

# AllPay Error Handling. The definitive WIP.

Errors generated within the AllPay application 'layers' can be logged in 2 major log repositories and can be viewed in 3 different ways...

Error Repositories:

1. Application Insights: View in Azure Portal Application Insights 'Failures' or 'Logs' area.
2. AllPay Payroll Error Table: View in Payroll Run Errors page (or t\_PayRollErrors directly)

The Application Insights 'failures' area will show raw exception information (including stack trace) for exceptions that are caught by the 'global' C# mvc error handling mechanism. This will include errors thrown from within the sql payroll run procedures as well.

These errors will be include the 'unexpected' payroll errors that are not currently tracked in the t\_PayrollError table.



The Application Insights 'Logs' error will allow the user to execute 'custom event' queries against the 2 configured 'bot report' events ('PayrollRunSuccess' and 'PayrollRunFailure').

Errors destined for these log buckets must be specifically invoked within the c# code, however they are capable of logging specific (searchable) context data points which may not be tracked by the default error handler.

The screenshot shows the Microsoft Azure Application Insights Logs interface for the 'AZWU2APTEST-DEV' resource. The left sidebar contains navigation links for Overview, Activity log, Access control (IAM), Tags, Diagnose and solve problems, Application map, Smart detection, Live metrics, Transaction search, Availability, Failures, Performance, Troubleshooting guides (preview), Monitoring, Alerts, Metrics, Logs, and Workbooks. The main area has a search bar at the top, followed by a 'New Query 1\*' input field containing the following SQL-like query:

```
1 customEvents
2 | where name in ('PayrollRunError', 'PayrollRunSuccess')
3
```

The 'Tables' tab is selected in the query editor. Below the query, there are sections for Favorites and Application Insights. The Application Insights section lists availabilityResults, browserTimings, and customEvents. Under customEvents, it shows timestamp (datetime), name (string), itemType (string), customDimensions (dynamic), customMeasurements (dynamic), operation\_Name (string), operation\_Id (string), and operation\_ParentId (string). The 'Results' tab is selected, displaying the following table of log entries:

| timestamp [UTC]          | name              | itemType    | customDimensions   | customMeasurements                         | operation_Name                 | operation_Id                    |
|--------------------------|-------------------|-------------|--|--|--------------------------------|---------------------------------|
| 2023-10-12T14:35:20.000Z | PayrollRunFailure | customEvent | DeveloperMode:"true", "AspNetCoreEnvironment": "Development" | Description: Unexpected Payroll Failure.   | POST Payroll/RunManualCheckNew | c03c2dbfb054a419b4c6b195b7d99ef |
| 2023-10-12T14:35:20.000Z | PayrollRunSuccess | customEvent | DeveloperMode: true  | Description: PayrollId: Unknown            | POST Payroll/RunManualCheckNew | c03c2dbfb054a419b4c6b195b7d99ef |
| 2023-10-12T14:35:20.000Z | PayrollRunFailure | customEvent | DeveloperMode: true  | Description: User: MichaelNario@lithia.com | POST Payroll/RunManualCheckNew | c03c2dbfb054a419b4c6b195b7d99ef |
| 2023-10-12T14:35:20.000Z | PayrollRunSuccess | customEvent | DeveloperMode: true  | Description: PayrollId: Unknown            | POST Payroll/RunManualCheckNew | c03c2dbfb054a419b4c6b195b7d99ef |

At the bottom, it shows a display time of '0s 352ms' and a 'Display time (UTC+00:00)' dropdown.

'Expected' errors which currently are the errors that are associated with a specific paySheet id, are generated by the Payroll Run process (sproc) or Payroll Report Data creation process (c# post processing) are logged to the t\_PayRollErrors table.

# Payroll Home

| Company<br>-- Select One --   | Pay Period End Date<br>-- Select One -- | Pay Group<br>-- Select One -- | Pay Calendar<br>-- Select One --     | Status<br>Error                      | Data Load<br>-- Select One --         |                                      |                     |                                       |                          |            |                  |             |            |  |               |                          |            |           |                                      |                                      |                                       |                                      |  |                                       |                          |
|---|---|-------------------------------|--------------------------------------|--------------------------------------|---------------------------------------|--------------------------------------|---------------------|---------------------------------------|--------------------------|------------|------------------|-------------|------------|--|---------------|--------------------------|------------|-----------|--------------------------------------|--------------------------------------|---------------------------------------|--------------------------------------|--|---------------------------------------|--------------------------|
| Register Review Company<br>-- Select One --   |   |                               |                                      |                                      |                                       |                                      |                     |                                       |                          |            |                  |             |            |  |               |                          |            |           |                                      |                                      |                                       |                                      |  |                                       |                          |
| <table border="1"> <thead> <tr> <th>Company</th> <th>Pay Period End Date</th> <th>Pay Calendar</th> <th>Tech Data</th> <th>Sales Data</th> <th>Performance Data</th> <th>Input Sheet</th> <th>Adjustment</th> <th></th> <th>Run Date/Time</th> </tr> </thead> <tbody> <tr> <td>Monterey Porsche (L0184)</td> <td>08/06/2022</td> <td>Bi-Weekly</td> <td><span style="color: green;">●</span></td> <td><span style="color: green;">●</span></td> <td><span style="color: yellow;">●</span></td> <td><span style="color: green;">●</span></td> <td></td> <td><span style="color: blue;">Run</span></td> <td>09/09/2022<br/>7:38:34 PM</td> </tr> </tbody> </table>  |   |                               |                                      |                                      |                                       | Company                              | Pay Period End Date | Pay Calendar                          | Tech Data                | Sales Data | Performance Data | Input Sheet | Adjustment |  | Run Date/Time | Monterey Porsche (L0184) | 08/06/2022 | Bi-Weekly | <span style="color: green;">●</span> | <span style="color: green;">●</span> | <span style="color: yellow;">●</span> | <span style="color: green;">●</span> |  | <span style="color: blue;">Run</span> | 09/09/2022<br>7:38:34 PM |
| Company   | Pay Period End Date                     | Pay Calendar                  | Tech Data                            | Sales Data                           | Performance Data                      | Input Sheet                          | Adjustment          |                                       | Run Date/Time            |            |                  |             |            |  |               |                          |            |           |                                      |                                      |                                       |                                      |  |                                       |                          |
| Monterey Porsche (L0184)  | 08/06/2022                              | Bi-Weekly                     | <span style="color: green;">●</span> | <span style="color: green;">●</span> | <span style="color: yellow;">●</span> | <span style="color: green;">●</span> |                     | <span style="color: blue;">Run</span> | 09/09/2022<br>7:38:34 PM |            |                  |             |            |  |               |                          |            |           |                                      |                                      |                                       |                                      |  |                                       |                          |
| <span style="float: left; margin-right: 10px;"><span style="border: 1px solid #ccc; padding: 2px 5px;"></span></span> <span style="float: left; margin-right: 10px;"><span style="border: 1px solid #ccc; padding: 2px 5px;"></span></span> <span style="float: left; margin-right: 10px;"><span style="border: 1px solid #ccc; padding: 2px 5px;"></span></span> <span style="float: left; margin-right: 10px;"><span style="border: 1px solid #ccc; padding: 2px 5px;"></span></span> <span style="float: left; margin-right: 10px;">Page <span style="border: 1px solid #ccc; padding: 2px 5px;">1</span> of 1</span> <span style="float: left; margin-right: 10px;">10 <span style="border: 1px solid #ccc; padding: 2px 5px;">▼</span></span> <span style="float: left;">items per page</span> |   |                               |                                      |                                      |                                       |                                      |                     |                                       |                          |            |                  |             |            |  |               |                          |            |           |                                      |                                      |                                       |                                      |  |                                       |                          |

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Version: 1.32.0

Payroll Errors - Lithia All Pay

ALL PAY

| Employee       | PayPlan Name            | PayPlan Block Name | Error Message   |
|----------------|-------------------------|--------------------|---|
| Michael Miguel | Michael Miguel (176363) |                    | There was an error while generating the paysheet data: Exception: Exception in Proc... BlockName: AOP Parts Gross, BlockId: 65792, PlanId: 29017, InnerException: Attemp... |

Page 1 of 1 10 ▼ items per page

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Version: 1.32.0

## 'Global', 'Automatic' Error Handling Mechanism Implementation Notes:

The global error handling that populates the Azure App Insights failures section is implemented in the \_ViewImports.cshtml, and \_Layout.cshtml files...

File Edit View Project Build Debug Team Test Analyze Tools Extensions Window Help Search (Ctrl+Q) Payroll.Web

Debug Any CPU Payroll.Web IIS Express

\_ViewImports.cshtml \_Layout.cshtml

```
61     <script src="~/lib/jquery-ui/jquery-ui.min.js"></script>
62     <script src="~/lib/bootstrap-datepicker/dist/js/bootstrap-datepicker.min.js"></script>
63     <script src="https://kendo.cdn.telerik.com/2020.1.219/js/kendo.all.min.js"
64         asp-fallback-src="~/lib/kendo-ui/js/kendo.all.min.js"
65         asp-fallback-test="window.kendo">
66     </script>
67     <script src="https://kendo.cdn.telerik.com/2020.1.219/js/kendo.aspnetmvc.min.js"
68         asp-fallback-src="~/lib/kendo-ui/js/kendo.aspnetmvc.min.js"
69         asp-fallback-test="kendo.data.transports['aspnetmvc-ajax']">
70     </script>
71     <script src="~/lib/kendo-ui/js/jszip.min.js"></script>
72     <script src="~/lib/moment/min/moment.min.js"></script>
73     <script src="~/lib/sortable/Sortable.min.js"></script>
74     <script src="~/js/site.js"></script>
75 </environment>
76
77 @RenderSection("scripts", required: false)
78 @Html.Raw(JavaScriptSnippet.FullScript)
```

79

```
80 </head>
81 <body>
82     <div class="header container-fluid">
83         <div class="logo">
84             <a asp-area="" asp-controller="Home" asp-action="Index">
85                 
86             </a>
87         </div>
88         <partial name="_LoginPartial" />
89     </div>
90     <div class="navbar navbar-inverse ">
91         <div class="container-fluid">
92             <nav>
93                 @(Html.Kendo().Menu()
94                     .Name("menuTop")
95                     .Items(tabstrip =>
96                         {
97                             if (AuthorizationService.AuthorizeAsync(User, Model, PolicyConstants.PayrollStoreReview
```

113% No issues found Scott Faulkner, 49 days ago | 1 author, 1 change

Mapping Details Find JavaScriptSnippet Error List Breakpoints Output

Ready

A screenshot of the Visual Studio IDE interface. The top menu bar includes File, Edit, View, Project, Build, Debug, Team, Test, Analyze, Tools, Extensions, Window, Help, and Search (Ctrl+Q). The title bar shows "Payroll.Web". The main window displays the code for "\_ViewImports.cshtml". The code contains several using statements and injection points. A red arrow points to the line "@inject Microsoft.ApplicationInsights.AspNetCore.JavaScriptSnippet JavaScriptSnippet" which is highlighted with a red rectangle. The status bar at the bottom shows "113 %", "No issues found", "5", "7", "0 changes | 0 authors, 0 changes", and tabs for Mapping Details, Find JavaScriptSnippet, Error List, Breakpoints, and Output. A blue bar at the bottom indicates the solution is "Ready".

```
1  @using Kendo.Mvc.UI
2  @using Payroll.Web
3  @using Payroll.Web.Helpers
4  @using Payroll.Web.Models
5  @using Payroll.Dal.Entities
6  @using Payroll.Web.ViewModels
7
8  @addTagHelper *, Microsoft.AspNetCore.Mvc.TagHelpers
9  @addTagHelper *, Kendo.Mvc
10
11 @inject Microsoft.Extensions.Options.IOptions<AppSettings> AppSetting
12 @inject Microsoft.AspNetCore.Authorization.IAuthorizationService AuthorizationService
13 @inject Microsoft.ApplicationInsights.AspNetCore.JavaScriptSnippet JavaScriptSnippet
```

A custom exception filter attribute overrides the OnException event which then triggers a call to the logger...

attribute wireup in Startup.cs...

```
Startup.cs x PayrollExceptionFilter.cs
Payroll.Web Payroll.Web.Startup

99     options.AddPolicy(PolicyConstants.SeniorPayrollCompensationEdit, policy => policy.Requirements.Add(new SeniorPayrollCompensationEditRequirement()));
100    options.AddPolicy(PolicyConstants.RegisterReviewPayroll, policy => policy.Requirements.Add(new RegisterReviewPayrollRequirement()));
101    options.AddPolicy(PolicyConstants.RegisterReviewStore, policy => policy.Requirements.Add(new RegisterReviewStoreRequirement()));
102    options.AddPolicy(PolicyConstants.CompensationView, policy => policy.Requirements.Add(new CompensationViewRequirement()));
103    options.AddPolicy(PolicyConstants.CompensationEdit, policy => policy.Requirements.Add(new CompensationEditRequirement()));
104    options.AddPolicy(PolicyConstants.CompensationAdmin, policy => policy.Requirements.Add(new CompensationAdminRequirement()));
105    options.AddPolicy(PolicyConstants.ReportsAdmin, (Action<AuthorizationPolicyBuilder>)(policy => policy.Requirements.Add(new ReportsAdminRequirement())));
106    options.AddPolicy(PolicyConstants.SeniorPayrollAdmin, policy => policy.Requirements.Add(new SeniorPayrollAdminRequirement()));
107    options.AddPolicy(PolicyConstants.SeniorCompensationDelete, policy => policy.Requirements.Add(new SeniorCompensationDeleteRequirement()));
108    options.AddPolicy(PolicyConstants.CompensationSuper, policy => policy.Requirements.Add(new CompensationSuperRequirement()));
109 });
110
111 services.AddMvc(options =>
112 {
113     var policy = new AuthorizationPolicyBuilder()
114         .RequireAuthenticatedUser()
115         .Build();
116     options.Filters.Add(new AuthorizeFilter(policy));
117     options.Filters.Add(typeof(PayrollExceptionFilterAttribute)); // Line highlighted by a red arrow
118 });
119     .SetCompatibilityVersion(CompatibilityVersion.Version_3_0)
120     .AddNewtonsoftJson(options =>
121 {
122     options.SerializerSettings.ContractResolver = new DefaultContractResolver();
123     options.SerializerSettings.ReferenceLoopHandling = ReferenceLoopHandling.Ignore;
124 });
125
126 // Add Kendo UI services to the services container.
127 services.AddKendo();
128
129 services.AddSingleton< IHttpContextAccessor, HttpContextAccessor>();
```

#### 'Programmatic' error handling mechanism:

Errors logged to the Application Insights 'Logs' area are triggered from explicit calls to the PayrollController.TrackEvent function.

This function calls the Microsoft .Net telemetry client and is currently capable of logging a '**'PayrollRunSuccess'** or a '**'PayrollRunError'** App Insights Custom Event. This logging capability is currently only wired up to the AllPay payroll process(es) and will log a basic success or failure of the payroll run (in the post processing phase of the controller function).

(todo..update ^ when detail is added to error handling mechanisms)

A screenshot of the Microsoft Visual Studio IDE. The top menu bar includes File, Edit, View, Project, Build, Debug, Team, Test, Analyze, Tools, Extensions, Window, Help, and a Search (Ctrl+Q) field. The title bar shows "Payroll.Web". The main window displays the "PayrollController.cs" file under the "Payroll.Web" project. The code is as follows:

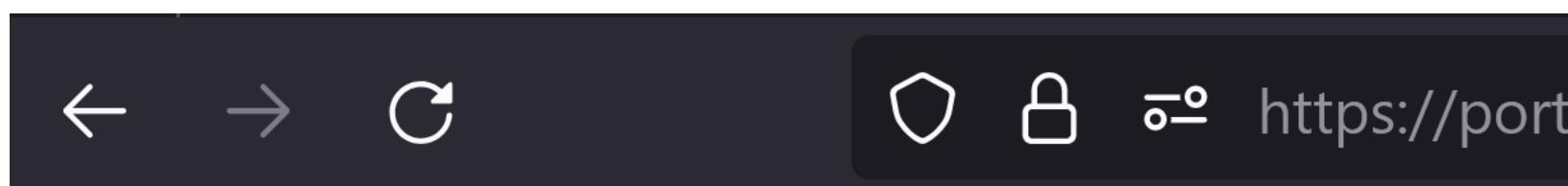
```
1573     eventDict.Add("PayCycle", payroll.PayrollPayFrequencyName);
1574     eventDict.Add("PPBegDate", payroll.PayPeriodBeginDate.ToString());
1575     eventDict.Add("PPEndDate", payroll.PayPeriodEndDate.ToString());
1576     eventDict.Add("Store", $"{storeInfo.CompanyNumber} - {storeInfo.Name}");
1577     eventDict.Add("Payroll Type", payroll.PayrollTypeName);
1578     eventDict.Add("User", HttpContext.User.Identity.Name);
1579     return eventDict;
1580 }
1581 [2] [5] [7]
3 references | Jim Strawn, 95 days ago | 1 author, 1 change
1582     private void TrackEvent(bool success, string description, PayrollEntity payroll)
1583     {
1584         string errors = success ? string.Empty : CompileRepoErrors(payroll);
1585
1586         var eventDict = CreateTelemetryInfo(payroll);
1587         eventDict.Add("Description", description);
1588         eventDict.Add("Errors", errors);
1589
1590         Telemetry.TrackEvent(success ? "PayrollRunSuccess" : "PayrollRunError", eventDict);
1591     }
1592 }
1593 }
```

The status bar at the bottom shows "113%" and "No issues found". Below the status bar are tabs for Mapping Details, Find PayrollExceptionFilterAttrib..., Error List, Breakpoints, and Output. A blue bar at the bottom indicates the application is "Ready".

'Rosie Bot' and 'Elroy Bot' are the names of the logic app that handles these 2 events ('PayrollRunSuccess' & 'PayrollRunError') and routes the alert message to the appropriate Teams channels.

## Error Searching

Searching Custom Events in AI Logs section: Custom events can be queried against the error details with the log query language...



[Create](#) [Manage view](#) [...](#)**Name** ↑↓

|  |                     |
|--|---------------------|
|  AZWCUAPTEST-TEST              | <a href="#">...</a> |
|  AZWCUAPTEST-DEV               | <a href="#">...</a> |
|  AZWCUAPTEST-TEST              | <a href="#">...</a> |
|  AZWCUAPWEB-PROD-CentralUS     | <a href="#">...</a> |
|  AZWU2APTEST-DEV             | <a href="#">...</a> |
|  AZWU2APWEB-PROD             | <a href="#">...</a> |
|  AZWU2APWEB-TEST             | <a href="#">...</a> |
|  AZWU2APWEB-TEST-AppInsights | <a href="#">...</a> |
|  AZWU2APWEB-UAT              | <a href="#">...</a> |
|  AZWU2LOFDEV-API             | <a href="#">...</a> |
|  AZWU2LOFTEST-INSIGHTS       | <a href="#">...</a> |
|  AZWU2LOFUAT-INSIGHTS        | <a href="#">...</a> |
|  AZWU2LPPSHRDDEV-AI          | <a href="#">...</a> |

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\(preview\)](#)

## Monitoring

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# PHASE 1 ERROR HANDLING IMPROVEMENTS

This is the first phase of error handling improvements affecting the OC payrolls only (*Manual New, Termination, Adjustment and Reverse.*)  
The code that was 'touched' is the middle tier code connecting to the underlying repository 'run' functions (none of which were changed).

All OC payroll types and re-runs should be tested for success mode and 'failure mode'.

Probably not necessary to test such details as the source field value 'overrides' or other grid functionality on that page. None of that was affected by these changes.

Regular payrolls should also be tested but those should be wholly unaffected by these changes.

## Change Details

There's been some consolidation of functions and refactoring but the upshot of this phase of changes is that there should be additional detail logged in AI Logs (and AI Failures) for any unexpected errors raised from either the payroll stored procedures or any of the c# functions in the execution path of the payroll run.

Also 'expected' errors (paysheet and any datacreation post processing errors) will also now be logged to AI Logs.

Additional context data points have been added to both kinds of 'errors' (errors and failures) displayed in the red UI error header as well as in the AI Logs section.

'Last Completed Phase' information has been added to the stored procedure error messaging for any failures (sql errors) raised from the 2 OC stored procs.

The Run Pay PLAN sproc was untouched by these changes.

**'Payroll Failure'** is a thing now and is distinct from Payroll Error.

- 'Failure' indicates an 'unexpected' error. (there's also a new payroll 'Failure' status but that's not testable right now)
- 'Error' still means more or less what it did before (paysheet and data post-processing *expected* errors *only*).

**There are no UI changes** except for the additional level of error detail for both expected errors and unexpected failures. Both will still appear as a red 'error' message in the UI as before.

There are now 3 kinds of 'custom payroll events' which can be written to the AI logs as a result of a payroll run... PayrollRunSuccess PayrollRunError & PayrollRunFailure (new!)

search example for AI Logs...

```
customEvents  
| where name in ('PayrollRunError', 'PayrollRunFailure', 'PayrollRunSuccess')
```



*The PayrollRunFailure event is new and will need to be wired up to the Elroy bot in order to get bot alerts on this event. (a feature story already exists for this).*

Additional data points are added to the customDimensions of the event and are searchable thusly...

```
customEvents  
| where name in ('PayrollRunFailure') and customDimensions.PayrollId == 'UNKNOWN'
```



(details of these data fields are still in flux and will be eventually updated in the main page) The full stack trace has been added to the logged PayrollRunFailure events as well as the 'Unexpected Errors' top level exception message.

Errors raised from the stored procedures will appear in this Unexpected Errors custom dimension of the event as a large string. (later phases may break this up to make specific fields more searchable via AI).

Some additional sproc error context has also been added to the error header messaging and will show up in the FAILURES section of AI as well as the Logs section.

- [Glossary](#)
  - [A](#)

## Glossary

- A glossary of terms and acronyms used within the context of All Pay and how it's used to support processing payroll and defining employee incentives or pay plans. This is a living document and intended for all team members to contribute and grow as All Pay grows.

## A

| Lithia Term | Definition | Domain |
|-------------|------------|--------|
|-------------|------------|--------|

| Lithia Term            | Definition   | Domain   |                                    |   |
|------------------------|--|--|------------------------------------|---|
| 'Adjacent' Pay Plans   | When a single employee has two active plans that are adjacent to each other in time relative to the plans' Effective and End Dates. (i.e. the Effective Date of the new plans is one day after the Expiration Date of the old plan.)<br><br>A manual check that's cut when an adjustment is needed to an On-Cycle Payroll Processing - Overview (azure.com). | 11180<br><br><a href="#">Employee - Overview (azure.com)</a> | Stephen Philips (569)<br><br>11182 | Stephen Philips (569)<br><br>Stephen Philips (569)<br><br>General Manager (15010)<br><br>General Manager (15010)<br><br>Act |
| Adjustment Check       | A tool to build complex queries using SQL in a UI  |  |                                    |   |
| Advanced Block Formula |  |  |                                    |   |

##B |Lithia Term|Definition|Domain|Example (i.e. Query, docs, video, etc) |---|---|---| Bi-weekly (BW) |This is only used by stores from California due to their extremely onerous regulatory environment. Pay cycles end every other Saturday. See the sheet in any BW store workbook for precise pay periods. Commissions are only calculated once per month, around the second week. Deployments can more easily be timed during the off weeks.|Pay Cycle|||Brian Markup Language (BML)|---| Bulk Processing Payroll Tasks| A feature enabling Senior Payroll Specialists the ability to process payroll processing tasks in bulk for a Pay Group Region. [Payroll Task Management - Overview \(azure.com\)](#)

##D

| Lithia Term                         | Definition  | Domain | Example (i.e. Query, docs, video, etc) |
|-------------------------------------|---|--------|--|
| DIPS (report): PBI DIPS SSRS DIPS - |   | -      | -                                      |
| Data Sources                        | Data used within All Pay to process and calculate payroll <a href="#">Data Sources - Overview (azure.com)</a> - |        |  |

##E |Lithia Term|Definition|Domain|Example (i.e. Query, docs, video, etc) |---|---|---| Equation Builder |A GUI that allows users to create nested calculations and other formulas to create a pay plan block. [Formula Builders - Overview \(azure.com\)](#)|[EquationBldr\\_Demo.pptx](#)

##F |Lithia Term|Definition|Domain|Example (i.e. Query, docs, video, etc) |---|---|---| Footer Template |A pre-defined template that's applied to an employee pay plan. A Footer (or, footer template) defines the payroll calculations and the order of operations therein. Footers templates are built based on the job type and pay frequency. [Formula Builders - Overview \(azure.com\)](#)|-| Formula Text|-|-|

##G |Lithia Term|Definition|Domain|Example (i.e. Query, docs, video, etc) |---|---|---| Grid Block|-|[Formula Builders - Overview \(azure.com\)](#)|-| Grid Block Formula|-|[Formula Builders - Overview \(azure.com\)](#)|-| Grid Plan |A tool to create a formula block where the payout amount is based on an evaluation matrix. [Formula Builders - Overview \(azure.com\)](#)|[GridPlan\\_Demo.pptx](#)

##H |Lithia Term|Definition|Domain|Example (i.e. Query, docs, video, etc) |---|---|---| History Block? (tbd)|---| History Function|-|-| History Grid|-|-|

##I |Lithia Term|Definition|Domain|Example (i.e. Query, docs, video, etc) |---|---|---| Impact Builder |Calculates the performance of a proposed pay plan. This provides the requestor of the Impact Analysis with information to know how the pay plan is expected to perform based on the objectives set for the department and pay plan. It also ensures pay plans are in compliance with Federal and State regulations. | [Impact Builder - Overview \(azure.com\)](#)|-|

##M |Lithia Term|Definition|Domain|Example (i.e. Query, docs, video, etc) |---|---|---| Manual Payroll |Also known as Off Cycle Payroll process. This process provides the ability to create checks outside of the On Cycle Payroll Process| [Off Cycle Payroll Processing - Overview \(azure.com\)](#) ##O |Lithia Term|Definition|Domain|Example (i.e. Query, docs, video, etc) |---|---|---| Off Cycle Payroll Process |A process to create checks outside of the On Cycle Payroll cycles |[Payroll Processing - Overview \(azure.com\)](#)|[Off Cycle Payroll Processing - Overview \(azure.com\)](https://dev.azure.com/LithiaMotors/Advanced%20Incentive%20Program/_wiki/wikis/Advanced-Incentive-Program.wiki/2955/Off-Cycle-Payroll-Processing|Offcycle Check|A check that is generated outside of the On Cycle Payroll Process|<a href=)|-| On Cycle Adjustment |A data source to On Cycle Payroll Processing|[Data Sources - Overview \(azure.com\)](#) |The data to process payroll can be managed using the Adjustment page. This page enables users to exclude employees from payroll or update the values used to calculate payroll.|

##P |Lithia Term|Definition |Domain|Example (i.e. Query, docs, video, etc) |--|---|---| |Pay Calendar ||-|  
 |https://dev.azure.com/LithiaMotors/Advanced%20Incentive%20Program/\_wiki/wikis/Advanced-Incentive-Program.wiki/3729/Pay-Calendar| |Pay Group |A Pay Group is also known as a Store and/or Company. The Pay Group ID and Store ID are the same. The Store Number (used in the All Pay UI with a leading LO) is not the same identifier. |-|select \* from orm.v\_PayGroup| |Pay Period End Date |The last day of a payroll calendar cycle |Business|SELECT PC.Name AS "Pay Calendar ID", P.\*,  
 from core.t\_PayCalendarPeriod P, core.t\_PayCalendar PC  
 where P.PaycalendarID = PC.ID| |Pay Plan |A pay plan lists the incentives in which an employee (not just sales) is paid based on performance.|Payroll|-| |Pay Plan Block |A component of an Employee's pay plan. |Pay Plan|-| |Pay Plan Block Formula |A formula that's used to calculate an employees payplan when payroll is processed. The formula can be built using the Simple or Advanced formula editor. |Business|-| |Payroll (something with a payroll id)|A header record identifying each payroll run within All Pay. A unique payroll record will have an:

- ID
- Organization
- Pay Cycle
- Pay Period End Date|Payroll Processing - Overview (azure.com)|-| |Payroll /PayPlan Field Override|-|---| |Payroll Process | A process for calculating and submitting gross commission and bonus data to WorkDay.|Payroll Processing - Overview (azure.com)|2/25/22: As-Is documentation is under construction. PayRoll Home - Overview (azure.com) |Paysheet Report |A summary of an employees calculated payout for a given pay cycle|-|Sample Payout Report.pdf| |Payroll Run |A task that's executed for processing payroll |Payroll Processing - Overview (azure.com) | |Payroll Source Fields|-|---| |Payroll System |Work Day is the system of record for payroll data, calculating the NET, and check disbursement. |-| |Payroll Total Input? (tbd)|-|---| |Payroll Total Output? (tbd)|-|---| |Prior Month Total|-|---| |Prospective Employee |A prospective employee that is going through the hiring process and does not have an Employee ID. A prospective employee pay plan is created and is reviewed for approval and/or adjustments. These pay plans ARE NOT linked to an Employee ID. They are a stand alone record. Once approved AND an Employee record exists within All Pay, the Pay Plan is linked to the Employee and Activated as part of the On Boarding process.| Pay Plan| |

##R |Lithia Term|Definition |Domain|Example (i.e. Query, docs, video, etc) |--|---|---| |Replacement Check |A manual check to replace an on-cycle payroll check.|Off Cycle Payroll Processing - Overview (azure.com)|-| |Reversal Check | A manual check to reverse an on-cycle payroll check for an employee|Off Cycle Payroll Processing - Overview (azure.com)|-|

##S |Lithia Term|Definition |Domain|Example (i.e. Query, docs, video, etc) |--|---|---| |Semi-Monthly (SM) | Pay cycles are:

- 1st through 15th
- 16th through EOM. |Pay Cycle |Processing generally runs immediately following the end of the period, starting with about a day for the setup on their end before they are running the macros in earnest. But for the commission payouts that are based on the prior month, Payroll usually starts running around the 10th of the month for the pay period ending on the 15th. This allows them to spread out the work and make all the exceptions before the official post-15th processing for the payouts.| |SFE |Simple Formula Editor - A tool to build simple formulas for a Pay Plan Block. This is for users that aren't familiar with building SQL statements|Formula Builders - Overview (azure.com)|References:  
 • [Equation Builder](#) |Simple Block Formula |A formula block created using the Simple Formula Editor (SFE) |Formula Builders - Overview (azure.com)|-| |Source Field Override|-|---| |Simple Formula Editor |SFE |Formula Builders - Overview (azure.com) || |Source System Fields |Source data from external systems that's used within All Pay to create employee pay plans. |-|select \* from ref.t\_SourceSystemField| |Source Systems|All Pay imports data from a variety of systems via ETL. This table lists the system where external data is used within All Pay. |-|select \* from orm.v\_SourceSystem where IsActive = 1;| |Sql Formula|-|---| |Store Input |Store input is considered a data source to the On Cycle Payroll process. The data is generated by Store Managers that aware employees additional incentives above what's defined an employee pay plan (i.e. Employee Pay Plan) |Data Sources - Overview (azure.com)||

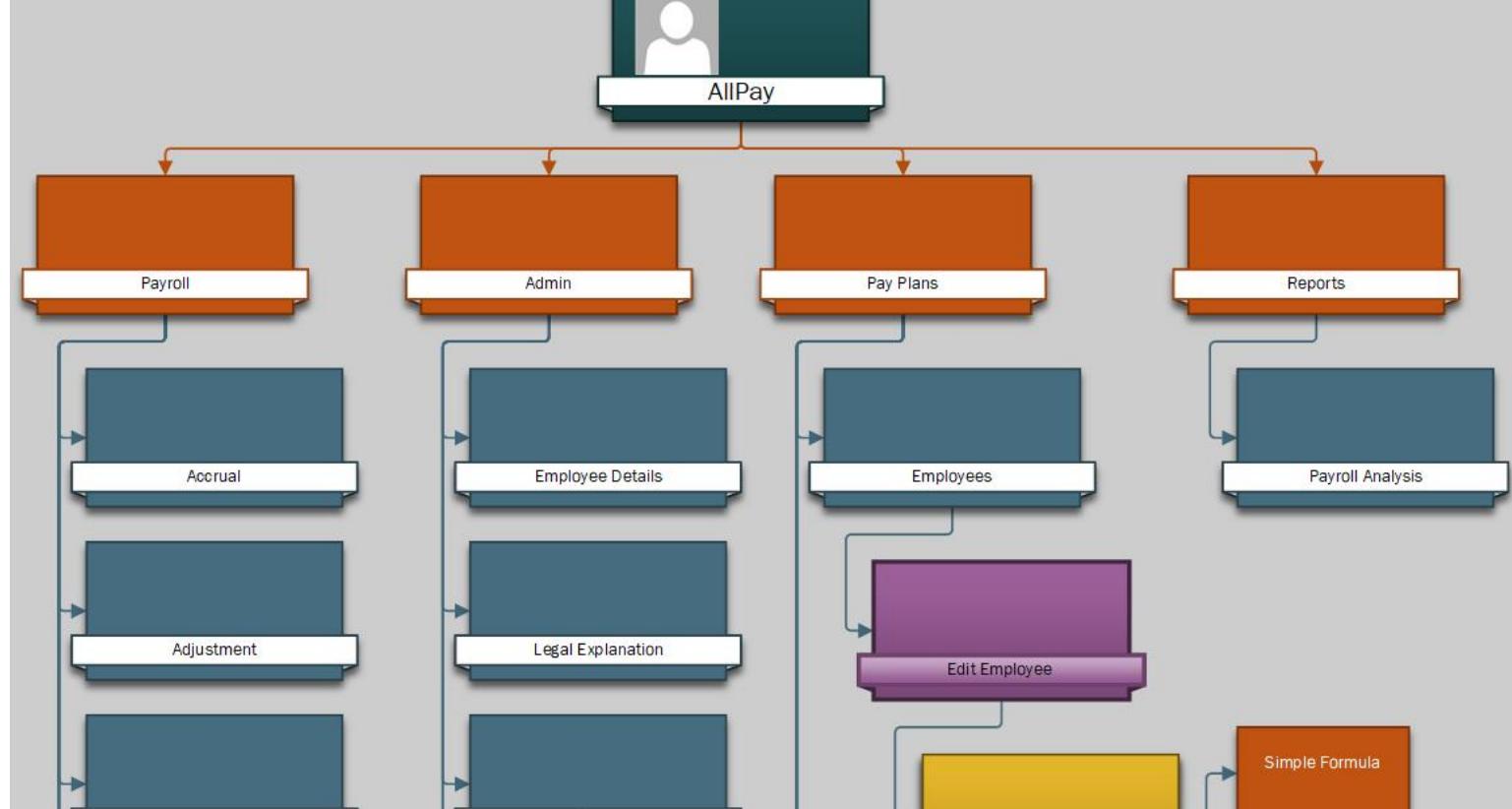
##T |Lithia Term|Definition |Domain|Example (i.e. Query, docs, video, etc) |--|---|---| |Template | A list of pre-defined templates that can be used when creating an Employee Pay Plan. For example, there are footer, pay plan and custom formula block templates.| Templates - Overview (azure.com) | |Tiered Block Formula|-|---|

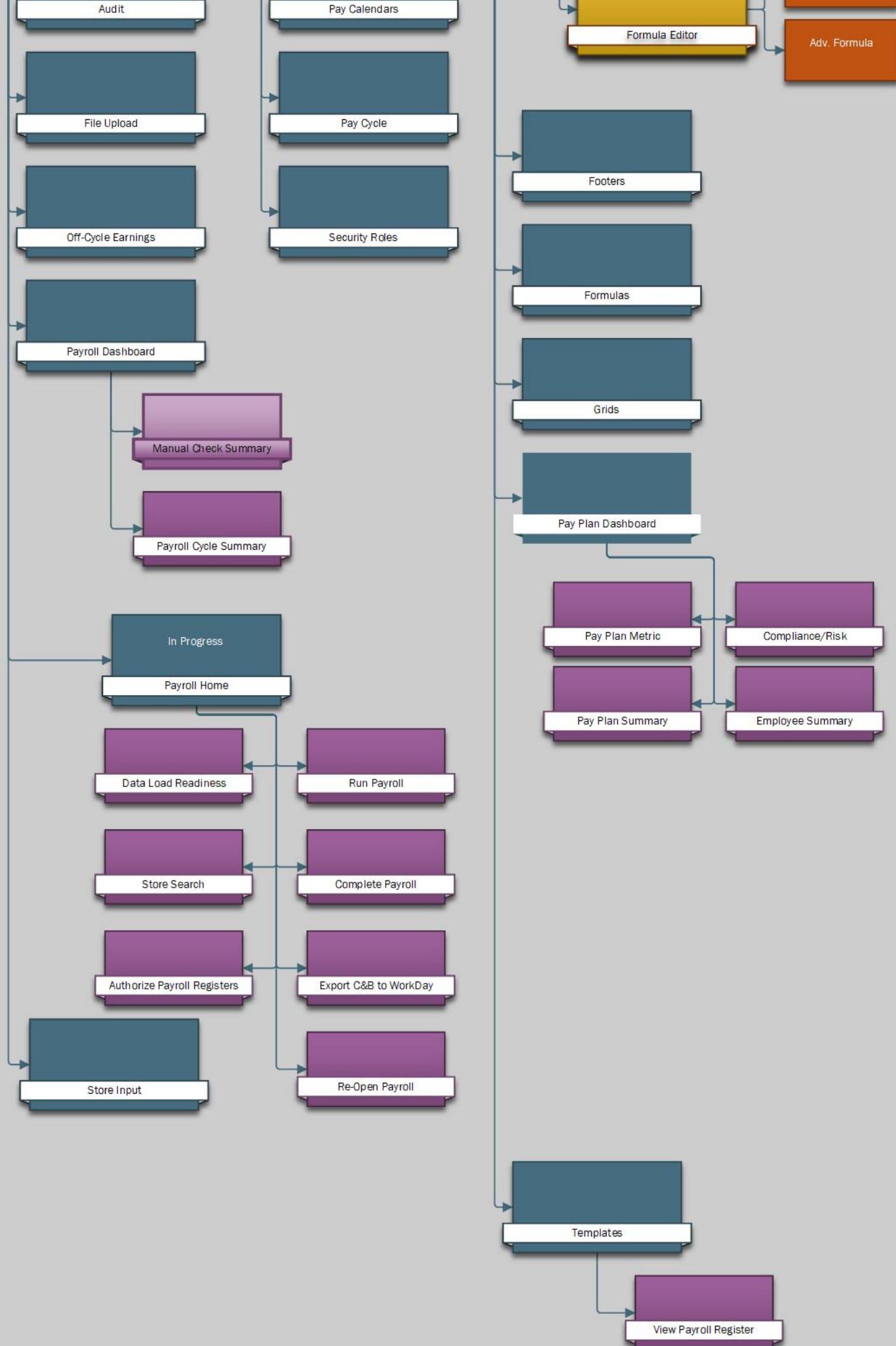
##U |Lithia Term|Definition |Domain|Example (i.e. Query, docs, video, etc) |--|---|---| |Unified Equation| A type of simple formula where a measure is created once and can be applied to any formula block saved to a pay plan. |Pay Plan - Overview (azure.com)||

##W |Lithia Term|Definition |Domain|Example (i.e. Query, docs, video, etc) |--|---|---| |Weekly | Pay cycles end every Saturday. Typically the best day to deploy changes to these files is Friday.|Pay Cycle|| |Work Day |The system that finalize what is owed to an Employee for each pay cycle. WorkDay calculates the net payment and "cuts" the pay check to the Employee|Business |N/A|

## #UNDER CONSTRUCTION

The site map provides a high-level view of each page within All Pay application.





# ALL PAGES UNDER THIS SITE ARE UNDER CONSTRUCTION

The goal of this section is to build As Is functional documentation of All Pay.

- [Objective](#)
- [Business Requirements:](#)

## Objective

### Business Requirements:

##Workflow ##Database Tables ##Business Rules ##Functional Components

##Code Summary

- [Bulk Payroll Processing Tasks](#)
  - [Business Objective](#)
  - [Business Process](#)
  - [User Personas](#)
  - [Use Cases](#)
  - [Functions](#)
  - [User Experience](#)

## Bulk Payroll Processing Tasks

### Business Objective

### Business Process

What are the impacted business processes?

The following steps are taken to .

- TASK:
- TASK:
- TASK:
- TASK:

### User Personas

- 1.
- 2.

### Use Cases

- 1.
- 2.

### Functions

#### Function Functional Spec Link

### User Experience

Insert screenshot of UX or link to UX Designs

##Extractor Visio Diagram

#Data Extractor What is the data extractor: It is an excel based tool Lithia IT created, to allow business to pull Schedule 64/Schedule 70/RTH, directly from CDK through reflections. Reflections is the interface used to extract certain CDK reports.

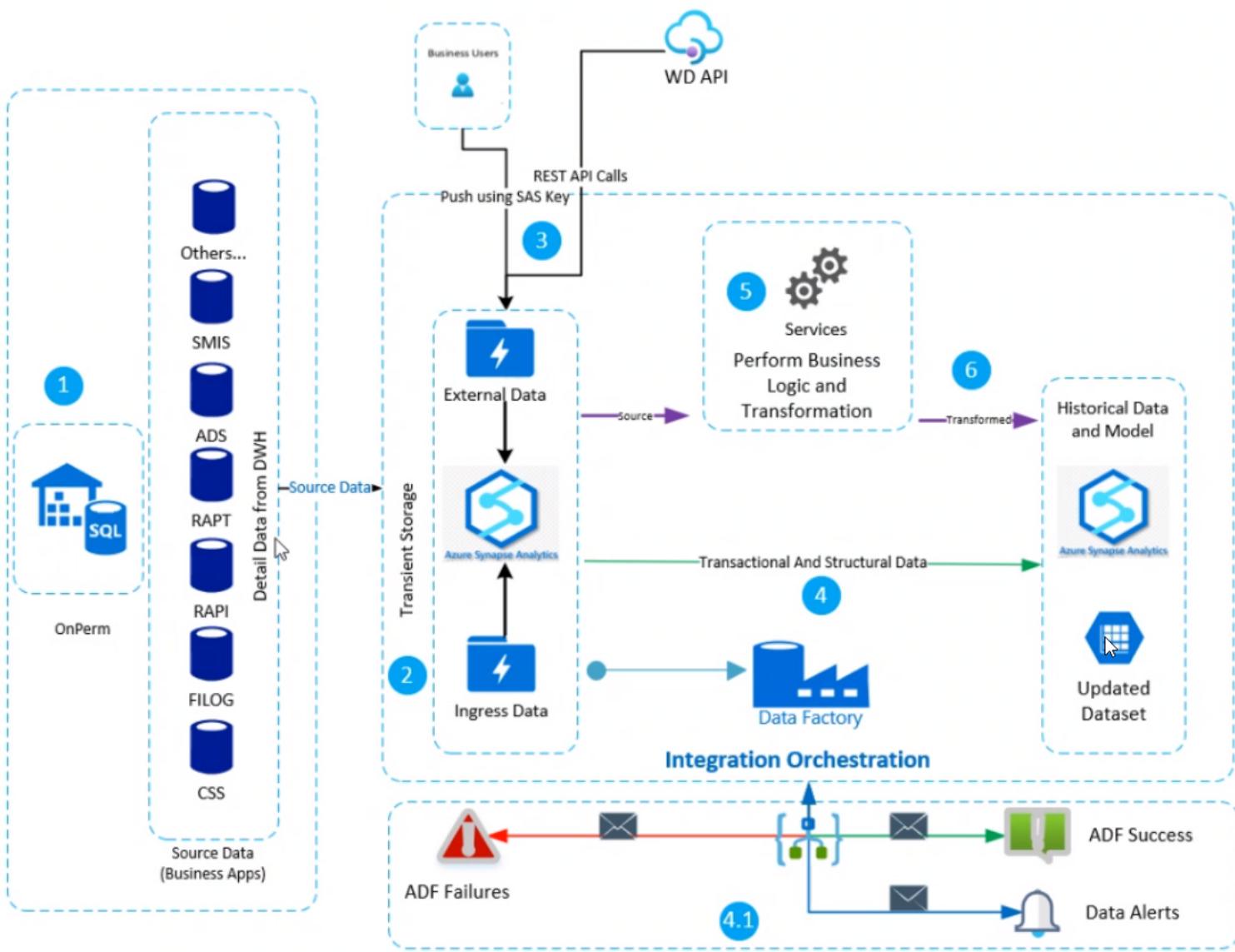
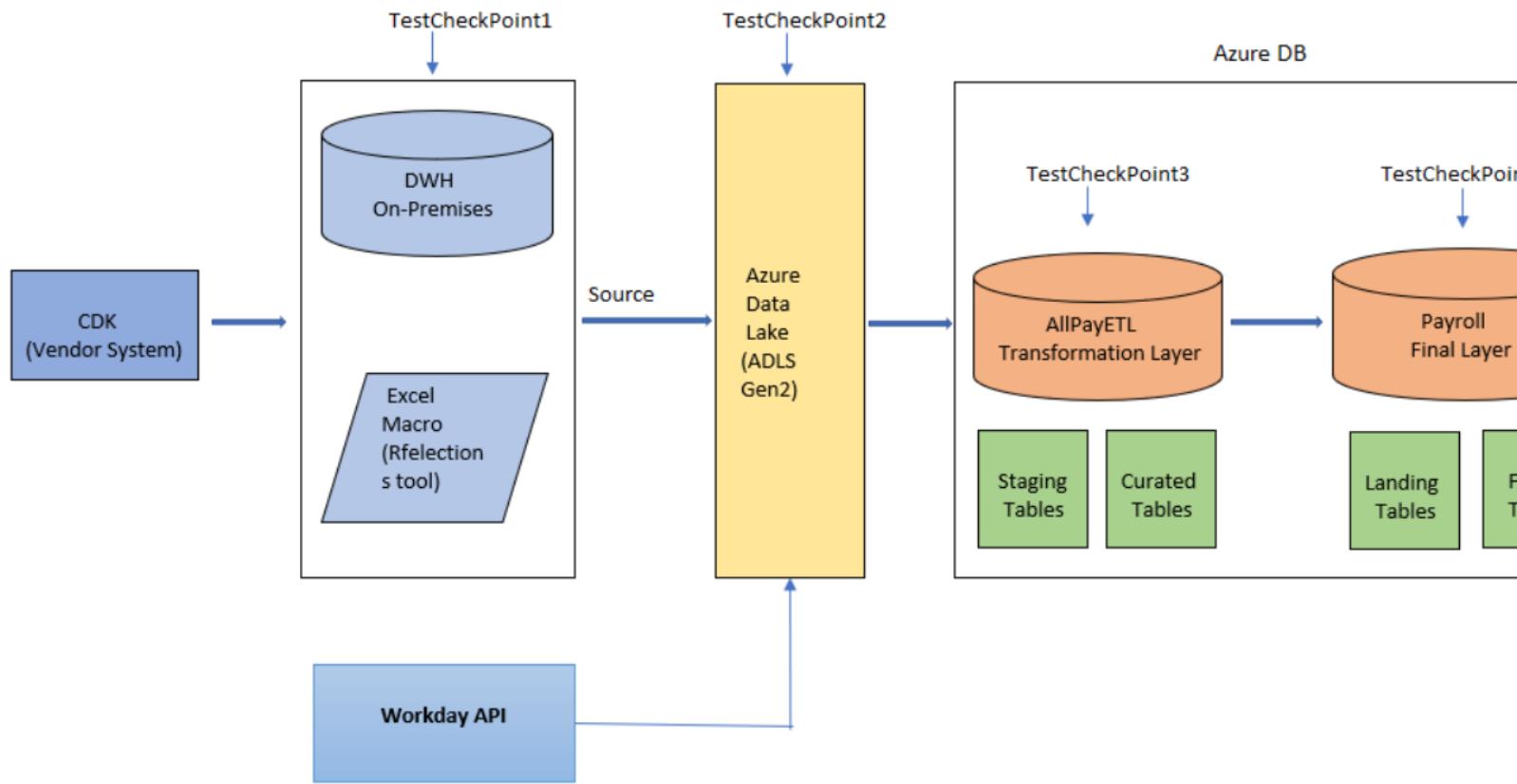
[https://lithiamotors.sharepoint.com/:u/r/sites/AllPay/\\_layouts/15/Doc.aspx?sourcedoc=%7B7C124FAA-32EB-4B00-978D-1DD286734AE5%7D&file=Data%20Flow%20Diagram%20-%20All%20Pay%20Extractor%20Macro.vsdx&action=default&mobileredirect=true](https://lithiamotors.sharepoint.com/:u/r/sites/AllPay/_layouts/15/Doc.aspx?sourcedoc=%7B7C124FAA-32EB-4B00-978D-1DD286734AE5%7D&file=Data%20Flow%20Diagram%20-%20All%20Pay%20Extractor%20Macro.vsdx&action=default&mobileredirect=true)

##Extractor Process Doc [https://lithiamotors.sharepoint.com/:w/r/sites/AllPay/\\_layouts/15/Doc.aspx?sourcedoc=%7BF878EA73-770E-4483-8A25-DFCCFAE264B7%7D&file=AllPay%20Data%20Extractor%20Overview.docx&action=default&mobileredirect=true](https://lithiamotors.sharepoint.com/:w/r/sites/AllPay/_layouts/15/Doc.aspx?sourcedoc=%7BF878EA73-770E-4483-8A25-DFCCFAE264B7%7D&file=AllPay%20Data%20Extractor%20Overview.docx&action=default&mobileredirect=true)

##Store Input Sheets [https://dev.azure.com/LithiaMotors/Advanced%20Incentive%20Program/\\_wiki/wikis/Advanced-Incentive-Program.wiki/3474/Store-Input-Sheets](https://dev.azure.com/LithiaMotors/Advanced%20Incentive%20Program/_wiki/wikis/Advanced-Incentive-Program.wiki/3474/Store-Input-Sheets)

##Termination Checks

- Termination checks are used as a data source to determine if Employee's are excluded from payroll processing. See [Func Spec | RUN Payroll](#) for more information.



## [BA Work 6557 - Schedule 64 flow.docx](#)

As an All Pay user, we would like the Pay Period End Date filter in the Payroll > File Upload screen to display values only valid for the Pay Calendar that has been selected AND be able to type in the pay period end date into the "Select One" field  
For example, when I choose a semi-monthly pay calendar then scroll through the dropdown in the pay period end date filter it should only display pay periods that are associated with the semi-monthly pay calendar. The same would apply for a weekly store or bi-weekly store.

Within this change, we'd like to ADD the ability to type in the pay period end date in the "Select One" area. This is not currently capable within this part of the application but IS available on the Payroll Home Screen currently



1. Navigate to the Payroll > File Upload screen within the app
2. Choose Company within "Pay Calendar" filter dropdown
3. Navigate to the "Pay Period End Date" filter dropdown
  - a. Able to type in a pay period end date that is valid for that pay cycle
  - b. OR Able to select from the dropdown
4. The dropdown within the "Pay Period End Date" filter should only display valid period end dates that are associated with the pay cycle
5. This should display all valid entries in the pay cycle table and display in order of most future PPE date at the top and the farthest in the past at the bottom

**Test Case 1:** When a Company whose pay frequency is Semi-Monthly is selected, the Pay Period End Date drop down menu must contain only semi-monthly PPE dates. For example: 09/15/2021, 09/30/2021, 10/15/2021, 10/31/2021 etc. This should correspond to PPE Dates for Pay Calendar ID 2 in the t\_PayCalendarPeriod table.

**Test Case 2:** When a Company whose pay frequency is Weekly is selected, the Pay Period End Date drop down menu must contain only weekly PPE dates. For example: 10/02/2021, 10/09/2021, 10/16/2021 etc. This should correspond to PPE Dates for Pay Calendar ID 1 in the t\_PayCalendarPeriod table.

**Test Case 3:** When a Company whose pay frequency is Bi-Weekly is selected, the Pay Period End Date drop down menu must contain only bi-weekly PPE dates. For example: 10/02/2021, 10/16/2021, 10/30/2021 etc. This should correspond to PPE Dates for Pay Calendar ID 3 in the t\_PayCalendarPeriod table.

**Test Case 4:** Once a company is chosen, a user must be able to type in a valid PPE Date depending on the pay frequency associated with the chosen company. For example, if a semi-monthly company is chosen, the user must be able to enter a PPE date associated with the semi-monthly pay calendar (09/15/2021, for example).

**Test Case 5:** When a user selects a company and inputs the PPE Date manually (instead of choosing from the drop-down), System must not accept a PPE date value associated with a different pay calendar. For example, if the company is associated with a semi-monthly pay calendar, then the system must not accept a weekly PPE Date and vice versa.

**Test Case 6:** The dates must be in descending order within the PPE Date drop down menu. The menu must contain the most future date (depending on pay frequency) at the top and the oldest date at the bottom.

- [Adjustment Data](#)
  - [Business Objective](#)
  - [Business Process](#)
  - [User Personas](#)
  - [Use Cases](#)
  - [Functions](#)
  - [User Experience](#)

## Adjustment Data

### Business Objective

To provide the ability to adjust the value used to calculate incentives for On Cycle payroll processing. The adjustment can be applied at the Company level or to the individual Employee.

### Business Process

- On Cycle Payroll Processing
- 

### User Personas

1. Payroll Specialist
2. Senior Payroll Specialist

### Use Cases

1. Create an adjustment to On Cycle Payroll for an Employee
2. Create an adjustment to On Cycle Payroll for a Company
3. Edit an adjustment record
4. Delete an adjustment record
5. Exclude Employee's from On Cycle payroll processing

### Functions

| Function             | Spec Link   |
|----------------------|---|
| Load Adjustment Data | <a href="#">Func Spec - Adjust On Cycle Payroll - Overview (azure.com)"</a> |

Add/Edit/Delete Adjustment [Func Spec - Adjust On Cycle Payroll - Overview \(azure.com\)"](#)

### User Experience

| User Scenario | User Experience |
|---------------|-----------------|
|---------------|-----------------|



Payroll Pay Plans Admin Reports

Dashboard Payroll Home Store Input Adjustment Accrual Audit Off-Cycle Earnings File Upload

## Adjustment

|                |                     |                       |        |
|----------------|---------------------|-----------------------|--------|
| Payroll Type * | Company *           | Pay Period End Date * | Status |
| Payroll        | Seattle BMW (L0110) | 10/31/2022            |        |

Specify Payroll Type, Company and Payroll Period to display rows in the grid

Load Adjustment Data

*Adjustment data does not exist for the selected Company & PPE*



Payroll Pay Plans Admin Reports

Dashboard Payroll Home Store Input Adjustment Accrual Audit Off-Cycle Earnings File Upload

## Adjustment

|                |                     |                       |        |
|----------------|---------------------|-----------------------|--------|
| Payroll Type * | Company *           | Pay Period End Date * | Status |
| Payroll        | Seattle BMW (L0110) | 10/31/2022            | New    |

Specify Payroll Type, Company and Payroll Period to display rows in the grid

| Employee | Source System   | Source Field      | Calculation Period |
|----------|-----------------|-------------------|--------------------|
| ◀ ▶ ⌂    | Page 0 of 0 ▶ ▶ | 10 items per page |                    |

Payroll Pay Plans Admin Reports

Dashboard Payroll Home Store Input Adjustment Accrual Audit Off-Cycle Earnings File Upload

## Adjustment

|                |                     |                       |        |
|----------------|---------------------|-----------------------|--------|
| Payroll Type * | Company *           | Pay Period End Date * | Status |
| Payroll        | Seattle BMW (L0110) | 10/31/2022            | New    |

Specify Payroll Type, Company and Payroll Period to display rows in the grid

Add an Adjustment to On Cycle Payroll

| Employee         | Source System    | Source Field     | Calculation Period |
|------------------|------------------|------------------|--------------------|
| -- Select One --   |

◀ ▶ ⌂ Page 1 of 1 ▶ ▶ 10 items per page

Exclude an Employee from On Cycle Payroll Processing

| Payroll Type * | Company *           | Pay Period End Date * | Status |
|----------------|---------------------|-----------------------|--------|
| Payroll        | Seattle BMW (L0110) | 10/31/2022            | New    |

Specify Payroll Type, Company and Payroll Period to display rows in the grid

| Employee  | Source System    | Source Field     | Calculation Period |
|---|------------------|------------------|--------------------|
| Dean Faciane (204904) <span style="color:red;">x</span> | -- Select One -- | -- Select One -- | -- Select One --   |

Page 1 of 1 10 items per page

## ##Objective

- The purpose of an Adjustment is to support the need to update the data used to process On Cycle Payroll for a selected Company or Employee. Adjustments can be applied at the Company and individual Employee level depending on how the record is defined.

##Basic Workflow: 1.

##Database Tables:

| Table                      | Usage  |
|----------------------------|--|
| core.t_AdjustmentSheet     | The header row for Adjustment data                     |
| core.t_AdjustmentSheetData | The metadata associated to the Adjustment Sheet record |

##Detailed Requirement The following information pertains to the functionality and user interactions with the Adjustment form. |User Scenario|User Experience|Detailed Requirements|--|--|--|Load Adjustment Data

*Adjustment data does not exist for the selected Company & PPE|*



| Payroll   | Pay Plans    | Admin       | Reports    |
|-----------|--------------|-------------|------------|
| Dashboard | Payroll Home | Store Input | Adjustment |

Accrual      Audit      Off-Cycle Earnings      File Upload

## Adjustment

| Payroll Type * | Company *           | Pay Period End Date *                        | Status |
|----------------|---------------------|--|--------|
| Payroll        | Seattle BMW (L0110) | 10/31/2022 <span style="color:red;">x</span> |        |

Specify Payroll Type, Company and Payroll Period to display rows in the grid

## Adjustment

Payroll Type \*

Payroll

Company \*

Seattle BMW (L0110)

Pay Period End Date \*

10/31/2022

Status

New

Specify Payroll Type, Company and Payroll Period to display rows in the grid

| Employee | Source System | Source Field | Calculation Period | New Value |
|----------|---------------|--------------|--------------------|-----------|
|----------|---------------|--------------|--------------------|-----------|

Page  of 0    10  items per page

|Add an Adjustment to On Cycle Payroll |

## Adjustment

Payroll Type \*

Payroll

Company \*

Seattle BMW (L0110)

Pay Period End Date \*

10/31/2022

Status

New

Specify Payroll Type, Company and Payroll Period to display rows in the grid

| Employee | Source System | Source Field | Calculation Period | New Value |
|----------|---------------|--------------|--------------------|-----------|
|----------|---------------|--------------|--------------------|-----------|

Page  of 1    10  items per page

Validation Check

# Adjustment

|                       |                     |                              |               |
|-----------------------|---------------------|------------------------------|---------------|
| <b>Payroll Type *</b> | <b>Company *</b>    | <b>Pay Period End Date *</b> | <b>Status</b> |
| Payroll               | Seattle BMW (L0110) | 10/31/2022                   | New           |

Specify Payroll Type, Company and Payroll Period to display rows in the grid

| Employee         | Source System    | Source Field     | Calculation Period | New Value |
|------------------|------------------|------------------|--------------------|-----------|
| -- Select One --   | 0         |

! The SourceSystemId field is required. ! The SourceSystemFieldId field is required. ! A calculation period is required.

Page 1 of 1

| Exclude an Employee from On Cycle Payroll Processing|

# Adjustment

|                       |                     |                              |               |
|-----------------------|---------------------|------------------------------|---------------|
| <b>Payroll Type *</b> | <b>Company *</b>    | <b>Pay Period End Date *</b> | <b>Status</b> |
| Payroll               | Seattle BMW (L0110) | 10/31/2022                   | New           |

Specify Payroll Type, Company and Payroll Period to display rows in the grid

| Employee   | Source System    | Source Field     | Calculation Period | New Value |
|--|------------------|------------------|--------------------|-----------|
| Dean Faciane (204904) <span style="float: right;">x</span> | -- Select One -- | -- Select One -- | -- Select One --   | 0         |

Page 1 of 1 10 items per page

- An Employee Name and the Exclude from Payroll option are required to save the record.

- An inline message is displayed when Exclude from Payroll is selected AND an EMPLOYEE IS NOT selected.

## ##Business Rules

1. Adjustments are applied at the Company level (i.e. All Employees) when an Employee is NOT defined and the source field is included in pay plan formula block.
2. An employee is excluded from Payroll when 'Exclude from Payroll' is selected. This is ONLY applied to the selected Company and Pay Period when Payroll is processed. This does not impact future payroll processing runs.

## ##Stored Procedures

### Stored Procedure Trigger Output

- [Store Input](#)
  - [Business Objective](#)
  - [Business Process](#)
  - [User Personas](#)
  - [Use Cases](#)
  - [Functions](#)
  - [User Experience](#)

# Store Input

## Business Objective

## Business Process

- On cycle payroll processing

The following tasks support the import of Store Input data for a selected company and pay period.

- Generate Data:** The Payroll Specialist generates the employee data used to populate the Store Input Sheet Template
- Create Template:** The Payroll Specialist downloads the Store Input Sheet Template (Store Submitted Exceptions) from **PowerBI**
- Enter Store Input:** The Store Manager will update the Store Input Sheet template and send it to the Payroll Specialist
- Import Data:** The Payroll Specialist imports the data entry form to All Pay

## User Personas

1. Payroll Specialist (PS)
2. Sr. Payroll Specialist (SrPS)

## Use Cases

1. Generate employee data
2. Import Store Input Sheet Data
3. Download store input sheet reports (XLS/PDF)
4. Submit Store Input for Payroll Processing

## Functions

### Function Functional Spec Link

Generate Store Input Sheet Data [Load Store Input Sheet Data - Overview \(azure.com\)](#)

Generate Report (XLS/PDF)

Manually add Incentives

Generate Store Input Data in Bulk [Bulk Processing Payroll Tasks - Overview \(azure.com\)](#)

Submit payroll data

Update metadata

Save metadata

Cancel updates to metadata

Delete employee data

## User Experience

© 2020 - Lithia All Pay

# Store Input



Company \*

-- Select One --

Pay Period End Date \*

-- Select One --

Status

Load

Specify both Company and Payroll Period to display rows in the grid

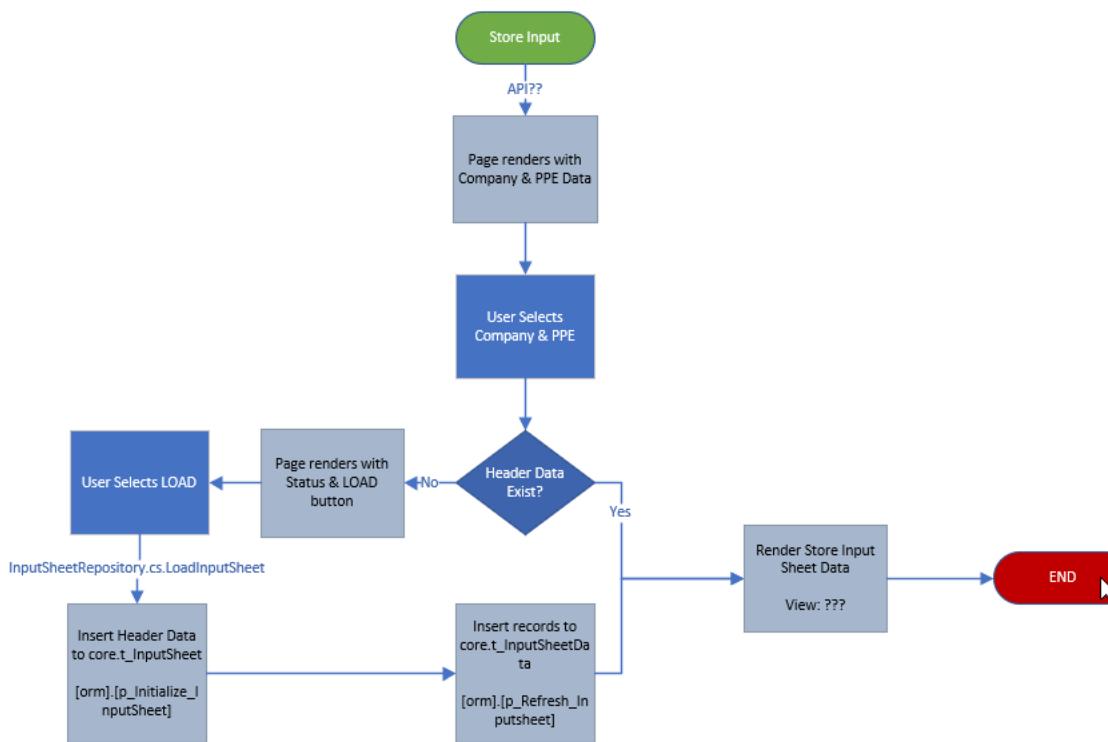
© 2020 - Lithia All Pay

Version: 1.11.0

## Objective

- Create store input sheet data
- Render store input sheet data

## Data & Page Load Workflow



##API ##Database Tables:

### Table Usage

**core.t\_InputSheet** The header record that's linked to each store input sheet record for a payroll run cycle.  
**core.t\_InputSheetData** The employee records that are linked to the header record for the selected payroll cycle.

**Views** Used to render page data to the Store Input page

### ##Stored Procedures

| Stored Procedure                       | Trigger                     | Output  |
|--|-----------------------------|---|
| InputSheetRepository.cs.LoadInputSheet | User clicks the LOAD button | <ul style="list-style-type: none"> <li>- A header row is written to core.t_InputSheet</li> <li>- Head ID is passed to p_Refresh_Inputsheet</li> </ul> |
| [orm].[p_Refresh_Inputsheet]           | cs.LoadInputSheet           | Row data is written to [core].[t_InputSheetData] for each row returned meeting the criteria for the selected Company and Pay Period End date.         |

## Store Input Sheet Load Requirements

- An Active Employee Pay Plan exists (Status: Active, Not Expire, Is Active: YES)

- Data Source: select \* from [ref].[t\_SourceSystem] where ID = 15 --Store Input Sheet
- What is the SQL to generate the row data to t\_inputsheetdata?
- Do the \$0 rows have any business value? Do they need to be included in Payroll Processing?

```

SELECT *--count(id), value
  FROM core.[t_InputSheetData]
  where value <> 0.00000
  --Group by Value

  -- $0 | 87,487
  -- >$01 | 89,162

```

##Basic Workflow: 1. [Validation dictionary for input sheet.xlsx \(sharepoint.com\)](#)

[Advanced Incentive Comp - Store Input sheet upload - All Documents \(sharepoint.com\)](#)

##Database Tables:

#### Table Usage

##Stored Procedures

#### Stored Procedure Trigger Output

- [Pay Plan Dashboard](#)
  - [Business Objective](#)
  - [Business Process](#)
  - [User Personas](#)
  - [Use Cases](#)
  - [Functions](#)
  - [User Experience](#)

## Pay Plan Dashboard

### Business Objective

### Business Process

- Process Management

The following tasks support the import of Store Input data for a selected company and pay period.

- 
- 
- 

### User Personas

### Use Cases

### Functions

### Function Spec Link

### User Experience

- [Pay Plan Dashboard](#)
  - [Business Objective](#)
  - [Business Process](#)
  - [User Personas](#)
  - [Use Cases](#)
  - [Functions](#)
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## Pay Plan Dashboard

- [Pay Plan Dashboard](#)
  - [Business Objective](#)
  - [Business Process](#)
  - [User Personas](#)
  - [Use Cases](#)
  - [Functions](#)
  - [User Experience](#)

## **Business Objective**

### **Business Process**

- Onboarding
- Process Management

The following tasks support the \_\_\_\_\_.

- 

### **User Personas**

1.

### **Use Cases**

1.

### **Functions**

#### **Function Spec Link**

### **User Experience**

### **Objective**

- Process Payroll

### **Data & Page Load Workflow**

##API

##Database Tables:

#### **Table Usage**

Views

##Stored Procedures

#### **Stored Procedure Trigger Output**

This feature is not used in Production

The feature is not used in production

#Objective The on-cycle check process creates payroll records for each Pay Group (i.e. Store). Payroll processing will vary by Pay Group (i.e. Weekly, Bi-Weekly, etc).

Potential Actions and evolution of an On Cycle payroll check within All Pay.

- Need to include the Uncomplete functionality

[ReadMe\\_PayrollProcessing.docx \(sharepoint.com\)](#)

### **Business Process:**

- On Cycle Payroll Processing | URL [Payroll Home - Lithia All Pay \(azwu2apweb-uat.azurewebsites.net\)](#)

From the **Payroll Home** page, the Payroll Specialist executes the following tasks to process payroll and export data to HRIS (Workday).

- Finalize payroll data
- Generate payroll audit reports
- Track payroll approvals
- Export payroll data to HRIS

### **Use Cases**

1. Process management
2. Finalize payroll data (Data validation and adjustments to payroll data)
3. Generate payroll reports
4. Export payroll data to HRIS
5. Payroll audits (FUTURE)

### **Functions**

1. Page filtering
2. Data validation | **RUN**
3. Adjustments to payroll data | **RUN**
4. Exclusions from payroll processing | **RUN**
5. Link to payroll reports (PowerBI)
6. Submit payroll data to HRIS (AllPay - PowerBI - HRIS)
7. Process management (i.e. Data readiness, approvals, finalize, re-open, review audit logs, add notes)

## User Personas

1. Payroll Specialist
2. Sr. Payroll Specialist

## User Experience



Payroll   Pay Plans   Admin   Reports  
 Dashboard   Payroll Home   Store Input   Adjustment   Accrual   Audit   Off-Cycle Earnings   File Upload

## Payroll Home

| Company                      | Pay Period End Date     | Pay Group        | Pay Calendar     | Status     | Data Load        |             |                                     |                                     |                                      |                           |
|------------------------------|-------------------------|------------------|------------------|------------|------------------|-------------|-------------------------------------|-------------------------------------|--------------------------------------|---------------------------|
| -- Select One --             | -- Select One --        | -- Select One -- | -- Select One -- | Complete   | -- Select One -- |             |                                     |                                     |                                      |                           |
| Register Review Payroll      | Register Review Company |                  |                  |            |                  |             |                                     |                                     |                                      |                           |
| -- Select One --             | -- Select One --        |                  |                  |            |                  |             |                                     |                                     |                                      |                           |
| Company                      | Pay Period End Date     | Pay Calendar     | Tech Data        | Sales Data | Performance Data | Input Sheet | Adjustment                          |                                     | Run Date/Time                        |                           |
| ► Medford CJD (L0004)        | 11/30/2020              | Semi-monthly     | ●                | ●          | ●                | ●           |                                     | <span style="color:red;">●</span>   | <span style="color:blue;">Run</span> | 01/16/2021<br>11:12:00 AM |
| ► Klamath Falls Ford (L0227) | 04/15/2021              | Semi-monthly     | ●                | ●          | ●                | ●           |                                     | <span style="color:green;">●</span> | <span style="color:blue;">Run</span> | 05/13/2021<br>7:33:23 PM  |
| ► Klamath Falls Ford (L0227) | 03/15/2021              | Semi-monthly     | ●                | ●          | ●                | ●           | <span style="color:green;">●</span> | <span style="color:green;">✓</span> | <span style="color:blue;">Run</span> | 06/23/2021<br>3:49:15 PM  |
| ► Maui Honda (L0249)         | 04/15/2021              | Semi-monthly     | ●                | ●          | ●                | ●           |                                     | <span style="color:green;">●</span> | <span style="color:blue;">Run</span> | 05/14/2021<br>7:51:28 PM  |
| ► Grants Pass CJD (L0015)    | 04/15/2021              | Semi-monthly     | ●                | ●          | ●                | ●           |                                     | <span style="color:green;">●</span> | <span style="color:blue;">Run</span> | 05/26/2021<br>9:23:09 PM  |

## API

KENDO FILTERING FORM DATA 'POST' REQUEST EXAMPLE:

```
sort=&page=1&pageSize=10&group=&FILTER=PAYGROUPID~EQ~3
```

'MAIN' (TOP LEVEL) FILTER:

```
'Company'
```

FILTER FETCH ENDPOINTS (PayrollController):

```
PayGroup_Read
PayCalendarPeriodByPayGroup_Read
PayRegion_Read
PayCalendar_Read
PayrollStatus_Read
```

QS URL EXAMPLE: [http://localhost:5000/Payroll/PayCalendarPeriodByPayGroup\\_Read?payGr](http://localhost:5000/Payroll/PayCalendarPeriodByPayGroup_Read?payGr)  
 KENDO FILTERING (post)  
 KENDO FILTERING (post)  
 KENDO FILTERING (post)

PAGE 'POST' (AJAX) ENDPOINTS:

```
SavePayroll
  (grid checkboxes)

  post object:
  {
    Id: payrollId,
    PayGroupId: payGroupId,
    PayCalendarPeriodId: payCalendarPeriodId,
    PayDayDate: payDayDate,
    IsCompleted: false,
    RegisterReviewByPayrollComplete: isReviewByPayroll,
    RegisterReviewByLocationComplete: isReviewByLocation,
    PayrollTypeId: payrollTypeId
  }

  CompleteRegularPayroll
  (complete button)

  post object
  {
    PayrollId: payrollId
  }
```

```
RunPayrollRegular  
post object  
{  
Id: payrollId,  
PayrollTypeId: payrollTypeId,  
PayGroupId: payGroupId,  
PayCalendarPeriodId: payCalendarPeriodId,  
PayDayDate: payDayDate,  
PayPeriodBeginDate: payPeriodBeginDate,  
PayPeriodEndDate: payPeriodEndDate,  
BypassDataLoadCheck: bypassDataLoadCheck  
}  
(run button)
```

#### GRID ENDPOINTS:

|                    |                   |                                       |
|--------------------|-------------------|---------------------------------------|
| Payroll_Read       | (main grid fetch) | KENDO FILTERING                       |
| PayrollNote_Read   | (note fetch)      | QS Filtering... ?PayrollId            |
| PayrollNote_Create | (note fetch)      | POST OBJECT {existingPayrollId , pay} |

Author: Mike Nario

(I'm adding this page as a holding place to socialize the progress made thus far on the AllPay future state API work.)

#Notes from the future...



YOG JOSHI.com

See the child pages for details and progress updates...

**Preliminary Notes**

## Current Swagger Doc (work in progress)

This is the current AllPay proposed API document. Currently in Swagger format but I will convert to OpenApi 3.0 spec. [Swagger Doc](#)

---

### Preliminary Notes

Below are my notes thus far describing the current and future state of the AllPay API as it relates to a single site page...Payroll/Home.

The creation of an API for the Payroll Home page represents a first step towards extending the lifetime of the system and preparing for future enhancements.

---

## PAYROLL HOME PAGE (CURRENT)

KENDO FILTERING FORM DATA 'POST' REQUEST EXAMPLE:

```
sort=&page=1&pageSize=10&group=&FILTER=PAYGROUPID~EQ~3
```

'MAIN' (TOP LEVEL) FILTER:

```
'Company'
```

FILTER FETCH ENDPOINTS (PayrollController):

```
PayGroup_Read  
PayCalendarPeriodByPayGroup_Read  
PayRegion_Read  
PayCalendar_Read  
PayrollStatus_Read
```

QS URL EXAMPLE: [http://localhost:5000/Payroll/PayCalendarPeriodByPayGroup\\_Read?payGr](http://localhost:5000/Payroll/PayCalendarPeriodByPayGroup_Read?payGr)  
KENDO FILTERING (post)  
KENDO FILTERING (post)  
KENDO FILTERING (post)

PAGE 'POST' (AJAX) ENDPOINTS:

```
SavePayroll (grid checkboxes)
```

```
post object:  
{  
    Id: payrollId,  
    PayGroupId: payGroupId,  
    PayCalendarPeriodId: payCalendarPeriodId,  
    PayDayDate: payDayDate,  
    IsCompleted: false,  
    RegisterReviewByPayrollComplete: isReviewByPayroll,  
    RegisterReviewByLocationComplete: isReviewByLocation,  
    PayrollTypeId: payrollTypeId  
}
```

```
CompleteRegularPayroll (complete button)
```

```
post object  
{  
    PayrollId: payrollId  
}
```

```
RunPayrollRegular (run button)
```

```
post object  
{  
    Id: payrollId  
    PayrollTypeId: payrollTypeId,  
    PayGroupId: payGroupId,  
    PayCalendarPeriodId: payCalendarPeriodId,  
    PayDayDate: payDayDate,  
    PayPeriodBeginDate: payPeriodBeginDate,  
    PayPeriodEndDate: payPeriodEndDate,  
    BypassDataLoadCheck: bypassDataLoadCheck  
}
```

GRID ENDPOINTS:

```
Payroll_Read  
PayrollNote_Read  
PayrollNote_Create
```

(main grid fetch)  
(note fetch)  
(note fetch)

KENDO FILTERING  
QS Filtering... ?PayrollId  
POST OBJECT {existingPayrollId , pay}

QUESTION:

Is the notes feature (and table) used at all?

## POSSIBLE FUTURE STATE:

'MAIN' (TOP LEVEL) FILTER:

```
'Company'
```

Question:

Do we want to preserve the 'action' of the current filters? Or use in-line column header filtering instead?  
(answer: tbd)

FETCH (filters and main grid) 'GET' ENDPOINTS (PayrollController lookup schema fetches):

```

**returns all items OR single item (id optional)**

/Payroll{id}                                                 replaces legacy: Payroll_Read

/PayGroup{?d}                                                 replaces legacy: PayGroup_Read

/PayCalendarPeriod{?Id}
/PayCalendarPeriod{?PayGroupId}
/PayCalendarPeriod{?PayCalendarId}

/PayRegion{?Id}                                              replaces legacy: PayRegion_Read

/PayCalendar{?Id}                                             replaces legacy: PayCalendar_Read

/PayrollStatus{?Id}                                           replaces legacy: PayrollStatus_Read

```

QUERYSTRING OPTIONS : sort, limit, after, shape

#### QUESTION:

Should the url path based on current db schema? or heirarchical?  
 (answer, flat-ish but in accordance with OPENAPI spec)

#### PAGE 'PUT' (update) ENDPOINTS (Id Required) :

```

/Payroll?Id                                                 replaces leg

      put object:
      {
        Id: payrollId,
        PayGroupId: payGroupId,
        PayCalendarPeriodId: payCalendarPeriodId,
        PayDayDate: payDayDate,
        IsCompleted: false,
        RegisterReviewByPayrollComplete: isReviewByPayroll,
        RegisterReviewByLocationComplete: isReviewByLocation,
        PayrollTypeId: payrollTypeId
      }

```

QUERYSTRING OPTIONS : n/a

#### PAGE 'POST' (create/update) ENDPOINT (Id Required): Replaces RunPayrollRegular (run button)

*QUERYSTRING OPTIONS : n/a*

#### option1

```
/Payroll/?storeId&payCalendarPeriodId
```

#### option2

```
/Payroll/Run{?id}&storeId&payCalendarPeriodId (id optional...with id means re-run, no id means create)
```

#### option3

```
/Payroll/Commands/Run/{storeId}/{payCalendarPeriodId}
```

#### option4

```

/Payroll{?id}

      post object:
      {
        Command: run | rerun | adjust | reverse | cancel
      }

```

#### option5

```

/Payroll

      post object:
      {
        Id: 123456,
        Command: run | rerun | adjust | reverse | cancel
      }

```

#### OTHER GRID ENDPOINTS:

*QUERYSTRING OPTIONS : n/a*

#### GET

```

/Payroll?id&shape                                         replaces legacy: PayrollNote_Read   (note fetch) example: /Payroll?id=123456&shape=note
/Payroll/{id}/Notes/{id}                                    (proposed one-to-many fetch)

```

#### POST

#### option1

```

/Payroll/Note                                               replaces legacy: PayrollNote_Create

      post object:
      {

```

```
payrollId: 123456,  
note: 'this is a payroll note.'
```

additional global querystring parameters (implemented as needed):

```
{&sort}           response items sort columns (format tbd)  
{&top}            paging top (verify)  
{&limit}          paging limit (verify)  
{&after}          paging after (verify)  
  
{&shape}           (proposed) response column set. example: /PayGroup?id=123456&shape=%7Bid%2Cname%2Ccode%2Cdescription%7D  
                   returns only id, name, code, and description columns  
  
'(id,name,c
```

The Aging report (GET) endpoint is a Node/Express based Azure API function that calls the **orm.p\_Get\_Payroll\_Aging\_Report** stored procedure and returns a single JSON object (agingReport) that represents the various subreports (recordsets) returned by the sproc.

Example:

```
{  
    "TotalActiveStores": [  
        {  
            "Description": "Total # of Active Stores",  
            "Count": 534  
        },  
        {  
            "Description": "Total # of Active Stores Processing Payroll",  
            "Count": 14  
        }  
    ],  
    "PayrollCyclesProcessedWithAllPay": [  
        {  
            "Description": "Total # of Off-Cycle Payroll Runs Processed:",  
            "Count": 188  
        },  
        {  
            "Description": "Total # of On-Cycle Payroll Runs Processed:",  
            "Count": 510  
        }  
    ],  
    "PayrollManualChecksProcessed": [  
        {  
            "Description": "Manual - New",  
            "Count": 26  
        },  
        {  
            "Description": "Manual - Termination",  
            "Count": 25  
        },  
        {  
            "Description": "Manual - Adjustment",  
            "Count": 25  
        },  
        {  
            "Description": "Manual - Reverse",  
            "Count": 4  
        }  
    ],  
    "TotalNumberOfPayrollRunsProcessed": [  
        {  
            "PayrollMonth": "January, 2022",  
            "TotalPayrollRunsProcessed": 2  
        },  
        {  
            "PayrollMonth": "February, 2022",  
            "TotalPayrollRunsProcessed": 4  
        },  
        {  
            "PayrollMonth": "March, 2022",  
            "TotalPayrollRunsProcessed": 11  
        },  
        {  
            "PayrollMonth": "April, 2022",  
            "TotalPayrollRunsProcessed": 9  
        }  
    ],  
    "PayrollProcessingRunTime": [  
        {  
            "PayrollId": "697",  
            "PayGroupId": "14",  
            "SourceDataLoaded": "2022-01-31T00:00:00.000Z",  
            "RunDate": "2022-01-31T00:00:00.000Z",  
            "CompleteDate": null,  
            "DaysToCompletePayrollRun": null  
        },  
        {  
            "PayrollId": "698",  
            "PayGroupId": "14",  
            "SourceDataLoaded": "2022-01-31T00:00:00.000Z",  
            "RunDate": "2022-01-31T00:00:00.000Z",  
            "CompleteDate": null,  
            "DaysToCompletePayrollRun": null  
        },  
        {  
            "PayrollId": "700",  
            "PayGroupId": "8",  
            "SourceDataLoaded": "2022-02-02T00:00:00.000Z",  
            "RunDate": "2022-02-03T00:00:00.000Z",  
            "CompleteDate": null,  
            "DaysToCompletePayrollRun": null  
        }  
    ]  
}
```

```
"CompleteDate": "2022-02-03T00:00:00.000Z",
"DaysToCompletePayrollRun": 0
},
{
    "PayrollId": "704",
    "PayGroupId": "68",
    "SourceDataLoaded": "2022-02-09T00:00:00.000Z",
    "RunDate": "2022-02-09T00:00:00.000Z",
    "CompleteDate": "2022-02-09T00:00:00.000Z",
    "DaysToCompletePayrollRun": 0
},
{
    "PayrollId": "705",
    "PayGroupId": "35",
    "SourceDataLoaded": "2022-02-09T00:00:00.000Z",
    "RunDate": "2022-02-09T00:00:00.000Z",
    "CompleteDate": "2022-02-09T00:00:00.000Z",
    "DaysToCompletePayrollRun": 0
},
{
    "PayrollId": "708",
    "PayGroupId": "14",
    "SourceDataLoaded": "2022-02-22T00:00:00.000Z",
    "RunDate": "2022-03-11T00:00:00.000Z",
    "CompleteDate": "2022-03-10T00:00:00.000Z",
    "DaysToCompletePayrollRun": -1
},
{
    "PayrollId": "717",
    "PayGroupId": "90",
    "SourceDataLoaded": "2022-03-07T00:00:00.000Z",
    "RunDate": "2022-03-07T00:00:00.000Z",
    "CompleteDate": "2022-03-07T00:00:00.000Z",
    "DaysToCompletePayrollRun": 0
},
{
    "PayrollId": "734",
    "PayGroupId": "14",
    "SourceDataLoaded": "2022-03-17T00:00:00.000Z",
    "RunDate": "2022-03-21T00:00:00.000Z",
    "CompleteDate": "2022-03-21T00:00:00.000Z",
    "DaysToCompletePayrollRun": 0
},
{
    "PayrollId": "736",
    "PayGroupId": "220",
    "SourceDataLoaded": "2022-03-18T00:00:00.000Z",
    "RunDate": "2022-03-18T00:00:00.000Z",
    "CompleteDate": "2022-03-18T00:00:00.000Z",
    "DaysToCompletePayrollRun": 0
},
{
    "PayrollId": "737",
    "PayGroupId": "96",
    "SourceDataLoaded": "2022-03-18T00:00:00.000Z",
    "RunDate": "2022-03-18T00:00:00.000Z",
    "CompleteDate": "2022-03-18T00:00:00.000Z",
    "DaysToCompletePayrollRun": 0
},
{
    "PayrollId": "753",
    "PayGroupId": "96",
    "SourceDataLoaded": "2022-03-23T00:00:00.000Z",
    "RunDate": "2022-03-24T00:00:00.000Z",
    "CompleteDate": "2022-03-24T00:00:00.000Z",
    "DaysToCompletePayrollRun": 0
},
{
    "PayrollId": "757",
    "PayGroupId": "96",
    "SourceDataLoaded": "2022-03-24T00:00:00.000Z",
    "RunDate": "2022-03-24T00:00:00.000Z",
    "CompleteDate": "2022-03-24T00:00:00.000Z",
    "DaysToCompletePayrollRun": 0
},
{
    "PayrollId": "764",
    "PayGroupId": "74",
    "SourceDataLoaded": "2022-03-25T00:00:00.000Z",
    "RunDate": "2022-04-28T00:00:00.000Z",
    "CompleteDate": "2022-04-28T00:00:00.000Z",
    "DaysToCompletePayrollRun": 0
},
{
    "PayrollId": "767",
    "PayGroupId": "245",
    "SourceDataLoaded": "2022-04-04T00:00:00.000Z",
    "RunDate": "2022-04-04T00:00:00.000Z",
    "CompleteDate": "2022-04-04T00:00:00.000Z",
    "DaysToCompletePayrollRun": 0
},
{
    "PayrollId": "768",
    "PayGroupId": "245",
    "SourceDataLoaded": "2022-04-04T00:00:00.000Z",
    "RunDate": "2022-04-05T00:00:00.000Z",
    "CompleteDate": "2022-04-05T00:00:00.000Z",
    "DaysToCompletePayrollRun": 0
},
{
    "PayrollId": "769",
    "PayGroupId": "245",
    "SourceDataLoaded": "2022-04-04T00:00:00.000Z",
    "RunDate": "2022-04-04T00:00:00.000Z",
    "CompleteDate": "2022-04-04T00:00:00.000Z",
    "DaysToCompletePayrollRun": 0
}
```

```

        "DaysToCompletePayrollRun": 0
    },
    {
        "PayrollId": "771",
        "PayGroupId": "14",
        "SourceDataLoaded": "2022-04-06T00:00:00.000Z",
        "RunDate": "2022-04-06T00:00:00.000Z",
        "CompleteDate": "2022-04-06T00:00:00.000Z",
        "DaysToCompletePayrollRun": 0
    },
    {
        "PayrollId": "773",
        "PayGroupId": "96",
        "SourceDataLoaded": "2022-04-07T00:00:00.000Z",
        "RunDate": "2022-04-07T00:00:00.000Z",
        "CompleteDate": "2022-04-07T00:00:00.000Z",
        "DaysToCompletePayrollRun": 0
    },
    {
        "PayrollId": "804",
        "PayGroupId": "74",
        "SourceDataLoaded": "2022-04-28T00:00:00.000Z",
        "RunDate": "2022-04-28T00:00:00.000Z",
        "CompleteDate": "2022-04-28T00:00:00.000Z",
        "DaysToCompletePayrollRun": 0
    }
],
"TotalActivePayPlans": [
    {
        "PayPlan": "Employee",
        "ActivePayPlansCount": 5314
    }
]
}

```

It accepts a single query string parameter (?lookbackdays) that represents the amount of days to look 'back' for the data fetch.

The full deployed URL will be... <https://dev.allpay.lithiainc.com/services/api/metrics/payroll/aging?lookbackdays=1000>.

Raw queries are located here [https://dev.azure.com/LithiaMotors/Advanced%20Incentive%20Program/\\_wiki/wikis/Advanced-Incentive-Program.wiki/2941/KPI-Script](https://dev.azure.com/LithiaMotors/Advanced%20Incentive%20Program/_wiki/wikis/Advanced-Incentive-Program.wiki/2941/KPI-Script)

The (original) output of the information for the Payroll Run Aging Report (manual first run)

[https://dev.azure.com/LithiaMotors/Advanced%20Incentive%20Program/\\_wiki/wikis/Advanced-Incentive-Program.wiki/2946/Payroll-Run-Aging-Report](https://dev.azure.com/LithiaMotors/Advanced%20Incentive%20Program/_wiki/wikis/Advanced-Incentive-Program.wiki/2946/Payroll-Run-Aging-Report)

Swagger Doc [https://dev.azure.com/LithiaMotors/Advanced%20Incentive%20Program/\\_wiki/wikis/Advanced-Incentive-Program.wiki/3672/Swagger-Doc-\(WIP\)](https://dev.azure.com/LithiaMotors/Advanced%20Incentive%20Program/_wiki/wikis/Advanced-Incentive-Program.wiki/3672/Swagger-Doc-(WIP))

BASE DEVELOP URL <https://dev.allpay.lithiainc.com/services/api>

'TUNDRA' REPO [https://dev.azure.com/LithiaMotors/Advanced%20Incentive%20Program/\\_git/TUNDRA-API](https://dev.azure.com/LithiaMotors/Advanced%20Incentive%20Program/_git/TUNDRA-API)

*The following defines the base API schema (inputs, return data, definitions, etc.) but it's incomplete (and a wip) in terms of what's available in the full Open API spec (security schemas, etc.).*

```

openapi: 3.0.1
info:
  title: Aging report endpoint
  description: |
    Node endpoint to return Aging report JSON data object.
  termsOfService: http://swagger.io/terms/
  contact:
    email: admin@lithia.com
  license:
    name: Apache 2.0
    url: http://www.apache.org/licenses/LICENSE-2.0.html
  version: 1.0.0
  externalDocs:
    description: Find out more about Swagger
    url: http://swagger.io
paths:
  /metrics/payroll/aging:
    get:
      tags:
        - lookbackdays
      summary: Fetch aging report
      description: Fetch aging report
      operationId: getAgingReport
      parameters:
        - name: lookbackdays
          in: query
          description: Days to
          schema:
            type: integer
      responses:
        200:
          description: Fetch Successfull
          content:
            application/json:
              schema:
                type: array
                items:
                  $ref: '#/components/schemas/agingReport'
        404:
          description: Not Found
          content: {}
  security:
    - APIKeyHeader: []
components:
  schemas:
    totalActiveStores:
      type: object

```

```

properties:
  Description:
    type: string
  Count:
    type: integer
payrollCyclesProcessedWithAllPay:
  type: object
  properties:
    Description:
      type: string
    Count:
      type: integer
payrollManualChecksProcessed:
  type: object
  properties:
    Description:
      type: string
    Count:
      type: integer
totalNumberOfPayrollRunsProcessed:
  type: object
  properties:
    PayrollMonth:
      type: string
    TotalPayrollRunsProcessed:
      type: integer
payrollProcessingRunTime:
  type: object
  properties:
    PayrollId:
      type: integer
    PayGroupId:
      type: integer
    SourceDataLoaded:
      type: string
    RunDate:
      type: string
    CompleteDate:
      type: string
    DaysToCompletePayrollRun:
      type: integer
totalPayrollRunsPerMonth:
  type: object
  properties:
    AverageDaysToProcessPayroll:
      type: integer
totalActivePayPlans:
  type: object
  properties:
    PayPlan:
      type: string
    ActivePlanCount:
      type: integer
agingReport:
  type: object
  properties:
    TotalActiveStores:
      type: array
      items:
        $ref: "#/components/schemas/totalActiveStores"
PayrollCyclesProcessedWithAllPay:
  type: array
  items:
    $ref: "#/components/schemas/payrollCyclesProcessedWithAllPay"
PayrollManualChecksProcessed:
  type: array
  items:
    $ref: "#/components/schemas/payrollManualChecksProcessed"
TotalNumberOfPayrollRunsProcessed:
  type: array
  items:
    $ref: "#/components/schemas/totalNumberOfPayrollRunsProcessed"
PayrollProcessingRunTime:
  type: array
  items:
    $ref: "#/components/schemas/payrollProcessingRunTime"
TotalPayrollRunsPerMonth:
  type: array
  items:
    $ref: "#/components/schemas/totalPayrollRunsPerMonth"
TotalActivePayPlans:
  type: array
  items:
    $ref: "#/components/schemas/totalActivePayPlans"
securitySchemes:
  APIKeyHeader:
    type: apiKey
    name: X-API-Key
    in: header
  APIKeyQueryParam:
    type: apiKey
    name: api_key
    in: query
servers:
  # Added by API Auto Mocking Plugin
  - description: SwaggerHub API Auto Mocking
    url:

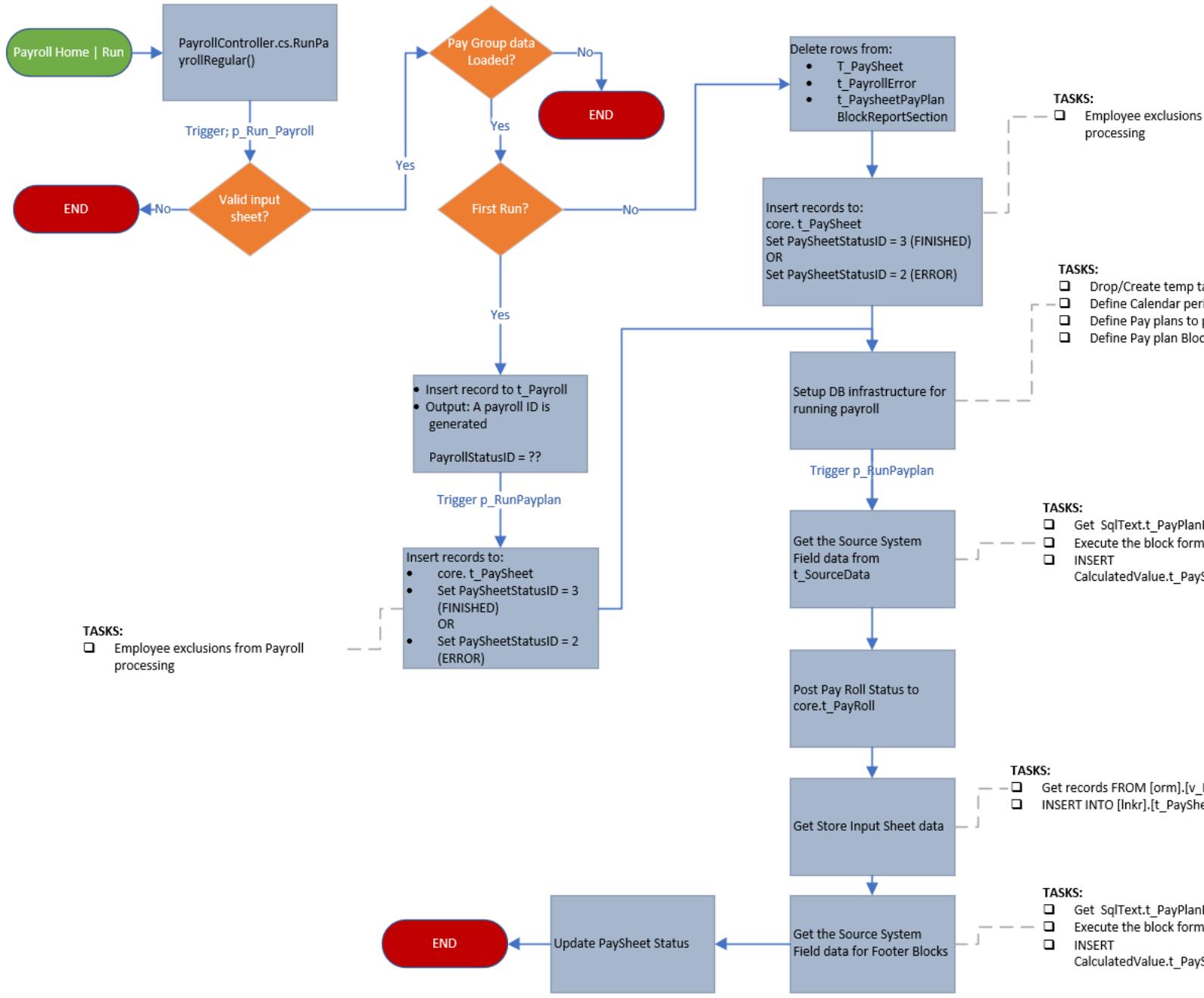
```

- [Objective](#)
- [Payroll Processing Workflow](#)
- [Database Diagram](#)

## Objective

- Generate payroll data
- Post payroll processing status
- Generate pay sheet data
- Process pay sheet data
- Post reporting records

## Payroll Processing Workflow



## ##Database Tables

### Table

core.t\_Payroll  
 core.t\_PayrollError  
 core.t\_PaySheet  
 core.t\_PayPlanBlock  
 core.t\_AdjustmentSheetData  
 lnkr.t\_PaySheetPayPlanBlock  
 lnkr.t\_PaysheetPayPlanBlockSourceDataValue  
 lnkr.t\_PaysheetPayPlanBlockReportSection

### Usage

A record indicating payroll is processing for the selected Company and Pay Period End Date  
 A record of validation errors found when processing payroll  
 A record of the pay plans processed for a pay roll cycle  
 A record of every formula associated to an Employee Pay Plan.  
 A table to define employee's that are excluded from payroll processing for a selected company and pay period end date.  
 A record of the calculated value for the source system field.  
 A record tracking the value used in calculating the payout for each incentive (formula block) tied to a pay plan.(i.e. Source Field).  
 A historical record for each pay plan where a pay sheet and pay plan block was generated for a specific Pay Period End Date.  
 A record of an employee's termination check for a selected company and pay period end date.

## ##Business Rules

- What are the business rules for generating pay sheet records?

- Employee's with a termination check record are excluded from pay roll for the selected company and pay period end date.
- Employee's with payroll exclusion record will be ignored for the selected company and pay period end date.

## View Usage

Views Used to render page data to Payroll Home

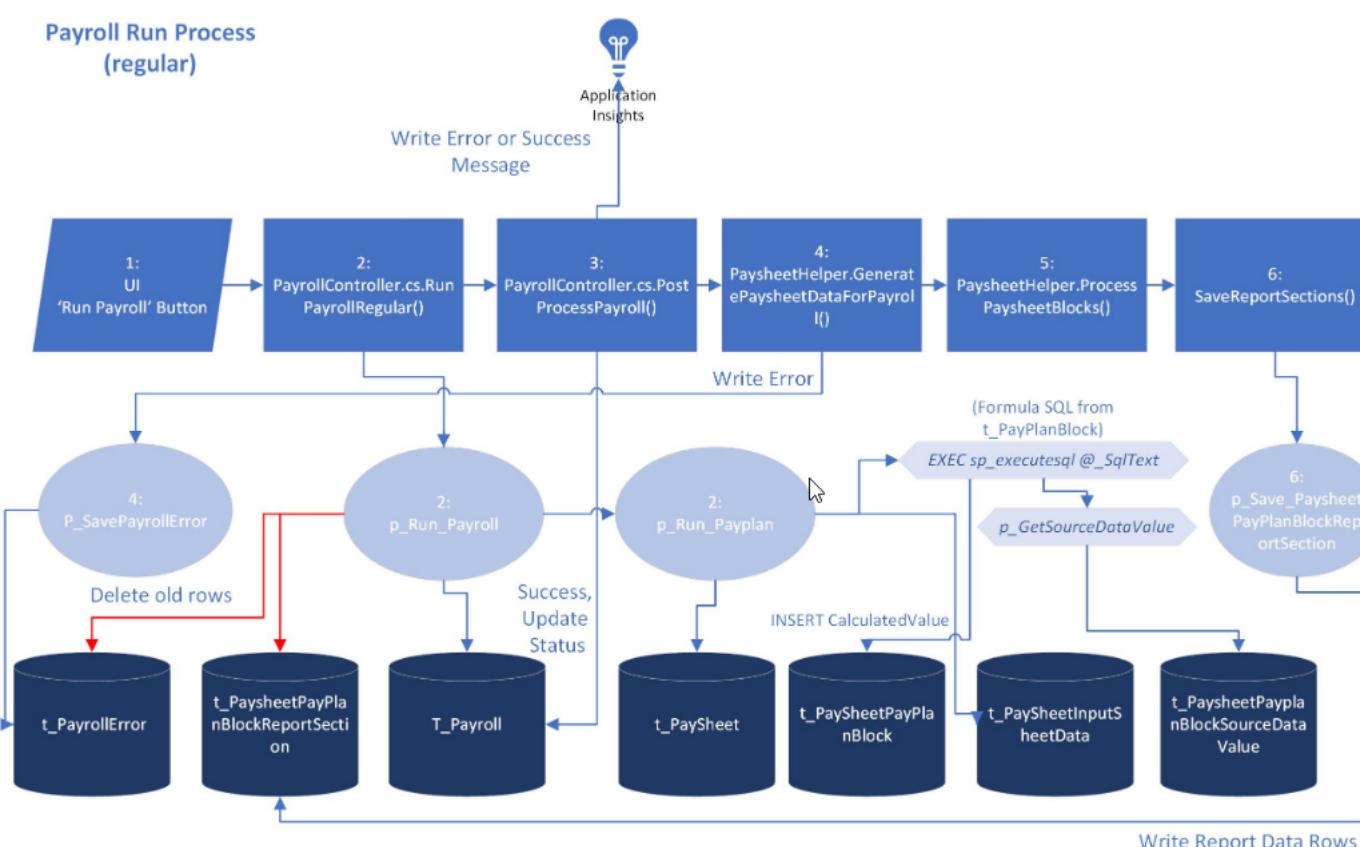
##Functional Components

| Step Component                              | Trigger                                      | Action Result   |
|---|--|---|
| 1. PayrollController.cs.RunPayrollRegular   | User selects RUN from the Payroll Home page. | p_Run_Payroll is executed   |
| 2.a p_Run_Payroll                           | cs.RunPayrollRegular                         | <ul style="list-style-type: none"> <li>A record is added to [core.t_Payroll] for the Company (Pay Group) and Pay Period End Date being processed.</li> <li>Reprocessing a Pay Group will delete the records from: [core.t_PayrollError]</li> </ul>  |
| 3. PayrollController.cs.PostProcessPayroll  | p_Run_Payroll ends                           | Update [core].[t_Payroll].[PayrollStatusID] when processing is complete.<br>2 = Processing<br>3 = Error   |
| 2.b p_Run_PayPlan                           | p_Run_Payroll                                | <ul style="list-style-type: none"> <li>Pay Sheet records are added to [core].[PaySheet] for each pay plan that's processed during payroll. Generate Pay Sheet data</li> <li>The value for each source field variable is defined ((formula block) and rows are inserted into [lnkr].[t_PaysheetPayPlanBlockSourceDataValue]</li> </ul> |
| 4. Helper: GeneratePaysheetDataforPayroll() | Payroll validation fails                     | Error records are added to [core].[t_PayrollError]  |
| 5. Helper: ProcessPaysetBlocks()            | Payroll processing is successful             | The payouts for the incentives are calculated   |
| 6. SaveReportSection                        |  | A record is written to lnkr.t_PaysheetPayPlanBlockReportSection.  |

##Code Summary

- [Payroll Process Code Outline](#)

## Database Diagram



The following matrix outlines the potential actions that can be taken when processing payroll.

## Payroll Lifecycle

| Type/Status  | Possible Actions on Original Check   | Possible Actions on Adjustment Check  |
|--|--|---|
| Original/Complete  | <ul style="list-style-type: none"> <li>Reverse</li> <li>Creates Reversed/Preliminary check</li> </ul>  |   |
| Original/Complete Adjustment                               | <ul style="list-style-type: none"> <li>Reversed/Preliminary</li> <li>Adjustment/Preliminary checks</li> </ul>  | N/A   |
| Original/Complete Reversed/Preliminary                     | <ul style="list-style-type: none"> <li>Complete</li> <li>Sets Reversed/Preliminary check to Reversed/Complete</li> <li>Unreverse</li> <li>Deletes Reversed/Preliminary check</li> </ul>  |   |
| Adjustment Status: Preliminary                             | <ul style="list-style-type: none"> <li>Complete</li> <li>Rerun</li> <li>Delete</li> </ul>  | Same as actions on Original Check   |
| Original/Complete Reversed/Complete Adjustment/Preliminary | <p>Complete</p> <ul style="list-style-type: none"> <li>Sets Adjustment/Preliminary check to Adjustment/Complete</li> </ul> <p>Delete</p> <ul style="list-style-type: none"> <li>Deletes Adjustment/Preliminary check</li> </ul> <p>Rerun</p> <ul style="list-style-type: none"> <li>Allows user to rerun the Adjustment/Preliminary check. No status change occurs.</li> </ul> | Same as actions on Original Check   |
| Original/Complete Reversed/Complete Adjustment/Complete    | N/A (no more actions can be performed on the original check)   | <p>Reverse</p> <ul style="list-style-type: none"> <li>Creates Reversed/Preliminary check</li> </ul> <p>Adjustment</p> <ul style="list-style-type: none"> <li>Creates both Reversed/Preliminary and Adjustment/Preliminary checks</li> </ul> |

## Payroll Processing Audit Tracking

Feature: [Payroll Processing Audit: Collect metrics for tracking time to complete payroll tasks](#)

- [Payroll Processing Audit Tracking](#)
  - [Objective](#)
  - [Payroll Tasks](#)
  - [Technical Information](#)

### Objective

Provide the Business Functional Team with the ability to report on and understand performance metrics centered around payroll and payroll processing. When a specific task is executed, a record is created identifying the task, who executed the task and when was the task triggered (*See Payroll Tasks below*).

##Database Tables

| Table                  | Usage   |
|------------------------|---|
| lkup.t_Event           | A lookup table listing the event descriptions used for payroll tracking   |
| lnkr.t_EventLog        | A table used to track an Event was triggered  |
| lnkr.t_PayrollEventLog | A table used to link an event to a payroll (i.e. core.t_Payroll.id). Until the ID is written to the database, the Pay Group & PPE are the unique identifiers for an event record. |

##Sample Query

```
SELECT EventLogid, Eventid, EventName, EL.Createdbyusername, EL.createdtimestamputc, paygroupid, paycalendarperiodid, payrollid FROM lkup.t_Event E, lnkr.t_EventLog EL, lnkr.t_PayrollEventLog PEL WHERE e.id = EL.EventID AND el.id = PEL.ID AND payrollid = 4817 --Update the payroll id to alter the result set order by el.createdtimestamputc asc
```

##Look-up Values

Values for logging ETL events are hard coded |ID|Event Name|---|Payroll Run|Payroll Re-Run|#95096\_|Store Input Sheet Submitted|Store Input Sheet Unlocked|Adjustments Submitted|Adjustments Unlocked|Register Review Payroll|Register Review Company|Payroll Completed

The Event Name for each ETL event is hardcoded in the p\_Insert\_PayrollEventLog stored procedure.

### View Usage

TBD Used to render the payroll audit history to the Payroll Home page

##Functional Components

Most of the audit events detailed in the wiki are already available in the Payroll database. We should be able to create an efficient query/view that will display the events for each payroll in the UI. However, there are certain events for which we do not have a reliable "source of truth", such as when a payroll is re-run. The "UpdatedTimeStamp" column value could refer to any event where columns are updated. For these events, we can create an application method that can be invoked whenever one of these tasks, such as "Register Review Company", is successfully completed and log it to a new table in the database.

1. Task Audit via Query to Existing Data Schedule 64 Uploaded Schedule 70 Uploaded RTH Booked Uploaded RTH Closed Uploaded Adjustments Submitted Timecard File Uploaded
2. Task Audit via logging method/table Payroll run - New Payroll run - Re-run Store Input Sheet Submitted Store Input Sheet Unlocked Adjustments Unlocked Register Review Payroll Register Review Company Payroll Completed

These tasks are saved in t\_EventLog and t\_PayrollEventLog tables.

| Step Component              | Trigger                          | Action Result  |
|-----------------------------|----------------------------------|--|
| 1. p_Insert_EventLog        | User or System triggers an event | A row is written to the lnkr tables referenced above. Only All Pay events are logged in this table. See the <a href="#">Payroll Tasks</a> table for a comprehensive list of ETL and All Pay tasks. |
| 2. p_Insert_PayrollEventLog | User or System triggers an event | A row is written to the lnkr tables referenced above.  |

## Payroll Tasks

| Payroll Task                | Trigger Condition   | App | ETL Data source        | TriggeredTimeStamp | TriggeredBy       | Payroll Task                |
|-----------------------------|---|-----|------------------------|--------------------|-------------------|-----------------------------|
| Payroll run - New           | When a new payroll is run   | X   | core.t_Payroll         | CreatedTimestamp   | CreatedByUserName | Payroll run                 |
| Payroll run - Re-run        | When a payroll is re-run  | X   | core.t_Payroll         | UpdatedTimestamp   | UpdatedByUserName | Payroll re-run              |
| Schedule 64 Uploaded        | Whenever Sch 64 data is loaded for a given PayGroupId. SourceSystemID is 11. Complete status is 1   | X   | etl.t_PayGroupDataLoad | CreatedTimestamp   | CreatedByUserName | Schedule 64 Uploaded        |
| Schedule 70 Uploaded        | Whenever Sch 70 data is loaded for a given PayGroupId. SourceSystemID is 13. Complete status is 1   | X   | etl.t_PayGroupDataLoad | CreatedTimestamp   | CreatedByUserName | Schedule 70 Uploaded        |
| RTH Booked Uploaded         | Whenever RTH Booked data is loaded for a given PayGroupId. SourceSystemID is 41. Complete status is 1   | X   | etl.t_PayGroupDataLoad | CreatedTimestamp   | CreatedByUserName | RTH Booked Uploaded         |
| RTH Closed Uploaded         | Whenever RTH Closed data is loaded for a given PayGroupId. SourceSystemID is 40. Complete Status is 1   | X   | etl.t_PayGroupDataLoad | CreatedTimestamp   | CreatedByUserName | RTH Closed Uploaded         |
| Store Input Sheet Submitted | Whenever InputSheetStatusId is changed to 2 and the UpdatedTimestamp value is updated for a given input sheet ID  | X   | core.t_InputSheet      | UpdatedTimestamp   | UpdatedByUserName | Store Input Sheet Submitted |
| Store Input Sheet Unlocked  | Whenever InputSheetStatusId is changed to 3 and the UpdatedTimestamp value is updated for a given input sheet ID  | X   | core.t_InputSheet      | UpdatedTimestamp   | UpdatedByUserName | Store Input Sheet Unlocked  |
| Adjustments Submitted       | Whenever AdjustmentSheetStatusId is changed to 2 and the UpdatedTimestamp value is updated for a given input sheet ID   | X   | core.t_AdjustmentSheet | CreatedTimestamp   | UpdatedByUserName | Adjustments Submitted       |
| Adjustments Unlocked        | Whenever AdjustmentSheetStatusId is changed to 3 and the UpdatedTimestamp value is updated for a given input sheet ID   | X   | core.t_AdjustmentSheet | CreatedTimestamp   | UpdatedByUserName | Adjustments Unlocked        |
| Timecard File Uploaded      | Data is loaded at an employee level for timecard data. If one or more rows exist for a given store ID + Pay Calendar Period ID + Max(LoadID), then time card data is considered as available. | X   | etl.ETLDBTimeCard      | CreatedTimestamp   | CreatedByUserName | File Uploaded               |
| Register Review Payroll     | Whenever RegisterReviewByPayrollComplete value is updated to 1.   | X   | core.t_Payroll         | UpdatedTimestamp   | UpdatedByUserName | Register Review Payroll     |
| Register Review Company     | Whenever RegisterReviewByLocationComplete value is updated to 1.  | X   | core.t_Payroll         | UpdatedTimestamp   | UpdatedByUserName | Register Review Company     |
| Payroll Completed           | Whenever PayrollStatusId is updated to 5 and CompeteTimestamp is updated.   | X   | core.t_Payroll         | CompleteTimestamp  | UpdatedByUserName | Payroll Completed           |

## Technical Information

#Objective The off-cycle check process creates a one-time, off-cycle paycheck for an employee outside of the normal payroll cycle.

#System Definition An off-cycle check is comprised of a single payroll database record and a single associated paysheet database record. The term “off-cycle check” and “off-cycle payroll” are synonymous.

### #Off Cycle Scenarios

The following processes requires the ability to produce an off-cycle check:

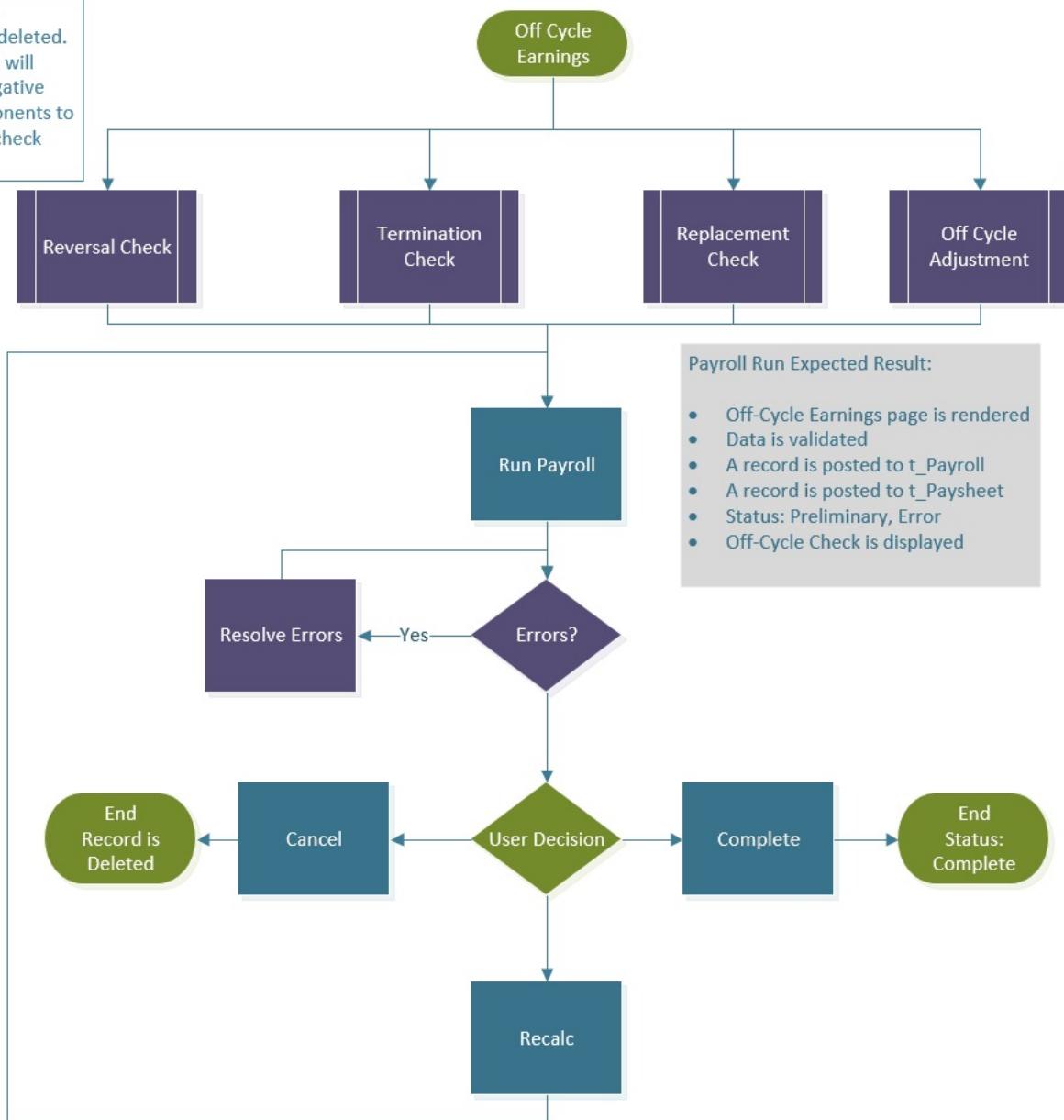
- Replacement:** A replacement off-cycle check can be generated at any time.
- Termination:** Upon employee termination, earnings from all pay periods that have not yet been closed need to be calculated in order to be paid on an employee’s final checks. An off-cycle check is generated in the same way as a Replacement Check, except the user specifies a termination date and the pay period end date is changed to match that termination date when the pay plan blocks are calculated.
- Reverse:** A check can be reversed in case of erroneous issuance. Each pay sheet pay plan block value in the original pay sheet will have offsetting value in the reversal pay sheet. When added together, the original and reversal pay sheets will total zero. In cases of overpayment, a Reversal and a Replacement off-cycle check would be processed.
- Adjustment:** An adjustment check accommodates for scenarios where a check needs to be reissued if the employee is due additional earnings.

#Off-Cycle Earnings Functions The following table outlines the functions behind each type of off-cycle checked processed through All Pay.

| Check Type      | Preliminary Status | Action        | Complete Status | Actions |
|-----------------|--------------------|---------------|-----------------|---------|
| New/Replacement | - Complete         | - Reverse     |                 |         |
|                 | - Recalc           | - Adjustment  |                 |         |
|                 | - Cancel           | - Un-Complete |                 |         |
| Termination     | - Complete         | - Reverse     |                 |         |
|                 | - Recalc           | - Adjustment  |                 |         |
|                 | - Cancel           | - Un-Complete |                 |         |
| Adjustment      | - Complete         |               |                 |         |
|                 | - Recalc           | - Un-Complete |                 |         |
|                 | - Cancel           |               |                 |         |
| Reverse         | - Complete         | - Reverse     |                 |         |
|                 | - Recalc           | - Adjustment  |                 |         |
|                 | - Cancel           |               |                 |         |

**Reverse:** Once a check is completed, it cannot be deleted. It can be reversed, and it will create a check of the negative values of the plan components to cancel out the previous check that was calculated.

**Adjustment:** Once completed, it can be An adjustment can be made to the check. The check load with the prior values will be if needed.



- [Adjustment Check](#)
  - [Business Objective](#)
  - [Business Process](#)
  - [User Personas](#)
  - [Use Cases](#)
  - [Functions](#)
  - [User Experience](#)

## Adjustment Check

### Business Objective

### Business Process

- Onboarding
- Process Management

The following tasks support the \_\_\_\_\_.

- 

### User Personas

## Use Cases

1.

### Functions

#### Function Spec Link

### User Experience

- [Replacement Check](#)
  - [Business Objective](#)
  - [Business Process](#)
  - [User Personas](#)
  - [Use Cases](#)
  - [Functions](#)
  - [User Experience](#)

## Replacement Check

### Business Objective

### Business Process

- Onboarding
- Process Management

The following tasks support the \_\_\_\_\_.

- 

### User Personas

1.

### Use Cases

1.

### Functions

#### Function Spec Link

### User Experience

- [Termination Check](#)
  - [Business Objective](#)
  - [Business Process](#)
  - [User Personas](#)
  - [Use Cases](#)
  - [Functions](#)
  - [User Experience](#)

## Termination Check

### Business Objective

To process an employee's final pay check. The earnings for all pay periods that aren't closed, need to be calculated in order to be paid on an employee's final checks.

### Business Process

- Onboarding
- Process Management

The following tasks support the \_\_\_\_\_.

- The user processes a separate off-cycle check for each open pay period. This could include more than one pay period depending on the date of the termination and the details of the employee's pay plan.

**Question:** How does the Payroll Specialist get the list of open pay periods?

### User Personas

1.

### Use Cases

1.

## Functions

[Function Spec Link](#)

## User Experience

##Functional Requirement

- The user will specify a termination date, and if that date is earlier than the pay period's end date, the pay period's end date will be changed to the termination date for payroll processing.
- Termination checks are not based on any previous data. The user will enter values into input controls for each value:
- Combining multiple pay periods outside of the current pay period when processing termination checks.

### • [Reversal Check](#)

- [Business Objective](#)
- [Business Process](#)
- [User Personas](#)
- [Use Cases](#)
- [Functions](#)
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## Reversal Check

### Business Objective

### Business Process

- Onboarding
- Process Management

The following tasks support the \_\_\_\_\_.

- 

### User Personas

- 1.

### Use Cases

- 1.

### Functions

[Function Spec Link](#)

## User Experience

## Objective

- 

## Business Process

- On Cycle Payroll Processing

## Use Cases

- Manage Pay Calendars (CrUD)

## User Scenarios

- Create pay calendars
- Edit pay calendars
- Delete pay calendars

## Functions

- Create pay calendars
- Edit pay calendars
- Delete pay calendars

| Metadata            | Description | Business Usage | Business Rule | Expected Results | Notes |
|---------------------|-------------|----------------|---------------|------------------|-------|
| Calendar            |             |                |               |                  |       |
| Pay Period End Date |             |                |               |                  |       |

| Metadata                | Description | Business Usage | Business Rule | Expected Results | Notes |
|-------------------------|-------------|----------------|---------------|------------------|-------|
| Pay Period Begin Date   |             |                |               |                  |       |
| Pay Day                 |             |                |               |                  |       |
| Accounting Month        |             |                |               |                  |       |
| Accounting Begin Date   |             |                |               |                  |       |
| Accounting End Date     |             |                |               |                  |       |
| Commission Begin Date   |             |                |               |                  |       |
| Commission End Date     |             |                |               |                  |       |
| Calculation Period Type |             |                |               |                  |       |

## Persona's

| Calendar     | Pay Period Begin Date | Pay Period End Date | Pay Day Date | Accounting Month | Accounting Month Begin Date | Accounting Month End Date | Commission Month Begin Date | Commission Month End Date | Calculation |
|--------------|-----------------------|---------------------|--------------|------------------|-----------------------------|---------------------------|-----------------------------|---------------------------|-------------|
| Weekly       | 01/22/2023            | 01/28/2023          | 02/03/2023   | 01/2023          | 01/01/2023                  | 01/28/2023                | 01/01/2023                  | 01/31/2023                | Always, Cu  |
| Weekly       | 01/15/2023            | 01/21/2023          | 01/27/2023   | 01/2023          | 01/01/2023                  | 01/28/2023                | 01/01/2023                  | 01/31/2023                | Always      |
| Bi-Weekly    | 01/08/2023            | 01/21/2023          | 01/27/2023   | 01/2023          | 12/25/2022                  | 01/21/2023                | 01/01/2023                  | 01/31/2023                | Always, Cu  |
| Semi-monthly | 01/01/2023            | 01/15/2023          | 01/25/2023   | 01/2023          | 01/01/2023                  | 01/31/2023                | 12/01/2022                  | 12/31/2022                | Always, Pri |
| Weekly       | 01/08/2023            | 01/14/2023          | 01/20/2023   | 01/2023          | 01/01/2023                  | 01/28/2023                | 01/01/2023                  | 01/31/2023                | Always      |
| BiWeekly Wk2 | 01/01/2023            | 01/07/2023          | 01/13/2023   | 01/2023          | 12/25/2022                  | 01/21/2023                | 01/01/2023                  | 01/31/2023                |             |
| Bi-Weekly    | 12/25/2022            | 01/07/2023          | 01/13/2023   | 01/2023          | 12/25/2022                  | 01/21/2023                | 01/01/2023                  | 01/31/2023                | Always, Pri |
| Weekly       | 01/01/2023            | 01/07/2023          | 01/13/2023   | 01/2023          | 01/01/2023                  | 01/28/2023                | 12/01/2022                  | 12/31/2022                | Always, Pri |
| Weekly       | 12/25/2022            | 12/31/2022          | 01/06/2023   | 12/2022          | 11/27/2022                  | 12/31/2022                | 12/01/2022                  | 12/31/2022                | Always, Cu  |
| Semi-monthly | 12/16/2022            | 12/31/2022          | 01/10/2023   | 12/2022          | 12/01/2022                  | 12/31/2022                | 12/01/2022                  | 12/31/2022                | Always, Cu  |

[Navigation icons] Page 1 of 31 [Next] [Last] items per page

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Version: 1.15.2

- [Bulk Processing Payroll Tasks](#)
  - [Business Objective](#)
  - [Business Process](#)
  - [User Personas](#)
  - [Use Cases](#)
  - [Functions](#)
  - [User Experience](#)

## Bulk Processing Payroll Tasks

### Business Objective

- Provide Senior Payroll Specialists with the ability to process payroll processing tasks by Region.

##Use Case:

#76462 #94118 #82772

### Business Process

The following business processes are supported by this functionality:

- Payroll Processing

### User Personas

- Senior Payroll Specialist

## Use Cases

The following supports the execution or completion of a payroll processing task. When executed, payroll tasks are processed in bulk by Pay Group Region and Pay Period End date.

- Generate Store Input Sheet Records
- Complete Payroll

## Future Bulk Processing Tasks

- Bulk inserting Pay Calendar
- Bulk Loading Adjustment Data

## Functions

### Function              Functional Spec Link

Execute Payroll Task [Func Spec: Run Payroll Processing Task](#)

## User Experience

The screenshot shows the 'Supervisor Tasks' tab selected in the top navigation bar. The main content area is titled 'Payroll File Upload'. It contains fields for 'Pay Calendar', 'Pay Period End Date', 'Accounting Month Date', and a 'Upload Timecard' section with a 'Select File' button. Below this is another section titled 'Payroll Processing Tasks' with fields for 'Pay Period End Date', 'Pay Group Region', and 'Task', each with dropdown menus, followed by a 'RUN' button.

##Objective This page outlines the detailed requirements for rendering the Supervisor Tasks tab in All Pay.

##Database Tables ##Page Filters ##Functional Components |Page Element |Desc |Values | Required | Notes| --|--|--|--| Component |Payroll Processing Tasks ||| |Info Msg. | |Select a task to process for the Pay Group Region and Pay Period End Date |Drop Down List| Pay Group Region | SELECT \*  
FROM [lkup].[t\_PayRegion]  
AND IsActive = 1

- California Pay Group
- East 2 Pay Group
- East Pay Group
- East Semi-Monthly Pay Group
- Hawaii Pay Group
- Midwest Pay Group
- West Pay Group |YES| Default: NULL

Order: Ascending |List | Pay Period End Date |This field is dynamically populated based on the selected Pay Group region.

The query is output for each Pay Group Region.

```
SELECT Distinct PayRegionId, C.PayPeriodEndDate, PG.PayCalendarId  
FROM [core].[t_PayGroup] PG, [core].[t_PayCalendarPeriod] C  
WHERE C.PayCalendarId = PG.PayCalendarId  
AND PayRegionId is not null  
Order By PayRegionId, PayPeriodEndDate Desc |YES| Default: NULL  
Order: Descending |List | Task | Hardcoded Values:
```

- Complete Payroll
- Generate Store Input Sheet Data | YES | Default: NULL

Order: Ascending |

### CTA   Label Default   Rule

### Notes

Button RUN Disabled Enabled when a Pay Group Region, PPE & Task are selected Stored Procedure:

# ALL PAY

Payroll Pay Plans Admin Reports  
 Dashboard Payroll Home Store Input Adjustment Accrual Audit Off-Cycle Earnings Supervisor Tasks

## Payroll File Upload

|                  |                     |   |  |
|------------------|---------------------|---|--|
| Pay Calendar     | Pay Period End Date | Accounting Month Date                             | Upload Timecard                            |
| -- Select One -- | -- Select One --    | July 2022 <input type="button" value="Calendar"/> | <input type="button" value="Select File"/> |

## Payroll Processing Tasks

Select a task to process for the Pay Group Region and Pay Period End Date

\*

Pay Group Region

Pay Period End Date

Task

-- Select One --

-- Select One --

-- Select One --

**RUN**

|Select Pay Group Region|

## Payroll Processing Tasks

Use this tool when needing to create Store Input Sheet data by Pay Group Region.

\*

Pay Group Region

Pay Period End Date

Task

California Pay Group  
 East 2 Pay Group  
 East Pay Group  
 East Semi-Monthly Pay Group  
 Hawaii Pay Group  
 Midwest Pay Group  
 West Pay Group

-- Select One --

-- Select One --

**RUN**

|Required fields selected|

## Payroll Processing Tasks

Select a task to process for the Pay Group Region and Pay Period End Date

\*

Pay Group Region

Pay Period End Date

Task

California Pay Group

12/31/2022

Generate Store Input Sheet Data

**RUN**

|Select Task|

## Payroll Processing Tasks

Select a task to process for the Pay Group Region and Pay Period End Date

\*

Pay Group Region

Pay Period End Date

Task

California Pay Group

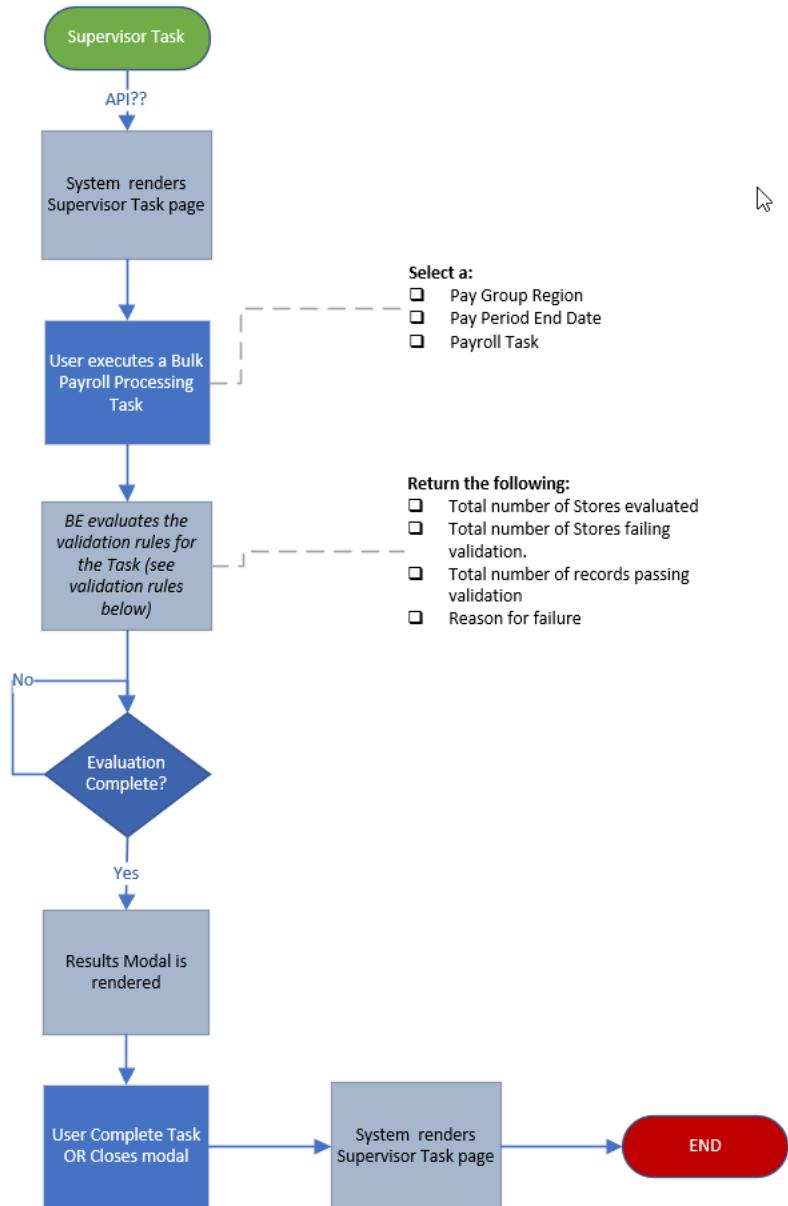
12/31/2022

Complete Payroll  
 Generate Store Input Sheet Data

**RUN**

|Modal ||

##Objective Outline how payroll tasks are executed and validated when processing in bulk.



##Workflow

##Database Tables ##Business Rules

- Only stores passing validation can have the task completed in bulk. The process will skip records that failed the validation rules for the payroll task.

##Validation Rules

| Payroll Task  | Evaluation Criteria  | Return Object   | Expected Result: Complete Task   |
|---|--|---|--|
| Complete Payroll  | IF PAY_RUN_STATUS = 'Preliminary Status'<br>AND Register Review Payroll = True<br>THEN Status = PASS<br>ELSE Status = FAIL | <ul style="list-style-type: none"> <li>• Organization_Id</li> <li>• Payroll Status ID</li> <li>• Register Review Payroll value</li> <li>• Validation PASS/FAIL</li> </ul> | $t\_Payroll.PayrollStatusId = 5$ (Complete)  |
| Generate Store Input Sheet Data                         | IF Header Row Exists<br>THEN Status = FAIL<br>ELSE Status = PASS   | <ul style="list-style-type: none"> <li>• Organization_Id</li> <li>• SIS_Status</li> <li>• Validation PASS/FAIL</li> </ul>   | For each Organization passing validation do the following:<br><ul style="list-style-type: none"> <li>• A header row is inserted to core.t_InputSheet</li> <li>• SIS data is inserted to core.t_InputSheetData</li> </ul> |
| Generate Pay Calendar Data<br>Bulk Load Adjustment Data |  |   |  |

##Functional Components

| Step Component          | Trigger          | Action Result   |
|-------------------------|------------------|---|
| 1. STORED PROCEDURE TBD | User selects RUN | Payroll Processing Task Business Rules are Validated and object returned to the front end<br>User selects Complete Task Payroll task is completed based on the expected results listed in the validation rule |

- [Employee Pay Plan](#)
  - [Business Objective](#)
  - [Business Process](#)
  - [User Personas](#)
  - [Use Cases](#)
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  - [User Experience](#)

# Employee Pay Plan

## Business Objective

## Business Process

- 

The following tasks support the import of Store Input data for a selected company and pay period.

- 

## User Personas

- 1.

## Use Cases

1. Create a pay plan for a prospective employee
2. Create a pay plan for an existing employee

## Functions

### Function Spec Link

## User Experience

UX Requirements: Evaluation Matrix for Populating Footer List: [https://dev.azure.com/LithiaMotors/Advanced%20Incentive%20Program/\\_workitems/edit/72266](https://dev.azure.com/LithiaMotors/Advanced%20Incentive%20Program/_workitems/edit/72266)

Adjacent Pay Plans:

- A pay plan is activated the day after a previous pay plan expired.
- Does this affect payroll processing? If so, how?

- [Plan Type](#)

##Objective ##Database Tables ##Functional Components

Defined footer Edit: Saved Footer does not align with selected Pay Frequency & Position Type| Editing a pay plan with a status of: Active, Inactive, Pending, Suspended, Draft

##Page Filtering

###Dynamic List Filtering:

####Footer The Footer list is dynamically populated based on the following scenarios when both the **Pay Frequency & Position Type** are selected. The following script provides the evaluation matrix for evaluating the list filtering rules.

```
***** Script for reviewing the rules for filtering the Footer list *****

SELECT ID, PayFrequencyId, PositionTypeCode,
FM.PayPlanId "Footer ID",
(SELECT NAME
  FROM core.t_payplan p
 WHERE p.id = FM.PayPlanId) "Footer NAME"
FROM lkup.t_PayPlanBlockDefaultFooterMatrix FM
```

### Scenario

### Expected Result

One qualifier is selected All Active Footers are populated in the list

Two qualifiers are selected Footer List is populated based on evaluation matrix

A non evaluated Pay Frequency is selected All Active Footers are populated in the list

A non evaluated Position Type is selected All Active Footers are populated in the list

##UX Scenarios: |Scenario | Example| |-|-| Saving a Pay Plan and the footer does not match the evaluation matrix.| Display an error message when the user selects Submit (The user will update the footer) To Do: Example of UX

Expected Result:

- Display an error message when the user selects Submit
- The Footer list is NULL
- Cancelling the changes retains the original value

Error Msg: The Employee Pay Plan is configured to use a Footer that does not align with the selected Pay Frequency or Position Type. Select a valid Footer to save the changes.

## Plan Type

[https://dev.azure.com/LithiaMotors/Advanced%20Incentive%20Program/\\_workitems/edit/57531](https://dev.azure.com/LithiaMotors/Advanced%20Incentive%20Program/_workitems/edit/57531)

- [Pay Plan Audit Tracking](#)
  - [Objective](#)

## Pay Plan Audit Tracking

## Objective

Today, the business knows when an EPP was created and updated, but not the specific date depending on the lifecycle event. The goal is to track and understand the changes made to an employee pay plan.

### Business Requirements:

- Track the date a change was made to an employee pay plan (i.e. status or metadata change)
- Track the user updating the employee pay plan
- Track what changed when the event triggers (i.e. Status, Metadata, etc.)
- Event data is available for reporting using Power BI

##Workflow ##Database Tables ##Business Rules ##Functional Components

##Code Summary [What is Change Data Capture?](#)

```
--Enable CDC on current database EXEC sys.sp_cdc_enable_db;  
--Enable CDC on t_PayPlan EXEC sys.sp_cdc_enable_table @source_schema = N'core', @source_name = N't_PayPlan', @role_name = null,  
@supports_net_changes = 1;
```

```
--Set data retention to 7 years EXECUTE sys.sp_cdc_change_job @job_type = N'cleanup', @retention = 3679200;
```

The resulting CDC table(s) will contain rows using the following operation codes: (see \_\_\$operation column).

1 = Row has been deleted

2 = Row has been inserted

3 = Row has been updated - this is the "before" values

4 = Row has been updated - this is the "after" values

(3 and 4 come in pairs)

##Database Diagram

- [Create Pay Plan](#)
  - [Objective](#)
  - [Business Process](#)
  - [Use Cases](#)
  - [Functions](#)
  - [User Personas](#)
  - [User Experience](#)

## Create Pay Plan

### Objective

To define an incentive based employee pay plan. Once activated, the pay plan is used to process payroll for each pay cycle.

### Business Process

1. New Employee On-Boarding

### Use Cases

1. Pay Plan Management (CURD)

### Functions

1. Define Pay Plan metadata
2. Define Pay Type variables
3. Activate Pay Plan
4. Manage Formula Blocks (i.e. Blocks)
5. Manage Footer Blocks (i.e. Footers)

| Function                            | Description         | Spec Link |
|-------------------------------------|---------------------|-----------|
| Define Pay Plan Metadata            | --                  |           |
| Define Pay Type Variables           |                     |           |
| Test Plan                           |                     |           |
| Print Pay Plan                      | Link to PowerBI     |           |
| Delete Pay Plan                     |                     |           |
| Submit Pay Plan                     |                     |           |
| Save Pay Plan                       |                     |           |
| Cancel updates to metadata          | Action Button: BACK |           |
| Manage Footer Blocks (i.e. Footers) |                     |           |
| Manage Formula Blocks (i.e. Blocks) |                     |           |

### User Personas

1. Compensation Analyst

## User Experience

### Edit Employee Pay Plan

| Employee<br>Stephen Philips (569)  | Company<br>Medford Toyota (L0006) | Pay Frequency<br>Semi-monthly    |             |               |               |             |  |  |                               |  |  |  |      |    |  |  |           |           |               |               |   |  |            |  |      |    |  |  |  |  |      |    |  |  |  |  |      |    |                                  |  |  |  |      |    |  |  |  |  |      |    |   |  |  |  |      |    |                                     |  |  |  |      |    |                                     |  |  |  |      |    |
|--|-----------------------------------|----------------------------------|-------------|---------------|---------------|-------------|--|--|-------------------------------|--|--|--|------|----|--|--|-----------|-----------|---------------|---------------|---|--|------------|--|------|----|--|--|--|--|------|----|--|--|--|--|------|----|----------------------------------|--|--|--|------|----|--|--|--|--|------|----|---|--|--|--|------|----|-------------------------------------|--|--|--|------|----|-------------------------------------|--|--|--|------|----|
| Name<br>Stephen Philips (569)  | Department<br>Overhead (OVRHED)   | Pay Rate Type<br>Commission (CM) |             |               |               |             |  |  |                               |  |  |  |      |    |  |  |           |           |               |               |   |  |            |  |      |    |  |  |  |  |      |    |  |  |  |  |      |    |                                  |  |  |  |      |    |  |  |  |  |      |    |   |  |  |  |      |    |                                     |  |  |  |      |    |                                     |  |  |  |      |    |
| Effective Date<br>1/1/2009   | Expiration Date<br>12/31/2025     | Estimated Monthly Earnings       |             |               |               |             |  |  |                               |  |  |  |      |    |  |  |           |           |               |               |   |  |            |  |      |    |  |  |  |  |      |    |  |  |  |  |      |    |                                  |  |  |  |      |    |  |  |  |  |      |    |   |  |  |  |      |    |                                     |  |  |  |      |    |                                     |  |  |  |      |    |
| Commission Payout<br>Delayed   | Job<br>General Manager (15010)    | Footer<br>Commission - Monthly   |             |               |               |             |  |  |                               |  |  |  |      |    |  |  |           |           |               |               |   |  |            |  |      |    |  |  |  |  |      |    |  |  |  |  |      |    |                                  |  |  |  |      |    |  |  |  |  |      |    |   |  |  |  |      |    |                                     |  |  |  |      |    |                                     |  |  |  |      |    |
| <table border="1"> <thead> <tr> <th>Plan Type</th> <th>Always</th> <th>Current Mid</th> <th>Current End</th> <th></th> <th></th> </tr> </thead> <tbody> <tr><td><input type="checkbox"/> Base</td><td></td><td></td><td></td><td>From</td><td>to</td></tr> <tr><td><input checked="" type="checkbox"/> Draw</td><td></td><td>5,000,000</td><td>5,000,000</td><td>From 1/1/2008</td><td>to 12/31/2026</td></tr> <tr><td><input checked="" type="checkbox"/> Guarantee</td><td></td><td>10,000,000</td><td></td><td>From</td><td>to</td></tr> <tr><td><input type="checkbox"/> Special Guarantee</td><td></td><td></td><td></td><td>From</td><td>to</td></tr> <tr><td><input type="checkbox"/> Contract Rate</td><td></td><td></td><td></td><td>From</td><td>to</td></tr> <tr><td><input type="checkbox"/> Interim</td><td></td><td></td><td></td><td>From</td><td>to</td></tr> <tr><td><input type="checkbox"/> Interim Bonus</td><td></td><td></td><td></td><td>From</td><td>to</td></tr> <tr><td><input type="checkbox"/> Maximum Amount</td><td></td><td></td><td></td><td>From</td><td>to</td></tr> <tr><td><input type="checkbox"/> Split Base</td><td></td><td></td><td></td><td>From</td><td>to</td></tr> <tr><td><input type="checkbox"/> Split Draw</td><td></td><td></td><td></td><td>From</td><td>to</td></tr> </tbody> </table> |                                   |                                  | Plan Type   | Always        | Current Mid   | Current End |  |  | <input type="checkbox"/> Base |  |  |  | From | to | <input checked="" type="checkbox"/> Draw |  | 5,000,000 | 5,000,000 | From 1/1/2008 | to 12/31/2026 | <input checked="" type="checkbox"/> Guarantee |  | 10,000,000 |  | From | to | <input type="checkbox"/> Special Guarantee |  |  |  | From | to | <input type="checkbox"/> Contract Rate |  |  |  | From | to | <input type="checkbox"/> Interim |  |  |  | From | to | <input type="checkbox"/> Interim Bonus |  |  |  | From | to | <input type="checkbox"/> Maximum Amount |  |  |  | From | to | <input type="checkbox"/> Split Base |  |  |  | From | to | <input type="checkbox"/> Split Draw |  |  |  | From | to |
| Plan Type  | Always                            | Current Mid                      | Current End |               |               |             |  |  |                               |  |  |  |      |    |  |  |           |           |               |               |   |  |            |  |      |    |  |  |  |  |      |    |  |  |  |  |      |    |                                  |  |  |  |      |    |  |  |  |  |      |    |   |  |  |  |      |    |                                     |  |  |  |      |    |                                     |  |  |  |      |    |
| <input type="checkbox"/> Base  |                                   |                                  |             | From          | to            |             |  |  |                               |  |  |  |      |    |  |  |           |           |               |               |   |  |            |  |      |    |  |  |  |  |      |    |  |  |  |  |      |    |                                  |  |  |  |      |    |  |  |  |  |      |    |   |  |  |  |      |    |                                     |  |  |  |      |    |                                     |  |  |  |      |    |
| <input checked="" type="checkbox"/> Draw   |                                   | 5,000,000                        | 5,000,000   | From 1/1/2008 | to 12/31/2026 |             |  |  |                               |  |  |  |      |    |  |  |           |           |               |               |   |  |            |  |      |    |  |  |  |  |      |    |  |  |  |  |      |    |                                  |  |  |  |      |    |  |  |  |  |      |    |   |  |  |  |      |    |                                     |  |  |  |      |    |                                     |  |  |  |      |    |
| <input checked="" type="checkbox"/> Guarantee  |                                   | 10,000,000                       |             | From          | to            |             |  |  |                               |  |  |  |      |    |  |  |           |           |               |               |   |  |            |  |      |    |  |  |  |  |      |    |  |  |  |  |      |    |                                  |  |  |  |      |    |  |  |  |  |      |    |   |  |  |  |      |    |                                     |  |  |  |      |    |                                     |  |  |  |      |    |
| <input type="checkbox"/> Special Guarantee   |                                   |                                  |             | From          | to            |             |  |  |                               |  |  |  |      |    |  |  |           |           |               |               |   |  |            |  |      |    |  |  |  |  |      |    |  |  |  |  |      |    |                                  |  |  |  |      |    |  |  |  |  |      |    |   |  |  |  |      |    |                                     |  |  |  |      |    |                                     |  |  |  |      |    |
| <input type="checkbox"/> Contract Rate   |                                   |                                  |             | From          | to            |             |  |  |                               |  |  |  |      |    |  |  |           |           |               |               |   |  |            |  |      |    |  |  |  |  |      |    |  |  |  |  |      |    |                                  |  |  |  |      |    |  |  |  |  |      |    |   |  |  |  |      |    |                                     |  |  |  |      |    |                                     |  |  |  |      |    |
| <input type="checkbox"/> Interim   |                                   |                                  |             | From          | to            |             |  |  |                               |  |  |  |      |    |  |  |           |           |               |               |   |  |            |  |      |    |  |  |  |  |      |    |  |  |  |  |      |    |                                  |  |  |  |      |    |  |  |  |  |      |    |   |  |  |  |      |    |                                     |  |  |  |      |    |                                     |  |  |  |      |    |
| <input type="checkbox"/> Interim Bonus   |                                   |                                  |             | From          | to            |             |  |  |                               |  |  |  |      |    |  |  |           |           |               |               |   |  |            |  |      |    |  |  |  |  |      |    |  |  |  |  |      |    |                                  |  |  |  |      |    |  |  |  |  |      |    |   |  |  |  |      |    |                                     |  |  |  |      |    |                                     |  |  |  |      |    |
| <input type="checkbox"/> Maximum Amount  |                                   |                                  |             | From          | to            |             |  |  |                               |  |  |  |      |    |  |  |           |           |               |               |   |  |            |  |      |    |  |  |  |  |      |    |  |  |  |  |      |    |                                  |  |  |  |      |    |  |  |  |  |      |    |   |  |  |  |      |    |                                     |  |  |  |      |    |                                     |  |  |  |      |    |
| <input type="checkbox"/> Split Base  |                                   |                                  |             | From          | to            |             |  |  |                               |  |  |  |      |    |  |  |           |           |               |               |   |  |            |  |      |    |  |  |  |  |      |    |  |  |  |  |      |    |                                  |  |  |  |      |    |  |  |  |  |      |    |   |  |  |  |      |    |                                     |  |  |  |      |    |                                     |  |  |  |      |    |
| <input type="checkbox"/> Split Draw  |                                   |                                  |             | From          | to            |             |  |  |                               |  |  |  |      |    |  |  |           |           |               |               |   |  |            |  |      |    |  |  |  |  |      |    |  |  |  |  |      |    |                                  |  |  |  |      |    |  |  |  |  |      |    |   |  |  |  |      |    |                                     |  |  |  |      |    |                                     |  |  |  |      |    |

Employee 1: Add a Split Base effective 11/1/21 and expires 11/15/21 for \$200 on current mid Add Base effective 11/16/21-plan expiration date for \$2000 on current mid and \$1500 on current end Run Payroll for PPE 11/15/21 11/30/21 12/15/21 and see this behavior 11/15/21 - \$200 BSE 11/30/21 - \$1500 BSE 12/15/21 - \$2000 BSE

Employee 2: Add a Split Draw effective 11/1/21 and expires 11/15/21 for \$200 on current mid Add Draw effective 11/16/21-plan expiration date for \$2000 on current mid and \$1500 on current end Run Payroll for PPE 11/15/21 11/30/21 12/15/21 and see this behavior 11/15/21 - \$200 DRW 11/30/21 - \$1500 DRW 12/15/21 - \$2000 DRW Date Validations: All Dates must be a valid date. For example, 13/45/2086 must throw an error. To Date cannot be earlier than From Date or Plan Effective Date. To Date cannot be later than Plan Effective Date. From Date cannot be earlier than Plan Effective Date. From Date cannot be later than To Date.

| Rule Name                      | Stored Procedure               | Conditions  | Query   |
|--------------------------------|--------------------------------|---|---|
| Delete aged employee pay plans | [p_Delete_UnfinishedPayPlans]  | <ul style="list-style-type: none"> <li>Pay Plan Usage = Employee</li> <li>UpdatedTimestamp &gt;= 180 from the current date</li> <li>Status is DRAFT or PENDING</li> </ul> | <pre>select id, convert(date, UpdatedTimestamp), DATEDIFF(day, UpdatedTimestamp, GETDATE()) "Age of Pay Plan in Days" from orm.v_PayPlan where PayPlanStatusId in (3, 4) and PayPlanUsageId = 1 and DATEDIFF(day, UpdatedTimestamp, GETDATE()) &gt;= 180 order by DATEDIFF(day, UpdatedTimestamp, GETDATE()) desc</pre>   |
| Inactivate expired pay plans   | [p_Inactivate_ExpiredPayPlans] | <ul style="list-style-type: none"> <li>Pay Plan Usage = Employee</li> <li>EndDate &gt;= 60 from the current date</li> </ul>   | <pre>select id, payplanstatus, convert(date, EndDate) "EndDate", convert(date, effectivedate) "Effective Date", DATEDIFF(day, Enddate, GETDATE()) "Age of Pay Plan in Days" from orm.v_PayPlan where PayPlanUsageId = 1 --Employee and DATEDIFF(day, EndDate, GETDATE()) &gt;= 60 and PayPlanStatusID not in (2) and ispayplanexpired = 0 order by DATEDIFF(day, EndDate, GETDATE()) desc</pre> |

*Known Issue: Pay Plans with a status of SUSPENDED are skipped*

- [Impact Builder](#)
  - [Business Objective](#)
  - [User Personas](#)
  - [Business Process](#)
  - [Use Cases:](#)
  - [Business Requirements](#)
  - [Functions](#)

## Impact Builder

### Business Objective

The Impact Builder calculates the performance of a proposed pay plan. This provides the requestor of the Impact Analysis with information to know how the pay plan is expected to perform based on the objectives set for the department and pay plan. It also ensures pay plans are in compliance with Federal and State regulations.

- Assumption: The calculations defined by BFT are validated and meet both Federal and State regulations.*

The Impact Builder will:

- Produce a Department and Compensation impact analysis report utilizing pay plan, sales data and other performance metrics to calculate the Impact Analysis
- An Impact Analysis can be produced for 1 or Many Pay Plans
- Allow for overriding calculations for both Commission and Bonus formula blocks
- The definition of the Impact Analysis can be saved for future reference

## User Personas

1. Compensation Analyst
2. Sr. Compensation Analyst
3. Super User

## Business Process

- Onboarding
- Process Management

## Use Cases:

- Create an Impact Analysis \_ Create Impact Analysis in Bulk
- Save Impact Analysis
- Edit an Impact Analysis

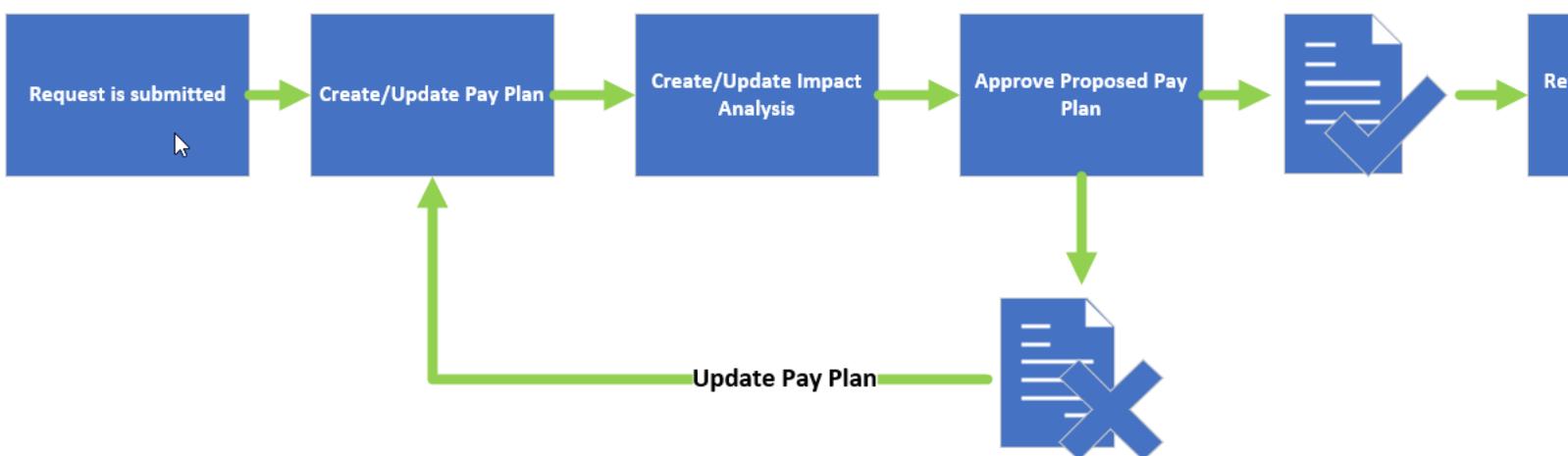
## Business Requirements

- The Impact Analysis is generated on page load
- The impact Analysis can be saved
  - This includes any overrides to commission or bonus calculations
  - Report Configurations (Monthly Avg, Close Date & Productivity Measures)
  - Reason Type
- The Impact Analysis can be edited
- Any update made to the Impact Analysis can be cancelled
- The Impact Analysis can be configured to modify how the impact analysis is calculated
  - Average Number of months to calculate the impact analysis
  - The Closing Date for selecting the range of data for calculating the Impact Analysis
  - Defining Productivity Measures
- A READ ONLY view providing users with data about the Pay Plan (i.e.
- The ability to override a commission or bonus calculation
- The system allows users to revert to the previous state last saved change
- The override values can be reverted to the calculated value ##Business Rules
- Only 1 impact analysis can be created against a Pay Plan
- An Impact Analysis can be created for both employee's and prospective employees

*NOTE: All Pay Plans can have an Impact Analysis created. However, Pay Plans created for Job Names with 'Tech' or 'Sales' in the description will not have an Impact Analysis created for the job type as a regular business practice.*

The following tasks support the process of creating and approving an Impact Analysis.

- Create/Edit Pay Plan
- Create/Edit Impact Analysis
- Approve Impact Analysis - Approval is managed outside of All Pay. Users will grab screen shots and email the report to the requestor of the impact analysis.
- Finalize and Activate the Pay Plan



## Functions

| Function  | Spec Link                                  |
|---|--|
| Create/Edit an Impact Analysis for 1 Employee (MVP) | <a href="#">Func Spec: Single Pay Plan</a> |
| Create an Impact Analysis in bulk (Phase II)        | TBD  |

- [UI Component Requirements](#)
- [Target Pay Plan Scenarios](#)
- [UX Scenarios](#)
- [Figma: Create Impact Analysis](#)

##Objective This page outlines the page components that comprise the Impact Analysis and how each one is setup and functions.

## UI Component Requirements

| Page Element   | Label/Desc                  | Values  | Required Default | Order | Editable Database Tables | Notes   |
|----------------|-----------------------------|---|------------------|-------|--------------------------|---|
| Info Msg.      | N/A                         | N/A   | N/A              | N/A   | No                       | N/A   |
| Drop Down List | Reason Type                 | Change/Replace  | Yes              | NULL  | Ascending No             | TBD   |
| CTA            | Add Productivity Measure    | • Store PVR<br>• Store Flat Rate Hours<br>• Total Retail Units!                     | No               | NULL  | NA                       | TBD   |
| CTA            | Delete Productivity Measure |  |                  |       |                          | <p>Detailed Requirements:</p> <ul style="list-style-type: none"> <li>• A productivity measure can only be applied once</li> <li>• Alt Text: Delete Row Trigger: On Hover</li> </ul> |

This is a conditional information message and is only displayed if the user has selected a reason type of Change/Additional.

| Page Element   | Label/Desc               | Values  | Required | Default   | Order             | Editable Database Tables | Notes                    |  |
|----------------|--------------------------|---|----------|---|-------------------|--------------------------|--------------------------|--|
| Drop Down List | Monthly Average          | <ul style="list-style-type: none"> <li>• 1 Month Average</li> <li>• 2 Month Average</li> <li>• 3 Month Average</li> <li>• 4 Month Average</li> <li>• 5 Month Average</li> <li>• 6 Month Average</li> <li>• 7 Month Average</li> <li>• 8 Month Average</li> <li>• 9 Month Average</li> <li>• 10 Month Average</li> <li>• 11 Month Average</li> <li>• 12 Month Average</li> </ul> | Yes      | 3 Month Average   | Numeric Ascending | No                       | TBD                      |  |
| Calendar       | Closing Month            | N/A   | Yes      | <pre> IF SYSDATE is BETWEEN 1st AND 5th of the Month THEN RESULT = &lt;CURRENT_MONTH&gt;-2 ELSE RESULT = &lt;CURRENT_MONTH&gt; - 1 </pre> <p>Example:<br/> IF Todays Date = 12/1/22<br/> THEN DEFAULT Value =<br/> October, 2022 ELSE<br/> DEFAULT Value =<br/> November, 2022.</p> | N/A               | N/A                      | N/A                      | #113467<br>• A month in the future cannot be selected. |
| Text Box       | Replacement Employee ID  | N/A   | No       | NULL  | N/A               | Yes                      | N/A                      |  |
| Text Box       | Replacement Emp. Average | N/A   | No       | RESULT = TBD  | N/A               | No                       | N/A                      |  |
| Text Box       | Employee                 | N/A   | N/A      | The value saved to the pay plan.  | N/A               | No                       | t_PayPlan.NAME           |  |
| Text Box       | Company                  | N/A   | N/A      | The Value saved to the pay plan   | N/A               | No                       | t_PayPlan.OrganizationID |  |
| Text Box       | Job                      | N/A   | N/A      | The value saved to the pay plan.  | N/A               | No                       | t_PayPlan.JobID          |  |
| Text Box       | Current Average Pay      | N/A   | N/A      | Result =<br>\$CUR_MONTHLY_AVG   | N/A               | No                       | TBD                      |  |
| Text Box       | New Average Pay          | N/A   | N/A      | Result =<br>\$NEW_MONTHLY_AVG   | N/A               | No                       | TBD                      |  |

##Evaluate Plan Type for expected values Pay Plans can have plan types defined. This defines additional compensation to an employee and when it should be paid out based on pay frequency. The following workflow outlines how the UX should handle each user scenario.

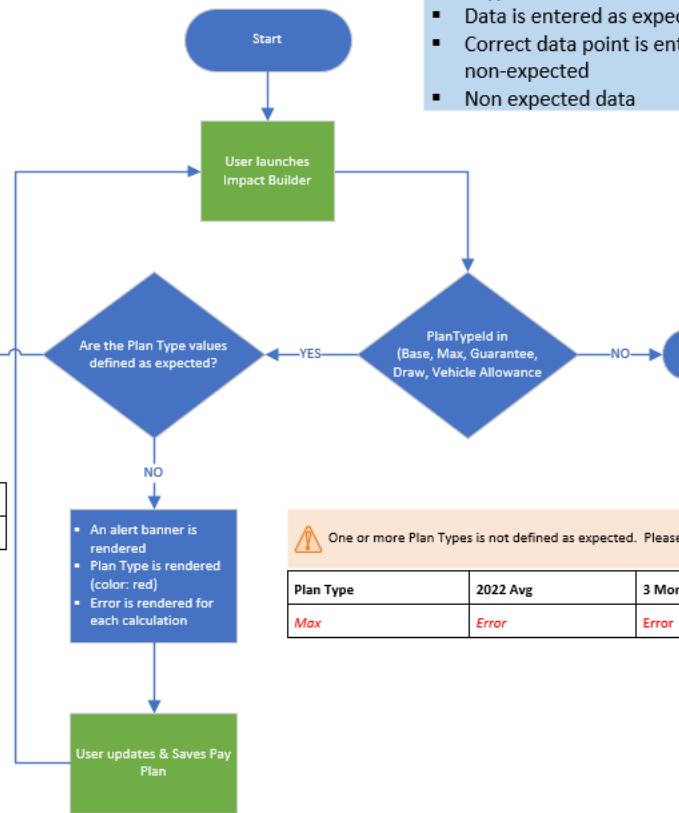
**Business Rules:** [Plan Type Definition and Requirements](#)

| Plan Type | Pay Frequency | Always | Current Mid | Current End |
|-----------|---------------|--------|-------------|-------------|
| Base      | Weekly        | X      |             |             |
| Base      | Bi-Weekly     | X      |             |             |
| Base      | Semi-Monthly  |        | X           | X           |
| Draw      | Weekly        | X      |             |             |
| Draw      | Semi-Monthly  |        | X           | X           |

- Plan Type Scenarios:
- Data is entered as expected
  - Correct data point is entered in non-expected
  - Non expected data

| Plan Type | 2022 Avg | 3 Month Avg | Performance Objective | Weight |
|-----------|----------|-------------|-----------------------|--------|
| Max       | \$0      | \$0         | \$0                   | \$0    |

Render Plan Type and calculated values



⚠ One or more Plan Types is not defined as expected. Please check the configuration.

| Plan Type | 2022 Avg | 3 Month Avg |
|-----------|----------|-------------|
| Max       | Error    | Error       |

##Inline Editing for Commission and Bonus Overrides The following outlines the requirements for overriding commission or bonus calculations.

#### Commission Impact

| Action | Use Calculated | Description      | 2021 Avg | 3 Month Average | Performance Objective | Weight |
|--------|----------------|------------------|----------|-----------------|-----------------------|--------|
|        |                | Monthly Base     | \$500    | \$500           | \$500                 | 1%     |
|        |                | Sales Gross (2%) | \$17,925 | \$24,672        | \$28,3772             | 56%    |

[React Data Grid Component & Inline Editing with Custom Editors - KendoReact Docs & Demos \(telerik.com\)](#)

| Scenario                                    | Steps to Execute  | Expected Result  |
|---|---|--|
| Default Scenario   Create New Report        | 1. Edit a Pay Plan<br>a. Status = DRAFT<br>2. User clicks   |  <br>Edit CTA: Enabled<br>Slide: Active & Disabled   |
| User Edits a calculated Value               | 1. Impact Analysis is Generated<br>2. User selects Edit   |   <br>Save: Enabled<br>Close: Enabled<br>Switch: Inactive & Disabled<br>Data Fields: Editable |
| User deletes the value in an editable field | 1. Impact Analysis is Generated<br>2. User selects <u>Edit</u><br>3. User deletes the value in an editable field<br>a. Entering a value enables the confirm button  |  <br>Save: Disabled  |
| User Confirms an Override                   | 1. Impact Analysis is Generated<br>2. User selects <u>Edit</u><br>3. User 'changes' a calculated value<br>a. The value must be different than what was calculated to save the value to the db.<br>4. User confirms the override  |  <br>Edit CTA: Enabled<br>Slider Active & Disabled<br>The user can toggle between Override and Calculated values.  |
| Open a saved report with override values    | 1. Edit a Pay Plan<br>a. Status = DRAFT<br>2. User clicks    |  <br>Edit CTA: Enabled<br>Slide: The switch renders based on the what was defined on the previous save   |
| Open Saved Report without override values   | 1. Edit a Pay Plan<br>a. Status = DRAFT<br>2. User clicks    |  <br>Edit CTA: Enabled<br>Slide: Active & Disabled   |
| User Cancels an Override                    | 1. Impact Analysis is Generated<br>2. User selects <u>Edit</u><br>3. User 'changes' a calculated value<br>4. User cancels the override   | Expected Result is dependent on the executing scenario. See the respective test case for each scenario:<br><br>1. New Report<br>2. Saved report with Overrides<br>3. Saved report without Overrides  |

## Target Pay Plan Scenarios

```

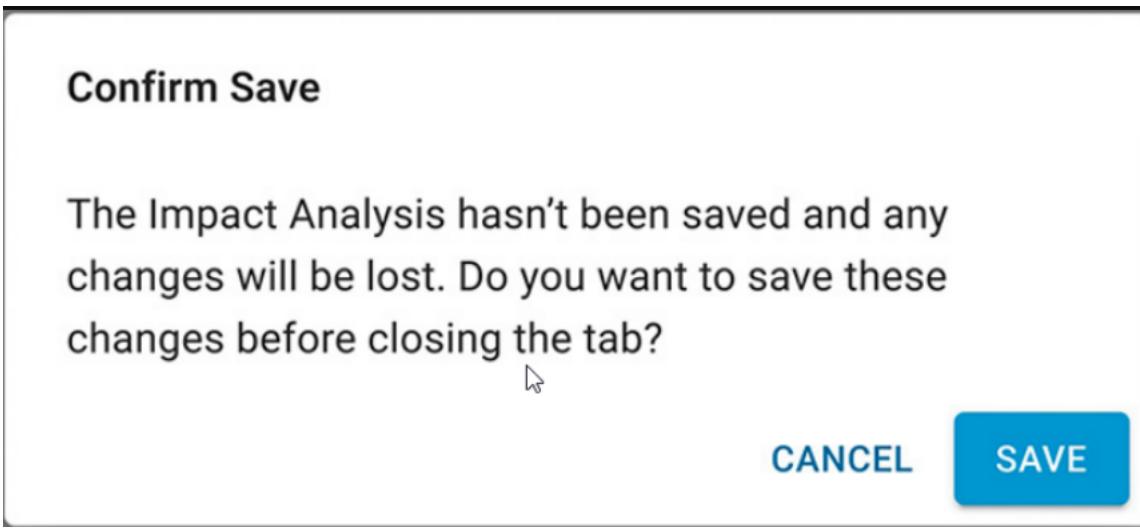
SELECT      PP.NAME
, PP.OrganizationId
, PP.Id "Pay Plan ID"
, PPB.ID "Payplan Formula Block"
, PPB.PayPlanBlockPayTypeId 'Formula Block Type COM/BON'
, CalculationPeriodTypeId 'Pay Frequency'
, SourceSystemFieldId
, SourceSystemId
, IsSimpleFormula
, PPB.SimpleFormulaUI
, FormulaText
, SqlText
, PP.CreatedTimestamp
FROM        core.t_PayPlanBlock PPB
,core.t_payplan PP
,lnkr.t_PayPlanBlockSourceSystemField SS
,ref.t_SourceSystemField SSF
WHERE PP.ID = PPB.PayPlanId
AND PPB.ID = SS.SourceSystemFieldId
AND SSF.ID = SS.SourceSystemFieldId
AND PPB.PayPlanBlockPayTypeId IN (1,2) -- (COM,BON)
AND PP.PayPlanUsageId <> 4
AND IsSimpleFormula = 1
AND PP.JobId IN ('15', '117', '13', '28', '11', '7', '9', '61', '76', '84', '26', '3', '4', '36', '125', '2', '6', '17', '93', '14', '97', '8', '70', '70', '16', '62', '5')
order by PP.CreatedTimestamp desc'
```

## UX Scenarios

| ID Scenario                                       | User Action            | Expected Results   | Impact   |
|---|------------------------|--|--|
| 1 • Pay Plan with Impact CREATED for the 1st time | Create Impact Analysis | <ul style="list-style-type: none"> <li>The Impact Analysis page renders</li> </ul> | • The system will dynamically generate the impact analysis based on the pay plan and default settings. |

| ID Scenario  | User Action            | Expected Results   | Impact |
|--|------------------------|--|--------|
| 2 The User saves the Impact Analysis   | Create Impact Analysis | <ul style="list-style-type: none"> <li>The Reason Type, Report Configurations, Productivity Measures and Override values (if any) are saved.</li> </ul>  | UX     |
| 3 The Impact Analysis is EDITED AND has Override values  | Edit Impact Analysis   | <ul style="list-style-type: none"> <li>Messaging will inform the user of required fields that are not defined.</li> <li>The User can Edit the Impact Analysis</li> <li>On EDIT, the saved values are used by default. For any override variable, the saved value is used to render the expected data.</li> </ul>                             | UX     |
| 4 EDITED AND does not have Override values   | Edit Impact Analysis   | <ul style="list-style-type: none"> <li>On Edit, The System will render the calculated values for the pay plan</li> <li>The system will dynamically re-calculate the Impact Analysis</li> <li>The system will save the initial settings and any future updates when triggered.</li> </ul>   | UX     |
| 5 The User changes a report configuration (i.e. # of Months, Measure or Close Date)                                | Create Impact Analysis | <ul style="list-style-type: none"> <li>The system will dynamically re-calculate the Impact Analysis</li> <li>The system will save the initial settings and any future updates</li> </ul>   | UX     |
| 6 The User overrides compensation data (COMM/BON).   | Edit Impact Analysis   | <ul style="list-style-type: none"> <li>The system will dynamically re-calculate the Impact Analysis</li> <li>The system will save the initial settings and any future updates</li> </ul>   | UX     |
| 7 A Pay Plan is Deleted from All Pay   | Delete Pay Plan        | <ul style="list-style-type: none"> <li>The system will "cleanup" impact analysis data after a Pay Plan is deleted.</li> <li>The Override value is ignored</li> <li>The Commission and Bonuses are calculated</li> </ul>  | UX     |
| 8 A Comm or BON block is Edited in All Pay, and the Impact Analysis has override data saved to the Impact Analysis | Edit Impact Analysis   | <ul style="list-style-type: none"> <li>On Save, the override value is not saved to the IA record</li> <li>On Revert to Save, the override value is returned as long as the IA is not saved</li> <li>The system will dynamically generate the impact analysis based on the pay plan and the metadata saved to the Impact Analysis.</li> </ul> | UX     |
| 9 A Comm or BON blocks are Edited, and the IA does not have override data  | Edit Impact Analysis   | <ul style="list-style-type: none"> <li>The reason type Analysis is saved to the Impact Analysis record on save.</li> </ul>   | UX     |
| 10 User configures the Reason Type variable  | Create Impact Analysis | <ul style="list-style-type: none"> <li>The reason type Analysis is saved to the Impact Analysis record on save.</li> </ul>   | UX     |

| ID Scenario  | User Action                                    | Expected Results   | Impact |
|--|--|--|--------|
| 11 User configures the Monthly Avg variable                                  | Create Impact Analysis<br>Edit Impact Analysis | The Impact Analysis is dynamically updated when the user changes the Monthly Avg report configuration.   | UX     |
| 12 User configures the Close Date variable                                   | Create Impact Analysis<br>Edit Impact Analysis | The Impact Analysis is dynamically updated when the user changes the Monthly Avg report configuration.   | UX     |
| 13 User adds a Productivity Measures to the Impact Analysis                  | Create Impact Analysis<br>Edit Impact Analysis | The Impact Analysis is dynamically updated when the user changes the Monthly Avg report configuration.   | UX     |
| 14 Plan Types are defined on the pay plan                                    | Create Impact Analysis<br>Edit Impact Analysis | <ul style="list-style-type: none"> <li>For each plan type defined, the data will render, and the Impact Analysis will calculate the values.</li> <li>Only the plan types defined on the pay plan will render.</li> </ul>   | UX     |
| 15 The pay frequency for the pay plan is bi-weekly                           | Create Impact Analysis<br>Edit Impact Analysis | <ul style="list-style-type: none"> <li>A Bi-Weekly row is rendered on the Employee Earnings component (Need to define the biz rule for which job codes this applies to for the UX)</li> <li>By default, the Bi-Weekly Employee Earnings total is not rendered unless the IA is for a Bi-Weekly pay plan.</li> </ul>  | UX     |
| 16 Selecting Replacement Employee as a reason type                           | Create Impact Analysis<br>Edit Impact Analysis | <ul style="list-style-type: none"> <li>When triggered, a Replace Employee ID text box is rendered.</li> <li>Replace Emp ID Average is calculated and rendered.</li> <li>An informational message is rendered for the store.</li> </ul>   | UX     |
| 17 The Draw is more than the sum of the commission and bonus payout combined | Create Impact Analysis<br>Edit Impact Analysis | <p><i>The Draw is more than then the expected payout.</i></p> <ul style="list-style-type: none"> <li>When triggered, the override value is reverted to the calculated value</li> <li>On Save, the override value is not saved to the IA record</li> <li>On Revert to Save, the override value is returned</li> </ul> | UX     |
| 18 The User reverts the override value to the calculated value               | Create Impact Analysis<br>Edit Impact Analysis | <ul style="list-style-type: none"> <li>When triggered, the override value is reverted to the calculated value</li> <li>On Save, the override value is not saved to the IA record</li> <li>On Revert to Save, the override value is returned</li> </ul>   |        |
| 19 The User reverts the impact analysis to the saved version                 | Create Impact Analysis<br>Edit Impact Analysis | <ul style="list-style-type: none"> <li>When triggered, the saved values are rendered</li> </ul>  |        |

| ID Scenario                                | User Action                                    | Expected Results  | Impact   |
|--|--|---|--|
| 20 User closes tab and report is not saved | Create Impact Analysis<br>Edit Impact Analysis | <ul style="list-style-type: none"> <li>When triggered, a modal is rendered</li> </ul>                         |                                     |
| 21 Pay Period End Date is not selected     | Create Impact Analysis<br>Edit Impact Analysis | <ul style="list-style-type: none"> <li>An Alert Banner is rendered until a PPE is selected.</li> </ul>        | Msg: Select a Pay Period End Date to calculate Current Monthly Average and Personnel Expense with Change.            |
| 22 Plan Types are not defined as expected. | Create Impact Analysis<br>Edit Impact Analysis | <ul style="list-style-type: none"> <li>An Alert Banner is rendered until the Pay Plan is resolved.</li> </ul> | Msg: One or more Plan Types is not defined as expected. Please update the pay plan to calculate the Impact Analysis. |

### Figma: Create Impact Analysis

##Functional Components |Step|Component|Trigger |Action Result|---|---|---|1. |Add sproc to support function|User selects ADD PRODUCTIVITY MEASURE|

- A Productivity Measure row is rendered
- A drop down list is rendered with a list of Productivity Measure
- A garbage can CTA is rendered

(See Detailed Requirements section for UX information) |2. ||User selects delete CTA |

•

The hyperlink directs you to the UX Designs: [63771 AllPay - Impact Builder – Figma](#)

**Employee and Impact Information**

|                                     |   |   |  |
|-------------------------------------|---|---|--|
| Reason Type<br>Pay Plan Change      | Employee<br>Jennifer Allbeck (<EmployeeID>) | Job<br>Sales Representative                 | Current Average Pay<br>CUR_MONTHLY_AVG |
| Required                            |   |   |  |
| Replacement Employee ID<br><Number> | Company<br>Honolulu Volkswagen              | Replacement Emp. Average<br>CUR_MONTHLY_AVG | New Average Pay<br>NEW_MONTHLY_AVG     |

**Calculation Configurations**

|                                      |
|--------------------------------------|
| Monthly Average -<br>3 Month Average |
| Closing Month<br>July 2022           |

**Impact Analysis**

⚠ Alert content

**Department Impact**

|                         | 3 month Average | With Change |
|-------------------------|-----------------|-------------|
| Personnel Expense       | \$309,266       | \$349,871   |
| Expense as a % of Gross | 7.3%            | 8.8%        |
| Expense Guide           | 13%             | 13%         |

**Performance Impact**

**Add Productivity Measure**

| Action           | Description | 2021 Avg  | 3 Month Average | Performance Objective |
|------------------|-------------|-----------|-----------------|-----------------------|
| Sales Gross      |             | \$896,250 | \$1,233,582     | \$1,410,620           |
| New Retail Units |             | 98        | 78              | 156                   |

**Commission Impact**

| Action | Use Calculated | Description      | 2021 Avg | 3 Month Average | Performance Objective | Weight |
|--------|----------------|------------------|----------|-----------------|-----------------------|--------|
|        |                | Monthly Base     | \$500    | \$500           | \$500                 | 1%     |
|        |                | Sales Gross (2%) | \$17,925 | \$24,672        | \$28,3772             | 56%    |

**Bonus Impact**

| Action | Use Calculated | Description          | 2021 Avg | 3 Month Average | Performance Objective | Weight |
|--------|----------------|----------------------|----------|-----------------|-----------------------|--------|
|        |                | F&I Commissions (1%) | \$8,963  | \$12,336        | \$14,186              | 28%    |
|        |                | F&I Commissions      | \$500    | \$500           | \$500                 | 5%     |

**Payout Impact**

| Description       | 2021 Avg | 3 Month Average | Performance Objective | Weight |
|-------------------|----------|-----------------|-----------------------|--------|
| Vehicle Allowance | \$100    | \$100           | \$100                 | 0%     |

**Employee Earnings**

| Description       | 2021 Avg  | 3 Month Average | Performance Objective |
|-------------------|-----------|-----------------|-----------------------|
| Total Monthly Pay | \$26,988  | \$37,107        | \$42,659              |
| Total Annual Pay  | \$322,750 | \$444,190       | \$510,803             |

- [Objective](#)

## Objective

- Create an impact analysis for a single pay plan

##Workflow ##Database Tables

##Functional Components

##Code Summary

### Calculation Type      Formulas      Calculation Types

|                                    |   |   |
|------------------------------------|---|---|
| <a href="#">Department Impacts</a> | <ul style="list-style-type: none"> <li>• Personnel Expense</li> <li>• Performance Impacts</li> <li>• Expense Guide</li> </ul> | <ul style="list-style-type: none"> <li>• Current Monthly Average</li> <li>• New Monthly Average</li> <li>• Previous Year Average</li> <li>• Current Monthly Average</li> <li>• Performance Objective</li> <li>• Weight</li> </ul> |
| Compensation Impacts               | <ul style="list-style-type: none"> <li>• Commission Impacts</li> <li>• Bonus Impacts</li> </ul>                               | <ul style="list-style-type: none"> <li>• Previous Year Average</li> <li>• Current Monthly Average</li> <li>• Performance Objective</li> <li>• Weight</li> </ul>   |

| Calculation Type      | Formulas  | Calclation Types  |
|-----------------------|---|---|
| Plan Type Impacts     | <ul style="list-style-type: none"> <li>• Vehicle Allowance</li> <li>• Monthly Base</li> <li>• Draw</li> <li>• Guarantee</li> <li>• Max</li> </ul> | <ul style="list-style-type: none"> <li>• Previous Year Average</li> <li>• Current Monthly Average</li> <li>• Performance Objective</li> </ul> |
| Productivity Measures |   | <ul style="list-style-type: none"> <li>• Previous Year Average</li> <li>• Current Monthly Average</li> <li>• Performance Objective</li> </ul> |
| Employee Earnings     |   | <ul style="list-style-type: none"> <li>• Sum of Column for</li> </ul>   |

##Data Requirements The following are the data requirements where calculations are dependent on month end closing either for the Store or Employee

## Data Workflow

graph LR; A[1. CDK or other source] --> B[2. DWH]--> C[3. ETL]--> D[4. Payroll];

1. Sales data is loaded to an external data source such as CDK
2. Data is loaded to DW\_PROD | MERP database (dbo.MISLine)
3. ETL gets the data and translates the data at the integration layer
4. Data is loaded to Payroll database | ref.t\_SourceData

###Store Performance The result of the following query outlines the month ending sales data posted to the General Ledger (GL) by store. Each sales category is assigned a GL Code and is the equivalent of a Source System Field in the ref.t\_SourceData table in the Payroll Database.

```
SELECT TOP 1000 P.AccountingMonthDate, SourceSystemFieldId, organizationid, Sum(Value) 'Sales Performance by Store | MNTH_GL_TOTAL
Field'--, EmployeeId
FROM ref.t_SourceData S
    inner join [core].[t_PayCalendarPeriod] P
    on P.ID = S.PayCalendarPeriodId
AND EmployeeId Is Not Null -- This will bring back sales performance data on an individual basis by Employee
AND OrganizationId = 66 -- Store Code: 249 Name: Maui Honda
AND sourcesystemfieldid = 737 -- ROCountC
Group by P.AccountingMonthDate, SourceSystemFieldId, Organizationid
Order by SourceSystemFieldId, P.AccountingMonthDate
```

|    | AccountingMonthDate | SourceSystemFieldId | organizationid | Sales Performance by Store   MNTH_GL_TOTAL |
|----|---------------------|---------------------|----------------|--|
| 1  | 2022-01-01          | 737                 | 66             | 1330.00000                                 |
| 2  | 2022-02-01          | 737                 | 66             | 1366.00000                                 |
| 3  | 2022-03-01          | 737                 | 66             | 1448.00000                                 |
| 4  | 2022-04-01          | 737                 | 66             | 1389.00000                                 |
| 5  | 2022-05-01          | 737                 | 66             | 1366.00000                                 |
| 6  | 2022-06-01          | 737                 | 66             | 1473.00000                                 |
| 7  | 2022-07-01          | 737                 | 66             | 1367.00000                                 |
| 8  | 2022-08-01          | 737                 | 66             | 1472.00000                                 |
| 9  | 2022-09-01          | 737                 | 66             | 1372.00000                                 |
| 10 | 2022-10-01          | 737                 | 66             | 1331.00000                                 |
| 11 | 2022-11-01          | 737                 | 66             | 1296.00000                                 |
| 12 | 2022-12-01          | 737                 | 66             | 459.00000                                  |

###Performance Objectives

The result of the following query outlines monthly objectives set for a sales category.

## Data Workflow

graph LR; A[1. Excel Spreadsheet] --> B[2. DWH]--> C[3. ETL]--> D[4. Payroll];

1. Each year, sales objectives are defined for what stores are expected to achieve on a monthly basis. The data is saved to an Excel spreadsheet.
2. Data is loaded to DW\_PROD | MERP database
3. ETL gets the data and translates the data at the integration layer
4. Data is loaded to Payroll database | ref.t\_SourceData | Source Control = 34

```
SELECT TOP 1000 P.AccountingMonthDate, SourceSystemFieldId, organizationid, Sum(Value) '@MNTH_AOP_OBJ
FROM ref.t_SourceData S
    inner join [core].[t_PayCalendarPeriod] P
    on P.ID = S.PayCalendarPeriodId
AND sourcecontrol = 34 -- Source System: SPE Standard
AND P.IsActive = 0
--AND OrganizationId = 66 -- Store Code: 249 Name: Maui Honda
--AND sourcesystemfieldid = 20538 -- New Retail Revenue - Total Sales - LM10860 (CMTDunt)
--AND AccountingMonthDate >= '2022-01-01' --2022 AOP Objectives
Group by P.AccountingMonthDate, SourceSystemFieldId, organizationid
Order by SourceSystemFieldId, P.AccountingMonthDate
```

|    | AccountingMonthDate           | SourceSystemFieldId | organizationid | AOP Objective   MNTH_AOP_OBJ |
|----|-------------------------------|---------------------|----------------|------------------------------|
| 1  | 2022-01-01                    | 20538               | 66             | 78.00000                     |
| 2  | 2022-02-01                    | 20538               | 66             | 74.00000                     |
| 3  | 2022-03-01                    | 20538               | 66             | 92.00000                     |
| 4  | 2022-04-01                    | 20538               | 66             | 94.00000                     |
| 5  | 2022-05-01                    | 20538               | 66             | 94.00000                     |
| 6  | Click to select the whole row |                     | 66             | 96.00000                     |
| 7  | 2022-07-01                    | 20538               | 66             | 95.00000                     |
| 8  | 2022-08-01                    | 20538               | 66             | 100.00000                    |
| 9  | 2022-09-01                    | 20538               | 66             | 88.00000                     |
| 10 | 2022-10-01                    | 20538               | 66             | 89.00000                     |
| 11 | 2022-11-01                    | 20538               | 66             | 89.00000                     |
| 12 | 2022-12-01                    | 20538               | 66             | 92.00000                     |

Sample Output:

The screenshot displays the ALLPAY Impact Builder application interface. It includes several sections for configuration and analysis:

- Employee and Impact Information:** Includes fields for Plan Change, Employee, Job, Current Average Pay, and Calculation Configurations (Monthly Average Months, Closing Month).
- Impact Analysis:** Shows department impact for Personal Expense and Expense as a % of Gross, comparing 3-month average with changes.
- Performance Impact:** Lists descriptions, 2021 Avg, 3 Month Average, and Performance Objective for various metrics like COM\_FORMULA\_BLK1 and Productivity Measure.
- Commission Impact:** Lists descriptions, 2021 Avg, 3 Month Average, Performance Objective, and Weight for metrics like PT\_BASE and COMP\_AVG\_AOP.
- Bonus Impact:** Lists descriptions, 2021 Avg, 3 Month Average, Performance Objective, and Weight for metrics like BON\_YR\_AVG and BON\_MO\_AVG.
- Payout Impact:** Lists descriptions, 2021 Avg, 3 Month Average, Performance Objective, and Weight for metrics like PT\_GUARANTEE, PT\_MAXIMUM, and PT\_VEHICLE.
- Employee Earnings:** Lists descriptions, 2021 Avg, 3 Month Average, and Performance Objective for metrics like TOTAL\_BW\_YR, TOTAL\_MO\_YR, and TOTAL\_ANNUAL\_YR.



- [Database Schema](#)

## #Compensation Impacts

Impacts to compensation will evaluate the employee's month end closing gross income and calculate the current monthly average (*Current Average Pay*) and show how it compares to the proposed pay plan (*New Average Pay*).

|  |   |  |   |   |
|--|---|--|---|---|
| <b>Employee and Impact Information</b>   |   |  |   | <b>Calculation Configurations</b>                         |
| <input type="button" value="Reason Type"/><br>Pay Plan Change<br><small>Required</small> | <b>Employee</b><br>core.t_PayPlan.NAME          | <b>Job</b><br>core.t_PayPlan.JobId                 | <b>Current Average Pay</b><br>CUR_MONTHLY_AVG | <input type="button" value="Monthly Average"/><br>MONTHS  |
| <input type="button" value="Replacement Employee ID"/><br><Number>                       | <b>Company</b><br>core.t_PayPlan.OrganizationId | <b>Replacement Emp. Average</b><br>CUR_MONTHLY_AVG | <b>New Average Pay</b><br>NEW_MONTHLY_AVG     | <input type="button" value="Closing Month"/><br>July 2022 |

##UX Reference

## Database Schema

#Database Schema

|Source|Description ||--|-| t\_PayPlan.t\_PayPlan.PositionType |Name like '%Individual%' or '%Team%' | Impact Analysis Variables |Variables prefixed w/ an '@' are defined elsewhere in the Impact Analysis | core.t\_employee.hiredate | To calculate the Days of Service to support PE\_CHANGE and CUR\_MO\_AVG.| @StartPPE | To calculate the Days of Service to support PE\_CHANGE and CUR\_MO\_AVG. This is configured by the user.| Days or Service (DOS) | The number of days of employment between the Hire Date and the Start PPE

Days of Service = @StartPPE - Hire Date

| DOS_Months | Business Rule                       |
|------------|-------------------------------------|
| 1          | Days of Service Between 0 AND 25    |
| 2          | Days of Service Between 26 AND 50   |
| 3          | Days of Service Between 51 AND 75   |
| 4          | Days of Service Between 76 AND 100  |
| 5          | Days of Service Between 101 AND 125 |
| 6          | Days of Service Between 126 AND 150 |
| 7          | Days of Service Between 151 AND 175 |
| 8          | Days of Service Between 176 AND 200 |
| 9          | Days of Service Between 201 AND 225 |
| 10         | Days of Service Between 226 AND 250 |
| 11         | Days of Service Between 251 AND 275 |
| 12         | Days of Service >= 276              |

|DOS\_MONTH | The value to use for calculating PE\_CHANGE. | MO\_Earnings | WorkDay via ETL (In Definition)

#121154 ##Current Average Pay

## CURR\_MONTHLY\_AVG

```
RESULT = SUM($MO_Earnings)/DOS_MONTH
| MO_Earnings      The Sum of Monthly Earnings as reported in
|                   WorkDay (How is TBD)
```

```
| DOS_MONTH       The value defines the denominator based on the number of Days of Service (DOS)
```

##Monthly Average

## NEW\_MONTHLY\_AVG

```
IF      t_PayPlan.t_PayPlan.PositionType.NAME  IN 'Individual%'
THEN   RESULT = @TOTAL_MO_MO
|      TOTAL_MO_MO      The sum of the calculated monthly average values
|                        for commissions, bonuses and performance
|                        impacts.

ELSE
  IF      t_PayPlan.PositionType.NAME like 'Team %'
  THEN   RESULT = @TOTAL_ANNUAL_MO
|      TOTAL_ANNUAL_MO  The sum of the calculated yearly average values
|                        for commissions, bonuses and performance
|                        impacts.

  ELSE   RESULT = $0
  END IF
END IF
```

##Sample Queries

TBD

- [UX Reference](#)
- [Database Schema](#)

#Department Impacts The Departmental Impacts informs how the changes to the pay plan affects department personnel and what the monthly average is over time.

## UX Reference

The screenshot shows where the variables are applied within the Impact Analysis

# Impact Analysis

⚠ Alert content

## Department Impact

| <EXPENSE_TYPE>          | 3 month Average | With Change |
|-------------------------|-----------------|-------------|
| Personnel Expense       | \$309,266       | \$349,871   |
| Expense as a % of Gross | 7.3%            | 8.8%        |
| Expense Guide           | 13%             | 13%         |

## Database Schema

| Source                         | Description  |            |               |   |                                  |   |                                   |   |                                   |   |                                    |   |                                     |   |                                     |   |                                     |   |                                     |   |                                     |    |                                     |    |                                     |    |                        |
|--------------------------------|--|------------|---------------|---|----------------------------------|---|-----------------------------------|---|-----------------------------------|---|------------------------------------|---|-------------------------------------|---|-------------------------------------|---|-------------------------------------|---|-------------------------------------|---|-------------------------------------|----|-------------------------------------|----|-------------------------------------|----|------------------------|
| t_PayPlan.t_PayPlan.JobId      | <ul style="list-style-type: none"> <li>The Job ID maps to the specific Personnel Expense formula to calculate the monthly average.</li> <li>For a given Job ID, there are 1:Many source field id's to facilitate calculating <b>PE_MNTH_AVG</b>.</li> </ul> <p>See the <i>Formulas</i> section at the bottom of the page for data requirements.</p>  |            |               |   |                                  |   |                                   |   |                                   |   |                                    |   |                                     |   |                                     |   |                                     |   |                                     |   |                                     |    |                                     |    |                                     |    |                        |
| Impact Analysis Variables      | Variables prefixed w/ an '@' are defined elsewhere in the Impact Analysis  |            |               |   |                                  |   |                                   |   |                                   |   |                                    |   |                                     |   |                                     |   |                                     |   |                                     |   |                                     |    |                                     |    |                                     |    |                        |
| Reason Type                    | The group for the Reason Type selected is used in determining how to calculate a formula.  |            |               |   |                                  |   |                                   |   |                                   |   |                                    |   |                                     |   |                                     |   |                                     |   |                                     |   |                                     |    |                                     |    |                                     |    |                        |
| ref.t_SourceData.SourceFieldId | Both @PEM_FORMULA & @MIS_Line.SourceFieldId uses data from t_SourceData to get values for formulas.  |            |               |   |                                  |   |                                   |   |                                   |   |                                    |   |                                     |   |                                     |   |                                     |   |                                     |   |                                     |    |                                     |    |                                     |    |                        |
| ref.t_SourceData.Value         | VALUE is tied to the Source Field Id and used to calculate PE_MNTH_AVG & GROSSEXP_CHANGE.  |            |               |   |                                  |   |                                   |   |                                   |   |                                    |   |                                     |   |                                     |   |                                     |   |                                     |   |                                     |    |                                     |    |                                     |    |                        |
| core.t_employee.hiredate       | To calculate the Days of Service to support PE_CHANGE and CUR_MO_AVG.  |            |               |   |                                  |   |                                   |   |                                   |   |                                    |   |                                     |   |                                     |   |                                     |   |                                     |   |                                     |    |                                     |    |                                     |    |                        |
| @StartPPE                      | <p>DaysOfService = HireDate - @StartPPE</p> <p>To calculate the Days of Service to support PE_CHANGE and CUR_MO_AVG. This is configured by the user.</p> <p>The number of days of employment between the Hire Date and the Start PPE</p>   |            |               |   |                                  |   |                                   |   |                                   |   |                                    |   |                                     |   |                                     |   |                                     |   |                                     |   |                                     |    |                                     |    |                                     |    |                        |
|                                | Days of Service = Hire Date - @StartPPE  |            |               |   |                                  |   |                                   |   |                                   |   |                                    |   |                                     |   |                                     |   |                                     |   |                                     |   |                                     |    |                                     |    |                                     |    |                        |
| Days or Service (DOS)          | <table border="1"> <thead> <tr> <th>DOS_Months</th> <th>Business Rule</th> </tr> </thead> <tbody> <tr><td>1</td><td>Days of Service Between 0 AND 25</td></tr> <tr><td>2</td><td>Days of Service Between 26 AND 50</td></tr> <tr><td>3</td><td>Days of Service Between 51 AND 75</td></tr> <tr><td>4</td><td>Days of Service Between 76 AND 100</td></tr> <tr><td>5</td><td>Days of Service Between 101 AND 125</td></tr> <tr><td>6</td><td>Days of Service Between 126 AND 150</td></tr> <tr><td>7</td><td>Days of Service Between 151 AND 175</td></tr> <tr><td>8</td><td>Days of Service Between 176 AND 200</td></tr> <tr><td>9</td><td>Days of Service Between 201 AND 225</td></tr> <tr><td>10</td><td>Days of Service Between 226 AND 250</td></tr> <tr><td>11</td><td>Days of Service Between 251 AND 275</td></tr> <tr><td>12</td><td>Days of Service &gt;= 276</td></tr> </tbody> </table> | DOS_Months | Business Rule | 1 | Days of Service Between 0 AND 25 | 2 | Days of Service Between 26 AND 50 | 3 | Days of Service Between 51 AND 75 | 4 | Days of Service Between 76 AND 100 | 5 | Days of Service Between 101 AND 125 | 6 | Days of Service Between 126 AND 150 | 7 | Days of Service Between 151 AND 175 | 8 | Days of Service Between 176 AND 200 | 9 | Days of Service Between 201 AND 225 | 10 | Days of Service Between 226 AND 250 | 11 | Days of Service Between 251 AND 275 | 12 | Days of Service >= 276 |
| DOS_Months                     | Business Rule  |            |               |   |                                  |   |                                   |   |                                   |   |                                    |   |                                     |   |                                     |   |                                     |   |                                     |   |                                     |    |                                     |    |                                     |    |                        |
| 1                              | Days of Service Between 0 AND 25   |            |               |   |                                  |   |                                   |   |                                   |   |                                    |   |                                     |   |                                     |   |                                     |   |                                     |   |                                     |    |                                     |    |                                     |    |                        |
| 2                              | Days of Service Between 26 AND 50  |            |               |   |                                  |   |                                   |   |                                   |   |                                    |   |                                     |   |                                     |   |                                     |   |                                     |   |                                     |    |                                     |    |                                     |    |                        |
| 3                              | Days of Service Between 51 AND 75  |            |               |   |                                  |   |                                   |   |                                   |   |                                    |   |                                     |   |                                     |   |                                     |   |                                     |   |                                     |    |                                     |    |                                     |    |                        |
| 4                              | Days of Service Between 76 AND 100   |            |               |   |                                  |   |                                   |   |                                   |   |                                    |   |                                     |   |                                     |   |                                     |   |                                     |   |                                     |    |                                     |    |                                     |    |                        |
| 5                              | Days of Service Between 101 AND 125  |            |               |   |                                  |   |                                   |   |                                   |   |                                    |   |                                     |   |                                     |   |                                     |   |                                     |   |                                     |    |                                     |    |                                     |    |                        |
| 6                              | Days of Service Between 126 AND 150  |            |               |   |                                  |   |                                   |   |                                   |   |                                    |   |                                     |   |                                     |   |                                     |   |                                     |   |                                     |    |                                     |    |                                     |    |                        |
| 7                              | Days of Service Between 151 AND 175  |            |               |   |                                  |   |                                   |   |                                   |   |                                    |   |                                     |   |                                     |   |                                     |   |                                     |   |                                     |    |                                     |    |                                     |    |                        |
| 8                              | Days of Service Between 176 AND 200  |            |               |   |                                  |   |                                   |   |                                   |   |                                    |   |                                     |   |                                     |   |                                     |   |                                     |   |                                     |    |                                     |    |                                     |    |                        |
| 9                              | Days of Service Between 201 AND 225  |            |               |   |                                  |   |                                   |   |                                   |   |                                    |   |                                     |   |                                     |   |                                     |   |                                     |   |                                     |    |                                     |    |                                     |    |                        |
| 10                             | Days of Service Between 226 AND 250  |            |               |   |                                  |   |                                   |   |                                   |   |                                    |   |                                     |   |                                     |   |                                     |   |                                     |   |                                     |    |                                     |    |                                     |    |                        |
| 11                             | Days of Service Between 251 AND 275  |            |               |   |                                  |   |                                   |   |                                   |   |                                    |   |                                     |   |                                     |   |                                     |   |                                     |   |                                     |    |                                     |    |                                     |    |                        |
| 12                             | Days of Service >= 276   |            |               |   |                                  |   |                                   |   |                                   |   |                                    |   |                                     |   |                                     |   |                                     |   |                                     |   |                                     |    |                                     |    |                                     |    |                        |
| DOS_MONTH                      | The value to use for calculating PE_CHANGE.  |            |               |   |                                  |   |                                   |   |                                   |   |                                    |   |                                     |   |                                     |   |                                     |   |                                     |   |                                     |    |                                     |    |                                     |    |                        |

#Business Rule |Business Rule |Definition | ---| Evaluating Performance Data to determine denominators for Monthly Averages | If S.Value > \$0 THEN Closing Data exists for the month.

Example Scenario: The user is evaluating 5 months of data

If the # of Months with \$0 posted for S.Value is < the selected Monthly Average THEN apply the business rule. |||

##Personnel Expense The following outlines the formulas to calculate departmental impacts.

## PE\_CHANGE

```

IF REASON_TYPE = 'Add'
THEN RESULT = @PE_MNTH_AVG + @NEW_MONTHLY_AVG
ELSE
  IF REASON_TYPE = 'Adjust for Emp'
  THEN RESULT = (@PE_MNTH_AVG + @NEW_MONTHLY_AVG) - SUM(@CUR_MONTHLY_AVG)/MONTHS
  ELSE
    IF REASON_TYPE = 'Replace'
    THEN
      IF DOS_MONTH < MONTHS
      THEN RESULT = (@PE_MNTHAVG + @NEW_MONTHLY_AVG) - (@CUR_MONTHLY_AVG/DOS_MONTH)

      ELSE RESULT = (@PE_MNTHAVG + @NEW_MONTHLY_AVG) - (@CUR_MONTHLY_AVG/MONTHS)
      END IF
    ELSE
      END IF
    END IF
  END IF
END IF

```

| REASON\_TYPE: The reason the user selected for creating  
| Variables prefixed w/ '@' are calculations defined with

| MONTHS: The value selected by the user for Monthly  
| DOS\_MONTH: The value used as the denominator for a Re

## PE\_MNTH\_AVG

```

IF t_PayPlan.JobId = core.t_PayPlan.JobCodeId
THEN RESULT = PEM_FORMULA
ELSE RESULT = $0
    | The JobId defined for the pay plan
    | See the Formulas table at the end of the page

```

*Example:*

| Job Code       | t_PayPlan.JobId | Job Description | Plan Type | Expense Type    | PE_MNTH_AVG   | GROSSEXP_CHANGE |
|----------------|-----------------|-----------------|-----------|-----------------|---------------|-----------------|
| Detail Manager | 9               | Detail Manager  | Team      | Service Support | 22804 + 22810 | 20189           |

*IF t\_PayPlan.JobId = 9 (Detail Manager) THEN RESULT = 22804 + 22810 (TBD: Update with source field id's) ELSE END IF*

**\*\*Example Query to get the denominator to calculate the month end data for PE\_MNTH\_AVG ⓘ\***

```

SELECT TOP 1000 P.AccountingMonthDate, SourceSystemFieldId, organizationid, Sum(Value) 'PE_MNTH_AVG by Month'
FROM ref.t_sourceData S
inner join [core].[t_PayCalendarPeriod] P
on P.ID = S.PayCalendarPeriodId
AND OrganizationId = 66 -- Store Code: 249 Name: Maui Honda
AND sourcesystemfieldid =
AND P.IsActive = 0
Group by P.AccountingMonthDate, SourceSystemFieldId, organizationid
Order by SourceSystemFieldId, P.AccountingMonthDate

```

**##Expense as a % of Gross**

What percentage of the gross pay goes towards the employee's personnel expense.

### **GROSSEXP\_MNTHAVG**

```

IF t_PayPlan.JobId = core.t_PayPlan.JobCodeId
THEN RESULT = @PE_MNTHAVG/MIS_Line.SourceFieldId %
ELSE
END IF
    | The JobId defined for the pay plan
    | MIS_Line.SourceFieldId - See the Formulas section for the Source Field ID to use for calculating the

```

### **GROSSEXP\_CHANGE**

```

IF t_PayPlan.JobId = core.t_PayPlan.JobCodeId
THEN RESULT = @PE_CHANGE/MIS_Line.SourceFieldId %
    | The JobId defined for the pay plan
    | MIS_Line.SourceFieldId - See the Formulas section for the Source Field ID to use for calculating the

```

*Example:*

| Job Code       | t_PayPlan.JobId | Job Description | Plan Type | Expense Type    | PE_MNTH_AVG   | GROSSEXP_CHANGE |
|----------------|-----------------|-----------------|-----------|-----------------|---------------|-----------------|
| Detail Manager | 9               | Detail Manager  | Team      | Service Support | 22804 + 22810 | 20189           |

*IF t\_PayPlan.JobId = 9 (Detail Manager) THEN RESULT = 20189 ELSE END IF*

**\*\*Example Query to get the denominator to calculate the month end data for GROSSEXP\_CHANGE ⓘ\***

```

SELECT TOP 1000 P.AccountingMonthDate, SourceSystemFieldId, organizationid, Sum(Value) 'GROSSEXP_CHANGE by Month'
FROM ref.t_sourceData S
inner join [core].[t_PayCalendarPeriod] P
on P.ID = S.PayCalendarPeriodId
AND OrganizationId = 66 -- Store Code: 249 Name: Maui Honda
AND sourcesystemfieldid = 20189 --
AND P.IsActive = 0
Group by P.AccountingMonthDate, SourceSystemFieldId, organizationid
Order by SourceSystemFieldId, P.AccountingMonthDate

```

**##Expense Guide** The Job Code saved to the pay plan and the Expense Type (See Formulas's matrix at the bottom of the page) defines what Benchmark value to render and how to calculate and build the bar graph.

### **EXPGUIDE**

## Department Impact

|                         | 3 month Average | With Change |
|-------------------------|-----------------|-------------|
| Personnel Expense       | \$309,266       | \$349,871   |
| Expense as a % of Gross | 7.3%            | 8.8%        |
| Expense Guide           | 13%             | 13%         |



### Expense Type EXPGUIDE

|                         |     |
|-------------------------|-----|
| Sales Representatives   | 14% |
| F&I Managers            | 6%  |
| Sales Managers          | 8%  |
| Sales Support           | 1%  |
| Service Advisor         | 13% |
| Service Support         | 5%  |
| Service Manager         | 6%  |
| Parts Advisor           | 10% |
| Parts Manager           | 7%  |
| Parts Support Staff     | 2%  |
| Body Shop Advisor       | 13% |
| Body Shop Manager       | 6%  |
| Body Shop Support Staff | 6%  |

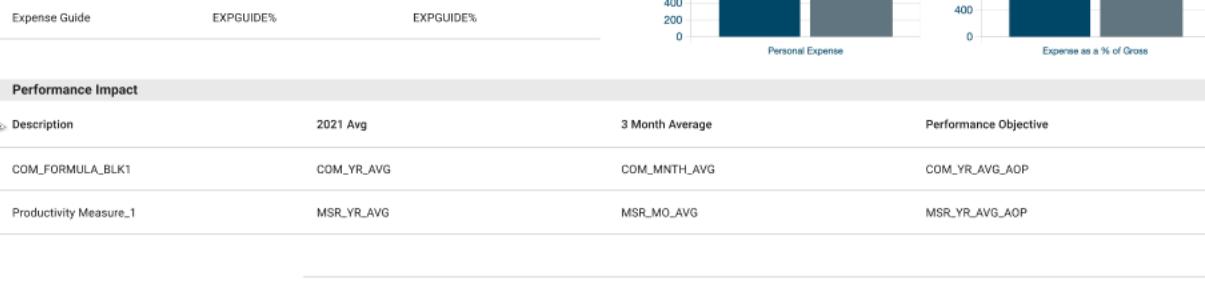
#Formulas The formulas define how to calculate the department impacts. The MIS LINE is the GL Account and the Formula are subsidiary GL accounts.

| Job Code                     | t_PayPlan.JobId | Job Description             | Plan Type  | Expense Type      | PE_MNTH_AVG GROSSEXP_CHANGE |                        | DWH.MIS_LINE | t_SourceSystemField.InternalName | t_SourceSystemField                 |
|------------------------------|-----------------|-----------------------------|------------|-------------------|-----------------------------|------------------------|--------------|----------------------------------|-------------------------------------|
|                              |                 |                             |            |                   | PEM_FORMULA                 | MIS_Line.SourceFieldId |              |                                  |                                     |
| Assistant Body Shop Manager  | 15              | Assistant Body Shop Manager | Team       | Body Shop Advisor | 23687 - 25990               | 20207                  | LM55606      | LM55605-CMTDAMT                  | BODY SHOP GRC LM55605 (CMTDAMT)     |
| Assistant General Manager    | 117             | Assistant General Manager   | Team       | General Manager   |                             | 20214                  | LM85605      | LM85605-CMTDAMT                  | TOTAL STORE GRC LM85605 (CMTDAMT)   |
| Assistant Parts Manager      | 13              | Assistant Parts Manager     | Team       | Parts Advisor     | 23357 - 25991               | 20200                  | LM45605      | LM45605-CMTDAMT                  | PARTS GROSS PAY (CMTDAMT)           |
| Assistant Sales Manager      | 28              | Assistant Sales Manager     | Team       | Sales Manager     | 22448                       | 20169                  | LM15605      | LM15605-CMTDAMT                  | SALES GROSS PAY (CMTDAMT)           |
| Assistant Service Manager    | 11              | Assistant Service Manager   | Team       | Service Advisor   | 22798 - 25989               | 20189                  | LM25605      | LM25605-CMTDAMT                  | SERVICE GROSS PAY LM25605 (CMTDAMT) |
| Body Shop Manager            | 7               | Body Shop Manager           | Team       | Body Shop Manager | 25990                       | 20207                  | LM55606      | LM55605-CMTDAMT                  | BODY SHOP GRC LM55605 (CMTDAMT)     |
| Detail Manager               | 9               | Detail Manager              | Team       | Service Support   | 22804 + 22810               | 20189                  | LM25605      | LM25605-CMTDAMT                  | SERVICE GROSS PAY LM25605 (CMTDAMT) |
| Estimator                    | 61              | Estimator                   | Individual | Shop Advisor      | 23687 - 25990               | 20207                  | LM55606      | LM55605-CMTDAMT                  | BODY SHOP GRC LM55605 (CMTDAMT)     |
| Express Lube Advisor         | 76              | Express Lube Advisor        | Individual | Service Advisor   | 22798 - 25989               | 20189                  | LM25605      | LM25605-CMTDAMT                  | SERVICE GROSS PAY LM25605 (CMTDAMT) |
| Express Lube Advisor (Store) | 76              | Express Lube Advisor        | Individual | Service Advisor   | 22798 - 25989               | 20189                  | LM25605      | LM25605-CMTDAMT                  | SERVICE GROSS PAY LM25605 (CMTDAMT) |

| Job Code                    | t_PayPlan.JobId | Job Description             | Plan Type                  | Expense Type | PE_MNTH_AVG   | GROSSEXP_CHANGE        | DWH.MIS_LINE t_SourceSystemField.InternalName | t_SourceSystemField |
|-----------------------------|-----------------|-----------------------------|----------------------------|--------------|---------------|------------------------|---|---------------------|
|                             |                 |                             |                            |              | PEM_FORMULA   | MIS_Line.SourceFieldId |   |                     |
| Express Lube Advisor (Team) | 76              | Express Lube Advisor        | Individual Service Advisor |              | 22798 - 25989 | 20189                  | LM25605                                       | LM25605-CMTDAMT     |
| Express Lube Manager        | 84              | Express Lube Manager        | Team Service Manager       |              | 25989         | 20189                  | LM25605                                       | LM25605-CMTDAMT     |
| F&I Manager                 | 26              | F&I Manager                 | Individual F&I Manager     |              | 22412         | 20169                  | LM15605                                       | LM15605-CMTDAMT     |
| General Manager             | 3               | General Manager             | Team General Manager       |              |               | 20214                  | LM85605                                       | LM85605-CMTDAMT     |
| General Sales Manager       | 4               | General Sales Manager       | Team Sales Manager         |              | 22448         | 20169                  | LM15605                                       | LM15605-CMTDAMT     |
| Internet Sales Manager      | 36              | Internet Sales Manager      | Team Sales Manager         |              | 22448         | 20169                  | LM15605                                       | LM15605-CMTDAMT     |
| Lead F&I Manager            | 125             | Lead F&I Manager            | Team F&I Manager           |              | 22412         | 20169                  | LM15605                                       | LM15605-CMTDAMT     |
| Multi Store General Manager | 2               | Multi-Store General Manager | Team General Manager       |              |               | 20214                  | LM85605                                       | LM85605-CMTDAMT     |
| New Vehicle Manager         | 6               | New Vehicle Manager         | Team Sales Manager         |              | 22448         | 20169                  | LM15605                                       | LM15605-CMTDAMT     |
| Operations Manager          | 17              | Fixed Operations Manager    | Team Service Manager       |              | 25989         | 20189                  | LM25605                                       | LM25605-CMTDAMT     |
| Parts Advisor               | 93              | Parts Advisor               | Team Parts Advisor         |              | 23357 - 25991 | 20200                  | LM45605                                       | LM45605-CMTDAMT     |
| Parts Manager               | 14              | Parts Manager               | Team Parts Manager         |              | 25991         | 20200                  | LM45605                                       | LM45605-CMTDAMT     |
| Parts Outside Sales         | 97              | Parts Outside Sales         | Team Parts Advisor         |              | 23357 - 25991 | 20200                  | LM45605                                       | LM45605-CMTDAMT     |
| Sales Desk Manager          | 8               | Sales Desk Manager          | Team Sales Manager         |              | 22448         | 20169                  | LM15605                                       | LM15605-CMTDAMT     |
| Service Advisor             | 70              | Service Advisor             | Individual Service Advisor |              | 22798 - 25989 | 20189                  | LM25605                                       | LM25605-CMTDAMT     |
| Service Advisor (Store)     | 70              | Service Advisor             | Individual Service Advisor |              | 22798 - 25989 | 20189                  | LM25605                                       | LM25605-CMTDAMT     |
| Service Advisor (Team)      | 70              | Service Advisor             | Individual Service Advisor |              | 22798 - 25989 | 20189                  | LM25605                                       | LM25605-CMTDAMT     |
| Service Manager             | 16              | Service Manager             | Team Service Manager       |              | 25989         | 20189                  | LM25605                                       | LM25605-CMTDAMT     |
| Shop Foreman                | 62              | Shop Foreman                | Team Service Manager       |              | 25989         | 20189                  | LM25605                                       | LM25605-CMTDAMT     |
| Used Vehicle Manager        | 5               | Used Vehicle Manager        | Team Sales Manager         |              | 22448         | 20169                  | LM15605                                       | LM15605-CMTDAMT     |



#Performance Impacts For each commission defined for a pay plan, the performance impacts are evaluated to determine how they are expected to perform based on closing month data and departmental performance objectives.



##UX Reference

##Database Schema

#### Source

|                                    | Description  |
|------------------------------------|--|
| t_PayPlan.t_PayPlan.PositionTypeId | The Position Type identifies if the Pay Plan is an Individual or Team Plan. PositionTypeId IN (6, 7, 8, 9, 10, 11, 12, 13, 21, 22). This will determine which version of a calc to use in an IF,THEN,ELSE. |
| Impact Analysis Variables          | Variables prefixed w/ an '@' are defined elsewhere in the Impact Analysis  |
| ref.SourceData.Value S             | This field defines the values for AOP Objectives, Sales Performance and Productivity Measures (i.e., amounts & units). Sample queries are at the bottom of the page for both scenarios.                    |
| t_PayPlanBlock.RateFormat          | The format of the value used as part of defining the pay plan formula block using the Simple Formula Editor. The Rate Format defines how to read the Rate Value (i.e. \$, %)                               |
| t_PayPlanBlock.RateValue           | The value that defines either the payout amount or payout percentage   |
| t_PayPlanBlock.SelectedField       | The source field used for obtaining month end closing data and AOP Objectives  |
| Sum of Sales by Lead F&I Mgr.      | This will sum the sales for each F&I Mgr. into an overall department total. Need to validate if t_SourceData will suffice. It currently does not include non-commissioned sales transactions via ETL.      |
| t_Employee.JobId                   | Used to filter the job codes for calculating the number of employees within the F&I Department AND to determine the path for calculating Performance Impacts for the report.                               |

#Business Rule

#### Business Rule

|  | Definition  |
|--|---|
| Evaluating Performance Data to determine denominators for Monthly Averages (Months_Posted) | If S.Value > \$0 THEN Closing Data exists for the month.  |
| PVR Bonus  | Example Scenario: The user is evaluating 5 months of data<br>If the # of Months with \$0 posted for S.Value is < the selected Monthly Average THEN apply the business rule.<br>A type of BONUS (BNS) formula block setup for F&I Managers. The following must be setup in order to be deemed a PVR Bonus Formula Block: <ul style="list-style-type: none"><li>• Selected Computed Rate - Single Field</li><li>• Source Field = PVR_PVR_AMT_ALL</li><li>• Logic Type = Tiered</li><li>• Value = Max(Tier)</li><li>• Format: Amt</li></ul> Source ID - Description<br>21397 - FI_TOTAL_amt_All<br>21419 - FIN_RESERVE_amt_All<br>21435 - FI_TOTAL_ct_All<br>25894 - Product_Amt_All |
| Source Fields for Calculating FI Mgr. Calcs  | TBD   |
| Source Fields for Calculating Service Advisor Calcs  | Source Id - Description<br>20538 - New Retail Revenue - Total Sales - LM10860 (CMTDunt)<br>20160 - Used Retail Revenue - Total Sales - LM15150 (CMTDunt)<br>21700 - Sales Gross Sales (CMTDunt)<br>24186 - THRS<br>20538+20160  |
| F&I Manager Calcuation Rules   | COM_YR_AVG is not calculated for F&I Managers. Only COM_MNTH_AVG & COM_YR_AVG_AOP are calculated for this Job type.   |

#Commission Impacts

The following workflow outlines how to calculate the Yearly, Monthly and AOP Performance Impacts against the Commission Formula Blocks defined for the Pay Plan.

## ##Individual and TEAM Pay Plans

### Pay Plan Scenarios

#### F&I Managers

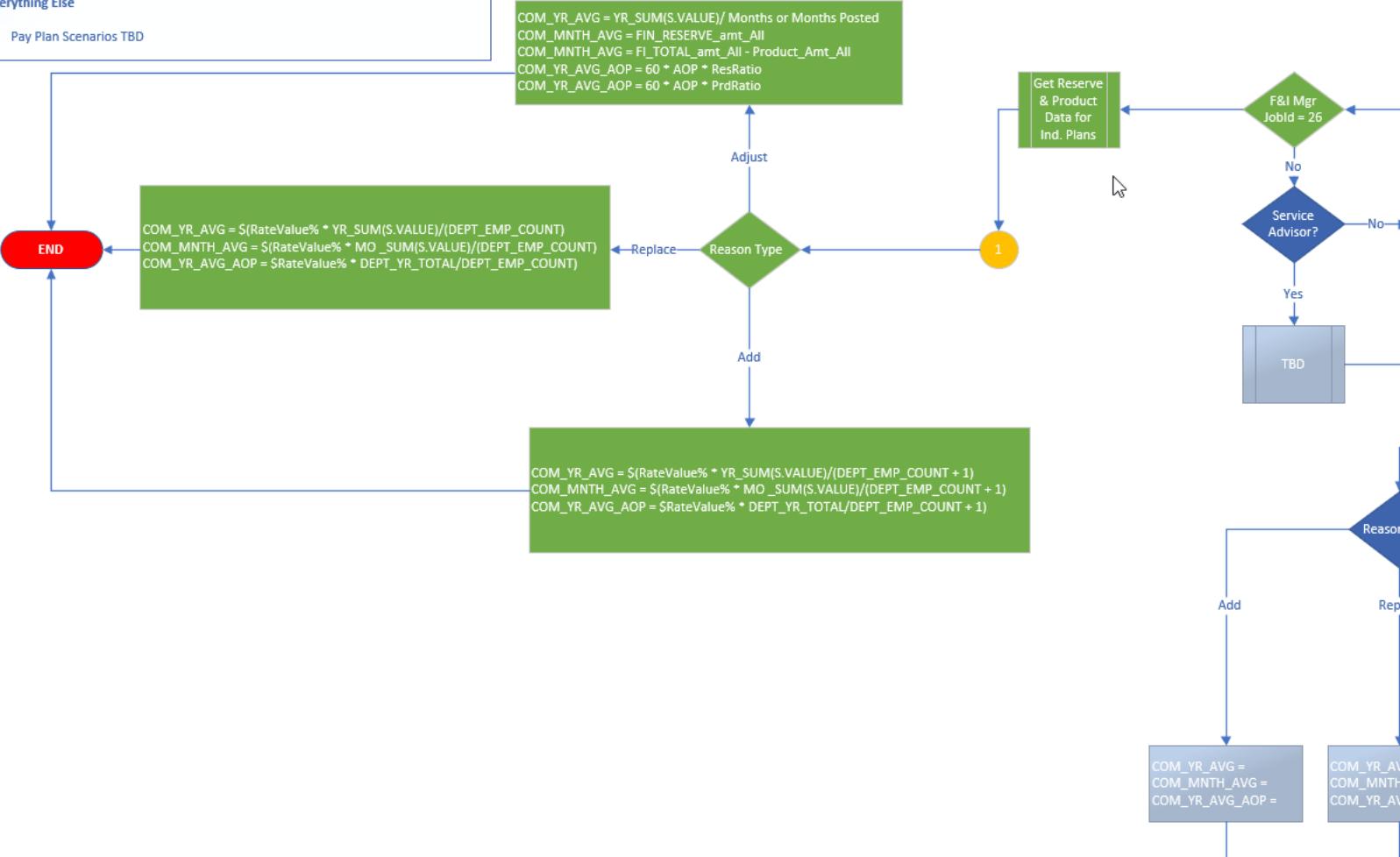
- Varying Rates - MVP: Workflow Complete
- Paid on Total F&I Income
- Paid off Total F&I & Product Varying Rates
- Product Only
- Reserve Only
- Paid off Total F&I & Reserve Varying Rates (not supported today)

#### Service Advisors

- Pay Plan Scenarios TBD

#### Everything Else

- Pay Plan Scenarios TBD



### #Productivity Measures ##Previous Years Average

RESULT = SUM(S.VALUE) /Months\_Posted | MONTHS\_Posted: The Monthly Average selected by the user. See business rule at top of page.

### Sample Query: Previous Years Average

```

SELECT 'MSR_YR_AVG' | Productivity Measure'
, AccountingMonthDate
, SourceSystemFieldId
, organizationid
, Sum(Value) 'VALUE - Units'
FROM ref.t_sourceData S
inner join [core].[t_PayCalendarPeriod] P
on P.ID = S.PayCalendarPeriodId
AND OrganizationId in (66) -- Store Code: 249 Name: Maui Honda
AND sourcesystemfieldid IN (20538, 20160, 21700, 24186)
AND S.ID <> 24025157 -- I don't know why a double entry is recorded. Assuming this record wasn't Deactivated based on PERF DASH results.
AND AccountingMonthDate BETWEEN '2022-01-01' AND '2022-12-01'
Group by AccountingMonthDate, SourceSystemFieldId, organizationid
Order by SourceSystemFieldId
    
```

### ##Productivity Measure: Monthly Average

RESULT = \$ SUM(S.VALUE) /MONTH\_Posted | MONTHS\_Posted: The Monthly Average selected by the user. See business rule at top of page.

### ##Performance Objective: AOP Average

```

IF PayPlanPositionTypeId NOT LIKE 'Individual'
AND $MNTH_AOP_OBJ <> 0.00000
AND $MNTH_AOP_OBJ >= $MONTHLY_AVG
THEN RESULT = AVG(MNTH_AOP_OBJ)
    
```

| MNTH\_AOP\_OBJ: The objective set for selected productivity measure.  
| MONTHLY\_AVG: The average number of units sold for the selected productivity measure.

```
ELSE RESULT = @MSR_MO_AVG * 1.15
END IF
```

## #Sample Queries

```
SELECT 'MSR_YR_AVG | Productivity Measure', AccountingMonthDate, SourceSystemFieldId, Sum(Value) 'VALUE - Units'
FROM ref.t_sourceData S
inner join [core].[t_PayCalendarPeriod] P
on P.ID = S.PayCalendarPeriodId
AND OrganizationId in (66) -- Store Code: 249 Name: Maui Honda
AND sourcesystemfieldid = 20538 -- IN (20538, 20160, 21700, 24186 ) --ALL Prod Measure Source Field ID's
AND SourceControl is NOT Null --AOP Objective set for the Store
AND AccountingMonthDate BETWEEN '2022-01-01' AND '2022-12-01'
Group by SourceSystemFieldId, AccountingMonthDate
Order by AccountingMonthDate, SourceSystemFieldId
```

|                                   |            |       |  |           |
|-----------------------------------|------------|-------|--|-----------|
| MSR_YR_AVG   Productivity Measure | 2021-12-01 | 20538 | New Retail Revenue - Total Sales - LM10860 (CMTD...<br>LM10860-CMTDunt | 109.00000 |
| MSR_YR_AVG   Productivity Measure | 2022-01-01 | 20538 | New Retail Revenue - Total Sales - LM10860 (CMTD...<br>LM10860-CMTDunt | 116.00000 |
| MSR_YR_AVG   Productivity Measure | 2022-02-01 | 20538 | New Retail Revenue - Total Sales - LM10860 (CMTD...<br>LM10860-CMTDunt | 111.00000 |
| MSR_YR_AVG   Productivity Measure | 2022-03-01 | 20538 | New Retail Revenue - Total Sales - LM10860 (CMTD...<br>LM10860-CMTDunt | 139.00000 |
| MSR_YR_AVG   Productivity Measure | 2022-04-01 | 20538 | New Retail Revenue - Total Sales - LM10860 (CMTD...<br>LM10860-CMTDunt | 138.00000 |
| MSR_YR_AVG   Productivity Measure | 2022-05-01 | 20538 | New Retail Revenue - Total Sales - LM10860 (CMTD...<br>LM10860-CMTDunt | 144.00000 |
| MSR_YR_AVG   Productivity Measure | 2022-06-01 | 20538 | New Retail Revenue - Total Sales - LM10860 (CMTD...<br>LM10860-CMTDunt | 144.00000 |
| MSR_YR_AVG   Productivity Measure | 2022-07-01 | 20538 | New Retail Revenue - Total Sales - LM10860 (CMTD...<br>LM10860-CMTDunt | 143.00000 |
| MSR_YR_AVG   Productivity Measure | 2022-08-01 | 20538 | New Retail Revenue - Total Sales - LM10860 (CMTD...<br>LM10860-CMTDunt | 152.00000 |
| MSR_YR_AVG   Productivity Measure | 2022-09-01 | 20538 | New Retail Revenue - Total Sales - LM10860 (CMTD...<br>LM10860-CMTDunt | 136.00000 |
| MSR_YR_AVG   Productivity Measure | 2022-10-01 | 20538 | New Retail Revenue - Total Sales - LM10860 (CMTD...<br>LM10860-CMTDunt | 135.00000 |
| MSR_YR_AVG   Productivity Measure | 2022-11-01 | 20538 | New Retail Revenue - Total Sales - LM10860 (CMTD...<br>LM10860-CMTDunt | 136.00000 |

```
SELECT 'COM_YR_AVG | PayPlan Type: Team | Add |DEPT_YR_TOTAL'
      , SourceSystemFieldId, organizationid, Sum(Value) '$ SUM(VALUE)'
      , AVG(Value)*.015 'RESULT = $ RateValue% * SUM(S.VALUE)/DEPT_EMP_COUNT + 1', count(s.id) 'Count of Records'
FROM ref.t_sourceData S
inner join [core].[t_PayCalendarPeriod] P
on P.ID = S.PayCalendarPeriodId
AND OrganizationId IN (66) -- Store Code: 249 Name: Maui Honda
AND sourcesystemfieldid = 20169
AND AccountingMonthDate BETWEEN '2022-01-01' AND '2022-12-01'
AND EmployeeId is NOT NULL
Group by SourceSystemFieldId, organizationid
Order by SourceSystemFieldId
```

| (No column name)                                       | SourceSystemFieldId | organizationid | \$ SUM(VALUE) | RESULT = \$ COMM% * SUM(S.VALUE)/DEPT_EMP_COUNT + 1 | Count of Records |
|--|---------------------|----------------|---------------|---|------------------|
| 1 COM_YR_AVG   PayPlan Type: Team   Add  DEPT_YR_TO... | 20169               | 6              | 533024.11000  | 3997.680825   | 2                |
| 2 COM_YR_AVG   PayPlan Type: Team   Add  DEPT_YR_TO... | 20169               | 66             | 775923.31000  | 11638.849650  | 1                |

```
SELECT PP.NAME
, PP.OrganizationId
, PP.DepartmentId
, PP.Id "Pay Plan ID"
, PPB.ID "PayPlan Formula Block"
, PPB.PayPlanBlockPayTypeId 'Formula Block Type COM/BON'
, CalculationPeriodTypeId 'Pay Frequency'
, SourceSystemFieldId
, SourceSystemId
, IsSimpleFormula
, PPB.SimpleFormulaUI
, FormulaText
, SqlText
, PP.CreatedTimestamp
FROM
[core].[t_PayPlanBlock] PPB
,[core].[t_payplan] PP
,[lnkr].[t_PayPlanBlockSourceSystemField] SS
,[ref].[t_SourceSystemField] SSF
WHERE PP.ID = PPB.PayPlanId
AND PPB.ID = SS.PayPlanBlockId
AND SSF.ID = SS.SourceSystemFieldId
AND PPB.PayPlanBlockPayTypeId IN (1,2) -- (COM,BON)
AND PP.PayPlanUsageId <> 4
AND IsSimpleFormula = 1
AND PP.DepartmentId IN ('15', '117', '13', '28', '11', '7', '9', '61', '76', '84', '26', '3', '4', '36', '125', '2', '6', '17', '93', '14', '97')
order by PP.CreatedTimestamp descde17de2e.png
```

- [Commission Impacts](#)
- [Sample Queries](#)
  - [AOP Objectives for a Source Field in Units \(i.e. New Retail Units\)](#)
  - [Month End Sales Performance](#)
  - [Month End Sales Performance](#)

#Compensation Impacts #UX Reference

## Commission Impact

| Description         | 2021 Avg    | 3 Month Average | Performance Objective | Weight      |
|---------------------|-------------|-----------------|-----------------------|-------------|
| <PayFrequency> Base | PT_BASE     | PT_BASE         | PT_BASE               | PT_BASE     |
| COM_FORMULA_BLK1    | COMP_YR_AVG | COMP_MNTH_AVG   | COMP_AVG_AOP          | COMP_WEIGHT |

## Bonus Impact

| Description           | 2021 Avg   | 3 Month Average | Performance Objective | Weight     |
|-----------------------|------------|-----------------|-----------------------|------------|
| BON_FORMULA_BLK1 (X%) | BON_YR_AVG | BON_MO_AVG      | BON_AOP_AVG           | BON_WEIGHT |

## #Database Schema

|Source|Description ||--|| Impact Analysis Variables |Variables prefixed w/ an '@' are defined elsewhere in the Impact Analysis. | ref.t\_SourceData.Value S |To obtain sales data and AOP Objectives. The sample query at the end of the page provides AOP objectives (EmployeeId is NULL). S.Value represents the Month End Sales Performance data. | COM\_FORMULA\_BLK1 | Represents core.t\_payplanblock.Long\_Description | BON\_FORMULA\_BLK2 | Represent core.t\_payplanblock.Long\_Description | t\_PayPlanBlock.RateFormat | The format of the value used as part of defining the pay plan formula block using the Simple Formula Editor. The Rate Format defines how to read the Rate Value (i.e. \$, %) | t\_PayPlanBlock.RateValue | The value that defines either the payout amount or payout percentage | t\_PayPlanBlock.SelectedField | The source field used for obtaining month end closing data and AOP Objectives | #Business Rules

## Business Rule

### Definition

If S.Value > \$0 THEN Closing Data exists for the month.

Example Scenario: The user is evaluating 5 months of data

If the # of Months with \$0 posted for S.Value is < the selected Monthly Average THEN apply the business rule.

## Commission Impacts

### COMP\_YR\_AVG

```
IF RateFormat = AMT
THEN Result = $SUM(SelectedField) /12
| Rate Format: The value used for the payout. PCT or AMT
| SelectedField: This will tie back to the SourceSystemFieldId to get the
| VALUE for the SelectedField (i.e. incentive). The result is based
| on 12 months of data assuming data is posted for the entire year.
| If data is not posted for all 12 months, then use the number of
| months available as the denominator to calculate the average.

ELSE
    IF RateFormat = PCT
        THEN Result = $@COM_YR_AVG * RateValue
    | Rate Value: The value used to calculate the commission pay out
    END IF
END IF
```

### Example:

IF RateFormat = AMT  
THEN Result = \$SUM(LM45605)/12

The screenshot shows a software interface for managing data subtotals. On the left, there's a table with a subtotal row for 'Parts Gross'. On the right, there's a configuration panel for this subtotal. The panel has a 'Subtotal Title' field set to 'Parts Gross'. Below it is a 'Rate' section with a 'Compute rate' checkbox (unchecked) and a 'Rate Value' input field containing '2.750 %'. To the right of the rate section is a 'Format' dropdown set to 'pct'. At the bottom of the configuration panel, there are 'Measure' settings: a checked 'Use Measure Selector' checkbox and a 'Selected Field' dropdown set to '[MIS Standard LI]'. There's also a 'Choose Field' button.

### COMP\_MNTH\_AVG

```
IF      If RateFormat = PCT
THEN    RESULT = @COM_MNTH_AVG * RateValue %
ELSE    RESULT = AVG($RateValue/MONTHS)
| Rate Format: The value used for the payout. PCT or AMT
| @COM_MNTH_AVG See "Performance Impacts" for formula definition.
| RateValue   The value defined on the commission formula block
```

### COMP\_AVG\_AOP

```
IF      PayPlanPositionTypeId NOT IN (6, 7, 8, 9, 10, 11, 12, 13)
AND MNTH_AOP_OBJ IS NOT NULL
AND MNTH_AOP_OBJ >= (S.VALUE) /MONTHS
| S.VALUE      The sales performance data from t_SourceData.Value S for the
| Selected Field (i.e. source field).

THEN    RESULT = $SUM(MNTH_AOP_OBJ) /MONTHS
| MNTH_AOP_OBJ: A monthly objective set for the selected Source Field defined for the commission form
| SUM the monthly value for the number of MONTHS selected.

| MONTHS:     The value selected for Monthly Average. Refer to the business rule at the top of the p
| COM_MO_PO   The month end closing sales figures of the source field(s)
| defined for the formula block. The # of months to sum is based
| the Month Average selection.
```

## COMP\_WEIGHT

```
RESULT = SUM(MNTH_AOP_OBJ) / YR_AOP_OBJ %  
| MNTH_AOP_OBJ A monthly objective set for the selected Source Field defined for the commission f  
SUM the monthly value for the number of  
MONTHS selected.  
| YR_AOP_OBJ The sum of the AOP Objectives set for the year
```

##Bonus Impacts

## BON\_YR\_AVG

```
IF RateFormat = PCT  
THEN RESULT = $ @COM_YR_AVG * RateValue%  
ELSE RESULT = $RateValue
```

## BON\_MO\_AVG

```
IF RateFormat = PCT  
THEN RESULT = $ @COM_MNTH_AVG* RateValue%  
ELSE RESULT = $RateValue
```

## BON\_AVG\_AOP

```
IF RateFormat = PCT  
THEN RESULT = $ @COM_YR_AVG_AOP * RateValue%  
ELSE RESULT = $RateValue
```

## BON\_WEIGHT

```
RESULT = SUM(@MNTH_AOP_OBJ) / @YR_AOP_OBJ %  
| MNTH_AOP_OBJ: The monthly AOP objective set for the source field  
defined on bonus formula block. The numerator is defined by  
the value selected for the Monthly Average.  
| YR_AOP_OBJ The sum of 12 months of AOP Objectives
```

## Sample Queries

### AOP Objectives for a Source Field in Units (i.e. New Retail Units)

```
SELECT P.AccountingMonthDate, SourceSystemFieldId, SourceControl, EmployeeId, organizationid, Sum(Value) 'AOP Objective | @MNTH_AOP_OBJ'  
FROM ref_t_sourceData S  
inner join [core].[t_PayCalendarPeriod] P  
on P.ID = S.PayCalendarPeriodId  
AND sourcecontrol = 34 -- Source System: SPE Standard  
AND P.IsActive = 0  
AND OrganizationId = 66 -- Store Code: 249 Name: Maui Honda  
AND sourcesystemfieldid = 20538-- New Retail Revenue - Total Sales - LM10860 (CMTDunt)  
AND AccountingMonthDate BETWEEN '2022-1-1' AND '2022-12-01' --2022 AOP Objectives  
Group by P.AccountingMonthDate, SourceSystemFieldId, organizationid, EmployeeId, SourceControl  
Order by SourceControl
```

|    | AccountingMonthDate | SourceSystemFieldId | organizationid | AOP Objective   @MNTH_AOP_OBJ |
|----|---------------------|---------------------|----------------|-------------------------------|
| 1  | 2022-01-01          | 20538               | 66             | 78.00000                      |
| 2  | 2022-02-01          | 20538               | 66             | 74.00000                      |
| 3  | 2022-03-01          | 20538               | 66             | 92.00000                      |
| 4  | 2022-04-01          | 20538               | 66             | 94.00000                      |
| 5  | 2022-05-01          | 20538               | 66             | 94.00000                      |
| 6  | 2022-06-01          | 20538               | 66             | 96.00000                      |
| 7  | 2022-07-01          | 20538               | 66             | 95.00000                      |
| 8  | 2022-08-01          | 20538               | 66             | 100.00000                     |
| 9  | 2022-09-01          | 20538               | 66             | 88.00000                      |
| 10 | 2022-10-01          | 20538               | 66             | 89.00000                      |
| 11 | 2022-11-01          | 20538               | 66             | 89.00000                      |
| 12 | 2022-12-01          | 20538               | 66             | 92.00000                      |

Sample Output:

# 2022 Monthly Performance - Maui Hon

|                          |  | Monthly Trend                |                              |                              |                              |                              |                              |                              |                              |                              |
|--------------------------|--|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|
| Benchmark                |  | Jan-22                       | Feb-22                       | Mar-22                       | Apr-22                       | May-22                       | Jun-22                       | Jul-22                       | Aug-22                       | Sep-22                       |
| <strong>STORE</strong>   |  |                              |                              |                              |                              |                              |                              |                              |                              |                              |
| LM85600                  | Store Revenue                          | \$4,328,000                  | \$4,229,000                  | \$4,848,000                  | \$5,001,000                  | \$4,907,000                  | \$4,952,000                  | \$4,944,000                  | \$5,138,000                  | \$4,605,000                  |
| <strong>LM85605</strong> | <strong>Store Gross Profit</strong>    | <strong>\$1,117,500</strong> | <strong>\$1,076,750</strong> | <strong>\$1,239,250</strong> | <strong>\$1,285,550</strong> | <strong>\$1,265,700</strong> | <strong>\$1,270,300</strong> | <strong>\$1,278,000</strong> | <strong>\$1,322,500</strong> | <strong>\$1,200,100</strong> |
| LM86400                  | Store Expense                          | \$734,000                    | \$722,000                    | \$779,000                    | \$792,000                    | \$785,000                    | \$789,000                    | \$789,000                    | \$802,000                    | \$762,000                    |
| LM86410                  | Add Income (Expense)                   | \$1,000                      | \$900                        | \$1,100                      | \$1,000                      | \$1,000                      | \$1,000                      | \$1,000                      | \$1,000                      | \$1,000                      |
| <strong>LM86450</strong> | <strong>Net Profit Before Tax</strong> | <strong>\$384,500</strong>   | <strong>\$355,650</strong>   | <strong>\$461,350</strong>   | <strong>\$494,550</strong>   | <strong>\$481,700</strong>   | <strong>\$482,300</strong>   | <strong>\$490,000</strong>   | <strong>\$521,500</strong>   | <strong>\$439,100</strong>   |
| Net to Gross %           |  | 34.4%                        | 33.0%                        | 37.2%                        | 38.5%                        | 38.1%                        | 38.0%                        | 38.3%                        | 39.4%                        | 36.6%                        |
| <strong>SALES</strong>   |  |                              |                              |                              |                              |                              |                              |                              |                              |                              |
| LM15600                  | Sales Revenue                          | \$3,745,000                  | \$3,700,000                  | \$4,232,000                  | \$4,348,000                  | \$4,256,000                  | \$4,311,000                  | \$4,281,000                  | \$4,465,000                  | \$3,958,000                  |
| LM10860                  | New Retail Units                       | 78                           | 74                           | 92                           | 94                           | 94                           | 96                           | 95                           | 100                          | 88                           |
| LM15150                  | Used Retail Units                      | 74                           | 77                           | 85                           | 88                           | 90                           | 90                           | 90                           | 95                           | 85                           |

## Month End Sales Performance

```

SELECT AccountingMonthDate, SourceSystemFieldId, Sum(Value) '@COM_MO_PO'
FROM ref.t_sourceData S
inner join [core].[t_PayCalendarPeriod] P
on P.ID = S.PayCalendarPeriodId
AND OrganizationId in ( 6) -- Store Code: 249 Name: Maui Honda
AND sourcesystemfieldid = 20169
AND P.IsActive = 0
AND EmployeeId is not Null --This is what defines actuals vs. objectives
AND AccountingMonthDate BETWEEN '2021-12-01' AND '2022-11-01'
Group by SourceSystemFieldId, AccountingMonthDate
Order by AccountingMonthDate, SourceSystemFieldId

```

| Results             |                     |              | Messages |  |
|---------------------|---------------------|--------------|----------|--|
| AccountingMonthDate | SourceSystemFieldId | COM_MNTH_AVG |          |  |
| 1 2022-09-01        | 20538               | 49.00000     |          |  |

## Sample Output

## Month End Sales Performance

```

SELECT AccountingMonthDate, SourceSystemFieldId, Sum(Value) '@MNTH_AOP_OBJ'
FROM ref.t_sourceData S
inner join [core].[t_PayCalendarPeriod] P
on P.ID = S.PayCalendarPeriodId
AND OrganizationId in ( 241) -- Store Code: 249 Name: Maui Honda
AND sourcesystemfieldid = 20169
AND SourceControl = 33
AND AccountingMonthDate BETWEEN '2021-12-01' AND '2022-11-01'
Group by SourceSystemFieldId, AccountingMonthDate
Order by AccountingMonthDate, SourceSystemFieldId

```

```

SELECT AccountingMonthDate, PayCalendarPeriodId, SourceSystemFieldId, Sum(Value) '@COM_MO_PO'
FROM ref.t_sourceData S
inner join [core].[t_PayCalendarPeriod] P
on P.ID = S.PayCalendarPeriodId
AND OrganizationId in ( 241) -- Store Code: 249 Name: Maui Honda
AND sourcesystemfieldid = 20169
AND SourceControl IS NULL
AND AccountingMonthDate BETWEEN '2021-12-01' AND '2022-11-01'
Group by SourceSystemFieldId, AccountingMonthDate, PayCalendarPeriodId
Order by AccountingMonthDate, SourceSystemFieldId

select 'Individual Sales & AOP transaction records', * from ref.t_sourcedata
where SourceSystemFieldId = 20169
--and employeeid is NOT null
and PayCalendarPeriodId = 262
and OrganizationId = 241

```

## Results | Messages

|    | AccountingMonthDate | SourceSystemFieldId | @MNTH_AOP_OBJ |
|----|---------------------|---------------------|---------------|
| 1  | 2021-12-01          | 20169               | 1396847.37000 |
| 2  | 2022-01-01          | 20169               | 556765.23000  |
| 3  | 2022-02-01          | 20169               | 348714.97000  |
| 4  | 2022-03-01          | 20169               | 618576.70000  |
| 5  | 2022-04-01          | 20169               | 538205.18000  |
| 6  | 2022-05-01          | 20169               | 438048.41000  |
| 7  | 2022-06-01          | 20169               | 488008.74000  |
| 8  | 2022-07-01          | 20169               | 454280.91000  |
| 9  | 2022-08-01          | 20169               | 403793.65000  |
| 10 | 2022-09-01          | 20169               | 18134.88000   |
| 11 | 2022-10-01          | 20169               | 625875.71000  |
| 12 | 2022-11-01          | 20169               | 367318.47000  |

|   | AccountingMonthDate | PayCalendarPeriodId | SourceSystemFieldId | @COM_MO_PO   |
|---|---------------------|---------------------|---------------------|--------------|
| 1 | 2022-08-01          | 261                 | 20169               | 403793.65000 |
| 2 | 2022-09-01          | 262                 | 20169               | 36269.76000  |

|   | (No column name)                           | Id       | SourceSystemFieldId | EmployeeId | PayGroupId | OrganizationId | PayCalendarPeriodId | PayrollTypeId | SourceControl | SourceReference | Value  |
|---|--|----------|---------------------|------------|------------|----------------|---------------------|---------------|---------------|-----------------|--------|
| 1 | Individual Sales & AOP transaction records | 60976566 | 20169               | NULL       | 241        | 241            | 262                 | 1             | 33            | NULL            | 18134  |
| 2 | Individual Sales & AOP transaction records | 63002164 | 20169               | 36348      | 241        | 241            | 262                 | 5             | NULL          | NULL            | 0.0000 |
| 3 | Individual Sales & AOP transaction records | 65028097 | 20169               | 41436      | 241        | 241            | 262                 | 5             | NULL          | NULL            | 0.0000 |
| 4 | Individual Sales & AOP transaction records | 68297551 | 20169               | 36348      | 241        | 241            | 262                 | 6             | NULL          | NULL            | 18134  |
| 5 | Individual Sales & AOP transaction records | 68297975 | 20169               | 41436      | 241        | 241            | 262                 | 6             | NULL          | NULL            | 18134  |

- [UX Reference](#)

#Legend

## UX Reference

### Payout Impact

| Description       | 2021 Avg     | 3 Month Average | Performance Objective | Weight       |
|-------------------|--------------|-----------------|-----------------------|--------------|
| Guarantee         | PT_GUARANTEE | PT_GUARANTEE    | PT_GUARANTEE          | PT_GUARANTEE |
| Maximum           | PT_MAXIMUM   | PT_MAXIMUM      | PT_MAXIMUM            | PT_MAXIMUM   |
| Vehicle Allowance | PT_VEHICLE   | PT_VEHICLE      | PT_VEHICLE            | PT_VEHICLE   |

#Database Schema

### Source

core.t\_PayPlan.PlanTypeId

core.t\_PayPlan.FooterId

Impact Analysis Variables

lnkr.t\_PayPlanPayPlanType

core.t\_PayPlan.HourlyRate

GROSSTOTAL

SUM(COM + BON)

lnkr.t\_PayPlanPayPlanType.AlwaysAmount

### Description

A pay plan may have Plan Types defined. The Description will display to the user along with the calculated values.

The Footer Id is used to define if a pay plan is for an Hourly Employee and used to define calculations.

Variables prefixed w/ an '@' are defined elsewhere in the Impact Analysis

Always, Current Mid Amount and Current End Amount are used to define the amount of the pay out. Impact Builder should expect data to be entered based how the Plan Type Formula's Matrix is defined at the bottom of the page.

The hourly rate the employee is paid based on the pay plan.

The SUM of the expected values as defined for each plan type at the bottom of the page.

The sum of the commission and bonus calculations.

The value defined for the plan type. See the matrix at the bottom of the page for plan type definitions.

The value defined for the plan type. See the matrix at the bottom of the page for plan type definitions.

The value defined for the plan type. See the matrix at the bottom of the page for plan type definitions.

core.t\_PayPlan.FooterId

The footer will identify a pay plan that is hourly plus or offset

#Business Rule |Business Rule |Definition | |--| Plan Type's to render on Impact Analysis |

- Base
- Vehicle Allowance
- Maximum
- Guarantee

• Draw |Pay Plan setup for Plan Type | See Business Rule matrix at the bottom of the page: [Pay Plan setup for Plan Type Pay Out's](#) |

#Plan Type Formulas The following calculations are based on the Plan Types defined on a pay plan.

##Base

### ###Scenario 1: Pay Frequency = Weekly AND FooterId = Hourly Plus

```
If PayPlanTypeId = 'BASE'
    AND PayFrequencyId = 'Weekly'
    AND FooterId LIKE '%Hourly Plus%'
THEN RESULT = $HOURLY_RATE * 173.33
```

```
ELSE RESULT = AlwaysAmount * 4.333
END IF
```

#### ###Scenario 2: Pay Frequency = Bi-Weekly AND FooterId = Hourly Plus

```
If PayPlanTypeId = 'BASE'
    AND PayFrequencyId = 'Bi-Weekly'
    AND FooterId LIKE '%Hourly Plus%'
THEN RESULT = $HOURLY_RATE * 173.33
ELSE RESULT = AlwaysAmount * 4.333
END IF
```

#### ###Scenario 3: Pay Frequency = Semi-Monthly AND FooterId = Hourly Plus

```
If PayPlanTypeId = 'BASE'
    AND PayFrequencyId = 'Semi-Monthly'
    AND FooterId LIKE '%Hourly Plus%'
THEN RESULT = $HOURLY_RATE * 173.33
ELSE RESULT = AlwaysAmount * 4.333
END IF
```

#### ###Scenario 4: Pay Frequency = Weekly AND FooterId = Hourly Offset

```
If PayPlanTypeId = 'BASE'
    AND PayFrequencyId = 'Weekly'
    AND FooterId LIKE '%Hourly Offset%'
THEN RESULT =
    IF SUM(COM+BON) >= (HOURLY_RATE * 173.33)
        THEN (GrossTotals - (HOURLY_RATE * 173.33))
    ELSE (GrossTotals - SUM(COM+BON))
ELSE RESULT = AlwaysAmount * 4.333
END IF
```

#### ###Scenario 5: Pay Frequency = Bi-Weekly AND FooterId = Hourly Offset

```
If PayPlanTypeId = 'BASE'
    AND PayFrequencyId = 'Bi-Weekly'
    AND FooterId LIKE '%Hourly Offset%'
THEN RESULT =
    IF SUM(COM+BON) >= (HOURLY_RATE * 173.33)
        THEN (GrossTotals - (HOURLY_RATE * 173.33))
    ELSE (GrossTotals - (COM+BON))
ELSE RESULT = AlwaysAmount * 4.333
END IF
```

#### ###Scenario 6: Pay Frequency = Semi-Monthly AND FooterId = Hourly Offset

```
If PayPlanTypeId = 'BASE'
    AND PayFrequencyId = 'Semi-Monthly'
    AND FooterId LIKE '%Hourly Offset%'
THEN RESULT =
    IF SUM(COM+BON) >= (HOURLY_RATE * 173.33)
        THEN RESULT = $(GrossTotals - (HOURLY_RATE * 173.33))
    ELSE RESULT = $(GrossTotals - (COM+BON))
ELSE RESULT = $AlwaysAmount * 4.333
END IF
```

##Draw

#### ###Scenario 1: Pay Frequency = Weekly

```
If PayPlanTypeId = 'DRAW'
    AND PayFrequencyId = 'Weekly'
    AND (AlwaysAmount * 4.333) - SUM(COM + BON) <= $0
THEN RESULT = $0
ELSE RESULT = $(AlwaysAmount * 4.333) - SUM(BON + COM)
END IF
```

#### ###Scenario 2: Pay Frequency = Bi-Weekly

```
If PayPlanTypeId = 'DRAW'
    AND PayFrequencyId = 'Bi-Weekly'
    AND (CurrentMidAmount + CurrentEndAmount - SUM(BON+COM) ) <= $0
THEN RESULT = $0
ELSE RESULT = $CurrentMidAmount + CurrentEndAmount - SUM(BON+COM)
END IF
```

#### ###Scenario 3: Pay Frequency = Semi-Monthly

```
IF PayPlanTypeId = 'DRAW'
    AND PayFrequencyId = 'Semi-Monthly'
    AND (CurrentEndAmount - SUM(BON+COM) ) <= $0
THEN RESULT = $0
ELSE RESULT = $(CurrentEndAmount - SUM(BON+COM))
END IF
```

##Guarantee

#### ###Scenario 1: Pay Frequency IN (Weekly, Bi-Weekly, Semi-Monthly)

```
If PayPlanTypeId = 'GUARANTEE'
    AND PayFrequencyId IN (Weekly, Bi-Weekly, Semi-Monthly)
    AND (AlwaysAmount * 4.333) - SUM(COM + BON) <= $0
THEN $0
ELSE (AlwaysAmount * 4.333) - SUM(BON + COM)
END IF
```

##Vehicle Allowance

#### ###Scenario 1: Pay Frequency IN (Weekly, Bi-Weekly, Semi-Monthly)

```
If PayPlanTypeId = Vehicle Allowance
AND PayFrequencyId IN (Weekly, Bi-Weekly, Semi-Monthly)
THEN Result = $CurrentEndAmount
```

##Max

### ###Scenario 1: Pay Frequency IN (Weekly, Bi-Weekly, Semi-Monthly)

```
If PayPlanTypeId = Max
AND PayFrequencyId IN (Weekly, Bi-Weekly, Semi-Monthly)
THEN Result = $MIN(CurrentMidAmount - SUM(COM + BON) + DrawCalc + BaseCalc)
ELSE Result = $0
```

##Plan Type Expected Values #121673 The following matrix outlines the expected values for calculating Plan Type formulas. If the data is not populated on the pay plan as outlined, the system will prompt the user with an alert to adjust the pay plan values.

| Plan Type         | Pay Frequency | Always | Current | Mid | Current | End |
|-------------------|---------------|--------|---------|-----|---------|-----|
| Base              | Weekly        | X      |         |     |         |     |
| Base              | Bi-Weekly     | X      |         |     |         |     |
| Base              | Semi-Monthly  |        | X       | X   |         |     |
| Draw              | Weekly        | X      |         |     |         |     |
| Draw              | Semi-Monthly  |        | X       | X   |         |     |
| Draw              | Bi-Weekly     |        |         | X   |         |     |
| Guaranteee        | Weekly        |        | X       |     |         |     |
| Guaranteee        | Semi-Monthly  |        | X       |     |         |     |
| Guaranteee        | Bi-Weekly     |        | X       |     |         |     |
| Vehicle Allowance | Weekly        |        |         | X   |         |     |
| Vehicle Allowance | Semi-Monthly  |        |         | X   |         |     |
| Vehicle Allowance | Bi-Weekly     |        |         | X   |         |     |
| Max               | Weekly        | X      |         |     |         |     |
| Max               | Semi-Monthly  | X      |         |     |         |     |
| Max               | Bi-Weekly     | X      |         |     |         |     |

#UX Reference

| Employee Earnings   |                 |                 |                       |
|---------------------|-----------------|-----------------|-----------------------|
| Description         | 2021 Avg        | 3 Month Average | Performance Objective |
| Total Bi-Weekly Pay | TOTAL_BW_YR     | TOTAL_BW_MO     | TOTAL_BW_AOP          |
| Total Monthly Pay   | TOTAL_MO_YR     | TOTAL_MO_MO     | TOTAL_MO_AOP          |
| Total Annual Pay    | TOTAL_ANNUAL_YR | TOTAL_ANNUAL_MO | TOTAL_ANNUAL_AOP      |

#Employee Earnings

The employee earnings section will sum the variable totals used throughout the impact analysis.

### ##Bi-Weekly Pay TOTAL\_BW\_YR

```
RESULT = SUM(@COM_YR_AVG + @BON_YR_AVG + @PT_YR_AVG) / 26
```

### TOTAL\_BW\_MO

```
RESULT = SUM(@COM_MO_AVG + @BON_MO_AVG + @PT_MO_AVG) / 26
```

### TOTAL\_BW\_AOP

```
RESULT = SUM(@COM_YR_AVG + @BON_YR_AVG + @PT_YR_AVG) / 26
```

### ##Total Monthly Pay

Previous Year Average

### TOTAL\_MO\_YR

```
RESULT = SUM(@COM_YR_AVG + @BON_YR_AVG + @PT_YR_AVG)
```

### TOTAL\_MO\_MO

```
RESULT = SUM(@COM_MO_AVG + @BON_MO_AVG + @PT_AOP_OBJ)
```

### TOTAL\_MO\_AOP

```
RESULT = SUM(@COM_AVG_AOP + @BON_AVG_AOP + @PT_AOP_OBJ)
```

### ##Total Annual Pay

### TOTAL\_ANNUAL\_YR

```
RESULT = SUM(@COM_YR_AVG + @BON_YR_AVG + @PT_YR_AVG)
```

### TOTAL\_ANNUAL\_MO

```
RESULT = SUM(@COM_MO_AVG + @BON_MO_AVG + @PT_AOP_OBJ)
```

### TOTAL\_ANNUAL\_AOP

RESULT = SUM(@COM\_AVG\_AOP + @BON\_AVG\_AOP + @PT\_AOP\_OBJ

- [Impact Builder](#)
  - [Business Objective](#)
  - [Business Process](#)
  - [User Personas](#)
  - [Use Cases](#)
  - [Functions](#)
  - [User Experience](#)

## Impact Builder

### Business Objective

### Business Process

- Onboarding
- Process Management

The following tasks support the import of Store Input data for a selected company and pay period.

- 

### User Personas

1.

### Use Cases

1.

### Functions

#### Function Spec Link

### User Experience

Tools to create formulas without needing to know how to build SQL queries.

- Average
- Equation Builder
- Single Field
- Sum of 2 or more fields

Links: [Formula Builder](#)

##Functional Requirements

### Error Handling and Validation:

| Validation Rule   | Type Description   | Error Message  | User Experience  |
|---|--|--|--|
| An equation cannot start with an operator                         | Validate a Number or Source Error Field is the first element applied to the equation                   | The equation must start with a numeric value. To correct the issue, rearrange the operator or add a numeric value to the list.                   | On Save, the rule is validated and an error message is displayed.                |
| An equation cannot end with an operator                           | Validate an Operator is not the last element applied to the equation                                   | The equation must end with a numeric value. To correct the issue, rearrange the operator or add a numeric value to the list.                     | On Save, the rule is validated and an error message is displayed.                |
| Equation elements cannot be NULL                                  | Error configured before saving the equation.   | 1 or more equation elements are not configured. To correct the issue, please make sure a source field/numeric value and an operator is selected. | On Save, the rule is validated and an error message is displayed.                |
| Numbers must be a decimal number                                  | Only decimal numbers can be used when adding a Number to an equation.<br><br>For example: 18, 18.5, -1 |  | Block the input to not allow alpha numeric characters when configuring a number. |
| Operators are required between numeric values.                    | Error operator between 2 numeric values.   | An operator is missing. To correct the issue, add an operator between two numeric values.  | Trigger: User is done updating the equation and attempts to save.                |
| A Number cannot be Zero   | Error  | The numeric value cannot equal 0. To correct the issue, please remove the numeric value or adjust to a different decimal number.                 | On Save, the rule is validated and an error message is displayed.                |
| A Description is required for Store Input Sheet as a Source Field | Error  | Validate a description exists when Store Input Sheet is defined for a Source Field   | On Update, the rule is validated and the error message is displayed.             |

- [Impact Builder](#)
  - [Business Objective](#)
  - [Business Process](#)
  - [User Personas](#)
  - [Use Cases](#)
  - [Functions](#)
  - [User Experience](#)

## Impact Builder

### Business Objective

### Business Process

- Onboarding
- Process Management

The following tasks support the import of Store Input data for a selected company and pay period.

- 

### User Personas

- 1.

### Use Cases

- 1.

### Functions

### Function Spec Link

### User Experience

- [Impact Builder](#)
  - [Business Objective](#)
  - [Business Process](#)
  - [User Personas](#)
  - [Use Cases](#)
  - [Functions](#)
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## Impact Builder

### Business Objective

### Business Process

- 

The following tasks support the import of Store Input data for a selected company and pay period.

- 

### User Personas

- 1.

### Use Cases

- 1.

### Functions

### Function Spec Link

### User Experience

- [Impact Builder](#)
  - [Business Objective](#)
  - [Business Process](#)
  - [User Personas](#)
  - [Use Cases](#)

- [Functions](#)
- [User Experience](#)

## Impact Builder

### Business Objective

### Business Process

- 

The following tasks support the import of Store Input data for a selected company and pay period.

- 

### User Personas

- 1.

### Use Cases

- 1.

### Functions

#### Function Spec Link

### User Experience

- [Impact Builder](#)
  - [Business Objective](#)
  - [Business Process](#)
  - [User Personas](#)
  - [Use Cases](#)
  - [Functions](#)
  - [User Experience](#)

## Impact Builder

### Business Objective

### Business Process

- 

The following tasks support the import of Store Input data for a selected company and pay period.

- 

### User Personas

- 1.

### Use Cases

- 1.

### Functions

#### Function Spec Link

### User Experience

## Reporting Technical Overview

*The purpose of this page is to provide some initial technical insight into the parts of 'the system' that may have to be changed to accomplish some of the upcoming Reporting feature changes. This is a work in progress.*

Three main 'moving pieces' of the reporting system...

1. PayPlan Block Save Procedures (AllPay backend functions)
2. Payroll Run Procedures (AllPay backend function)
3. Power BI Query (view report)

3 CTAs and their results...

PayPlan Block (save):

```
>> (various C# backend functions)

>> t_PayPlanBlockSourceSystemField (user-selected field description 'FieldDesecription' is saved here.)

>> t_PayPlanBlock

(block's formula (for all builders) is saved here ^ in THREE formats)

A.SimpleFormulaUI
B.FormulaText
C.SqlText

Explanations:
SimpleFormulaUI: JSON version of the formula needed to 'contract' the representation of the formula in the 'builder' web UIs.
FormulaText: BRIAN LANGUAGE version of the formula (the text based formula you see in the 'advanced' builder)
SqlText: The T-SQL language 'template' necessary for the actual calculation of the formula in a sql environment.

Partial Examples:
A: {"Qualifiers": [], "Subtotals": [{"DisplayEquationOption": false, "IsReadOnly": false, ...}]
B: /*[@MOA01txt] = 'Sales Gross AOP' */ [@MTA01amt] = [MIS Standard.LM15605-CMTDamt] [@MNA01amt] = ( [@MTA01amt] )...
C: DECLARE @MISSstandard_LM15605_CMTDamt AS decimal(18, 5) EXEC [orm].[p_Get_SourceDataValue] 20169, @EmployeeId, @PayGroupId...
```

Payroll (run):

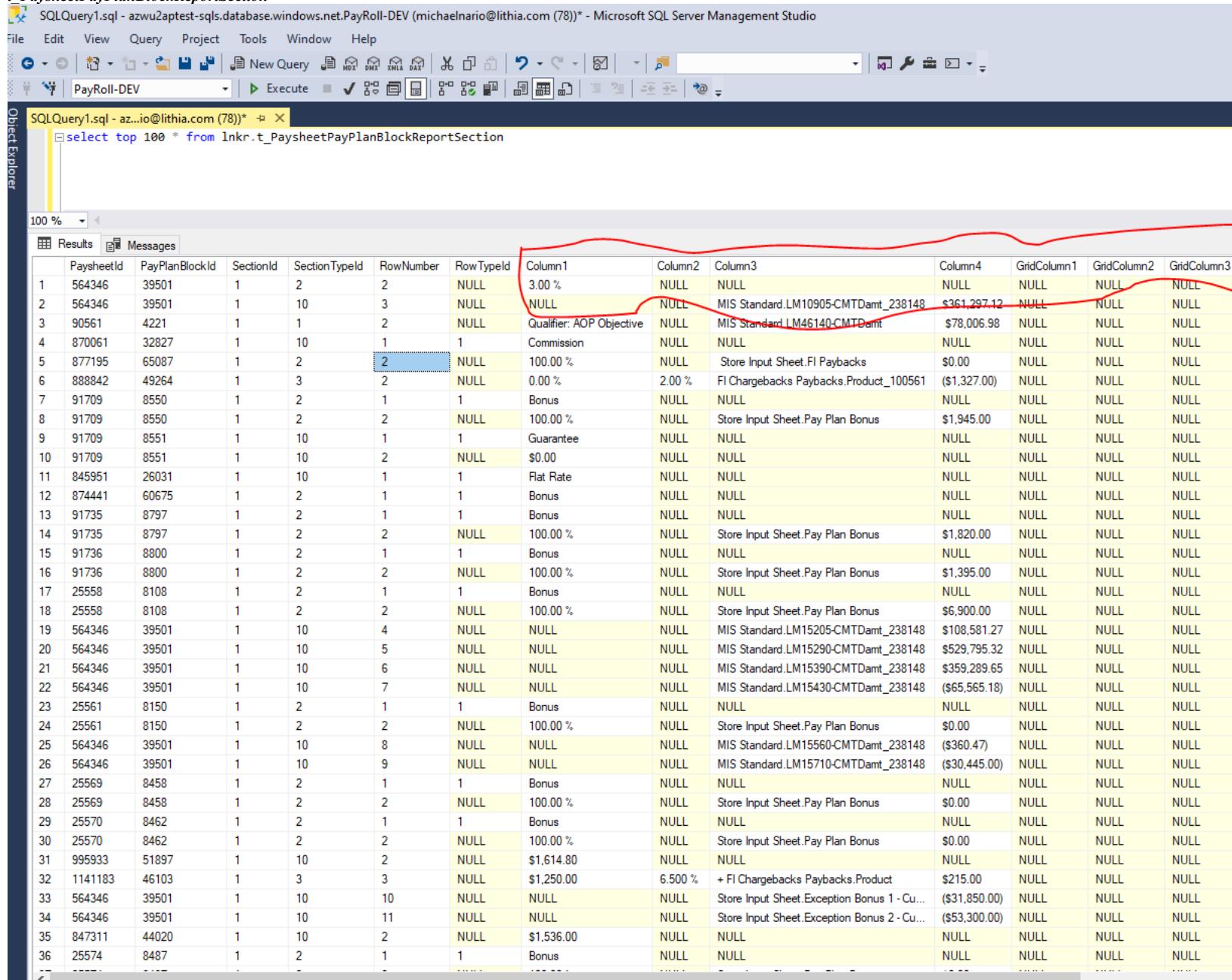
```
>> RunPayroll

>> Post Process Payroll

>> Generate Paysheet Data For Payroll

>> lnkr.t_PaysheetPayPlanBlockReportSection (formatted report data written to the table below)
```

### t\_PaysheetPayPlanBlockReportSection



SQLQuery1.sql - azwu2apitest-sqls.database.windows.net.PayRoll-DEV (michaelnario@lithia.com (78)) - Microsoft SQL Server Management Studio

File Edit View Query Project Tools Window Help

PayRoll-DEV Execute

SQLQuery1.sql - az...io@lithia.com (78)\*

select top 100 \* from lnkr.t\_PaysheetPayPlanBlockReportSection

Results Messages

|    | PaysheetId | PayPlanBlockId | SectionId | SectionTypeId | RowNumber | RowTypeId | Column1                  | Column2 | Column3                                     | Column4       | GridColumn1 | GridColumn2 | GridColumn3 |
|----|------------|----------------|-----------|---------------|-----------|-----------|--------------------------|---------|---|---------------|-------------|-------------|-------------|
| 1  | 564346     | 39501          | 1         | 2             | 2         | NULL      | 3.00 %                   | NULL    | NULL  | NULL          | NULL        | NULL        | NULL        |
| 2  | 564346     | 39501          | 1         | 10            | 3         | NULL      | NULL                     | NULL    | MIS Standard.LM10905-CMTDamt_238148         | \$361,297.12  | NULL        | NULL        | NULL        |
| 3  | 90561      | 4221           | 1         | 1             | 2         | NULL      | Qualifier: AOP Objective | NULL    | MIS Standard LM46140-CMTDamt                | \$78,006.98   | NULL        | NULL        | NULL        |
| 4  | 870061     | 32827          | 1         | 10            | 1         | 1         | Commission               | NULL    | NULL  | NULL          | NULL        | NULL        | NULL        |
| 5  | 877195     | 65087          | 1         | 2             | 2         | NULL      | 100.00 %                 | NULL    | Store Input Sheet.FI Paybacks               | \$0.00        | NULL        | NULL        | NULL        |
| 6  | 888842     | 49264          | 1         | 3             | 2         | NULL      | 0.00 %                   | 2.00 %  | FI Chargebacks Paybacks.Product_100561      | (\$1,327.00)  | NULL        | NULL        | NULL        |
| 7  | 91709      | 8550           | 1         | 2             | 1         | 1         | Bonus                    | NULL    | NULL  | NULL          | NULL        | NULL        | NULL        |
| 8  | 91709      | 8550           | 1         | 2             | 2         | NULL      | 100.00 %                 | NULL    | Store Input Sheet.Pay Plan Bonus            | \$1,945.00    | NULL        | NULL        | NULL        |
| 9  | 91709      | 8551           | 1         | 10            | 1         | 1         | Guarantee                | NULL    | NULL  | NULL          | NULL        | NULL        | NULL        |
| 10 | 91709      | 8551           | 1         | 10            | 2         | NULL      | \$0.00                   | NULL    | NULL  | NULL          | NULL        | NULL        | NULL        |
| 11 | 845951     | 26031          | 1         | 10            | 1         | 1         | Flat Rate                | NULL    | NULL  | NULL          | NULL        | NULL        | NULL        |
| 12 | 874441     | 60675          | 1         | 2             | 1         | 1         | Bonus                    | NULL    | NULL  | NULL          | NULL        | NULL        | NULL        |
| 13 | 91735      | 8797           | 1         | 2             | 1         | 1         | Bonus                    | NULL    | NULL  | NULL          | NULL        | NULL        | NULL        |
| 14 | 91735      | 8797           | 1         | 2             | 2         | NULL      | 100.00 %                 | NULL    | Store Input Sheet.Pay Plan Bonus            | \$1,820.00    | NULL        | NULL        | NULL        |
| 15 | 91736      | 8800           | 1         | 2             | 1         | 1         | Bonus                    | NULL    | NULL  | NULL          | NULL        | NULL        | NULL        |
| 16 | 91736      | 8800           | 1         | 2             | 2         | NULL      | 100.00 %                 | NULL    | Store Input Sheet.Pay Plan Bonus            | \$1,395.00    | NULL        | NULL        | NULL        |
| 17 | 25558      | 8108           | 1         | 2             | 1         | 1         | Bonus                    | NULL    | NULL  | NULL          | NULL        | NULL        | NULL        |
| 18 | 25558      | 8108           | 1         | 2             | 2         | NULL      | 100.00 %                 | NULL    | Store Input Sheet.Pay Plan Bonus            | \$6,900.00    | NULL        | NULL        | NULL        |
| 19 | 564346     | 39501          | 1         | 10            | 4         | NULL      | NULL                     | NULL    | MIS Standard.LM15205-CMTDamt_238148         | \$108,581.27  | NULL        | NULL        | NULL        |
| 20 | 564346     | 39501          | 1         | 10            | 5         | NULL      | NULL                     | NULL    | MIS Standard.LM15290-CMTDamt_238148         | \$529,795.32  | NULL        | NULL        | NULL        |
| 21 | 564346     | 39501          | 1         | 10            | 6         | NULL      | NULL                     | NULL    | MIS Standard.LM15390-CMTDamt_238148         | \$359,289.65  | NULL        | NULL        | NULL        |
| 22 | 564346     | 39501          | 1         | 10            | 7         | NULL      | NULL                     | NULL    | MIS Standard.LM15430-CMTDamt_238148         | (\$65,565.18) | NULL        | NULL        | NULL        |
| 23 | 25561      | 8150           | 1         | 2             | 1         | 1         | Bonus                    | NULL    | NULL  | NULL          | NULL        | NULL        | NULL        |
| 24 | 25561      | 8150           | 1         | 2             | 2         | NULL      | 100.00 %                 | NULL    | Store Input Sheet.Pay Plan Bonus            | \$0.00        | NULL        | NULL        | NULL        |
| 25 | 564346     | 39501          | 1         | 10            | 8         | NULL      | NULL                     | NULL    | MIS Standard.LM15560-CMTDamt_238148         | (\$360,47)    | NULL        | NULL        | NULL        |
| 26 | 564346     | 39501          | 1         | 10            | 9         | NULL      | NULL                     | NULL    | MIS Standard.LM15710-CMTDamt_238148         | (\$30,445.00) | NULL        | NULL        | NULL        |
| 27 | 25569      | 8458           | 1         | 2             | 1         | 1         | Bonus                    | NULL    | NULL  | NULL          | NULL        | NULL        | NULL        |
| 28 | 25569      | 8458           | 1         | 2             | 2         | NULL      | 100.00 %                 | NULL    | Store Input Sheet.Pay Plan Bonus            | \$0.00        | NULL        | NULL        | NULL        |
| 29 | 25570      | 8462           | 1         | 2             | 1         | 1         | Bonus                    | NULL    | NULL  | NULL          | NULL        | NULL        | NULL        |
| 30 | 25570      | 8462           | 1         | 2             | 2         | NULL      | 100.00 %                 | NULL    | Store Input Sheet.Pay Plan Bonus            | \$0.00        | NULL        | NULL        | NULL        |
| 31 | 995933     | 51897          | 1         | 10            | 2         | NULL      | \$1,614.80               | NULL    | NULL  | NULL          | NULL        | NULL        | NULL        |
| 32 | 1141183    | 46103          | 1         | 3             | 3         | NULL      | \$1,250.00               | 6.500 % | + FI Chargebacks Paybacks.Product           | \$215.00      | NULL        | NULL        | NULL        |
| 33 | 564346     | 39501          | 1         | 10            | 10        | NULL      | NULL                     | NULL    | Store Input Sheet.Exception Bonus 1 - Cu... | (\$31,850.00) | NULL        | NULL        | NULL        |
| 34 | 564346     | 39501          | 1         | 10            | 11        | NULL      | NULL                     | NULL    | Store Input Sheet.Exception Bonus 2 - Cu... | (\$53,300.00) | NULL        | NULL        | NULL        |
| 35 | 847311     | 44020          | 1         | 10            | 2         | NULL      | \$1,536.00               | NULL    | NULL  | NULL          | NULL        | NULL        | NULL        |
| 36 | 25574      | 8487           | 1         | 2             | 1         | 1         | Bonus                    | NULL    | NULL  | NULL          | NULL        | NULL        | NULL        |

Power BI Paysheet Report (view):

## Power BI Reporting App Permissions:

| DEV TEST                        | UAT                            | PROD                            |
|---------------------------------|--------------------------------|---------------------------------|
| AllPay_Compensation_Senior_TEST | AllPay_Payroll_UAT             | AllPay_Superuser_PROD           |
| AllPay_Superuser_TEST           | AllPay_Compensation_Senior_UAT | AllPay_Payroll_Senior_PROD      |
| AllPay_Compensation_TEST        | AllPay_Compensation_UAT        | AllPay_Payroll_PROD             |
| AllPay_Payroll_Senior_TEST      | AllPay_Superuser_UAT           | AllPay_Compensation_PROD        |
| AllPay_Payroll_TEST             | AllPay_Payroll_Senior_UAT      | AllPay_Compensation_Senior_PROD |

### #All Pay Reporting Environment Summary

Dev - <https://app.powerbi.com/groups/7438ca0f-4525-46c3-b834-473bd593afe9/list> (only have a workspace right now, no app)

QA/TEST - Workspace <https://app.powerbi.com/groups/26287233-6335-4ead-b30d-1e8f2ebaf104/list> App <https://app.powerbi.com/groups/me/apps/574d9a6e-30f6-4633-8dcc-1136a40f0233/reports/2ac1ff22-82e5-4902-b6d8-9326157045f8/ReportSection?>

UAT - Workspace <https://app.powerbi.com/groups/df27bb95-5a36-4e31-b9f1-6e6547504e94/list?ctid=f1a215ee-6910-4213-aec6-ac36fdca6048> App <https://app.powerbi.com/groups/me/apps/32ad744f-1632-4b4f-8974-0cb135946c1f/reports/cd0289ee-1603-4877-aedc-2acbe7bfee0e/ReportSection?>

PROD - Workspace <https://app.powerbi.com/groups/57f2e541-290a-4429-aa9d-05bc8c8c2561/list> App <https://app.powerbi.com/groups/me/apps/ebd233f9-b0c9-4463-b1f4-b83e8a3d0171/reports/cccc01f6-f002-4140-9519-122ba3ee2c61/ReportSection?>

### ##Cash Spiff JV Links

Dev - No Link (Currently not able to house reports in DEV)

Test - <https://app.powerbi.com/groups/26287233-6335-4ead-b30d-1e8f2ebaf104/rdlreports/b8a0059e-c0bc-442e-8ff1-954b751d39f8?ctid=f1a215ee-6910-4213-aec6-ac36fdca6048>

UAT - <https://app.powerbi.com/groups/me/apps/9944ec60-916a-479f-b883-405bfda4ad47/rdlreports/1902e239-b13f-4758-bb00-9d78d5415c2a?>

PROD - <https://app.powerbi.com/groups/57f2e541-290a-4429-aa9d-05bc8c8c2561/rdlreports/ff86b394-95cb-44e4-80f7-5a599c663a72?ctid=f1a215ee-6910-4213-aec6-ac36fdca6048>

### ##Vacation Temp Rates

Dev - Currently not a Premium Workspace so we do not have any reports saved in this environment

Test/QA - <https://app.powerbi.com/groups/26287233-6335-4ead-b30d-1e8f2ebaf104/reports/fd8d33a9-ee25-408a-8c54-16105c977686>

UAT - <https://app.powerbi.com/groups/me/apps/9944ec60-916a-479f-b883-405bfda4ad47/reports/f7b16ef2-0d9e-4f42-893e-031e932f7d9d/ReportSection?>

Prod - <https://app.powerbi.com/groups/57f2e541-290a-4429-aa9d-05bc8c8c2561/reports/8603ceb6-b59e-4d25-8302-0ad9c6aea9da/ReportSection>

### ##All Pay App Links DIPS (Paysheet Report)

QA - <https://app.powerbi.com/groups/me/apps/b0ff7cdb-e872-4428-a709-33534ba7a81a/rdlreports/2ad4ee82-116f-4262-926a-d586fc24592?ctid=f1a215ee-6910-4213-aec6-ac36fdca6048>

UAT - <https://app.powerbi.com/groups/me/apps/9944ec60-916a-479f-b883-405bfda4ad47/rdlreports/3a7a9f43-a8ab-401d-b649-0fa24041b205?>

PROD - <https://app.powerbi.com/groups/me/apps/67a0cdf6-3d29-420f-bc06-af74e6bf312b/rdlreports/8a5e8bfe-ff87-4e9f-a8b9-4283870ddd94?ctid=f1a215ee-6910-4213-aec6-ac36fdca6048>

### ##EIB Report

QA - <https://app.powerbi.com/groups/me/apps/b0ff7cdb-e872-4428-a709-33534ba7a81a/rdlreports/3c51d252-f654-475c-ad6e-f41d51761768?ctid=f1a215ee-6910-4213-aec6-ac36fdca6048>

UAT - <https://app.powerbi.com/groups/me/apps/9944ec60-916a-479f-b883-405bfda4ad47/rdlreports/73546c6c-e0da-4567-8a73-9efba79ccc2e?>

PROD - <https://app.powerbi.com/groups/me/apps/67a0cdf6-3d29-420f-bc06-af74e6bf312b/rdlreports/69b3d69c-e834-4dd9-a75c-41ec6c72be5a?ctid=f1a215ee-6910-4213-aec6-ac36fdca6048>

### ##Summary Sheet

QA - <https://app.powerbi.com/groups/me/apps/b0ff7cdb-e872-4428-a709-33534ba7a81a/rdlreports/e217d97b-b319-41f2-b377-22a7efc91f3c?ctid=f1a215ee-6910-4213-aec6-ac36fdca6048>

UAT - <https://app.powerbi.com/groups/me/apps/9944ec60-916a-479f-b883-405bfda4ad47/rdlreports/fda43a64-e144-49ac-9d1e-a07eb2d11bda?>

PROD - <https://app.powerbi.com/groups/me/apps/67a0cdf6-3d29-420f-bc06-af74e6bf312b/rdlreports/970fbc7f-la81-4fea-95cd-3ea1a5b6bba?ctid=f1a215ee-6910-4213-aec6-ac36fdca6048>

### ##Tech Summary Sheet

QA - <https://app.powerbi.com/groups/me/apps/b0ff7cdb-e872-4428-a709-33534ba7a81a/rdlreports/df249c25-fffb-478b-9cbc-24ccbe1eb01d?ctid=f1a215ee-6910-4213-aec6-ac36fdca6048>

UAT - <https://app.powerbi.com/groups/me/apps/9944ec60-916a-479f-b883-405bfda4ad47/rdlreports/cd032e7f-ffe9-4cb5-879c-0db3ea822aa0?>

PROD - <https://app.powerbi.com/groups/me/apps/67a0cdf6-3d29-420f-bc06-af74e6bf312b/rdlreports/88d1cf5c-0666-4014-b084-850de0725b0e?ctid=f1a215ee-6910-4213-aec6-ac36fdca6048>

Below is how to test UAT, please forward to others if they need to test.

#### 1. Access

- URL : <https://app.powerbi.com/groups/me/apps/67a0cdf6-3d29-420f-bc06-af74e6bf312b?ctid=f1a215ee-6910-4213-aec6-ac36fdca6048>
- Username: Lithia Account
- Password: Enterprise Password

#### 2. Reports are displayed on the Left-hand Side.

#### 3. Current available Reports are.

- Top Section Pay Plan

- o All Pay Calculated Plan

4. Click on the Report to access it.

5. Filters are available on top of the report, choose them accordingly.

6. Export to Excel:

- o Hover to left side of the report, until you see “more options” icon.

- o Select “Export Data” and hit “Export Button”.

The **ALL PAY** data load process is divided into 3 parts at a higher level.

- [\[On Premise Data Warehouse to Data Lake \(Lithia Data Platform\)\]\(Data Factory Generic Pipelines\)](#)
  - [On Premise to Inbound](#)
- [Data Lake to SQL DB \(All Pay Platform\)](#)
  - [Base Schema](#)

## [On Premise Data Warehouse to Data Lake (Lithia Data Platform)](Data Factory Generic Pipelines)

### On Premise to Inbound

##Inbound to Outbound

## Data Lake to SQL DB (All Pay Platform)

### Base Schema

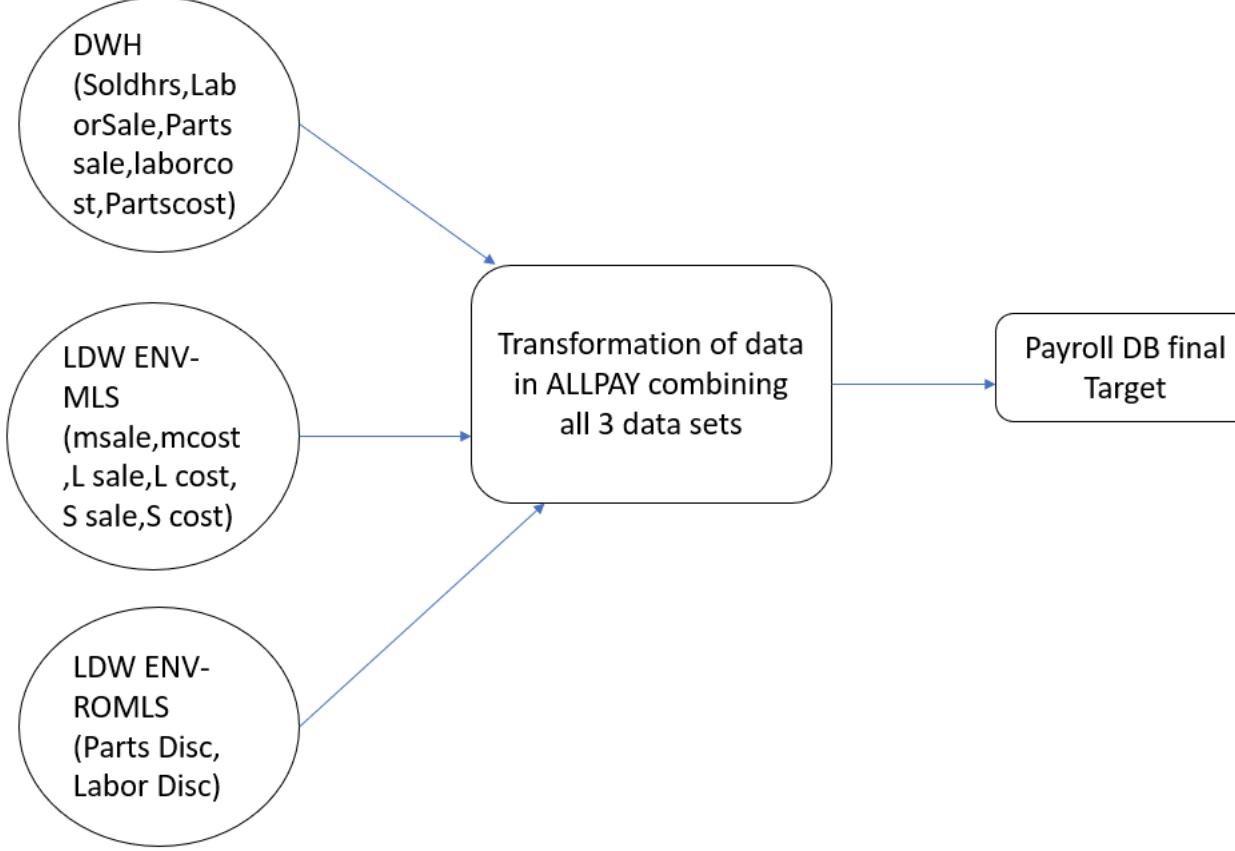
##Curated Schema #Application DB (All Pay Platform)

To know more on the environment and component names, refer - [Azure Environment and Components](#)

**ADS Details:** This page provides the information regarding the issue related to ADS and current analysis.

#Current ADS process in ALLPAY Currently in ALLPAY DB ADS report is a combination of 3 different datasets. Fact Service detail - Source of this information is DWH. On a daily basis we receive a file and it is placed in ADLS inbound folders under AllPay which includes ADS files. MLS - Source of the data is LDW Database. This is also a daily extraction which

happens from LDW to ALLPAY ETL DB MLS table. This data set is used for the Miscellaneous sale and cost details. ROMLS - This is also sourced from LDW DB. This is mainly used for discounts data calculations. Below is the higher level representation of the datasets and few fields from each data set.



Using the above 3 datasets ETL transforms the data and massages the data according to Business requirements and loads the final data to PAYROLL DB.

#Issue The current issue with respect to ADS is that there are multiple fields which are not in sync with Business report and it is identified that Discounts data might be the underlying issue as discounts fields are used in many other calculations and we see all those fields where discounts are used are also having an issue.

Some of the issues which were tracked for ADS include below: #69659 #72243

#Analysis There were multiple discussions with CDK for discounts data. As part of those conversations it was found that for discounts we need to look at DABE data which is not the current PROD process is doing. So after further conversations we were able to receive few days worth of data to SNOWFLAKE tables for analysis purposes. The DABE data is only available in SNOWFLAKE DEV env and only used for analysis purposes. After further through analysis of this DABE data and current Biz report which comes from CDK below conclusions were drawn: Whenever we see there is a match between CDK and DABE data i.e. whenever we see a RONumber match between both data sets then Discounts are matching with the correct \$\$ amount. Whenever we see there are RONumbers not available in DABE but available in the Biz report, after further validations with few examples we see that there is no discounts data posted in source CDK data for those RONumbers.

#Production Support Process ETL has scheduled jobs that run every day, and the team must ensure these jobs finish for accurate AllPay operations. The Production Support Process has been defined for the team to share responsibility of ensuring stable data loads.

##Environments Production/UAT: Priority for monitoring, with fixes or re-runs to be determined by priority Test: Secondary and can be addressed on the next working day depending on other priorities.

#### ##Scenarios

| Scenario                       | SLA              | Response  | Notes  |
|--------------------------------|------------------|---|--|
| Data Warehouse delay           | Monitor Only     | No action needed as DWH delay email notification already gets circulated to Biz and Dev teams by DWH team |  |
| Errors in ETL runs             | RCA              | Initial root cause to determine severity, and send email notification to team. See expectations below     |  |
| 9th/10th each Month            | Immediate action | Initial root cause, make fixes if needed, and re-run. Send email notification to team                     |  |
| TimeOut Errors                 | RCA              | Renrun the process from failure   |  |
| InvalidFlushOperation/conflict | RCA              | Check for storage space/buffer and rerun the process.   | This error occurred while transferring file from inbound to outbound. Error code is generic, can happen in different scenarios |

##Rotation ETL Team will be on a weekly rotation starting on Tuesday morning each week.

#### ##Procedure

1. React on any failure
2. Initial reaction:

- 9th and 10th are special - and all processes must complete
- Initial RCA - If error can be fixed quickly, make fix and re-run
- If not a fast fix: What is the impact on the rest of the loads?
- If loads are stopped, trigger the next in line loads

- Inform team and business stakeholders of issue and any resolutions, or estimated timeframes
- Depending on severity of issue, maintain visibility with email/teams updates

3. Investigate root cause - unless a showstopper, the RCA will be done during work hours

- How does this error affect other systems?
- Determine where the error is originating
- Once root cause is determined, make fix, and if appropriate retrospect to avoid future issues of the same.

NOTE: Unless its the 9th / 10th, investigate root case during business hours

#To Do Tier 2 taking on this support was something the team was starting to work on, and initial training was started, but this fizzled. We will investigate for future action.

On a daily basis ETL receives 2 files from workday. One is Active files and other is the terminated file.

| Base URL  | ID | Comments     |
|---|----|--------------|
| https://wd5-services1.myworkday.com/ccx/service/customreport2/lithia/ ISU_All_Pay_Outbound/Active_Employees_-_All_Pay?format=csv          |    | Deprecated   |
| https://wd5-services1.myworkday.com/ccx/service/customreport2/lithia/ ISU_All_Pay_Outbound/Terminated_Employees_-_All_Pay?format=csv      |    | Deprecated   |
| https://wd5-services1.myworkday.com/ccx/service/customreport2/lithia/ ISU_All_Pay_Outbound/Active_Employees_-_All_Pay_Test?format=csv     |    | Current PROD |
| https://wd5-services1.myworkday.com/ccx/service/customreport2/lithia/ ISU_All_Pay_Outbound/Terminated_Employees_-_All_Pay_Test?format=csv |    | Current PROD |
| https://wd5-services1.myworkday.com/ccx/service/customreport2/lithia/ ISU_All_Pay_Outbound/Active_Employees_-_All_Pay_1?format=csv        |    | New Backup   |
| https://wd5-services1.myworkday.com/ccx/service/customreport2/lithia/ ISU_All_Pay_Outbound/Terminated_Employees_-_All_Pay_1?format=csv    |    | New Backup   |

There are 2 versions we maintain which are copies of same URL. When ever there is a new change the backup report has to be updated first this will ensure that PROD is always working.

NOTE: Recently Business team has updated the "Old backup" to the "New backup" URL.

This document describes the action items/steps that could be taken during an acquisition. Below are the tables that are used by ALLPAY to ingest data from DWH to different sourcesystems. The below grid shows the current sourcesystems and the source tables used for ingestion on daily basis.

| Database Table              | Sourcesystem        |
|-----------------------------|---------------------|
| DWH dbo.dim_company         | company             |
| DWH clouddb0.filog_detail   | FI                  |
| DWH dbo.Fact_Service_Detail | Fact Service Detail |
| DWH dbo.Fact_GL_Transaction | GL Detail           |
| DWH MERP.dbo.MISLine        | SMIS                |
| DWH CUBE_LITHIA             | SPE                 |

Before the acquisition happens below are some of the questions/clarifications we need to look for:

1. What are the tables from DWH which will get impacted with this new acquisition?
2. What will be happening to the existing data in the tables?
3. Deadlines/any dates when this new data will be available in DEV DWH for us to take a look and do the analysis as needed for our process.
4. Will the new companies be available in company tables in DWH and under what division?
5. What will be the impact for the GL tables?
6. Will the keys change or remain same for GL and Fact data?

ETL data load happens on a daily basis and loads data to ALLPAY Database. Data load happens in multiple different steps: 1.Extract the data from DWH and place the files in ADLS. This pipeline resides in LDP Data Factory. 2.Once the ALLPAY pipeline triggers, it should read the file from ADLS and load into ALLPAY. These pipeline are in ALLPAY ADF.

Currently we have a sequence of how the loads progress in ETL. A sequence is maintained for the loads to get processed. We always make sure loads are processed in a sequential order and *not* parallelly as we see many issues when loads run parallelly.

The order is currently maintained in the LDP Datamove Database. The control happens through a stored procedure in which sequence is defined which is in LDP Datamove DB. The current order maintained for sourcesystems is below:

- CSS
- SMIS
- SPE
- ExpandedFI
- RAPINDIVIDUAL
- RAPTOTAL
- ADS
- GLDetail
- FIChargebacks

Some of the Key points are:

1. The loads will progress only after validating whether DWH files have been received for that day.
2. The current process takes care of the dependent loads and proceeds with the current in process sourcesystem. Ex: If CSS(current load) will progress only after payplan completes. The process is designed to handle the dependency accordingly.
3. When a sourcesystem(load) fails, then we can either fix and re run the same load or run the next one load in above order manually and that ensures the loads to progress further.

Below is the typical process and guidelines that we would like to follow when we are developing new features or enhancements for the AllPay project. This will continue to evolve over time, so please add to this as needed.

1. We will have team meetings for the BA->DE knowledge transfer sessions once a BRD is completed. a. DE's need to sign off during that meeting, or determine if further BA works is needed. b. QA should be invited as well for clarity. c. We should give a t-shirt size for the DE task so it can be used during sprint planning. d. Please record the pass down, and add the recording to the ADO item.

2. DE should pass off to QA once DE work is completed.
3. Please copy Tony (Or manager) on all BA emails and invite as optional to technical meetings.
4. Let's start communication more in an AllPay "Ninja" chat as a team, and have less silos of communication.
5. QA please ask if we should schedule a review session with Tony (Or manager) before passing on to UAT. We might not do each and every one, but let's start with the expectation that we will review each test effort.

**DE Task Sizing Chart for 1C above 0 :** A click of a button 1 : A 5 minute task 2 : 1 hour task 3 : 1 day task 5 : Couple days 8 : One week 13 : One Sprint 21 : More than a sprint

 Azure Pipelines [set up now](#)

#AllPay Environment Summary - ETL

#### **Primary Environment Current Version Secondary/Failover Current Version**

|                 |             |    |    |
|-----------------|-------------|----|----|
| [Prod]          | Release-316 | -- | -- |
| [UAT]           | Release-316 | -- | -- |
| [Test]          | Release-316 | -- | -- |
| [Dev (primary)] | [TBD#]+*    | -- | -- |

\* Dev environment will always have the latest updates from develop branch

FYI - Versioning has been changed to 'Release-XXX'

## #Release History

###Deployments

| <b>Release</b> | <b>Test</b> | <b>UAT</b> | <b>Prod</b> |
|----------------|-------------|------------|-------------|
| Release-316    | 3/18/2023   | 3/20/2023  | 3/23/2023   |

#Release-316 ###Deployments

| <b>TEST</b> | <b>UAT</b> | <b>Prod</b> |
|-------------|------------|-------------|
| 3/20/2023   | 3/22/2023  | 3/23/2023   |

###Included ADO Work Items #####ETL Team: #114104

####QA/UAT: |ITEM|QA|UAT|---|---|---| #114104 |||

#Release 1.0.34\_ETL ###Deployments

| <b>SourceSystem</b> | <b>TEST</b> | <b>UAT</b> | <b>Prod</b>      |
|---------------------|-------------|------------|------------------|
| PartsSales          | 5/3/2023    | 5/8/2023   | Target 5/10/2023 |

###Included ADO Work Items #####ETL Team DEV: #129143

####QA/UAT: #129145 #129147

#Release 1.0.33\_ETL ###Deployments

| <b>SourceSystem</b>          | <b>TEST</b> | <b>UAT</b> | <b>Prod</b>      |
|------------------------------|-------------|------------|------------------|
| FI Chargebacks and pay backs | 4/19/2023   | 4/21/2023  | Target 4/26/2023 |
| FI Product only              | 4/06/2023   | 4/19/2023  | Target 4/26/2023 |

###Included ADO Work Items #####ETL Team: #124500 #127015

####QA/UAT:

#125471 #125474 #128971 #127009

#Release 1.0.32\_ETL ###Deployments

| <b>TEST</b> | <b>UAT</b>       | <b>Prod</b>     |
|-------------|------------------|-----------------|
| 2/20/2023   | Target 2/22/2023 | Target 2/9/2023 |

###Included ADO Work Items #####ETL Team: #120901 #114184

####QA/UAT: |ITEM|QA|UAT|---|---|---| #120901 ||| #114184 |||

#Release 1.0.30.FIChargebackPaybacks ###Deployments

| <b>TEST</b> | <b>UAT</b> | <b>Prod</b> |
|-------------|------------|-------------|
| 2/3/2023    | 2/7/2023   | 2/9/2023    |

##Included ADO Work Items #####ETL Team: #114181

####QA/UAT: |ITEM|QA|UAT|--|--|--| #88469|PASS|PASS|

#Release 1.0.30.FIChargebackPaybacks ###Deployments

**TEST UAT Prod**

1/5/2023 Target 1/18/2023

##Included ADO Work Items #####ETL Team: #108911

####QA/UAT: |ITEM|QA|UAT|--|--|--| #88469|PASS|n/a| Tested in TEST due to time to load data.

#Release 1.0.28.RRTechTime ###Deployments

**UAT Prod**

/22 22

##Included ADO Work Items #####ETL Team: #88469

####QA/UAT: |ITEM|QA|UAT|--|--|--| #88469|PASS||

#Release 1.0.27.ADSFormula ###Deployments

**UAT Prod**

9/14/22 9/21/22

##Included ADO Work Items #####ETL Team: #101142

####QA/UAT: |ITEM|QA|UAT|--|--|--| #101142|PASS|PASS|

CAB - CHG0037125 [https://lithia.service-now.com/nav\\_to.do?uri=change\\_request.do?sys\\_id=bfd2b3401b061d900b7ceac2604bcbed](https://lithia.service-now.com/nav_to.do?uri=change_request.do?sys_id=bfd2b3401b061d900b7ceac2604bcbed)

#Release 1.0.26.VS ###Deployments

**UAT Prod**

8/24/22 9/8/22

##Included ADO Work Items #####ETL Team: #99147

####QA/UAT: |ITEM|QA|UAT|--|--|--| #99147|PASS|PASS|

July Data loaded.

CAB - CHG0037039 [https://lithia.service-now.com/nav\\_to.do?uri=change\\_request.do?sys\\_id=fec206dd1bf5dd540b7ceac2604bcba3a](https://lithia.service-now.com/nav_to.do?uri=change_request.do?sys_id=fec206dd1bf5dd540b7ceac2604bcba3a)

#Release 1.0.25.GL ###Deployments

**UAT Prod**

8/1/22 8/15/22

##Included ADO Work Items #####ETL Team: #66299

####QA/UAT: |ITEM|QA|UAT|--|--|--| #66299|PASS|PASS|

CAB -

#Release 1.0.24.ExpandedFILog ###Deployments

**UAT Prod**

08/08/2022 8/10/2022

##Included ADO Work Items #####ETL Team: #92230

####QA/UAT: |ITEM|QA|UAT|--|--|--| #92230|PASS|PASS|

CAB -

#Release 1.0.23.RTH ###Deployments

**QA UAT Prod**

5/9/22 5/24/22 6/30/22

##Included ADO Work Items #####ETL Team: #29568

####QA/UAT: |ITEM|QA| UAT| |--|--|--| #29568 |PASS|PASS|

#Release 1.0.22.FILOG ###Deployments

**Test    UAT    Prod**

4/27/22 5/4/22 5/11/22

###Included ADO Work Items ####ETL Team: #75996 #65165 #80483

####QA/UAT: |ITEM|QA| UAT| |--|--|--| #75996 |PASS|pass| #65165 |PASS|pass| #80483 |Pass|pass|

CAB - [https://lithia.service-now.com/nav\\_to.do?uri=change\\_request.do?sys\\_id=38b5448f1b1f4518e49441d6b04bcb0e](https://lithia.service-now.com/nav_to.do?uri=change_request.do?sys_id=38b5448f1b1f4518e49441d6b04bcb0e) CHG0036338

#Release 1.0.21.PVR ###Deployments

**UAT    Prod**

4/26/22 5/1/22

###Included ADO Work Items ####ETL Team: #45551 #75550

####QA/UAT: |ITEM|QA| UAT| |--|--|--| #45551 |pass|pass| #75550 |pass|pass|

CAB - [https://lithia.service-now.com/nav\\_to.do?uri=change\\_request.do?sys\\_id=38b5448f1b1f4518e49441d6b04bcb0e](https://lithia.service-now.com/nav_to.do?uri=change_request.do?sys_id=38b5448f1b1f4518e49441d6b04bcb0e) CHG0036338

#Release 1.0.20.skiplevel ###Deployments

**UAT    Prod**

4/4/22 4/21/2022

###Included ADO Work Items ####ETL Team: #77497 #46188

####QA/UAT: |ITEM|QA| UAT| |--|--|--| #77497 |PASS|PASS| #46188 | PASS|PASS|

CAB -

#Release 1.0.19.UpsellKahu ###Deployments

**UAT    Prod**

4/4/22 4/7/22

###Included ADO Work Items ####ETL Team: #74443 #64306 #70982 #74150

####QA/UAT: |ITEM|QA| UAT| |--|--|--| #74443 |PASS|PASS| #64306 | PASS|PASS|

CAB - CHG0036170 [https://lithia.service-now.com/nav\\_to.do?uri=change\\_request.do?sys\\_id=82064ed4873649d06427c956cebb358f](https://lithia.service-now.com/nav_to.do?uri=change_request.do?sys_id=82064ed4873649d06427c956cebb358f)

#Release 1.0.18.DimCompany ###Deployments

**UAT    Prod**

3/22/22 3/23/22

###Included ADO Work Items ####ETL Team: #67904

####QA/UAT: |ITEM|QA| UAT| |--|--|--| #67904 |||

Requirement is to eliminate 10507 company from error records.

CAB - CHG0036082 [https://lithia.service-now.com/nav\\_to.do?uri=change\\_request.do?sys\\_id=ec846def875649106427c956cebb3542](https://lithia.service-now.com/nav_to.do?uri=change_request.do?sys_id=ec846def875649106427c956cebb3542)

#Release 1.0.17.L0460 ###Deployments

**UAT Prod**

3/7/22

###Included ADO Work Items ####ETL Team: #71207

####QA/UAT: |ITEM|QA| UAT| |--|--|--| #71207 |PASS|PASS|

Sub Company added to Pay Cycle not pulling L0460

CAB - CHG0035991 [https://lithia.service-now.com/nav\\_to.do?uri=change\\_request.do?sys\\_id=d5c7269687020d906427c956cebb35a7](https://lithia.service-now.com/nav_to.do?uri=change_request.do?sys_id=d5c7269687020d906427c956cebb35a7)

#Release 1.0.13.Timecard ###Deployments

**UAT    Prod**

2/1/22 02/14/2022

###Included ADO Work Items #####ETL Team:

####QA/UAT: |ITEM |QA| UAT| |-|-|-|-| #66689 |PASS| PASS|

CAB - CHG0035877 [https://lithia.service-now.com/nav\\_to.do?uri=change\\_request.do?sys\\_id=c2aab6eb87e145106427c956cebb35d3](https://lithia.service-now.com/nav_to.do?uri=change_request.do?sys_id=c2aab6eb87e145106427c956cebb35d3)

#Release 1.0.16.2 ###Deployments

**UAT Prod**

2/1/22 2/9/22

###Included ADO Work Items #####ETL Team:

####QA/UAT: |ITEM |QA| UAT| |-|-|-|-| #59149 |PASS|PASS| #66029 |PASS|PASS| #62795 |PASS|PASS|

CAB -

#Release 1.0.15.RGPS ###Deployments

**UAT Prod**

###Included ADO Work Items #####ETL Team:

####QA/UAT: |ITEM |QA| UAT| |-|-|-|-| #66650 |Moved on 2/10, in progress||

CAB -

#Release 1.0.14.DimCompany ###Deployments

**UAT Prod**

01/20/2022 01/20/2022

###Included ADO Work Items #####ETL Team: #64733

####QA/UAT: |ITEM |QA| UAT| |-|-|-|-| #64733 |PASS|PASS|

#Release 1.0.11.RAPTO ###Deployments

**UAT Prod**

3/31/22

###Included ADO Work Items #####ETL Team: #59064 #59051 #59062 #59063 #52455 #58300 #43262

####QA/UAT: |ITEM |QA| UAT| |-|-|-|-|

|||

Moved to QA 2/24

CAB -

#Release 1.0.12.AOP-SPE-SMIS ###Deployments

**UAT Prod**

1/6/2022 1/10/2022

###Included ADO Work Items #####ETL Team:

####QA/UAT: |ITEM |QA| UAT| |-|-|-|-|

|||

CAB - CHG0035668

#Release 1.0.10.ADS ###Deployments

**UAT Prod**

1/6/2022 1/10/2022

###Included ADO Work Items #####ETL Team: #59060 #59147 #59061 #57507 #58061 #53619 #53886 #52459 #24811 #23050 #21005 #18474 #18445 #16012 #16868 #11290 #11993 #11290

Approved to Move to UAT 01/09/2022 Concern - FSD data approach may be changed by DWH and this could impact this source system. It was agreed to address when the change is made.

####QA/UAT: |ITEM|QA|UAT| |--|--|--|

|||

CAB - CHG0035668

#Release 1.0.9.RAPI ###Deployments

**UAT Prod**

12/09/2021 01/06/2022

###Included ADO Work Items ####ETL Team: #61473 #57574 #58902 #55419 #43131 #59057

####QA/UAT: |ITEM|QA|UAT| |--|--|--| | #61473 |PASS|PASS| | #55419 | PASS |PASS |

01/05/2021 - Approved to move to production. Noted that FSD Data Deletion approach is not currently known from the DWH team. The DWH approach may impact RAP Indv but will be analyzed once the issue arises.

Plan is to move on 01/06/2022 to Prod after production loads complete.

CAB - [https://lithia.service-now.com/nav\\_to.do?uri=change\\_request.do?sys\\_id=c36ab1cb1bb049508a372025604bcb96](https://lithia.service-now.com/nav_to.do?uri=change_request.do?sys_id=c36ab1cb1bb049508a372025604bcb96) CHG0035651

#Release 1.0.8.22 ###Deployments

**UAT Prod**

11/08/2021 12/06/2021

###Included ADO Work Items ####ETL Team: #48973

MUST BE COORDINATED WITH APP RELEASE THIS CAN NOT BE DEPLOYED BETWEEN THE 11th and 20th OF ANY MONTH!

####QA/UAT: |ITEM|QA|UAT| |--|--|--| | #48973 |PASS||

CAB - CHG0035504

#Release Andrew Z Stored Proc ###Deployments

**UAT Prod**

11/08/2021 11/30/2021

###Included ADO Work Items ####ETL Team: #55418

####QA/UAT: |ITEM|QA|UAT| |--|--|--| | #55418 |PASS|PASS|

CAB - CHG0035468

#Release paycaldnearperiod IsActive field ###Deployments

**Prod**

11/16/2021

###Included ADO Work Items ####ETL Team: #52510

CAB - CHG0035426

#Release 1.0.7.04 ###Deployments

**UAT Prod**

11/05/2021

###Included ADO Work Items ####ETL Team: Follow-up release to #41127

####QA/UAT: |ITEM|QA|UAT| |--|--|--| | #41127 |PASS|PASS|

We will monitor this and it will be deployed after APP release 1.3.15 @ 3:30pm 11/4

CAB -

#Release 1.0.6.01 ###Deployments

**UAT Prod**

10/22/2021 11/1/21

###Included ADO Work Items ####ETL Team: #41127

####QA/UAT: |ITEM|QA|UAT| |--|-|-|-| #41127 |PASS| PASS|

CAB - CHG0035342

#Release 1.0.5.20 ###Deployments

**UAT Prod**

9/9/21 9/20/2021

###Included ADO Work Items ####ETL Team: #37739 #37740 #40040 #33352

####QA/UAT: |ITEM|QA|UAT| |--|-|-|-| #37739 |PASS| PASS| #37740 |PASS| PASS| #40040 |PASS| PASS| #33352 |Not able to be tested in Test due to lack of data| PASS|

CAB - CHG0035013

#Release 1.0..25 ###Deployments

**Prod**

08/25/2021

###Included ADO Work Items ####ETL Team: #37708 #37712 #37711 #37707 #33335 #38195

####QA/UAT: |ITEM|QA|UAT| |--|-|-|-| #37708 |PASS| PASS| #37712 |PASS| PASS| #37711 |PASS| PASS| #37707 |PASS| PASS| #33335 |PASS| PASS| #38195 |PASS| PASS|

CAB - CHG0034842

#Release 1.0.3.28 ###Deployments

**Prod**

6/28/2021

###Included ADO Work Items ####ETL Team: #32000 #31229 #31639

####QA/UAT: |ITEM|QA|UAT| |--|-|-|-| #32000 |PASS| PASS| #31229 |PASS| PASS| #31639 |PASS| PASS|

CAB - CHG0034546

#Release 1.0.2.10 ###Deployments

**Prod**

6/14/2021

###Included ADO Work Items ####ETL Team: #28076 #28080 #29611

####QA/UAT: |ITEM|QA|UAT| |--|-|-|-| #28076 |PASS| N/A| #28080 |PASS| N/A| #29611 |PASS| PASS|

#Release 1.0.1.14 ###Deployments

**UAT Prod**

04/15/2021 04/28/2021

###Included ADO Work Items ####ETL Team:

#18281 #18282 #24346 #23362 #23361 #23364

RAP using MLS - Approved 4/21

####QA/UAT: |ITEM|QA|UAT| |--|-|-|-| #18281 |PASS| PASS| #18282 |PASS| PASS| (Additional testing will happen next week as well)| #24346 |PASS| PASS| #23362 |PASS| PASS| #23361 |PASS| Nothing to be tested by BFT for this item. Will move into UAT and Prod at same time.| #23364 |PASS| PASS| RAP using MLS Data |PASS| PASS|

#Release 1.0.0.24 (Sprints 7 through 16) ###Deployments

**Prod**

03/24/2021

###Included ADO Work Items ####ETL Team: [https://dev.azure.com/LithiaMotors/Advanced%20Incentive%20Program/\\_queries/query/98e54f07-7379-4e1b-a0a9-51155c053653/](https://dev.azure.com/LithiaMotors/Advanced%20Incentive%20Program/_queries/query/98e54f07-7379-4e1b-a0a9-51155c053653/)

#6939 #6942 #6943 #6944 #6945 #11020 #11467 #11551 #11919 #11992 #12540 #13719 #15107 #15127 #16184 #16953 #18324 #18838 #19997 #11183 #11241 #12084 #12196 #13423 #13461 #13538 #13606 #13607 #13608 #13609 #13610 #13783 #13788 #13789 #13933 #13934 #13982 #14596 #14799 #15102 #15104 #15106 #15362 #16007 #16165 #16169 #16318 #16566 #16569 #16571 #16870 #16994 #16998 #17014 #17833 #18105 #18963

####QA/UAT: |ITEM|QA|UAT| |--|-|-|-| #6939 |PASS| PASS| #6941 |PASS| PASS| #6942 |PASS| PASS| #6943 |PASS| PASS| #6944 |PASS| PASS| #6945 |PASS| PASS| #11020 |PASS| PASS| #11467 |PASS| PASS| #11551 |PASS| PASS| #11919 |PASS| PASS| #11992 |PASS| PASS| #12540 |PASS| PASS| #13719 |PASS| PASS| #15107 |PASS| PASS| #15127 |PASS| PASS| #16184 |PASS| PASS| #16953 |PASS| PASS| #18324 |PASS| PASS| #18838 |PASS| PASS| #19997 |PASS| PASS| #11183 |PASS| PASS| #11241 |PASS| PASS| #12084 |PASS| PASS| #12196 |PASS| PASS| #13423 |PASS| PASS| #13461 |PASS| PASS| #13538 |PASS| PASS| #13606 |PASS| PASS| #13607 |PASS| PASS| #13608 |PASS| PASS| #13609 |PASS| PASS| #13610 |PASS| PASS| #13783 |PASS| PASS| #13788 |PASS| PASS| #13789 |PASS| PASS| #13933 |PASS| PASS| #13934 |PASS| PASS| #13982 |PASS| PASS| #14596 |PASS| PASS|

PASS| PASS| #14799 | PASS| PASS| #15102 | PASS| PASS| #15104 | PASS| PASS| #15106 | PASS| PASS| #15362 | PASS| PASS| #16007 | PASS| PASS| #16165 | PASS| PASS| #16169 |  
PASS| PASS| #16318 | PASS| PASS| #16566 | PASS| PASS| #16569 | PASS| PASS| #16571 | PASS| PASS| #16870 | PASS| PASS| #16994 | PASS| PASS| #16998 | PASS| PASS| #17014 |  
PASS| PASS| #17833 | PASS| PASS| #18105 | PASS| PASS| #18963 | PASS| PASS|

## Story Number User Story Description

|                       |  |
|-----------------------|--|
| <a href="#">6865</a>  | User Story Add transformation logic to CSS ETL-DB  |
| <a href="#">6866</a>  | User Story Develop CSS Outbound to ETL-DB pipeline   |
| <a href="#">6867</a>  | User Story Add CSS data from ETL-DB to Application DB  |
| <a href="#">6927</a>  | User Story Add transformation logic to RAPIndividual ETL-DB  |
| <a href="#">6928</a>  | User Story Add RAPIndividual data from ETL-DB to Application DB  |
| <a href="#">6929</a>  | User Story Develop RAPTotal on-prem to inbound pipeline  |
| <a href="#">6931</a>  | User Story Develop RAPTotal Outbound to ETL-DB pipeline  |
| <a href="#">6932</a>  | User Story Add transformation logic to RAPTotal ETL-DB   |
| <a href="#">6933</a>  | User Story Add RAPTotal data from ETL-DB to Application DB   |
| <a href="#">8900</a>  | User Story File Uploader - How to trigger process  |
| <a href="#">9307</a>  | User Story Automate t_Job population from Workday Employee report  |
| <a href="#">9464</a>  | User Story t_Organization - Email Business when Company and L-Number has same value in Employee records        |
| <a href="#">9479</a>  | User Story Deploy ETL scripts on payroll DB for ETL and missing scripts to add manual pay calendar data in UAT |
| <a href="#">9480</a>  | User Story Run and Schedule ETL Pipeline in UAT  |
| <a href="#">9484</a>  | User Story UAT QA for ETL Data Validation  |
| <a href="#">9485</a>  | User Story Prod QA for ETL Data Validation   |
| <a href="#">9528</a>  | User Story Infrastructure / Ops Team   |
| <a href="#">9545</a>  | User Story QA - t_Job table load automation process  |
| <a href="#">9548</a>  | User Story QA - t_Organization data load failure email notification  |
| <a href="#">9563</a>  | User Story ADO - CI/CD Production  |
| <a href="#">9838</a>  | User Story Add User Emails to Employee Failure Notification in all Environments                                |
| <a href="#">9985</a>  | User Story Update - T_Employee table to source/map First Name and Last Name from Workday Employee Report       |
| <a href="#">10100</a> | User Story Update - DIM_COMPANY table in ALLPAY ETLDB  |
| <a href="#">10124</a> | User Story DE - Improve Export and Mailing Functionality   |

#Release 1.0.29.ExpandedFI ###Deployments

| Release | Test       | UAT       | Prod |
|---------|------------|-----------|------|
| 1.0.29  | 11/22/2022 | 12/7/2022 |      |

###Included ADO Work Items #####ETL Team: #104482 #97606

####QA/UAT: |ITEM|QA|UAT|--|--|--| #104482 | PASS | PASS | #97606 |PASS | PASS |

#Requirement Document Location The RAPIndividual requirement Document can be found [here](#)

#Business Analyst

- Alexandra Cannon
- Krishna Dhar

#On Premise to Azure Data Lake - Inbound Folder A. ETL Framework DB

- New entry added to Source System Table - **RAPINDIVIDUAL**
- New entry added to Entity Table - **RAPINDIVIDUAL**

The screenshot shows a SQL Server Management Studio window with three tabs: SQLQuery4.sql, Results, and Messages. The SQL tab contains three SELECT statements:

```
SQLQuery4.sql - lds@lithia.com (103)* ↻ ✎
Select * from Control.BusinessArea
Select * from Control.SourceSystem Where SourceSystemCode = 'RAPINDIVIDUAL'
Select * from Control.Entity where Name = 'RAPINDIVIDUAL'
```

The Results tab displays the data for each table:

|   | BusinessAreaId | BusinessAreaName | Enabled |
|---|----------------|------------------|---------|
| 1 | 1              | All Pay          | 1       |

|   | SourceSystemId | SourceSystemCode | SourceSystemName | BusinessAreaId | SourceSystemDescription | DataLakeFolderNameInbound | DataLakeFolderNameOutbound | ProcessingLayer |
|---|----------------|------------------|------------------|----------------|-------------------------|---------------------------|----------------------------|-----------------|
| 1 | 5              | RAPINDIVIDUAL    | RAPINDIVIDUAL    | 1              | RAPINDIVIDUAL           | inbound                   | outbound                   | Inbound         |

|   | EntityId | SourceSystemId | BusinessAreaId | Name          | Code | Description | SourceSchema | SourceTable   | FileFormat | RootRelativePath                | FilePattern | FilePattern |
|---|----------|----------------|----------------|---------------|------|-------------|--------------|---------------|------------|---------------------------------|-------------|-------------|
| 1 | 5        | 5              | 1              | RAPINDIVIDUAL | RAPI | allpay      | allpay       | RAPINDIVIDUAL | CSV        | OnPremDWH/AllPay/RAPINDIVIDUAL/ | None        | None        |

## B. DW\_

- Updated [allpay].[Export\_AllPay\_Datasets]

- New stored procedure created for RAPINDIVIDUAL export [allpay].[Export\_AllPay\_RAPIndividual]

### C. Lithia-Data-Platform--df

- Pipeline Name - PL\_Generic\_DWH\_Datalake\_Master No Changes to be made to Data Factory. Its configuration driven. If data is not moving or giving error, check configuration in step 1 and 2 , check reason for error.

#Azure Data Lake Inbound Folder to Outbound Folder A. Lithia-Data-Platform--df

- Pipeline Name - PL\_Generic\_Inbound\_to\_Outbound\_Master No Changes to be made to Data Factory.No entries to be made in ETL Framework Database. Make sure file entry from first step is available in Control.SourceFile.

Source File Table Entries -

SQLQuery4.sql - Id...s@lithia.com (103)\*

```
Select * from Control.SourceFile
where EntityId=5
```

82 %

Results Messages

| SourceFileId | LoadId | CurationTypeId | EntityId | FilePath | FileName                                  | FileAddedDate              | FileDeleted             | FileDeletedDate | FileExtract |
|--------------|--------|----------------|----------|----------|---|----------------------------|-------------------------|-----------------|-------------|
| 1            | 46     | 595            | 1        | 5        | OnPremDWH/AllPay/RAPINDIVIDUAL/2020/08/19 | 20200819_RAPINDIVIDUAL.csv | 2020-08-20 19:52:51.423 | 0               | NULL        |
| 2            | 49     | 598            | 1        | 5        | OnPremDWH/AllPay/RAPINDIVIDUAL/2020/08/19 | 20200819_RAPINDIVIDUAL.csv | 2020-08-20 22:38:27.207 | 0               | NULL        |
| 3            | 53     | 605            | 1        | 5        | OnPremDWH/AllPay/RAPINDIVIDUAL/2020/08/19 | 20200819_RAPINDIVIDUAL.csv | 2020-08-20 22:43:58.737 | 0               | NULL        |
| 4            | 56     | 623            | 1        | 5        | OnPremDWH/AllPay/RAPINDIVIDUAL/2020/08/20 | 20200820_RAPINDIVIDUAL.csv | 2020-08-21 13:08:08.403 | 0               | NULL        |

Data Lake File Location -

inbound

Upload Download Open New Folder Select All Copy Paste Rename Manage Access Properties Delete Refresh

← → ↑ inbound > OnPremDWH > AllPay > RAPINDIVIDUAL > 2020 > 08 > 20

| Name                       | Access Tier    | Access Tier Last Modified | Last Modified         | Blob Type  | Content Type             |
|----------------------------|----------------|---------------------------|-----------------------|------------|--------------------------|
| 20200820_RAPINDIVIDUAL.csv | Hot (inferred) | 8/21/2020, 6:08:05 AM     | 8/21/2020, 6:08:05 AM | Block Blob | application/octet-stream |

#Azure Data Lake outbound folder to ETL-DB ##Outbound to Staging A. ETL Framework Objects

1. [CONTROL].[DestinationDetails] - Table which maintains the Entity wise Table Names for ETL DB

SQLQuery4.sql - Id...s@lithia.com (103)\*

```
Select * from Control.DestinationDetails
```

82 %

Results Messages

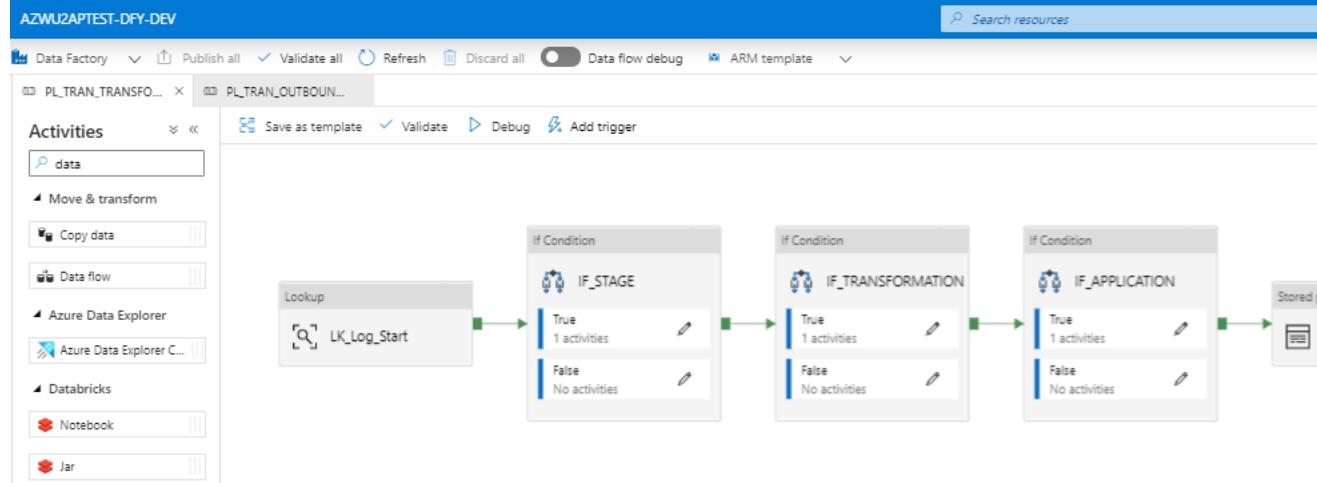
| DestinationTableId | DestinationTableName | DestinationTableSchema | EntityId |
|--------------------|----------------------|------------------------|----------|
| 1                  | DIM_COMPANY          | Staging                | 2        |
| 2                  | FACT_CSS DEALER      | Staging                | 1        |
| 3                  | ADVISORY_DAILY_SALES | Staging                | 3        |
| 4                  | WD_EMPLOYEE          | Staging                | 4        |
| 5                  | RAP_INDIVIDUAL       | Staging                | 5        |

2. [CONTROL].[ObtainSourceToRaw] Stored procedure used in master pipeline for extracting data from file to Staging DB

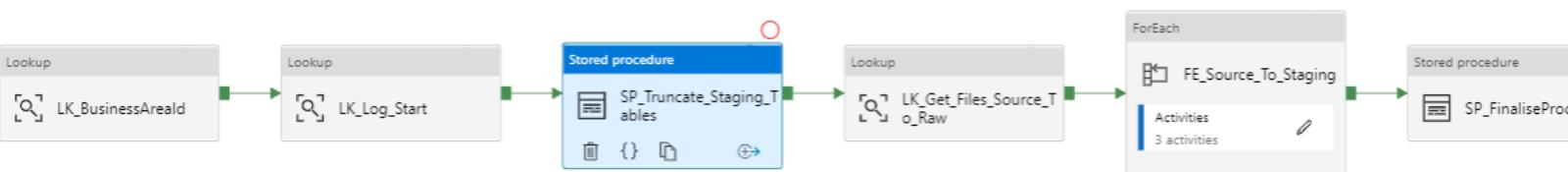
### B.Pipeline Name - TBD

| Services             | Object Names                  | Description   |
|----------------------|-------------------------------|---|
| Resource Group       | AZWU2-DIG-AP-RG               | Resource group name where we can find the ADF                   |
| ADF Name             | AZWU2APTEST-DFY-DEV           | ADF name for All Pay  |
| Master Pipeline Name | PL_TRAN_TRANSFORMATION_MASTER | Master pipeline for extracting data from file to Staging ETL DB |
| Child Pipeline       | PL_TRAN_OUTBOUND_TO_STAGE     | Child Pipeline Name for extracting data                         |

## Master Pipeline View -



## Child Pipeline View -



## Staging Data View -

SQLQuery5.sql - az...as@Lithia.com (85)\* → X SQLQuery4.sql - Id...s@lithia.com (103)\*  
Select \* from [Staging].[RAP\_INDIVIDUAL]

82 %

Results Messages

|    | CompanyNumber | MonthBeginDate              | EmployeeID | DWLaborTypeCode | ROCount | SoldHrs | HrsPerRO | LaborSale | LaborSalePerRO | PartsSale | PartsSalePerRO | MiscSale | MiscSa |
|----|---------------|-----------------------------|------------|-----------------|---------|---------|----------|-----------|----------------|-----------|----------------|----------|--------|
| 1  | 20110         | 2020-08-01 00:00:00.0000000 | 100086     | Customer Pay    | 1       | 0.5     | 0.5      | 15        | 15             | 227.39    | 227            | 0        | 0      |
| 2  | 20110         | 2020-08-01 00:00:00.0000000 | 100086     | Internal        | 23      | 0       | 0        | 0         | 0              | 0         | 0              | 0        | 0      |
| 3  | 20110         | 2020-08-01 00:00:00.0000000 | 100086     | Total           | 39      | 26.9    | 0.69     | 3579      | 92             | 1100.68   | 28             | 70131.85 | 1798   |
| 4  | 20110         | 2020-08-01 00:00:00.0000000 | 100086     | Warranty        | 20      | 26.4    | 1.32     | 3564      | 178            | 873.29    | 44             | 0        | 0      |
| 5  | 779           | 2020-08-01 00:00:00.0000000 | 100130     | Customer Pay    | 228     | 538.9   | 2.36     | 69148.35  | 303            | 31074.43  | 136            | 193.99   | 1      |
| 6  | 779           | 2020-08-01 00:00:00.0000000 | 100130     | Internal        | 252     | 72.2    | 0.29     | 3099.26   | 12             | 5288.16   | 21             | 1513     | 6      |
| 7  | 779           | 2020-08-01 00:00:00.0000000 | 100130     | Total           | 342     | 694.1   | 2.03     | 83500.67  | 244            | 58205.77  | 170            | -191.36  | -1     |
| 8  | 779           | 2020-08-01 00:00:00.0000000 | 100130     | Warranty        | 53      | 83      | 1.57     | 11253.06  | 212            | 21843.18  | 412            | 165      | 3      |
| 9  | 20170         | 2020-08-01 00:00:00.0000000 | 100210     | Customer Pay    | 1       | 0.3     | 0.3      | 65        | 65             | 130       | 130            | 0        | 0      |
| 10 | 20170         | 2020-08-01 00:00:00.0000000 | 100210     | Internal        | 295     | 448.7   | 1.52     | 50467     | 171            | 11955.2   | 41             | 30900    | 105    |
| 11 | 20170         | 2020-08-01 00:00:00.0000000 | 100210     | Total           | 297     | 450.5   | 1.52     | 50719.5   | 171            | 12085.2   | 41             | 32175.8  | 108    |
| 12 | 20170         | 2020-08-01 00:00:00.0000000 | 100210     | Warranty        | 1       | 1.5     | 1.5      | 187.5     | 188            | 0         | 0              | 1275.8   | 1276   |
| 13 | 20150         | 2020-08-01 00:00:00.0000000 | 100211     | Customer Pay    | 151     | 237.7   | 1.57     | 27653.87  | 183            | 22026.42  | 146            | -1242.08 | -8     |
| 14 | 20150         | 2020-08-01 00:00:00.0000000 | 100211     | Internal        | 219     | 124.2   | 0.57     | 13742.13  | 63             | 8030.19   | 37             | 1604     | 7      |
| 15 | 20150         | 2020-08-01 00:00:00.0000000 | 100211     | Total           | 232     | 425.3   | 1.83     | 48817.95  | 210            | 35798.26  | 154            | -68.37   | 0      |
| 16 | 20150         | 2020-08-01 00:00:00.0000000 | 100211     | Warranty        | 38      | 63.4    | 1.67     | 7421.95   | 195            | 5741.65   | 151            | 1146.48  | 30     |
| 17 | 20150         | 2020-08-01 00:00:00.0000000 | 100212     | Customer Pay    | 177     | 296     | 1.67     | 35935.31  | 203            | 28339.57  | 160            | -6492.08 | -37    |
| 18 | 20150         | 2020-08-01 00:00:00.0000000 | 100212     | Internal        | 256     | 95.9    | 0.37     | 10151.18  | 40             | 10255.92  | 40             | 4211.67  | 16     |
| 19 | 20150         | 2020-08-01 00:00:00.0000000 | 100212     | Total           | 305     | 493.1   | 1.62     | 58027.85  | 190            | 46844.08  | 154            | -2280.41 | -7     |
| 20 | 20150         | 2020-08-01 00:00:00.0000000 | 100212     | Warranty        | 69      | 101.2   | 1.47     | 11941.36  | 173            | 8248.59   | 120            | 0        | 0      |

##Staging to Transformation

##Transformation to Curated

##Curated to Application DB

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The ETL Mapping Document is [here](#)

#### #On Premise to Azure Data Lake - Inbound Folder A. ETL Framework DB

- New entry added to Source System Table - Pay Plan
- New entry added to Entity Table - Dim Company

| SQLQuery14.sql - l...s@lithia.com (113))*   |                  | SQLQuery13.sql - l...as@lithia.com (97))* |                |                         |                           |                            |                 |            |                                   |                |                  |                  |                |                         |                           |                            |                 |   |     |     |   |          |         |          |         |   |      |      |   |      |         |          |         |   |     |                      |   |                      |         |          |         |   |         |         |   |         |         |          |         |          |                |                |      |      |             |              |             |            |                  |           |   |   |   |   |             |            |                       |        |     |                                   |      |
|---|------------------|---|----------------|-------------------------|---------------------------|----------------------------|-----------------|------------|-----------------------------------|----------------|------------------|------------------|----------------|-------------------------|---------------------------|----------------------------|-----------------|---|-----|-----|---|----------|---------|----------|---------|---|------|------|---|------|---------|----------|---------|---|-----|----------------------|---|----------------------|---------|----------|---------|---|---------|---------|---|---------|---------|----------|---------|----------|----------------|----------------|------|------|-------------|--------------|-------------|------------|------------------|-----------|---|---|---|---|-------------|------------|-----------------------|--------|-----|-----------------------------------|------|
|   |                  |   |                |                         |                           |                            |                 |            |                                   |                |                  |                  |                |                         |                           |                            |                 |   |     |     |   |          |         |          |         |   |      |      |   |      |         |          |         |   |     |                      |   |                      |         |          |         |   |         |         |   |         |         |          |         |          |                |                |      |      |             |              |             |            |                  |           |   |   |   |   |             |            |                       |        |     |                                   |      |
|   |                  |   |                |                         |                           |                            |                 |            |                                   |                |                  |                  |                |                         |                           |                            |                 |   |     |     |   |          |         |          |         |   |      |      |   |      |         |          |         |   |     |                      |   |                      |         |          |         |   |         |         |   |         |         |          |         |          |                |                |      |      |             |              |             |            |                  |           |   |   |   |   |             |            |                       |        |     |                                   |      |
| <pre>Select * from [CONTROL].[BusinessArea] Select * from [CONTROL].[SourceSystem] Select * from [CONTROL].[Entity] where [Name] like 'DIM_COMPANY'</pre>   |                  |   |                |                         |                           |                            |                 |            |                                   |                |                  |                  |                |                         |                           |                            |                 |   |     |     |   |          |         |          |         |   |      |      |   |      |         |          |         |   |     |                      |   |                      |         |          |         |   |         |         |   |         |         |          |         |          |                |                |      |      |             |              |             |            |                  |           |   |   |   |   |             |            |                       |        |     |                                   |      |
| 82 %  |                  |   |                |                         |                           |                            |                 |            |                                   |                |                  |                  |                |                         |                           |                            |                 |   |     |     |   |          |         |          |         |   |      |      |   |      |         |          |         |   |     |                      |   |                      |         |          |         |   |         |         |   |         |         |          |         |          |                |                |      |      |             |              |             |            |                  |           |   |   |   |   |             |            |                       |        |     |                                   |      |
| <input type="button" value="Results"/> <input type="button" value="Messages"/> <table border="1"> <thead> <tr> <th>BusinessAreaId</th> <th>BusinessAreaName</th> <th>Enabled</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>All Pay</td> <td>1</td> </tr> </tbody> </table><br><table border="1"> <thead> <tr> <th>SourceSystemId</th> <th>SourceSystemCode</th> <th>SourceSystemName</th> <th>BusinessAreaId</th> <th>SourceSystemDescription</th> <th>DataLakeFolderNameInbound</th> <th>DataLakeFolderNameOutbound</th> <th>ProcessingLayer</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>CSS</td> <td>CSS</td> <td>1</td> <td>Customer</td> <td>inbound</td> <td>outbound</td> <td>Inbound</td> </tr> <tr> <td>2</td> <td>DLog</td> <td>DLog</td> <td>1</td> <td>DLog</td> <td>inbound</td> <td>outbound</td> <td>Inbound</td> </tr> <tr> <td>3</td> <td>ADS</td> <td>Advisory Daily Sales</td> <td>1</td> <td>Advisory Daily Sales</td> <td>inbound</td> <td>outbound</td> <td>Inbound</td> </tr> <tr> <td>4</td> <td>PAYPLAN</td> <td>PAYPLAN</td> <td>1</td> <td>PAYPLAN</td> <td>inbound</td> <td>outbound</td> <td>Inbound</td> </tr> </tbody> </table><br><table border="1"> <thead> <tr> <th>EntityId</th> <th>SourceSystemId</th> <th>BusinessAreaId</th> <th>Name</th> <th>Code</th> <th>Description</th> <th>SourceSchema</th> <th>SourceTable</th> <th>FileFormat</th> <th>RootRelativePath</th> <th>FileExtra</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>3</td> <td>4</td> <td>1</td> <td>DIM_COMPANY</td> <td>DIMCOMPANY</td> <td>Required for Pay Plan</td> <td>allpay</td> <td>CSV</td> <td>OnPremDWH/AllPay/Dim/DIM_COMPANY/</td> <td>None</td> </tr> </tbody> </table> |                  |   |                | BusinessAreaId          | BusinessAreaName          | Enabled                    | 1               | All Pay    | 1                                 | SourceSystemId | SourceSystemCode | SourceSystemName | BusinessAreaId | SourceSystemDescription | DataLakeFolderNameInbound | DataLakeFolderNameOutbound | ProcessingLayer | 1 | CSS | CSS | 1 | Customer | inbound | outbound | Inbound | 2 | DLog | DLog | 1 | DLog | inbound | outbound | Inbound | 3 | ADS | Advisory Daily Sales | 1 | Advisory Daily Sales | inbound | outbound | Inbound | 4 | PAYPLAN | PAYPLAN | 1 | PAYPLAN | inbound | outbound | Inbound | EntityId | SourceSystemId | BusinessAreaId | Name | Code | Description | SourceSchema | SourceTable | FileFormat | RootRelativePath | FileExtra | 1 | 3 | 4 | 1 | DIM_COMPANY | DIMCOMPANY | Required for Pay Plan | allpay | CSV | OnPremDWH/AllPay/Dim/DIM_COMPANY/ | None |
| BusinessAreaId  | BusinessAreaName | Enabled                                   |                |                         |                           |                            |                 |            |                                   |                |                  |                  |                |                         |                           |                            |                 |   |     |     |   |          |         |          |         |   |      |      |   |      |         |          |         |   |     |                      |   |                      |         |          |         |   |         |         |   |         |         |          |         |          |                |                |      |      |             |              |             |            |                  |           |   |   |   |   |             |            |                       |        |     |                                   |      |
| 1   | All Pay          | 1   |                |                         |                           |                            |                 |            |                                   |                |                  |                  |                |                         |                           |                            |                 |   |     |     |   |          |         |          |         |   |      |      |   |      |         |          |         |   |     |                      |   |                      |         |          |         |   |         |         |   |         |         |          |         |          |                |                |      |      |             |              |             |            |                  |           |   |   |   |   |             |            |                       |        |     |                                   |      |
| SourceSystemId  | SourceSystemCode | SourceSystemName                          | BusinessAreaId | SourceSystemDescription | DataLakeFolderNameInbound | DataLakeFolderNameOutbound | ProcessingLayer |            |                                   |                |                  |                  |                |                         |                           |                            |                 |   |     |     |   |          |         |          |         |   |      |      |   |      |         |          |         |   |     |                      |   |                      |         |          |         |   |         |         |   |         |         |          |         |          |                |                |      |      |             |              |             |            |                  |           |   |   |   |   |             |            |                       |        |     |                                   |      |
| 1   | CSS              | CSS                                       | 1              | Customer                | inbound                   | outbound                   | Inbound         |            |                                   |                |                  |                  |                |                         |                           |                            |                 |   |     |     |   |          |         |          |         |   |      |      |   |      |         |          |         |   |     |                      |   |                      |         |          |         |   |         |         |   |         |         |          |         |          |                |                |      |      |             |              |             |            |                  |           |   |   |   |   |             |            |                       |        |     |                                   |      |
| 2   | DLog             | DLog                                      | 1              | DLog                    | inbound                   | outbound                   | Inbound         |            |                                   |                |                  |                  |                |                         |                           |                            |                 |   |     |     |   |          |         |          |         |   |      |      |   |      |         |          |         |   |     |                      |   |                      |         |          |         |   |         |         |   |         |         |          |         |          |                |                |      |      |             |              |             |            |                  |           |   |   |   |   |             |            |                       |        |     |                                   |      |
| 3   | ADS              | Advisory Daily Sales                      | 1              | Advisory Daily Sales    | inbound                   | outbound                   | Inbound         |            |                                   |                |                  |                  |                |                         |                           |                            |                 |   |     |     |   |          |         |          |         |   |      |      |   |      |         |          |         |   |     |                      |   |                      |         |          |         |   |         |         |   |         |         |          |         |          |                |                |      |      |             |              |             |            |                  |           |   |   |   |   |             |            |                       |        |     |                                   |      |
| 4   | PAYPLAN          | PAYPLAN                                   | 1              | PAYPLAN                 | inbound                   | outbound                   | Inbound         |            |                                   |                |                  |                  |                |                         |                           |                            |                 |   |     |     |   |          |         |          |         |   |      |      |   |      |         |          |         |   |     |                      |   |                      |         |          |         |   |         |         |   |         |         |          |         |          |                |                |      |      |             |              |             |            |                  |           |   |   |   |   |             |            |                       |        |     |                                   |      |
| EntityId  | SourceSystemId   | BusinessAreaId                            | Name           | Code                    | Description               | SourceSchema               | SourceTable     | FileFormat | RootRelativePath                  | FileExtra      |                  |                  |                |                         |                           |                            |                 |   |     |     |   |          |         |          |         |   |      |      |   |      |         |          |         |   |     |                      |   |                      |         |          |         |   |         |         |   |         |         |          |         |          |                |                |      |      |             |              |             |            |                  |           |   |   |   |   |             |            |                       |        |     |                                   |      |
| 1   | 3                | 4   | 1              | DIM_COMPANY             | DIMCOMPANY                | Required for Pay Plan      | allpay          | CSV        | OnPremDWH/AllPay/Dim/DIM_COMPANY/ | None           |                  |                  |                |                         |                           |                            |                 |   |     |     |   |          |         |          |         |   |      |      |   |      |         |          |         |   |     |                      |   |                      |         |          |         |   |         |         |   |         |         |          |         |          |                |                |      |      |             |              |             |            |                  |           |   |   |   |   |             |            |                       |        |     |                                   |      |

#### B. DW\_

- Updated [allpay].[Export\_AllPay\_Datasets]
- New stored procedure created for Dim Company export [allpay].[Export\_AllPay\_DimCompany]

#### C. Lithia-Data-Platform--df

- Pipeline Name - PL\_Generic\_DWH\_Datalake\_Master No Changes to be made to Data Factory. Its configuration driven. If data is not moving or giving error, check configuration in step 1 and 2 , check reason for error.

#### #Azure Data Lake Inbound Folder to Outbound Folder A. Lithia-Data-Platform--df

- Pipeline Name - PL\_Generic\_Inbound\_to\_Outbound\_Master No Changes to be made to Data Factory.No entries to be made in ETL Framework Database. Make sure file entry from first step is available in Control.SourceFile.

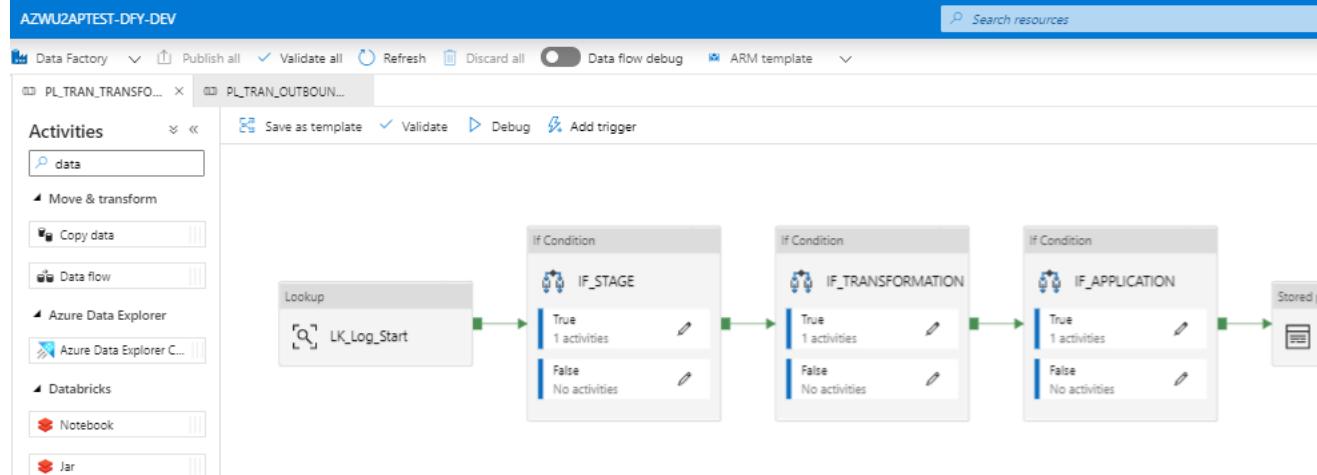
| SourceFileId | LoadId | CurationTypeid | EntityId | FilePath | FileName                                   | FileAddedDate            | FileDeleted             | FileDeletedDate | FileExtra |
|--------------|--------|----------------|----------|----------|--|--------------------------|-------------------------|-----------------|-----------|
| 1            | 115    | 409            | 1        | 5        | OnPremDWH/AllPay/ADS/2020/08/04            | 20200804痈ADS.csv         | 2020-08-05 18:46:55.523 | 0               | NULL      |
| 2            | 114    | 408            | 1        | 3        | OnPremDWH/AllPayDim/DIM_COMPANY/2020/08/04 | 20200804痈DIM_COMPANY.csv | 2020-08-05 18:46:54.383 | 0               | NULL      |
| 3            | 113    | 407            | 1        | 1        | OnPremDWH/AllPay/CSSDEALER/2020/08/04      | 20200804痈CSSDEALER.csv   | 2020-08-05 18:46:52.110 | 0               | NULL      |

#### #Azure Data Lake outbound folder to ETL-DB A. ETL Framework Objects

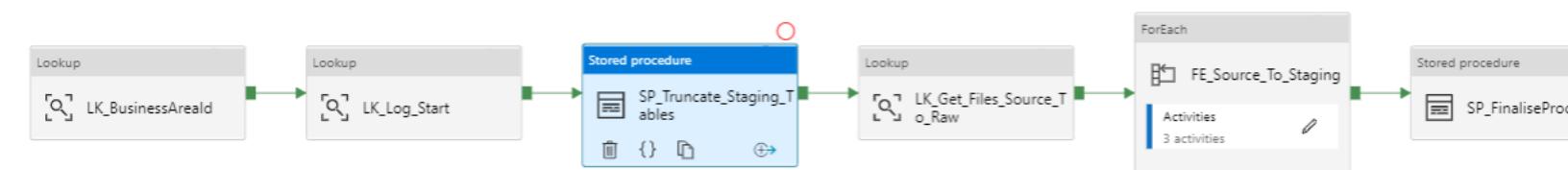
- [CONTROL].[DestinationDetails] - Table which maintains the Entity wise Table Names for ETL DB
- [CONTROL].[ObtainSourceToRaw] Stored procedure used in master pipeline for extracting data from file to Staging DB

#### B.Pipeline Name - TBD

| Services             | Object Names                  | Description   |
|----------------------|-------------------------------|---|
| Resource Group       | AZWU2-DIG-AP-RG               | Resource group name where we can find the ADF                   |
| ADF Name             | AZWU2APTEST-DFY-DEV           | ADF name for All Pay  |
| Master Pipeline Name | PL_TRAN_TRANSFORMATION_MASTER | Master pipeline for extracting data from file to Staging ETL DB |
| Child Pipeline       | PL_TRAN_OUTBOUND_TO_STAGE     | Child Pipeline Name for extracting data                         |



## Child Pipeline View -



#ETLDB

## Staging

Same copy (as in inbound/outbound) of data without any transformation

The screenshot shows the following components:

- Object Explorer:** Shows the database structure including Databases (System Databases, AlipayETL-DEV), Tables (System Tables, External Tables, GraphTables), and System-Versioned tables (Curated.t\_Employee, Curated.t\_FactCSSDealer, Curated.TOrganization).
- Query Editor:** Displays a T-SQL query to select top 1000 rows from the [Staging].[DIM\_COMPANY] table.
- Results Grid:** Shows the query results with columns: Company\_Key, Company\_Name, Work\_Day\_Company\_Code, and State.

| Company_Key | Company_Name             | Work_Day_Company_Code | State |
|-------------|--------------------------|-----------------------|-------|
| 1           | Motors                   | L0001                 | OR    |
| 2           | Medford Body Shop        | L0003                 | OR    |
| 3           | Medford CJD              | L0004                 | OR    |
| 4           | Omaha Ford               | L0005                 | NE    |
| 5           | Medford Toyota           | L0006                 | OR    |
| 6           | Medford L/M Suzuki Mazda | L0007                 | OR    |
| 7           | Medford Saturn           | L0008                 | OR    |
| 8           | Medford Honda            | L0009                 | OR    |
| 9           | Midland Chevrolet        | L0011                 | TX    |
| 10          | Medford Volkswagen       | L0012                 | OR    |
| 11          | Medford Nissan           | L0013                 | OR    |
| 12          | Medford BMW              | L0014                 | OR    |
| 13          | Grants Pass CJD          | L0015                 | OR    |
| 14          | Real Estate              | L0016                 | OR    |
| 15          | Financial                | L0018                 | OR    |
| 16          | Klamath Falls Toyota     | L0019                 | OR    |
| 17          | Klamath Falls CJD        | L0020                 | OR    |

- State added as per [https://dev.azure.com/LithiaMotors/Advanced%20Incentive%20Program/\\_workitems/edit/7834](https://dev.azure.com/LithiaMotors/Advanced%20Incentive%20Program/_workitems/edit/7834)

## Transformation

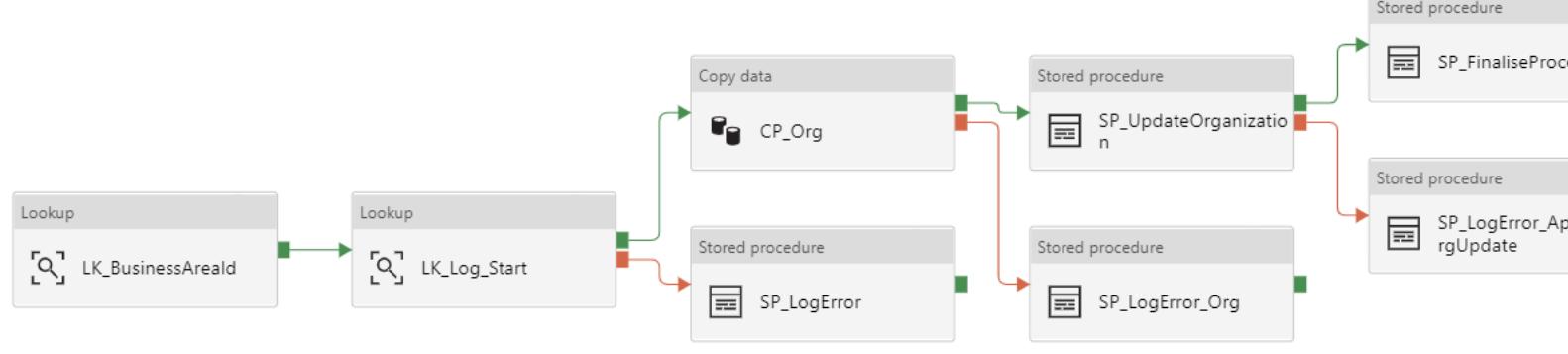
There are no tables for TOrganization in transformation schema however the stored procedure trnasforms data from WD\_EMployee table in staging and DimCCompany in transformation schema ans maintains it in Curated.TOrganization

##Curated - Curated.TOrganization Transformed data

##ApplicationDB

## Organization

The data from Curated.TOrganization is extracted for the max loadid and pushed to [etl].[t\_Organization]. After its successfully sent to etl schema a stored procedure is executed which merges the data to [core].[t\_Organization].The stored procedure used [etl].[UpdateOrganization].



## Organization Error Handling

The organizations for which we could not find matching information in Dim\_Company needs to be reported to the business users.The employee data from WD\_Employee is matched with Dim\_Company.If a matching company name or number is not found these are marked in the table [Curated].[TOrganization].

| Id | BusinessPlatformId | OrganizationTypeId | Code | Name | IsActive | CreatedByUserName | CreatedTimestamp | UpdatedByUserName           | UpdatedTimestamp | DeletedByUserName | DeletedTimestamp |
|----|--------------------|--------------------|------|------|----------|-------------------|------------------|-----------------------------|------------------|-------------------|------------------|
| 1  | 575991             | 0                  | 1    | 9999 | NULL     | 1                 | AZ-AliPay-ETL    | 2020-09-03 22:09:29.1033333 | NULL             | NULL              | NULL             |
| 2  | 575794             | 0                  | 1    | 0    | NULL     | 1                 | AZ-AliPay-ETL    | 2020-09-03 22:09:29.1033333 | NULL             | NULL              | NULL             |

The erroneous data is sent out to business users,once the Organization Load is complete and successful.

## AUTOMATED MAIL - ALL PAY - EMPLOYEE WITH NO MATCHING COMPANY



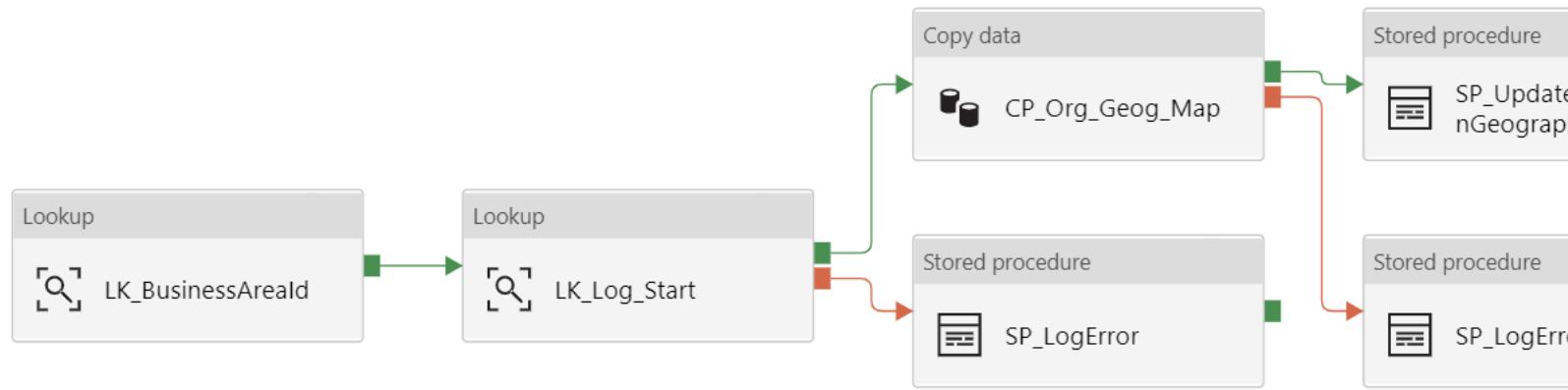
This message was sent with Low importance.  
If there are problems with how this message is displayed, click here to view it in a web browser.

Please review the below companies from the Workday Employee report that could not be matched in the Data Warehouse Dim\_Company table.

| Code | Company Name | LNumber   | Company Number | State | Date                |
|------|--------------|-----------|----------------|-------|---------------------|
| 9999 | Not Found    | Not Found | L9999          | No    | 2020-09-03T00:00:00 |
| 0    | Not Found    | Not Found | LERROR         | No    | 2020-09-03T00:00:00 |

## OrganizationGeographicRegion

Also, the state information extracted from datawarehouse dim\_company updates the new company and state mapping tables in PayrollDB [lnkr].[t\_OrganizationGeographicRegion].The stored procedure used for merging the data is [etl].[UpdateOrganizationGeographicRegion].



[Link to Mapping Document](#)

- [Datasource](#)
- [Processing Logic -](#)
- [Tables](#)

## Datasource

The data for employee is sourced from Work Day API Reports. We receive 2 reports every day from WD -

- Active Employee Report
- Terminated Employee Report

The reports are available at <https://wd5-services1.myworkday.com/ccx/service/customreport2/lithia/>

Azur Data Factory connects to this api and downloads the reports to All Pay Data Platform - Datalake.

The screenshot shows the Azure Data Factory Data Explorer interface. The top navigation bar has two tabs: 'outbound' (selected) and another 'outbound' tab. Below the tabs is a toolbar with standard file operations: Upload, Download, Open, New Folder, Select All, Copy, Paste, Rename, Manage Access, Properties, Delete, and Refresh. The main area displays a file list with the following details:

| Name                                   | Access Tier    | Access Tier Last Modified | Last Modified         |
|--|----------------|---------------------------|-----------------------|
| WORKDAYEMPLOYEEACTIVE_20200922.CSV     | Hot (inferred) |                           | 9/23/2020, 7:42:06 AM |
| WORKDAYEMPLOYEETERMINATED_20200922.CSV | Hot (inferred) |                           | 9/23/2020, 7:40:32 AM |

## Processing Logic -

Refer Employee Mappign document

## Tables

| ETLDB                  |           | APPDB         |           |
|------------------------|-----------|---------------|-----------|
| Staging                | Curated   | ETL           | Core      |
| WD_Employee            | TEmployee | ETLDBEmployee | t_Employy |
| WD_Employee_Terminated |           |               |           |

- [11-Oct-2020 - Production jobs for staging failing](#)

## 11-Oct-2020 - Production jobs for staging failing

##Root Cause :

1. COntrol.Entity table, CSS Dealer Entity was enabled 2.Changes for Fact\_CSS\_Dealer was made in Production on 9-Oct to include the changes for sprint 6 user story

##Solution : Disabled the entity in production as its not part of store roll out

- [Outbound to Staging](#)

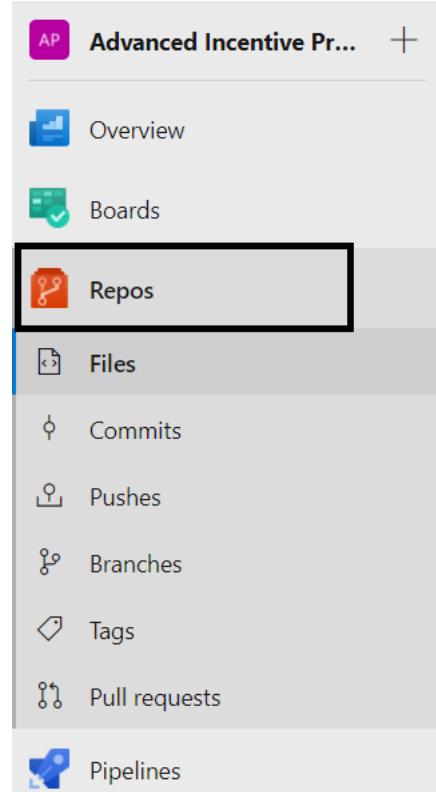
Note - Follow the order

#Load data from On Premise to Inbound To load data from Onpremise DW to Lithia Data Platform - Datalake - Inbound folder execute :

- ADF Name - Lithia-Data-Platform-Dev-df
- Pipeline Name - PL\_Generic\_DWH\_Datalake\_Master #Copy file from Inbound to Outbound To load data from Lithia Data Platform - Datalake - Inbound to Outbound Folder execute :
- ADF Name - Lithia-Data-Platform-Dev-df
- Pipeline Name - PL\_Generic\_Inbound\_to\_Outbound\_Master #Load data sources from Outbound to ETLDB

### Outbound to Staging

- ADF Name - AZWU2APTEST-DFY-DEV
  - Pipeline Name (master) - PL\_TRAN\_TRANSFORMATION\_MASTER
  - Pipeline Name (child) - PL\_TRAN\_OUTBOUND\_TO\_STAGE ##Staging to Transformation
  - ADF Name - AZWU2APTEST-DFY-DEV
  - Pipeline Name (master) - PL\_TRAN\_TRANSFORMATION\_MASTER
  - Pipeline Name (child) - PL\_TRAN\_STAGE\_TO\_TRANSFORMATION ##Transformation to Curated TBD
- 
- [All Pay Data Platform - ETLDB](#)
  - [All Pay Data Platform - ADF - AZWU2APTEST-DFY-DEV](#)
  - [All Pay Data Platform ARM template Deployments](#)
  - [All Pay DW Source Stored Procedure Script Repo](#)



#Introduction This page contains the information about the repositories to be used for the All Pay Project.  
DataMove

#Lithia Data Platform -

Repo Name - LDP-Databases - For repo location click [here](#).

LDPCL

- AUDIT
  - Stored Procedures
    - +  AUDIT.FileCopyResult.sql
    - +  AUDIT.InsertEntityLoad.sql
    - +  AUDIT.InsertPackageLoadErrorLog.sql
    - +  AUDIT.InsertSourceSystemLoad.sql
    - +  AUDIT.SQLCopyResult.sql
    - +  AUDIT.UpdatePackageLoad.sql
  - Tables
    - +  AUDIT.EntityLoad.sql
    - +  AUDIT.PipelineError.sql
    - +  AUDIT.PipelineLoad.sql
    - +  AUDIT.RowThroughput.sql
    - +  AUDIT.SourceSystemLoad.sql
- CONTROL
  - Stored Procedures
    - +  CONTROL.FinaliseProcess.sql
    - +  CONTROL.InsertSourceFile.sql
    - +  CONTROL.ObtainBusinessAreaId.sql
    - +  CONTROL.ObtainDWHDataToExtract.sql
    - +  CONTROL.ObtainDWHTablesToExtract.sql
    - +  CONTROL.ObtainFileNamestoMoveInboundtoOutbound.sql
    - +  CONTROL.ObtainNewLoadId.sql
    - +  CONTROL.ObtainSourceToRaw.sql
    - +  CONTROL.UpdateSourceEntityWatermark.sql
    - +  CONTROL.UpdateSourceFileExtraction.sql
    - +  CONTROL.UpdateSourceFileStaged.sql
  - Tables
    - +  CONTROL.BusinessArea.sql
    - +  CONTROL.DestinationDetails.sql
    - +  CONTROL.Entity.sql
    - +  CONTROL.LoadStatusType.sql
    - +  CONTROL.SourceFile.sql
    - +  CONTROL.SourceSystem.sql

#Lithia Data Platform - ADF - Lithia-Data-Platform-Dev-df Repo Name - Lithia-Data-Platform-df - For repo location click [here](#).

## All Pay Data Platform - ETLDB

Repo Name - AllPayETLDB - For repo location click [here](#).

## All Pay Data Platform - ADF - AZWU2APTEST-DFY-DEV

Repo Name - AllPay\_DataFactory- For repo location click [here](#).

## All Pay Data Platform ARM template Deployments

❖ AllPayDataFactoryDeployment

- ▽  AllPayDataFactoryDeployment
  - AllPayDataFactoryDeployment.deployproj
  - azuredeploy.json
  - azuredeploy.parameters.prod.json
  - azuredeploy.parameters.test.json
  - azuredeploy.parameters.uat.json
  - Deploy-AzureResourceGroup.ps1
  - Deployment.targets
- ▽  AllPayLogicApps
  - >  LA\_AllPay\_Company\_Data\_Errors
  - >  LA\_AllPay\_Employee\_Data\_Errors

Repo Name - AllPayDataFactoryDeployment - For repo location click [here](#)

## All Pay DW Source Stored Procedure Script Repo

LithiaMotors / Advanced Incentive Program / Repos / Branches / DWProduction

## Branches

Mine All Stale

| Branch                 | Commit   | Author | Age |
|------------------------|----------|--------|-----|
| master Default Compare | b2e79c95 | Mo...  | 13d |

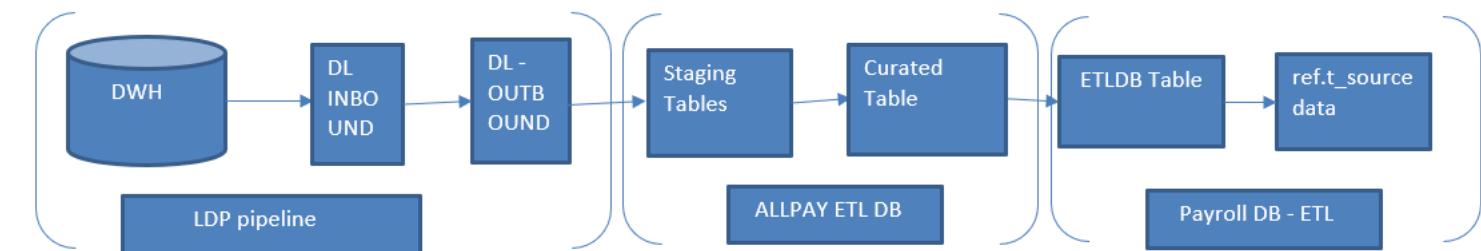
#Create Branch #Check in Branch #Publish

Refer DataFactoryDeploymentProject

ALLPAY Sourcesystem Mapping documents

- [Source System - CSS](#)
- [Source System - RAP\\_TOTAL](#)
- [Source System - RAPINDIVIDUAL](#)
- [Source System - SMIS](#)
- [Source System - FILOG](#)
- [Source Systems - ADS](#)
- [Source System - RTH](#)

High Level Dataflow diagram



## [Source System - CSS](#)

## [Source System - RAP\\_TOTAL](#)

## [Source System - RAPINDIVIDUAL](#)

## [Source System - SMIS](#)

## [Source System - FILOG](#)

## [Source Systems - ADS](#)

## [Source System - RTH](#)

- [Load data from Outbound ADLS to ALLPAY Staging table - \[Staging\],\[Advisory\\_Daily\\_Sales\]](#)
- [Load data from Staging to Curated table - \[Curated\].\[ads\]](#)

- [Load data to APP DB ETL Table \[ETLDBADS\]](#)
- [Load data from APP DB Table to ref.t\\_sourcedata](#)

#Extract Data from DWH ([allpay].[Export\_AllPay\_ADS]) to Inbound ADLS and then to Outbound ADLS

1.Transformation logic from DWH to Inbound ADLS and load the data to Inbound ADLS and then to Outbound ADLS |TargetField Name |Rule Type |Source Fieldname | Comment | --|---|  
-|-| Company\_Number|Derived Field|Company\_Number|Based on DCH store logic |SA|Direct(1:1)|SA| |MonthBeginDate||Close\_Date| |ROs|Direct(1:1)|ROs|  
|Labor\_Type|Direct(1:1)|Labor\_Type| |LaborSale|Direct(1:1)|LaborSale| |LaborDisc|Direct(1:1)|LaborDisc| |LaborCost|Derived Field|LaborCost|Based on LaboeSale,Labor\_Disc  
|NetGP|Derived Field|NetGP|Based on LaboeSale,Parts\_sale,Misc\_sale,Labor\_cost,Parts\_cost,Misc\_cost |PartsSale|Direct(1:1)|PartsSale| |PartsDisc|Direct(1:1)|PartsDisc|  
|PartsCost|Direct(1:1)|PartsCost| |TotalSale|Derived Field|TotalSale|Based on Labor\_sale,PartSale, Misc\_sale |Subtotal|Derived Field|Subtotal|Based on LaborSale, PartsSale, MiscSale  
|MiscSale|Direct(1:1)|MiscSale| |MiscCost| |Lube|NA|Lube| |SubletSale|NA|SubletSale| |SubletCost|NA|SubletCost| |SOldHrs|Direct(1:1)|SOldHrs| |CPSoldHrs|Derived  
Field|CPSoldHrs|Based on LaborType('C'),Soldhrs |CPRos|Derived Field|CPRos|Based on LaborType,RO |LaborGross|Derived Field|Based on LaborSale, LaboeDIsc, laboecost  
|AvgLaborGPPerRO|Derived Field|Based on LaborSale, LaboeDIsc, laboecost/RO |LaborGPPct|Derived Field|Based on LaborSale, LaboeDIsc, laboecost/Laborsale |PartsGross|Derived  
Field|Based on Partssale, Partdisc,Partcost |AvgPartsGPPerRO|Derived Field|Based on Partssale, Partdisc,Partcost/RO |PartsGPPct|Derived Field|Based on  
Partssale,Partdisc,Partcost/Partssale |AvgSubTotalGPPerRO|Derived Field|Based on Totalsale, RO |CPAvgHrsRO|Derived Field|Based on CPSoldhrs,CPRos |AvgHrsRO|Derived  
Field|Based on Soldhrs,RO |ELR|Derived Field|Based on LaborSale, Soldhrs |AvgNetGPPerRO|Derived Field|Based on NETGP,RO |NetGPPct|Derived Field|Based on NetGP,TotalSale

## Load data from Outbound ADLS to ALLPAY Staging table - [Staging].[Advisory\_Daily\_Sales]

2.Load data from Outbound ADLS to ALLPAY ETL Staging table which is 1:1 mapping.

## Load data from Staging to Curated table - [Curated].[ads]

3.Transformation logic from Staging table to Curated table.

| Target Fieldname    | Data Type    | Rule Type | Comment  |
|---------------------|--------------|-----------|--|
| SourceSystemFieldId | bigint       |           | Based on [External].[t_SourceSystemField], [External].[t_SourceSystem] |
| EmployeeId          | bigint       | NA        |  |
| PayGroupId          | bigint       |           | Based on companynumber , do lookup on [External].[t_PayGroup]          |
| OrganizationId      | bigint       |           | Based on companynumber , do lookup on [External].[t_Organization]      |
| PayCalendarPeriodId | bigint       |           | Based on [External].[t_PayCalendarPeriod]                              |
| PayrollTypeId       | bigint       |           |  |
| SourceControl       | varchar(128) |           | Based on [External].[t_SourceSystemField]                              |
| SourceReference     | varchar(128) |           |  |
| Value               | decimal(18)  |           | Based on all the measures from the staging table                       |
| IsActive            | bit          |           | 1  |
| CreatedByName       | varchar(100) |           | Based on current date  |
| CreatedTimestamp    | datetime2(7) |           | Based on current date  |
| UpdatedByName       | varchar(100) |           | Based on current date  |
| UpdatedTimestamp    | datetime2(7) |           | Based on current date  |
| DeletedByName       | varchar(100) |           |  |
| DeletedTimestamp    | datetime2(7) |           |  |
| PayrollId           | bigint       |           |  |
| ValueString         | varchar(max) |           |  |

## Load data to APP DB ETL Table [ETLDBADS]

4.Load data from ALLPAY ETL Curated table to APP DB table which is 1:1 mapping.

## Load data from APP DB Table to ref.t\_sourcedata

5.Last step of ETL process is to load data from PAYROLL ETL table to ref.t\_sourcedata

| Target Fieldname    | Data Type    | Mapping     | SourceFieldname     | Data Type     |
|---------------------|--------------|-------------|---------------------|---------------|
| SourceSystemFieldId | bigint       | Direct(1:1) | SourceSystemFieldId | bigint        |
| EmployeeId          | bigint       | Direct(1:1) | EmployeeId          | bigint        |
| PayGroupId          | bigint       | Direct(1:1) | PayGroupId          | bigint        |
| OrganizationId      | bigint       | Direct(1:1) | OrganizationId      | bigint        |
| PayCalendarPeriodId | bigint       | Direct(1:1) | PayCalendarPeriodId | bigint        |
| PayrollTypeId       | bigint       | Direct(1:1) | PayrollTypeId       | bigint        |
| SourceControl       | varchar(128) | Direct(1:1) | SourceControl       | varchar(128)  |
| SourceReference     | varchar(128) | Direct(1:1) | SourceReference     | varchar(128)  |
| Value               | decimal(18)  | Direct(1:1) | Value               | decimal(18,5) |
| IsActive            | bit          | Direct(1:1) | IsActive            | bit           |
| CreatedByName       | varchar(100) | Direct(1:1) | CreatedByName       | varchar(100)  |
| CreatedTimestamp    | datetime2(7) | Direct(1:1) | CreatedTimestamp    | datetime2(7)  |
| UpdatedByName       | varchar(100) | Direct(1:1) | UpdatedByName       | varchar(100)  |
| UpdatedTimestamp    | datetime2(7) | Direct(1:1) | UpdatedTimestamp    | datetime2(7)  |
| DeletedByName       | varchar(100) | Direct(1:1) | DeletedByName       | varchar(100)  |
| DeletedTimestamp    | datetime2(7) | Direct(1:1) | DeletedTimestamp    | datetime2(7)  |
| PayrollId           | bigint       | Direct(1:1) | PayrollId           | bigint        |
| ValueString         | varchar(max) |             | LoadId              | int           |

- [Load data from Outbound ADLS to ALLPAY Staging table - \[Staging\].\[rap\\_individual\]](#)
- [Load data from Staging to Curated table - \[Curated\].\[rap\\_individual\]](#)
- [Load data to APP DB ETL Table-\[ETLDBRapIndividual\]](#)

- [Load data from APP DB Table to ref.t\\_sourcedata](#)

#Extract Data from DWH ([allpay].[Export\_AllPay\_RAPIndividual\_V1]) to Inbound ADLS and then to Outbound ADLS

1.Transformation logic from DWH to Inbound ADLS and then load the data from Inbound ADLS and then to Outbound ADLS |TargetField Name|Rule Type|Source Fieldname|Comment ||--|---|---| companynumber|Derived Field|SourceCompanyNumber|Based on DCH Store logic |Employee ID|Direct(1:1)|EmployeeID| MonthBeginDate|Derived field|MonthBeginDate|Based on Report date |DWLaborTypeCode|Derived Field|CWI\_Class| ROCount|Direct(1:1)|ROCount| SoldHrs|Direct(1:1)|SoldHrs| HrsPerRO|Derived Field|HrsPerRO|Based on SoldHrs/ROCount |LaborSale|Direct(1:1)|LaborSale| LaborSalePerRO|Derived Field|LaborSalePerRO|Based on LaborSale/ROCount |PartsSale|Direct(1:1)|PartsSale| PartsSalePerRO|Derived Field|PartsSalePerRO|Based on PartsSale/ROCount |MiscSale|Direct(1:1)|MiscSale| MiscSalePerRO|Derived Field|MiscSalePerRO|Based on MiscSale/ROCount |TotalSale|Derived Field|TotalSale|Based on Labor\_Sale+Parts\_Sale + Misc\_Sale |TotalSalePerRO|Derived Field|TotalSalePerRO|Based on TotalSale/ROCount |ELR|Derived Field|ELR|Based on LaborSale/SoldHrs

## Load data from Outbound ADLS to ALLPAY Staging table - [Staging].[rap\_individual]

2.Load data from Outbound ADLS to ALLPAY ETL Staging table which is 1:1 mapping.

## Load data from Staging to Curated table - [Curated].[rap\_individual]

3.Transformation logic from Staging table to Curated table. |Target Fieldname|Data Type|Rule Type|Comment| |--|---|---| SourceSystemFieldId|bigint||Based on [External].[t\_SourceSystemField], [External].[t\_SourceSystem] |EmployeeId| bigint|Derived Field|Based on [External].[employee] |PayGroupId| bigint||Based on companynumber , do lookup on [External].[t\_PayGroup] |OrganizationId| bigint||Based on companynumber , do lookup on [External].[t\_Organization] |PayCalendarPeriodId| bigint||Based on [External].[t\_PayCalendarPeriod] |PayrollTypeId| bigint||SourceControl| varchar(128)||Based on [External].[t\_SourceSystemField] |SourceReference| varchar(128)||Value| decimal(18)||Based on all the measures from the staging table |IsActive| bit||1 |CreatedByUserName| varchar(100)||Based on current date |CreatedTimestamp| datetime2(7)||Based on current date |UpdatedByUserName| varchar(100)||Based on current date |UpdatedTimestamp| datetime2(7)||Based on current date |DeletedByUserName| varchar(100)|| DeletedTimestamp| datetime2(7)|| |PayrollId| bigint||ValueString| varchar(max)||

## Load data to APP DB ETL Table-(ETLDBRapIndividual)

4.Load data from ALLPAY ETL Curated table to APP DB table which is 1:1 mapping.

## Load data from APP DB Table to ref.t\_sourcedata

5.Last step of ETL process is to load data from PAYROLL ETL table to ref.t\_sourcedata

| Target Fieldname    | Data Type    | Mapping     | SourceFieldname     | Data Type     |
|---------------------|--------------|-------------|---------------------|---------------|
| SourceSystemFieldId | bigint       | Direct(1:1) | SourceSystemFieldId | bigint        |
| EmployeeId          | bigint       | Direct(1:1) | EmployeeId          | bigint        |
| PayGroupId          | bigint       | Direct(1:1) | PayGroupId          | bigint        |
| OrganizationId      | bigint       | Direct(1:1) | OrganizationId      | bigint        |
| PayCalendarPeriodId | bigint       | Direct(1:1) | PayCalendarPeriodId | bigint        |
| PayrollTypeId       | bigint       | Direct(1:1) | PayrollTypeId       | bigint        |
| SourceControl       | varchar(128) | Direct(1:1) | SourceControl       | varchar(128)  |
| SourceReference     | varchar(128) | Direct(1:1) | SourceReference     | varchar(128)  |
| Value               | decimal(18)  | Direct(1:1) | Value               | decimal(18,5) |
| IsActive            | bit          | Direct(1:1) | IsActive            | bit           |
| CreatedByUserName   | varchar(100) | Direct(1:1) | CreatedByUserName   | varchar(100)  |
| CreatedTimestamp    | datetime2(7) | Direct(1:1) | CreatedTimestamp    | datetime2(7)  |
| UpdatedByUserName   | varchar(100) | Direct(1:1) | UpdatedByUserName   | varchar(100)  |
| UpdatedTimestamp    | datetime2(7) | Direct(1:1) | UpdatedTimestamp    | datetime2(7)  |
| DeletedByUserName   | varchar(100) | Direct(1:1) | DeletedByUserName   | varchar(100)  |
| DeletedTimestamp    | datetime2(7) | Direct(1:1) | DeletedTimestamp    | datetime2(7)  |
| PayrollId           | bigint       | Direct(1:1) | PayrollId           | bigint        |
| ValueString         | varchar(max) | LoadId      |                     | int           |

- [Load data from Outbound ADLS to ALLPAY Staging table - \[Staging\].\[rap\\_total\]](#)
- [Load data from Staging to Curated table - \[Curated\].\[rap\\_total\]](#)
- [Load data to APP DB ETL Table- \[ETLDBRapTotal\]](#)
- [Load data from APP DB Table to ref.t\\_sourcedata](#)

#Extract Data from DWH ([allpay].[Export\_AllPay\_RAPTotal\_V1]) to Inbound ADLS and then to Outbound ADLS

1.Transformation logic from DWH to Inbound ADLS and load data to Inbound ADLS and then to Outbound ADLS

| TargetField Name | Rule Type                  | Source Fieldname    | Comment                                    |
|------------------|----------------------------|---------------------|--|
| companynumber    | Derived based on DCH logic | SourceCompanyNumber | Based on DCH Store logic                   |
| MonthBeginDate   | Derived field              | MonthBeginDate      | Based on Report date                       |
| DWLaborTypeCode  | Derived Field              | CWI_Class           |  |
| ROCount          | Direct(1:1)                | ROCount             |  |
| SoldHrs          | Direct(1:1)                | SoldHrs             |  |
| HrsPerRO         | Derived Field              | HrsPerRO            | Based on SoldHrs/ROCount                   |
| LaborSale        | Direct(1:1)                | LaborSale           |  |
| LaborSalePerRO   | Derived Field              | LaborSalePerRO      | Based on LaborSale/ROCount                 |
| PartsSale        | Direct(1:1)                | PartsSale           |  |
| PartsSalePerRO   | Derived Field              | PartsSalePerRO      | Based on PartsSale/ROCount                 |
| MiscSale         | Direct(1:1)                | MiscSale            |  |
| MiscSalePerRO    | Derived Field              | MiscSalePerRO       | Based on MiscSale/ROCount                  |
| TotalSale        | Derived Field              | TotalSale           | Based on Labor_Sale+Parts_Sale + Misc_Sale |

| TargetField Name | Rule Type     | Source Fieldname | Comment                    |
|------------------|---------------|------------------|----------------------------|
| TotalSalePerRO   | Derived Field | TotalSalePerRO   | Based on TotalSale/ROCount |
| ELR              | Derived Field | ELR              | Based on LaborSale/SoldHrs |

## Load data from Outbound ADLS to ALLPAY Staging table - [Staging].[rap\_total]

2.Load data from Outbound ADLS to ALLPAY ETL Staging table which is 1:1 mapping.

## Load data from Staging to Curated table - [Curated].[rap\_total]

3.Transformation logic from Staging table to Curated table. [Target Fieldname|Data Type|Rule Type|Comment] |--|---|---|---| [SourceSystemFieldId|bigint||Based on [External]. [t\_SourceSystemField], [External].[t\_SourceSystem] |EmployeeId| bigint|NA||PayGroupId| bigint||Based on companynumber , do lookup on [External].[t\_PayGroup] |OrganizationId| bigint||Based on companynumber , do lookup on [External].[t\_Organization] |PayCalendarPeriodId| bigint||Based on [External].[t\_PayCalendarPeriod] |PayrollTypeId| bigint|| |SourceControl| varchar(128)||Based on [External].[t\_SourceSystemField] |SourceReference| varchar(128)|| |Value| decimal(18)||Based on all the measures from the staging table |IsActive| bit||1 |CreatedByUserName| varchar(100)||Based on current date |CreatedTimestamp| datetime2(7)||Based on current date |UpdatedByUserName| varchar(100)||Based on current date |UpdatedTimestamp| datetime2(7)||Based on current date |DeletedByUserName| varchar(100)|| |DeletedTimestamp| datetime2(7)|| |PayrollId| bigint|| |ValueString| varchar(max)||

## Load data to APP DB ETL Table- [ETLDBRapTotal]

4.Load data from ALLPAY ETL Curated table to APP DB ETL table which is 1:1 mapping.

## Load data from APP DB Table to ref.t\_sourcedata

5.Last step of ETL process is to load data from PAYROLL ETL table to ref.t\_sourcedata

| Target Fieldname    | Data Type    | Mapping     | SourceFieldname     | Data Type     |
|---------------------|--------------|-------------|---------------------|---------------|
| SourceSystemFieldId | bigint       | Direct(1:1) | SourceSystemFieldId | bigint        |
| EmployeeId          | bigint       | Direct(1:1) | EmployeeId          | bigint        |
| PayGroupId          | bigint       | Direct(1:1) | PayGroupId          | bigint        |
| OrganizationId      | bigint       | Direct(1:1) | OrganizationId      | bigint        |
| PayCalendarPeriodId | bigint       | Direct(1:1) | PayCalendarPeriodId | bigint        |
| PayrollTypeId       | bigint       | Direct(1:1) | PayrollTypeId       | bigint        |
| SourceControl       | varchar(128) | Direct(1:1) | SourceControl       | varchar(128)  |
| SourceReference     | varchar(128) | Direct(1:1) | SourceReference     | varchar(128)  |
| Value               | decimal(18)  | Direct(1:1) | Value               | decimal(18,5) |
| IsActive            | bit          | Direct(1:1) | IsActive            | bit           |
| CreatedByUserName   | varchar(100) | Direct(1:1) | CreatedByUserName   | varchar(100)  |
| CreatedTimestamp    | datetime2(7) | Direct(1:1) | CreatedTimestamp    | datetime2(7)  |
| UpdatedByUserName   | varchar(100) | Direct(1:1) | UpdatedByUserName   | varchar(100)  |
| UpdatedTimestamp    | datetime2(7) | Direct(1:1) | UpdatedTimestamp    | datetime2(7)  |
| DeletedByUserName   | varchar(100) | Direct(1:1) | DeletedByUserName   | varchar(100)  |
| DeletedTimestamp    | datetime2(7) | Direct(1:1) | DeletedTimestamp    | datetime2(7)  |
| PayrollId           | bigint       | Direct(1:1) | PayrollId           | bigint        |
| ValueString         | varchar(max) | LoadId      |                     | int           |

- [Load data from Outbound ADLS to ALLPAY Staging table - \[Staging\].\[fact\\_css\\_dealer\]](#)
- [Load data from Staging to Curated table - \[Curated\].\[css\\_dealer\]](#)
- [Load data to APP DB ETL Table \(\[ETLDBFactCssDealer\]\).](#)
- [Load data from APP DB Table to ref.t\\_sourcedata](#)

#Extract Data from DWH ([allpay].[Export\_AllPay\_CSS\_V1]) to Inbound ADLS and then to Outbound ADLS

1.Transformation logic from DWH to Inbound ADLS and load the data to Inbound ADLS and then to Outbound ADLS

| TargetField Name         | Rule Type     | Source Fieldname         | Comment                  |
|--------------------------|---------------|--------------------------|--------------------------|
| Company                  | Derived Field | Company                  | Based on DCH store logic |
| Record_Date_Key          | Direct (1:1)  | Record_Date_Key          |                          |
| Sales_AprvRaw_Score      | Direct (1:1)  | Sales_AprvRaw_Score      |                          |
| [Sales_AprvComp]         | Direct (1:1)  | [Sales_AprvComp]         |                          |
| [Sales_AprvPercentage]   | Direct (1:1)  | [Sales_AprvPercentage]   |                          |
| [Service_AprvRaw_Score]  | Direct (1:1)  | [Service_AprvRaw_Score]  |                          |
| [Service_AprvComp]       | Direct (1:1)  | [Service_AprvComp]       |                          |
| [Service_AprvPercentage] | Direct (1:1)  | [Service_AprvPercentage] |                          |
| [Body_AprvRaw_Score]     | Direct (1:1)  | [Body_AprvRaw_Score]     |                          |
| [Body_AprvComp]          | Direct (1:1)  | [Body_AprvComp]          |                          |
| [Body_AprvPercentage]    | Direct (1:1)  | [Body_AprvPercentage]    |                          |
| [Sales_Raw_Score]        | Direct (1:1)  | [Sales_Raw_Score]        |                          |
| [Sales_Comp]             | Direct (1:1)  | [Sales_Comp]             |                          |
| [Sales_Percentage]       | Direct (1:1)  | [Sales_Percentage]       |                          |
| [Service_Raw_Score]      | Direct (1:1)  | [Service_Raw_Score]      |                          |
| [Service_Comp]           | Direct (1:1)  | [Service_Comp]           |                          |
| [Service_Percentage]     | Direct (1:1)  | [Service_Percentage]     |                          |
| [Body_Raw_Score]         | Direct (1:1)  | [Body_Raw_Score]         |                          |
| [Body_Comp]              | Direct (1:1)  | [Body_Comp]              |                          |

| Target Fieldname  | Rule Type    | Source Fieldname  | Comment |
|-------------------|--------------|-------------------|---------|
| [Body_Percentage] | Direct (1:1) | [Body_Percentage] |         |

## Load data from Outbound ADLS to ALLPAY Staging table - [Staging].[fact\_css\_dealer]

2.Load data from Outbound ADLS to ALLPAY ETL Staging table which is 1:1 mapping.

## Load data from Staging to Curated table - [Curated].[css\_dealer]

3.Transformation logic from Staging table to Curated table.

| Target Fieldname    | Data Type    | Rule Type | Comment  |
|---------------------|--------------|-----------|--|
| SourceSystemFieldId | bigint       |           | Based on [External].[t_SourceSystemField], [External].[t_SourceSystem] |
| EmployeeId          | bigint       | NA        |  |
| PayGroupId          | bigint       |           | Based on companynumber , do lookup on [External].[t_PayGroup]          |
| OrganizationId      | bigint       |           | Based on companynumber , do lookup on [External].[t_Organization]      |
| PayCalendarPeriodId | bigint       |           | Based on [External].[t_PayCalendarPeriod]                              |
| PayrollTypeId       | bigint       |           |  |
| SourceControl       | varchar(128) |           | Based on [External].[t_SourceSystemField]                              |
| SourceReference     | varchar(128) |           |  |
| Value               | decimal(18)  |           | Based on all the measures from the staging table                       |
| IsActive            | bit          |           | 1  |
| CreatedByUserName   | varchar(100) |           | Based on current date  |
| CreatedTimestamp    | datetime2(7) |           | Based on current date  |
| UpdatedByUserName   | varchar(100) |           | Based on current date  |
| UpdatedTimestamp    | datetime2(7) |           | Based on current date  |
| DeletedByUserName   | varchar(100) |           |  |
| DeletedTimestamp    | datetime2(7) |           |  |
| PayrollId           | bigint       |           |  |
| ValueString         | varchar(max) |           |  |

## Load data to APP DB ETL Table ([ETLDBFactCssDealer])

4.Load data from ALLPAY ETL Curated table to APP DB table which is 1:1 mapping.

## Load data from APP DB Table to ref.t\_sourcedata

5.Last step of ETL process is to load data from PAYROLL ETL table to ref.t\_sourcedata

| Target Fieldname    | Data Type    | Mapping     | Source Fieldname    | Data Type     |
|---------------------|--------------|-------------|---------------------|---------------|
| SourceSystemFieldId | bigint       | Direct(1:1) | SourceSystemFieldId | bigint        |
| EmployeeId          | bigint       | Direct(1:1) | EmployeeId          | bigint        |
| PayGroupId          | bigint       | Direct(1:1) | PayGroupId          | bigint        |
| OrganizationId      | bigint       | Direct(1:1) | OrganizationId      | bigint        |
| PayCalendarPeriodId | bigint       | Direct(1:1) | PayCalendarPeriodId | bigint        |
| PayrollTypeId       | bigint       | Direct(1:1) | PayrollTypeId       | bigint        |
| SourceControl       | varchar(128) | Direct(1:1) | SourceControl       | varchar(128)  |
| SourceReference     | varchar(128) | Direct(1:1) | SourceReference     | varchar(128)  |
| Value               | decimal(18)  | Direct(1:1) | Value               | decimal(18,5) |
| IsActive            | bit          | Direct(1:1) | IsActive            | bit           |
| CreatedByUserName   | varchar(100) | Direct(1:1) | CreatedByUserName   | varchar(100)  |
| CreatedTimestamp    | datetime2(7) | Direct(1:1) | CreatedTimestamp    | datetime2(7)  |
| UpdatedByUserName   | varchar(100) | Direct(1:1) | UpdatedByUserName   | varchar(100)  |
| UpdatedTimestamp    | datetime2(7) | Direct(1:1) | UpdatedTimestamp    | datetime2(7)  |
| DeletedByUserName   | varchar(100) | Direct(1:1) | DeletedByUserName   | varchar(100)  |
| DeletedTimestamp    | datetime2(7) | Direct(1:1) | DeletedTimestamp    | datetime2(7)  |
| PayrollId           | bigint       | Direct(1:1) | PayrollId           | bigint        |
| ValueString         | varchar(max) |             | LoadId              | int           |

- [Extract data from Outbound ADLS to Staging table - \[Staging\].\[rth\]](#)
- [Load data from ALLPAY Staging table to Curated Table - \[Curated\].\[rth\]](#)
- [Load data to ref.t\\_sourcedata](#)

## Extract data from Outbound ADLS to Staging table - [Staging].[rth]

1.Load data from Outbound ADLS to ALLPAY ETL Staging table which is 1:1 mapping.

| Target Fieldname | Data Type     | Mapping    | Source Fieldname |
|------------------|---------------|------------|------------------|
| Store            | bigint        | Direct 1:1 | Store            |
| PayEndDate       | date          | Direct 1:1 | PayEndDate       |
| PayrollTypeID    | bigint        | Direct 1:1 | PayrollTypeID    |
| DateType         | nvarchar(100) | Direct 1:1 | DateType         |
| Employee ID      | nvarchar(100) | Direct 1:1 | Employee ID      |

| Target Fieldname | Data Type     | Mapping                   | Source Fieldname |
|------------------|---------------|---------------------------|------------------|
| Date             | date          | Direct 1:1 Date           |                  |
| Actual Hours     | decimal(18,5) | Direct 1:1 Actual Hours   |                  |
| Sold Hours       | decimal(18,5) | Direct 1:1 Sold Hours     |                  |
| Total Hours      | decimal(18,5) | Direct 1:1 Total Hours    |                  |
| Total Sale       | decimal(18,5) | Direct 1:1 Total Sale     |                  |
| Sold Vs Actual   | decimal(18,5) | Direct 1:1 Sold Vs Actual |                  |
| Sold Vs Total    | decimal(18,5) | Direct 1:1 Sold Vs Total  |                  |
| Labor Cost       | decimal(18,5) | Direct 1:1 Labor Cost     |                  |
| Loadid           | bigint        |                           |                  |

## Load data from ALLPAY Staging table to Curated Table - [Curated].[rth]

2.Load data from Staging to Curated table |Target Fieldname|Data Type|Rule Type|Comment|---|---|---|---|SourceSystemFieldId|bigint||Based on [External].[t\_SourceSystemField], [External].[t\_SourceSystem] |EmployeeId| bigint|NA|PayGroupId| bigint||Based on companynumber , do lookup on [External].[t\_PayGroup] |OrganizationId| bigint||Based on companynumber , do lookup on [External].[t\_Organization] |PayCalendarPeriodId| bigint||Based on [External].[t\_PayCalendarPeriod] |PayrollTypeId| bigint||SourceControl| varchar(128)||Based on [External].[t\_SourceSystemField] |SourceReference| varchar(128)||Value| decimal(18)||Based on all the measures from the staging table |IsActive| bit||1 |CreatedByUserName| varchar(100)||Based on current date |CreatedTimestamp| datetime2(7)||Based on current date |UpdatedByUserName| varchar(100)||Based on current date |UpdatedTimestamp| datetime2(7)||Based on current date |DeletedByUserName| varchar(100)|| |DeletedTimestamp| datetime2(7)|| |PayrollId| bigint|| |ValueString| varchar(max)||

## Load data to ref.t\_sourcedata

3.Final step is to load data to ref.t\_sourcedata

| Target Fieldname    | Data Type    | Mapping     | SourceFieldname     | Data Type     |
|---------------------|--------------|-------------|---------------------|---------------|
| SourceSystemFieldId | bigint       | Direct(1:1) | SourceSystemFieldId | bigint        |
| EmployeeId          | bigint       | Direct(1:1) | EmployeeId          | bigint        |
| PayGroupId          | bigint       | Direct(1:1) | PayGroupId          | bigint        |
| OrganizationId      | bigint       | Direct(1:1) | OrganizationId      | bigint        |
| PayCalendarPeriodId | bigint       | Direct(1:1) | PayCalendarPeriodId | bigint        |
| PayrollTypeId       | bigint       | Direct(1:1) | PayrollTypeId       | bigint        |
| SourceControl       | varchar(128) | Direct(1:1) | SourceControl       | varchar(128)  |
| SourceReference     | varchar(128) | Direct(1:1) | SourceReference     | varchar(128)  |
| Value               | decimal(18)  | Direct(1:1) | Value               | decimal(18,5) |
| IsActive            | bit          | Direct(1:1) | IsActive            | bit           |
| CreatedByUserName   | varchar(100) | Direct(1:1) | CreatedByUserName   | varchar(100)  |
| CreatedTimestamp    | datetime2(7) | Direct(1:1) | CreatedTimestamp    | datetime2(7)  |
| UpdatedByUserName   | varchar(100) | Direct(1:1) | UpdatedByUserName   | varchar(100)  |
| UpdatedTimestamp    | datetime2(7) | Direct(1:1) | UpdatedTimestamp    | datetime2(7)  |
| DeletedByUserName   | varchar(100) | Direct(1:1) | DeletedByUserName   | varchar(100)  |
| DeletedTimestamp    | datetime2(7) | Direct(1:1) | DeletedTimestamp    | datetime2(7)  |
| PayrollId           | bigint       | Direct(1:1) | PayrollId           | bigint        |
| ValueString         | varchar(max) |             | LoadId              | int           |

- [Load data from Outbound ADLS to ALLPAY Staging table - \[Staging\].\[filog\]](#)
- [Load data from Staging to Curated table - \[Curated\].\[filog\]](#)
- [Load data to APP DB ETL Table.](#)
- [Load data from APP DB Table to ref.t\\_sourcedata](#)

#Extract Data from DWH ([allpay].[Export\_AllPay\_FILOG]) to Inbound ADLS and then to Outbound ADLS

1.Transformation logic from DWH to Inbound ADLS and then load the data from Inbound ADLS and then to Outbound ADLS |TargetField Name|Rule Type|Source Fieldname|Comment|---|---|---|---|Company\_Number|Derived Field|Company\_Number|Based on DCH store logic |MonthBeginDate|Derived Field|MonthBeginDate|CRM\_FIMgr\_Name|Direct(1:1)|CRM\_FIMgr\_Name|Emp\_ID|Direct(1:1)|Emp\_ID| |NewUsed|Direct(1:1)|NewUsed| |ReserveAmt|Direct(1:1)|ReserveAmt| |ESCAmt|Direct(1:1)|ESCAmt| |LOFAMt|Direct(1:1)|LOFAMt| |CoatsAmt|Direct(1:1)|CoatsAmt| |AlarmAmt|Direct(1:1)|AlarmAmt| |GAPAmt|Direct(1:1)|GAPAmt| |MiscAmt|Direct(1:1)|MiscAmt| |LaHAMt|Direct(1:1)|LaHAMt| |FIAMt|Direct(1:1)|FIAMt| |CashAmt|Direct(1:1)|CashAmt| |FICnt|Direct(1:1)|FICnt| |CashCnt|Direct(1:1)|CashCnt| |ReserveCnt|Direct(1:1)|ReserveCnt| |EscCnt|Direct(1:1)|EscCnt| |LOFCnt|Direct(1:1)|LOFCnt| |CoatsCnt|Direct(1:1)|CoatsCnt| |AlarmCnt|Direct(1:1)|AlarmCnt| |GAPCn|Direct(1:1)|GAPCn| |MiscCn|Direct(1:1)|MiscCn| |LaHCn| |CashPen|Derived Field||Based on CashCn|FICn| |ReservePen|Derived Field||Based on ReserveCn|FICn| |EscPen|Derived Field||Based on EscCn|FICn| |LoPen|Derived Field||Based on LOFCn|FICn| |Coatspen|Derived Field||Based on CoatsCn|FICn| |AlarmPen|Derived Field||Based on AlarmCn|FICn| |GAPPen|Derived Field||Based on GACPn|FICn| |MiScPen|Derived Field||Based on MiscCn|FICn| |LAHPen|Derived Field||Based on LaHCn|FICn|

## Load data from Outbound ADLS to ALLPAY Staging table - [Staging].[filog]

2.Load data from Outbound ADLS to ALLPAY ETL Staging table which is 1:1 mapping.

## Load data from Staging to Curated table - [Curated].[filog]

3.Transformation logic from Staging table to Curated table.

| Target Fieldname    | Data Type | Rule Type | Comment  |
|---------------------|-----------|-----------|--|
| SourceSystemFieldId | bigint    |           | Based on [External].[t_SourceSystemField], [External].[t_SourceSystem] |
| EmployeeId          | bigint    | NA        |  |
| PayGroupId          | bigint    |           | Based on companynumber , do lookup on [External].[t_PayGroup]          |
| OrganizationId      | bigint    |           | Based on companynumber , do lookup on [External].[t_Organization]      |
| PayCalendarPeriodId | bigint    |           | Based on [External].[t_PayCalendarPeriod]                              |
| PayrollTypeId       | bigint    |           |  |

| Target Fieldname  | Data Type    | Rule Type | Comment  |
|-------------------|--------------|-----------|--|
| SourceControl     | varchar(128) |           | Based on [External].[t_SourceSystemField]      |
| SourceReference   | varchar(128) |           |  |
| Value             | decimal(18)  |           | Based on all the measures from the staging tab |
| IsActive          | bit          |           | 1  |
| CreatedByUserName | varchar(100) |           | Based on current date                          |
| CreatedTimestamp  | datetime2(7) |           | Based on current date                          |
| UpdatedByUserName | varchar(100) |           | Based on current date                          |
| UpdatedTimestamp  | datetime2(7) |           | Based on current date                          |
| DeletedByUserName | varchar(100) |           |  |
| DeletedTimestamp  | datetime2(7) |           |  |
| PayrollId         | bigin        |           |  |
| ValueString       | varchar(max) |           |  |

## **Load data to APP DB ETL Table.**

4. Load data from ALLPAY ETL Curated table to APP DB table - [ETLDBFactFilog] which is 1:1 mapping

## Load data from APP DB Table to ref.t\_sourcedata

5. Last step of ETL process is to load data from PAYROLL ETL table to ref.t\_sourcedat

| Target Fieldname    | Data Type    | Mapping     | Source Fieldname    | Data Type     |
|---------------------|--------------|-------------|---------------------|---------------|
| SourceSystemFieldId | bigint       | Direct(1:1) | SourceSystemFieldId | bigint        |
| EmployeeId          | bigint       | Direct(1:1) | EmployeeId          | bigint        |
| PayGroupId          | bigint       | Direct(1:1) | PayGroupId          | bigint        |
| OrganizationId      | bigint       | Direct(1:1) | OrganizationId      | bigint        |
| PayCalendarPeriodId | bigint       | Direct(1:1) | PayCalendarPeriodId | bigint        |
| PayrollTypeId       | bigint       | Direct(1:1) | PayrollTypeId       | bigint        |
| SourceControl       | varchar(128) | Direct(1:1) | SourceControl       | varchar(128)  |
| SourceReference     | varchar(128) | Direct(1:1) | SourceReference     | varchar(128)  |
| Value               | decimal(18)  | Direct(1:1) | Value               | decimal(18,5) |
| IsActive            | bit          | Direct(1:1) | IsActive            | bit           |
| CreatedByUserName   | varchar(100) | Direct(1:1) | CreatedByUserName   | varchar(100)  |
| CreatedTimestamp    | datetime2(7) | Direct(1:1) | CreatedTimestamp    | datetime2(7)  |
| UpdatedByUserName   | varchar(100) | Direct(1:1) | UpdatedByUserName   | varchar(100)  |
| UpdatedTimestamp    | datetime2(7) | Direct(1:1) | UpdatedTimestamp    | datetime2(7)  |
| DeletedByUserName   | varchar(100) | Direct(1:1) | DeletedByUserName   | varchar(100)  |
| DeletedTimestamp    | datetime2(7) | Direct(1:1) | DeletedTimestamp    | datetime2(7)  |
| PayrollId           | bigint       | Direct(1:1) | PayrollId           | bigint        |
| ValueString         | varchar(max) |             | LoadId              | int           |

- [Load data from Outbound ADLS to ALLPAY Staging table - \[Staging\].\[Smis\]](#)
  - [Load data from Staging to Curated table - \[Curated\].\[smis\]](#)
  - [Load data to APP DB ETL Table.](#)
  - [Load data from APP DB Table to ref\\_t\\_sourcedata](#)

#Extract Data from DWIT ([amipay].[Export\_Amipay\_SMS]) to inbound ADES and then to Outbound ADE

1. Transformation logic from DWH to inbound ADTS and then load the data from inbound ADTS and then to Outbound ADTS.

| Target Field Name | Rule Type     | Source Field Name | Comment            |
|-------------------|---------------|-------------------|--------------------|
| CurrentMonth      | Derived field | Current month     |                    |
| Company number    | Direct (1:1)  | Company Number    |                    |
| MisLineNumber     | Direct (1:1)  | MisLineNumber     |                    |
| MisLineOrdinal    | Direct (1:1)  | MisLineOrdinal    |                    |
| TypeIndicator     | Direct (1:1)  | TypeIndicator     |                    |
| Description       | NA            | Description       |                    |
| CMTD              | Derived field | CMTD              | Based on mtd1      |
| PMTD              | Derived field | PMTD              | Based on mtd1      |
| MoM               | Derived field | MoM               | Based on CMTD,PMTD |
| CYTD              | Derived field | CYTD              | Based on mtd1      |
| PYTD              | Derived field | PYTD              | Based on mtd1      |
| YOY               | Derived field | YOY               | Based on CYTD,PYTD |
| SPE               | Direct (1:1)  | SPE               |                    |

## Load data from Outbound ADLS to ALLPAY Staging table - [Staging].[SMS...

2. Load data from Outbound ADLS to ALLPAY ETL Staging table which is 1:1 mapping

## Load data from Staging to Curated table - [Curated].smis

bigint||Based on companynumber , do lookup on [External].[t\_Organization] |PayCalendarPeriodId| bigint||Based on [External].[t\_PayCalendarPeriod] |PayrollTypeId| bigint||  
|SourceControl| varchar(128)||Based on [External].[t\_SourceSystemField] |SourceReference| varchar(128)|| |Value| decimal(18)||Based on all the measures from the staging table |IsActive|  
bit||1 |CreatedByUserName| varchar(100)||Based on current date |CreatedTimestamp| datetime2(7)||Based on current date |UpdatedByUserName| varchar(100)||Based on current date  
|UpdatedTimestamp| datetime2(7)||Based on current date |DeletedByUserName| varchar(100)|| |DeletedTimestamp| datetime2(7)|| |PayrollId| bigint|| |ValueString| varchar(max)||

## Load data to APP DB ETL Table.

4.Load data from ALLPAY ETL Curated table to APP DB table - [ETLDBSMIS] which is 1:1 mapping.

## Load data from APP DB Table to ref.t\_sourcedata

5.Last step of ETL process is to load data from PAYROLL ETL table to ref.t\_sourcedata

| Target Fieldname    | Data Type    | Mapping     | SourceFieldname     | Data Type     |
|---------------------|--------------|-------------|---------------------|---------------|
| SourceSystemFieldId | bigint       | Direct(1:1) | SourceSystemFieldId | bigint        |
| EmployeeId          | bigint       | Direct(1:1) | EmployeeId          | bigint        |
| PayGroupId          | bigint       | Direct(1:1) | PayGroupId          | bigint        |
| OrganizationId      | bigint       | Direct(1:1) | OrganizationId      | bigint        |
| PayCalendarPeriodId | bigint       | Direct(1:1) | PayCalendarPeriodId | bigint        |
| PayrollTypeId       | bigint       | Direct(1:1) | PayrollTypeId       | bigint        |
| SourceControl       | varchar(128) | Direct(1:1) | SourceControl       | varchar(128)  |
| SourceReference     | varchar(128) | Direct(1:1) | SourceReference     | varchar(128)  |
| Value               | decimal(18)  | Direct(1:1) | Value               | decimal(18,5) |
| IsActive            | bit          | Direct(1:1) | IsActive            | bit           |
| CreatedByUserName   | varchar(100) | Direct(1:1) | CreatedByUserName   | varchar(100)  |
| CreatedTimestamp    | datetime2(7) | Direct(1:1) | CreatedTimestamp    | datetime2(7)  |
| UpdatedByUserName   | varchar(100) | Direct(1:1) | UpdatedByUserName   | varchar(100)  |
| UpdatedTimestamp    | datetime2(7) | Direct(1:1) | UpdatedTimestamp    | datetime2(7)  |
| DeletedByUserName   | varchar(100) | Direct(1:1) | DeletedByUserName   | varchar(100)  |
| DeletedTimestamp    | datetime2(7) | Direct(1:1) | DeletedTimestamp    | datetime2(7)  |
| PayrollId           | bigint       | Direct(1:1) | PayrollId           | bigint        |
| ValueString         | varchar(max) | LoadId      |                     | int           |

#Description Notification system can be integrated into any pipeline or functions or streaming applications. This notification has been created on Logic App and will support sending email alerts for Success, Warning and Failure. The notification service can also query report out dataset and attach to the to the Failure emails. The notification function can run for an single instance or you can loop

#To Invoke the Notification function

you we need to perform the below steps

1. Create a Payload, make sure your Content-Type = 'application/json'
2. Invoke the REST API, if you are using the Azure Data Factory you can use the Web Activity to call the Notification function.
3. The Notification function call me invoked from many different applications like C#, Post Man to test
4. Create a small wait just in case if there is a delay in the network, we do not want all of the packages to clutter at once.

##Url to access the notification function

"https://prod-08.westus2.logic.azure.com:443/workflows/6f79e38dcba4b8c9053025058bd608e/triggers/manual/paths/invoke?api-version=2016-10-01&sp=%2Ftriggers%2Fmanual%2Frunt&sv=1.0&sig=xVBQFK8oftJNUgeL-YhBFUtdDG0jXkM2kchtOPCbd18"

#Parameters The Notification system takes the below Parameters

```

"parameters": {
    "loadid": {
        "type": "int",
        "defaultValue": 100
    },
    "msgtype": {
        "type": "string",
        "defaultValue": "Success"
    },
    "emailid": {
        "type": "string",
        "defaultValue": "sreepanthyjonnalagadda@lithia.com"
    },
    "emailsub": {
        "type": "string",
        "defaultValue": "success email sub"
    },
    "emailbdy": {
        "type": "string",
        "defaultValue": "success email body"
    },
    "hasattachment": {
        "type": "string",
        "defaultValue": "No"
    },
    "pipelinename": {
        "type": "string",
        "defaultValue": "send email alerts"
    },
    "datafactoryname": {
        "type": "string",
        "defaultValue": "data factory name"
    },
    "logicappurl": {
        "type": "string",
        "defaultValue": ""
    }
}

```

```
        "defaultValue": "https://prod-08.westus2.logic.azure.com:443/workflows/6f79e38dcba4b8c9053025058bd608e/triggers/manual/paths/invoke?api-version=2016-06-01&sp=%2Ftriggers%2Fmanual%2Frun&sv=1.0&st=2018-07-10T11%3A12%3A15Z&se=2018-07-10T11%3A13%3A15Z&sr=b&rsv=1.0",
    }
}
```

- [On Premise to Azure Data Lake - Inbound Folder](#)
  - [Write code to extract](#)
  - [Configure the ETL framework](#)
- [Azure Data Lake Inbound Folder to Outbound Folder](#)
- [Outbound folder to Staging tables and transform the data into Curated tables for export](#)
  - [Transformation to Curated](#)
- [Curated to Application DB](#)
- [Notification](#)

The steps listed below in the blob will help configure the data onboarding process for \*\*All Pay\*\* project. The ETL framework and notification system provides the capability to load, and process the data at very minimal effort on developing the data transformation process.

We use two data factories to onboard the data

1. Lithia Data Factory
2. All Pay Data Factory

## On Premise to Azure Data Lake - Inbound Folder

This is the process that will facilitates the data extraction from the source dataset to azure data lake (**Inbound folder**). This involves the following two steps, please make sure the development lifecycle is followed

### Write code to extract

1. Create data extraction stored procedure in the source dataset, which will be input for data extraction to save the file to the data lake storage project inbound folder
2. If there is any third party files are used/received make sure that the data is available in the inbound folder of the project in the data lake storage.

### Configure the ETL framework

1. Creating relevant entries in the configuration tables in DataMove database #####Inserting into Business Area table under CONTROL Schema This is an one time activity required for onboarding a new project #####Inserting into SourceSystem table under CONTROL Schema This is an one time activity required for onboarding a new Subproject #####Inserting into Entity table under CONTROL Schema The Entity table holds the list of steps required for the ETL Framework to process the data

###Pipeline to refer in Lithia Data Factory

1. Generic -> PL\_Generic\_DWH\_Datalake\_Master
2. Generic -> PL\_Generic\_DWH\_Datalake\_Child\_Export

#####[Click this link to access the Azure Repos for Template scripts to insert the data](#)

Once the data is inserted into the above configuration tables, check for data existence

```
SQLQuery4.sql - Id...s@lithia.com (103)*  X
Select * from Control.BusinessArea
Select * from Control.SourceSystem Where SourceSystemCode = 'RAPINDIVIDUAL'
Select * from Control.Entity where Name = 'RAPINDIVIDUAL'

82 %

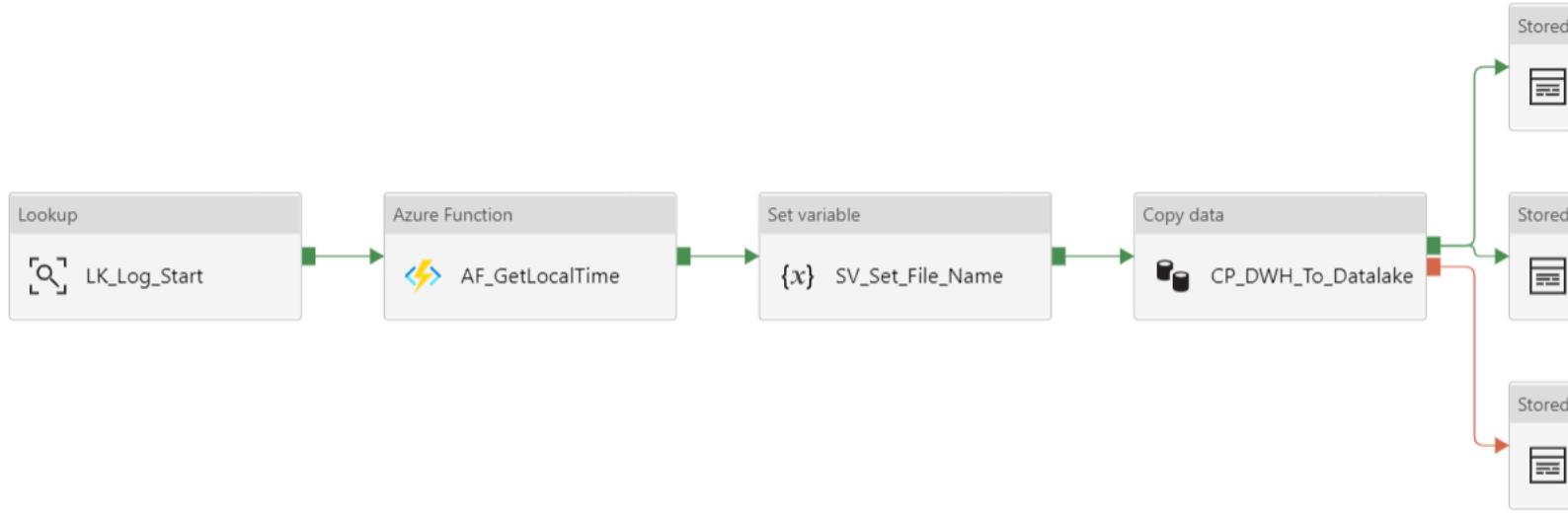
Results  Messages
BusinessAreaId BusinessAreaName Enabled
1 All Pay 1

SourceSystemId SourceSystemCode SourceSystemName BusinessAreaId SourceSystemDescription DataLakeFolderNameInbound DataLakeFolderNameOutbound ProcessingLayer
5 RAPINDIVIDUAL RAPINDIVIDUAL 1 RAPINDIVIDUAL inbound outbound Inbound

EntityId SourceSystemId BusinessAreaId Name Code Description SourceSchema SourceTable FileFormat RootRelativePath FilePattern FilePatternRegex HasWatermark
5 5 1 RAPINDIVIDUAL RAPI allpay allpay RAPINDIVIDUAL CSV OnPremDWH/AllPay/RAPINDIVIDUAL/ None None 1 E
```

###Run the pipeline

You can test the pipeline and it will create a new file in the inbound project folder if there are no configuration errors



## Azure Data Lake Inbound Folder to Outbound Folder

This step follows once the data is loaded into the project inbound folder, and copies the data into project outbound folder. There is no manual effort, the pipeline will take the parameters from the \*\*Entity\*\* table

SQLQuery2.sql - Id...@lithia.com (112)\* | created modified o...@lithia.com (110)\*

```

***** Script for SelectTopNRows command from SSMS *****
SELECT *
FROM [CONTROL].[Entity]

```

|    | SourceSchema                    | SourceTable  | FileFormat                   | RootRelativePath            | FilePattern                     | FilePatternRegex | HasWaterMark | SQLSelect              | IsActive               | ProcessFrequencyId | QuotedId |
|----|---------------------------------|--|------------------------------|-----------------------------|---------------------------------|------------------|--------------|------------------------|------------------------|--------------------|----------|
| 1  | SS All Pay                      | allpay   | FACT_CSS_DEALER              | CSV                         | OnPremDWH\AllPay\CSSEALER/      | NONE             | NONE         | 1                      | Export_AllPay_Datasets | 1                  | 1        |
| 2  |                                 | allpay   | DIM_COMPANY_NEW              | CSV                         | OnPremDWH\AllPay\DIM_COMPANY/   | None             | None         | 1                      | Export_AllPay_Datasets | 1                  | 1        |
| 3  |                                 | allpay   | Fact_Service_RO              | CSV                         | OnPremDWH\AllPay\ADS/           | None             | None         | 1                      | Export_AllPay_Datasets | 0                  | 1        |
| 4  | EMPLOYEE DATA                   | ISU_All_Pay_Outbound\Active_Employees_-_All_Pay... | WD_EMPLOYEE                  | CSV                         | AllPay\Employee\                | None             | None         | 1                      |                        | 1                  | &        |
| 5  |                                 | allpay   | RAPINDIVIDUAL                | CSV                         | OnPremDWH\AllPay\RAPINDIVIDUAL/ | None             | None         | 1                      | Export_AllPay_Datasets | 1                  | 1        |
| 6  |                                 | Staging  | DIM_COMPANY                  | NA                          | NA                              | NA               | NA           | 0                      | NA                     | 1                  | NA       |
| 7  | ge                              | CSSDEALER  | NA                           | OnPremDWH\AllPay\CSSDEALER/ | NA                              | NA               | 0            | NA                     | 1                      | 1                  | NA       |
| 8  |                                 | ADS  | NA                           | OnPremDWH\AllPay\ADS/       | NA                              | NA               | 0            | NA                     | 1                      | 1                  | NA       |
| 9  |                                 | Staging  | RAPINDIVIDUAL                | NA                          | OnPremDWH\AllPay\RAPINDIVIDUAL/ | NA               | NA           | 0                      | NA                     | 1                  | NA       |
| 10 | Curated from Staging            | Transformation                                     | DIM_COMPANY                  | NA                          | NA                              | NA               | NA           | 0                      | NA                     | 1                  | NA       |
| 11 | Curated from Staging            | Transformation                                     | TORGANIZATION                | NA                          | NA                              | NA               | NA           | 0                      | NA                     | 1                  | NA       |
| 12 | Curated from Staging            | Transformation                                     | ORGANIZATIONGEOGRAPHICREGION | NA                          | NA                              | NA               | NA           | 0                      | NA                     | 1                  | NA       |
| 13 | te App DB Table                 | Curated  | TORGANIZATION                | NA                          | NA                              | NA               | NA           | 0                      | NA                     | 1                  | NA       |
| 14 | te App DB Table                 | Curated  | TORGREGIONMAP                | NA                          | NA                              | NA               | NA           | 0                      | NA                     | 1                  | NA       |
| 15 | > Stage                         | Staging  | WD_EMPLOYEE                  | NA                          | OnPremDWH\AllPay\WD_EMPLOYEE/   | NA               | NA           | 0                      | NA                     | 1                  | 1        |
| 16 | 'transformation and/or Curat... | Transformation                                     | WORKDAYEMPLOYEE              | NA                          | NA                              | NA               | NA           | 0                      | NA                     | 1                  | NA       |
| 17 | te App DB Table                 | Curated  | TEMPLOYEE                    | NA                          | NA                              | NA               | NA           | 0                      | NA                     | 1                  | NA       |
| 18 | EMPLOYEE DATA                   | ISU_All_Pay_Outbound\Terminated_Employees_-_All_-  | WD_EMPLOYEE                  | CSV                         | AllPay\Employee\                | None             | None         | 1                      |                        | 1                  | &        |
| 19 | TED outbound to Stage           | Staging  | WD_EMPLOYEE_TERMINATED       | NA                          | OnPremDWH\AllPay\WD_EMPLOYEE/   | NA               | NULL         | 0                      | NA                     | 1                  | NA       |
| 20 |                                 | RAPTOTAL   | CSV                          | OnPremDWH\AllPay\RAPTOTAL/  | None                            | None             | 1            | Export_AllPay_Datasets | 1                      | 1                  | &        |
| 21 |                                 | RAPTOTAL   | NA                           | NA                          | NA                              | NA               | 0            | NA                     | 1                      | 1                  | NA       |
| 22 | Curated from Staging            | Transformation                                     | RAPTOTAL                     | NA                          | NA                              | NA               | NA           | 0                      | NA                     | 1                  | NA       |
| 23 | te App DB Table                 | Curated  | RAPTOTAL                     | NA                          | NA                              | NA               | NA           | 0                      | NA                     | 1                  | NA       |
| 24 | Curated from Staging            | Transformation                                     | RAPINDIVIDUAL                | NA                          | NA                              | NA               | NA           | 0                      | NA                     | 1                  | NA       |
| 25 | te App DB Table                 | Curated  | RAPINDIVIDUAL                | NA                          | NA                              | NA               | NA           | 0                      | NA                     | 1                  | NA       |
| 26 | driveway                        | SPE_Sales_ALog                                     | CSV                          | OnPremDWH\Sales\ALog/       | None                            | None             | 0            | Export_Driveway_Dat... | 1                      | 1                  | &        |
| 27 | e                               | DWH_SPE_Sales_ALog                                 | NA                           | NA                          | NA                              | NA               | 0            | NA                     | 1                      | 1                  | NA       |

90 %

Results Messages

Query executed successfully.

Use Azure Storage Explorer to browse the datafile in outbound folder, in azure datalake

inbound

Upload Download Open New Folder Select All Copy Paste Rename Manage Access Properties Delete Refresh

inbound > OnPremDWH > AllPay > RAPINDIVIDUAL > 2020 > 08 > 20

| Name                       | Access Tier    | Access Tier Last Modified | Last Modified         | Blob Type  | Content Type             | Size     | Lease Status |
|----------------------------|----------------|---------------------------|-----------------------|------------|--------------------------|----------|--------------|
| 20200820_RAPINDIVIDUAL.csv | Hot (inferred) |                           | 8/21/2020, 6:08:05 AM | Block Blob | application/octet-stream | 544.8 KB |              |

# Outbound folder to Staging tables and transform the data into Curated tables for export

Make sure that data is available respective tables in the outbound folder. This steps copies the data from the flat files from azure datalake to the staging tables. There is no manual operation, the pipeline will take the inputs of the files to be copied to the staging tables from the Entity configuration table

SQLQuery2.sql - Id...a@lithia.com (112)\* X created modified o...@lithia.com (110)\*

```
***** Script for SelectTopNRows command from SSMS *****
SELECT *
FROM [CONTROL].[Entity]
```

Results Messages

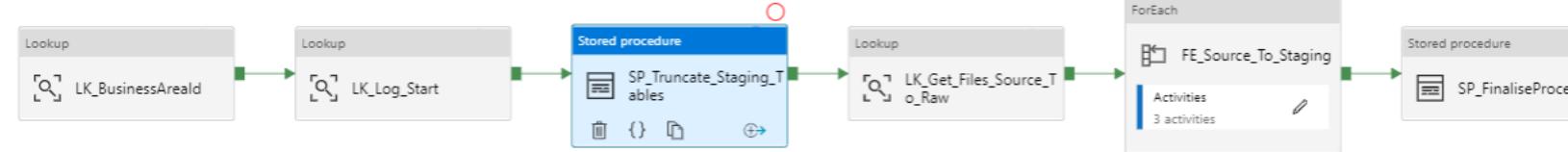
| FileFormat | RootRelativePath                  | FilePattern | FilePatternRegex | HasWatermark | SQLSelect              | IsActive | ProcessFrequencyId | QuotedIdentifier | IsTableOrStoredProcedure | Frequency | CurationTypeId | DataLakeName | DestinationTableName | Destination |
|------------|-----------------------------------|-------------|------------------|--------------|------------------------|----------|--------------------|------------------|--------------------------|-----------|----------------|--------------|----------------------|-------------|
| 1 CSV      | OnPremDWH\AllPay\CSSDEALER/       | NONE        | NONE             | 1            | Export_AllPay_Datasets | 1        | 1                  | &                | 2                        | M         | 1              | LDP          | fact_css_dealer      | Staging     |
| 2 CSV      | OnPremDWH\AllPay\Dim\DIM_COMPANY/ | None        | None             | 1            | Export_AllPay_Datasets | 1        | 1                  | &                | 2                        | F         | 1              | LDP          | DIM_COMPANY          | Staging     |
| 3 CSV      | OnPremDWH\AllPay\ADS/             | None        | None             | 1            | Export_AllPay_Datasets | 0        | 1                  | &                | 2                        | M         | 1              | LDP          | advisory_daily_sales | Staging     |
| 4 CSV      | AllPay\Employee/                  | None        | None             | 1            |                        | 1        | 1                  | &                | 3                        | M         | 1              | AP           | WD_EMPLOYEE          | Staging     |
| 5 CSV      | OnPremDWH\AllPay\RAPINDIVIDUAL/   | None        | None             | 1            | Export_AllPay_Datasets | 1        | 1                  | &                | 2                        | M         | 1              | LDP          | rap_individual       | Staging     |
| 6 NA       | NA                                | NA          | NA               | 0            | NA                     | 1        | 1                  | NA               | 1                        | N         | 2              | NA           | NULL                 | NULL        |
| 7 NA       | OnPremDWH\AllPay\CSSDEALER/       | NA          | NA               | 0            | NA                     | 1        | 1                  | NA               | 1                        | N         | 2              | NA           | NULL                 | NULL        |
| 8 NA       | OnPremDWH\AllPay\ADS/             | NA          | NA               | 0            | NA                     | 1        | 1                  | NA               | 1                        | N         | 2              | NA           | NULL                 | NULL        |
| 9 NA       | OnPremDWH\AllPay\RAPINDIVIDUAL/   | NA          | NA               | 0            | NA                     | 1        | 1                  | NA               | 1                        | N         | 2              | NA           | NULL                 | NULL        |
| 10 NA      | NA                                | NA          | NA               | 0            | NA                     | 1        | 1                  | NA               | 1                        | N         | 3              | NA           | NULL                 | NULL        |
| 11 NA      | NA                                | NA          | NA               | 0            | NA                     | 1        | 1                  | NA               | 1                        | N         | 3              | NA           | NULL                 | NULL        |
| 12 ON      | NA                                | NA          | NA               | 0            | NA                     | 1        | 1                  | NA               | 1                        | N         | 3              | NA           | NULL                 | NULL        |
| 13 NA      | NA                                | NA          | NA               | 0            | NA                     | 1        | 1                  | NA               | 1                        | N         | 4              | NA           | NULL                 | NULL        |
| 14 NA      | NA                                | NA          | NA               | 0            | NA                     | 1        | 1                  | NA               | 1                        | N         | 4              | NA           | NULL                 | NULL        |
| 15 NA      | OnPremDWH\AllPay\WD_EMPLOYEE/     | NA          | NA               | 0            | NA                     | 1        | 1                  | NA               | 1                        | N         | 2              | NA           | NULL                 | NULL        |
| 16 NA      | NA                                | NA          | NA               | 0            | NA                     | 1        | 1                  | NA               | 1                        | N         | 3              | NA           | NULL                 | NULL        |
| 17 NA      | NA                                | NA          | NA               | 0            | NA                     | 1        | 1                  | NA               | 1                        | N         | 4              | NA           | NULL                 | NULL        |
| 18 CSV     | AllPay\Employee/                  | None        | None             | 1            |                        | 1        | 1                  | &                | 3                        | M         | 1              | AP           | WD_EMPLOYEE_TE...    | Staging     |
| 19 NA      | OnPremDWH\AllPay\WD_EMPLOYEE/     | NA          | NULL             | 0            | NA                     | 1        | 1                  | NA               | 1                        | N         | 2              | NA           | NULL                 | NULL        |
| 20 CSV     | OnPremDWH\AllPay\RAPTOTAL/        | None        | None             | 1            | Export_AllPay_Datasets | 1        | 1                  | &                | 2                        | M         | 1              | LDP          | rap_total            | Staging     |
| 21 NA      | NA                                | NA          | 0                | NA           |                        | 1        | 1                  | NA               | 1                        | N         | 2              | NA           | NULL                 | NULL        |
| 22 NA      | NA                                | NA          | 0                | NA           |                        | 1        | 1                  | NA               | 1                        | N         | 3              | NA           | NULL                 | NULL        |
| 23 NA      | NA                                | NA          | 0                | NA           |                        | 1        | 1                  | NA               | 1                        | N         | 4              | NA           | NULL                 | NULL        |
| 24 NA      | NA                                | NA          | 0                | NA           |                        | 1        | 1                  | NA               | 1                        | N         | 3              | NA           | NULL                 | NULL        |
| 25 NA      | NA                                | NA          | 0                | NA           |                        | 1        | 1                  | NA               | 1                        | N         | 4              | NA           | NULL                 | NULL        |
| 26 CSV     | OnPremDWH\Sales\ALog/             | None        | None             | 0            | Export_Driveway_Dat... | 1        | 1                  | &                | 2                        | M         | 1              | LDP          | DWH_SPE_Sales_AL...  | staging     |
| 27 NA      | NA                                | NA          | 0                | NA           |                        | 1        | 1                  | NA               | 1                        | N         | 2              | NA           | NULL                 | NULL        |

Query executed successfully.



#####Master Pipeline

#####Child Pipeline

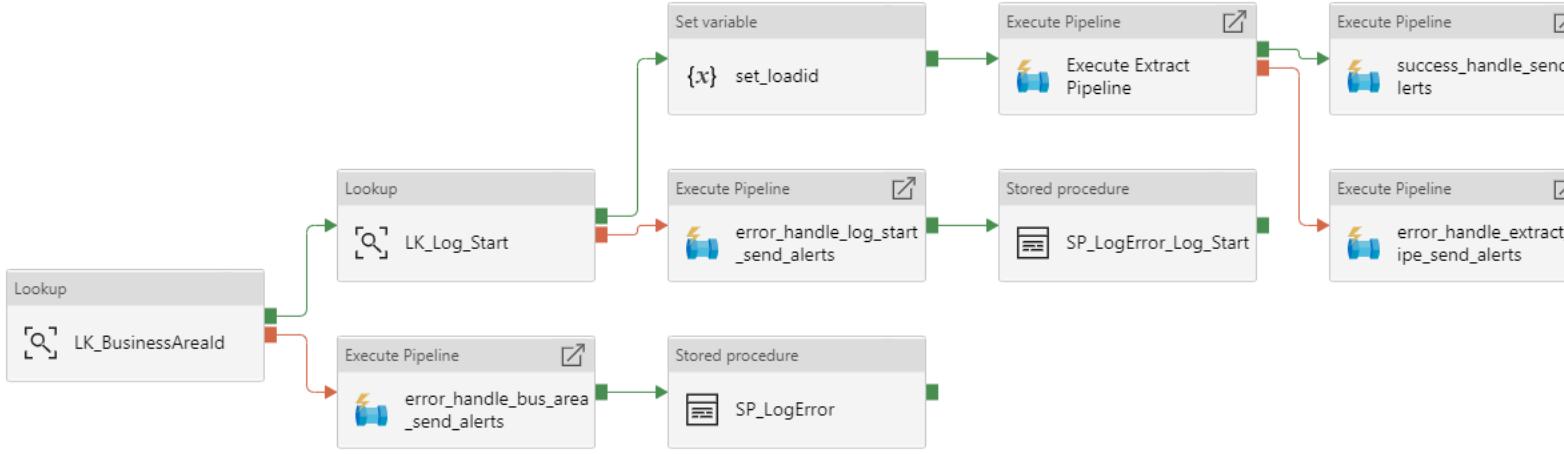


Transformation to Curated

At this time the data is staged in the stage table. This step can run a series of stored procedures that are needed for the data transformation and loads the data into the Curated tables and Error tables. **Error Tables** loading the data into error schema is optional based on the business requirements. But make sure the data is loaded into the curated table/transformed table for data to export into the final destination table.

## Curated to Application DB

- This process takes input from the Control schema, Entity table in DataMove database. This pipelines can be scaled to tailor as per the business needs. But at this time the Target Application DB is pointing to the Payroll application DB as the target connection.



## Notification

Click link to access the Notification blob

#Pipelines lineage

```

graph LR
    A[Lithia Data Factory] --> B[PL_Generic_DWH_Datalake_Outbound_Master]
    B --> C[Lithia-Data-Platform-Dev-df]
    C --> D[PL_Generic_DWH_Datalake_Master]
    D --> E[PL_Generic_DWH_Datalake_Child_Export]
    E --> F[Copy Command to Outbound]

```

```

graph LR
    A[AllPay Data Factory] --> B[PL_TRAN_TRANSFORMATION_MASTER]
    B --> C[PL_TRAN_TRANSFORMATION_STAGE_MASTER]
    C --> D[PL_Generic_DWH_Datalake_Master]
    D --> E[PL_TRAN_STAGE_TO_TRANSFORMATION]
    E --> F[PL_EXPORT_DATA]
    F --> G[PL_EXPORT]
    G --> H[PL_REPORTOUT]
    H --> I[PL_SENDAERTS]

```

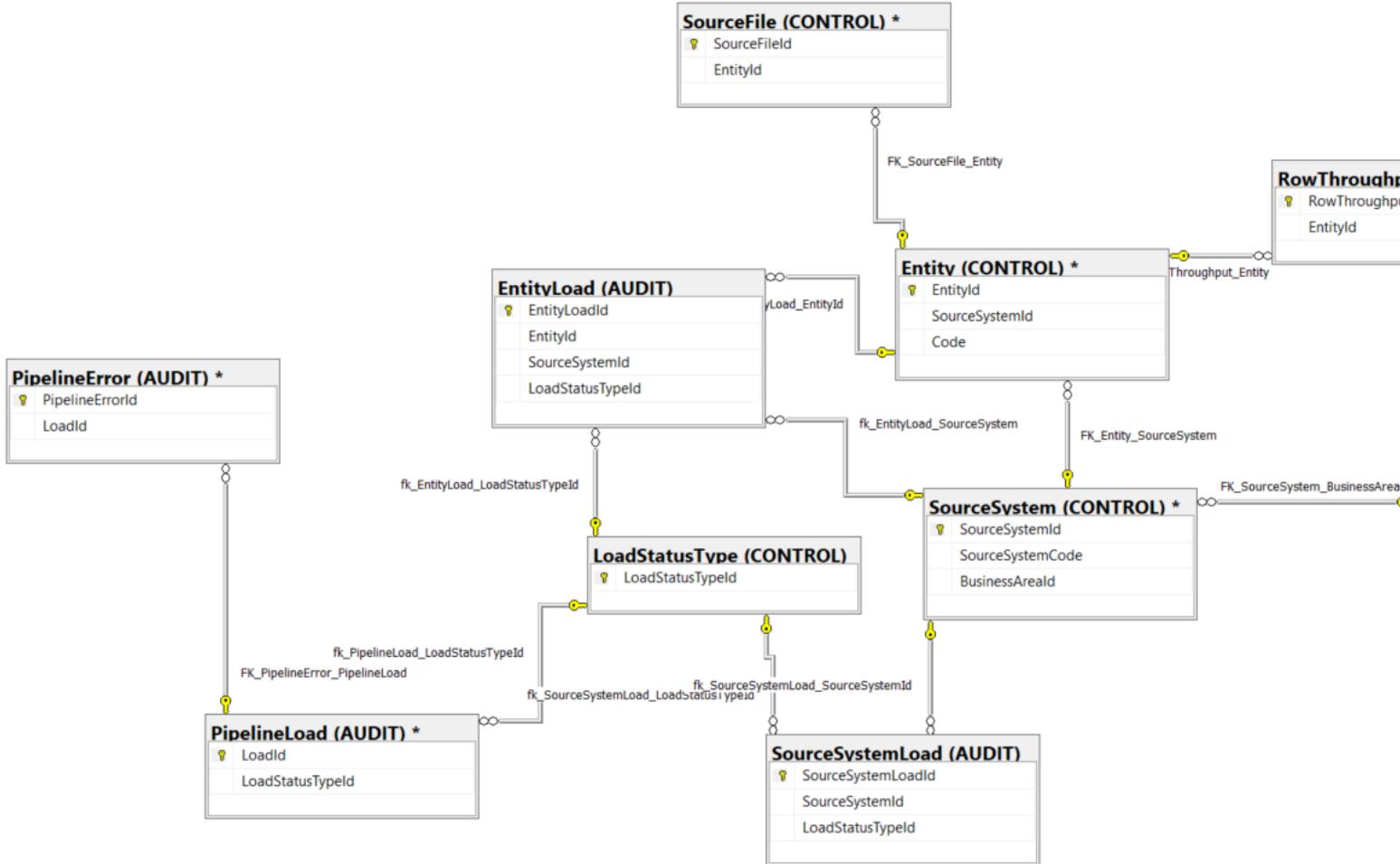
## DataMove System Database

This is a SQL database used to store central configuration for the ADF Ingestion Pipelines. It stores logging information for pipeline runs and details any errors that may have happened in a run.

### Database Schemas

#### Schema Use

Audit    Records history of activities including successful throughputs and error details  
 Control    Configuration for Source and Target (Lake) systems



#### TABLE\_CATALOG TABLE\_SCHEMA TABLE\_NAME

|          |         |                             | DESCRIPTION   |
|----------|---------|-----------------------------|---|
| DataMove | CONTROL | Alert                       | For email purpose - Not in use  |
| DataMove | CONTROL | AlertType                   | For email purpose - Not in use  |
| DataMove | CONTROL | MapSourceToTarget           | Mapping table, for a destination tables defines the source entities required        |
| DataMove | CONTROL | CurationType                | Layers for execution - Ingestion /Staging/Transformation/Curated etc                |
| DataMove | CONTROL | SourceFile                  | When we extract file from DW to DL or API to DL, hold the file name and location    |
| DataMove | CONTROL | AllPayAPPDBSToredProcedures | Only for All Pay  |
| DataMove | CONTROL | Entity                      | Table which defines the entities to be extracted from DW or API or any other source |
| DataMove | CONTROL | SourceSystem                | Defines the source system for a project   |
| DataMove | CONTROL | BusinessArea                | Defines the projects or business areas for which the ETL process will execute       |
| DataMove | CONTROL | AllPaySQLScript             | Only for All Pay  |
| DataMove | CONTROL | DestinationDetails          | Only for All Pay  |
| DataMove | CONTROL | LoadStatusType              | Defines the various Load status - success/failure                                   |

#### TABLE\_CATALOG TABLE\_SCHEMA TABLE\_NAME

|          |       |                  | DESCRIPTION   |
|----------|-------|------------------|---|
| DataMove | AUDIT | PipelineLoad     | Information of Pipeline load - when a pipeline started, ended, was it successful ,pipeline name etc.  |
| DataMove | AUDIT | EntityLoad       | When an entity load is complete, we need to update this table.Helps to track , for a source system which entities failed and which passed for downstream processing |
| DataMove | AUDIT | PipelineError    | When a pipeline fails, a record is inserted to this table.Holds the reason of failure and time of failure   |
| DataMove | AUDIT | RowThroughput    | Holds information regarding file size in case file is copied and hold no of rows extracted while copying data from DW to Datalake                                   |
| DataMove | AUDIT | SourceSystemLoad | Marks the completion of a source system load  |

Here are the various environments and components used for All Pay Application.

| AP Services             | DEV   | TEST                                   | UAT                                   | PROD                                   |
|-------------------------|---|--|---------------------------------------|--|
| Resource Group          | AZWU2-DIG-AP-RG                                 | AZWU2-DIG-AP-RG-TEST                   | AZWU2-DIG-AP-RG-UAT                   | AZWU2-DIG-AP-RG-PROD                   |
| SQL Server - ETLDB      | AllPayETL-DEV (azwu2apttest-sqls/AllPayETL-DEV) | AllPayETL (azwu2apsqls-test/AllPayETL) | AllPayETL (azwu2apsqls-uat/AllPayETL) | AllPayETL (azwu2apsqls-prod/AllPayETL) |
| ADF                     | AZWU2APTEST-DFY-DEV                             | AZWU2AP-DFY-TEST                       | AZWU2APDFY-UAT                        | AZWU2APDFY-PROD                        |
| DataLake                | azwu2apttestdlkdev                              | azwu2apdlktest                         | azwu2apdlkuat                         | azwu2apdlkprod                         |
| Key Vault               | AZWU2APTEST-KV                                  | AZWU2APKV-TEST                         | AZWU2APKV-UAT                         | AZWU2APKV-PROD                         |
| SQL Server - PayrollIDB | PayRoll-DEV (azwu2apttest-sqls/PayRoll-DEV)     | PayRoll (azwu2apsqls-test/PayRoll)     | Payroll (azwu2apsqls-uat/Payroll)     | PayRoll (azwu2apsqls-prod/PayRoll)     |
| LDP Services            | DEV   | TEST                                   | UAT PROD                              |  |

| LDP Services          | DEV                               | TEST                               | UAT                                | PROD |
|-----------------------|-----------------------------------|------------------------------------|------------------------------------|------|
| Resource Group        | Lithia-Data-Platform-Dev-rg       | Lithia-Data-Platform-Dev-rg        | Lithia-Data-Platform-Prod-rg       |      |
| SQL Server - DataMove | DataMove (ldp-dev-sqlsv/DataMove) | DataMove (ldp-test-sqlsv/DataMove) | DataMove (ldp-prod-sqlsv/DataMove) |      |
| ADF                   | Lithia-Data-Platform-Dev-df       | Lithia-Data-Platform-Test-df       | Lithia-Data-Platform-Prod-df       |      |
| DataLake              | lithiadataplatformdevdls          | lithiadataplatformtestdls          | lithiadataplatformproddls          |      |

[AllPayResourceList.xlsx](#)

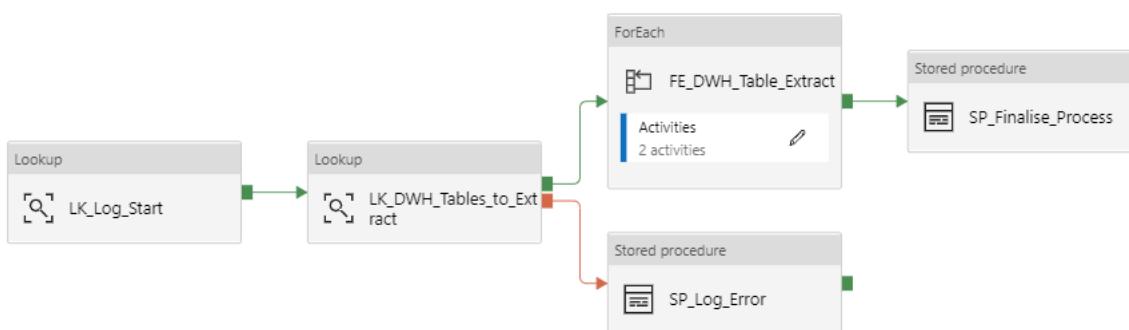
#### • PL\_Generic\_Inbound\_to\_Outbound\_Master

#PL\_Generic\_DWH\_Datalake\_Master This pipeline is available in the Lithia Data Platform ADF -Lithia-Data-Platform--df. The pipeline extracts data from the On Premise Data Warehouse to the Lithia Data Platform - Data Lake - Inbound folder.

To extract a table from the On Premise Data Warehouse , the following configuration tables needs to be updated.

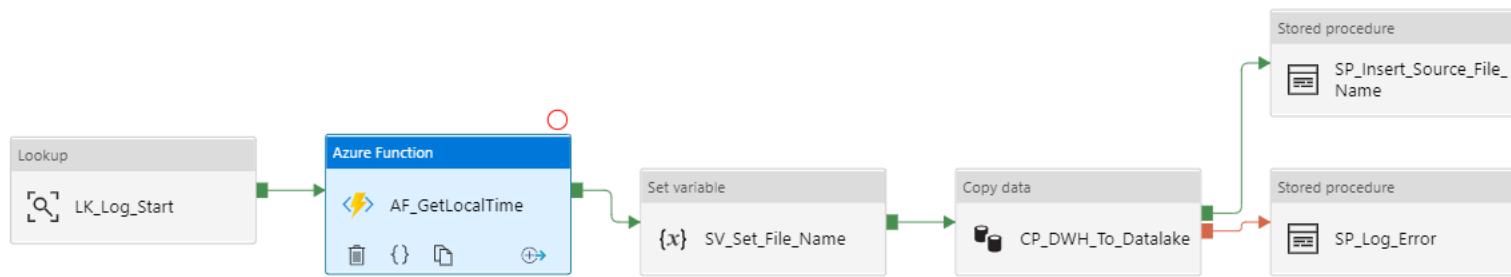
1. Populate Control.BusinessArea (If Business Area exists then do not insert)
2. Populate Control.SourceSystem (If Source system exists then do no insert)
3. Populate Control.Entity
4. Populate Control.EntityColumn
5. Populate Control.EntityWaterMark
6. Execute the pipeline
7. Check data in Control.SourceFile table

Master :-



Child :-

#### PL\_Generic\_Inbound\_to\_Outbound\_Master



This pipeline copies or moves the data from the inbound folder to the outbound folder in the Lithia Data Platform.If the Previous pipeline executed successfully and you can see data in inbound folder , then this pipeline will data to the outbound folder based on the SourceSystem. No configuration required.

1. Create a new stored procedure in DW\_Dev to extract the data for All Pay.Example - [allpay].[Export\_AllPay\_CSS]. Use Schema [allpay]
2. Add the stored procedure to the Stored procedure which will be executed from the pipeline - [allpay].[Export\_AllPay\_Datasets]

dw\_dev (SQL Server 13.0.5622.0 - LITHIAINC\N)

- Databases
  - System Databases
  - Database Snapshots
  - DW\_Admin\_Dev
  - DW\_Dev**
    - Database Diagrams
    - Tables
    - Views
    - External Resources
    - Synonyms
    - Programmability
    - Stored Procedures
      - System Stored Procedures
        - allpay.Export\_AllPay\_CSS
        - allpay.Export\_AllPay\_Datasets

3. Add the datasource to the Control.SourceSystem and Control.Entity in DataMove database table. Note - the Source System name in step 1 and Step 3 should be same.

```
select * from [CONTROL].[SourceSystem]
```

Results

| SourceSystemId | SourceSystemCode | SourceSystemName     | BusinessAreaId |
|----------------|------------------|----------------------|----------------|
| 1              | CSS              | CSS                  | 1              |
| 2              | DLog             | DLog                 | 1              |
| 3              | ADS              | Advisory Daily Sales | 1              |

SQLQuery112.sql - not connected\* SQLQuery102.sql - l...s@lithia.com (100)\* X

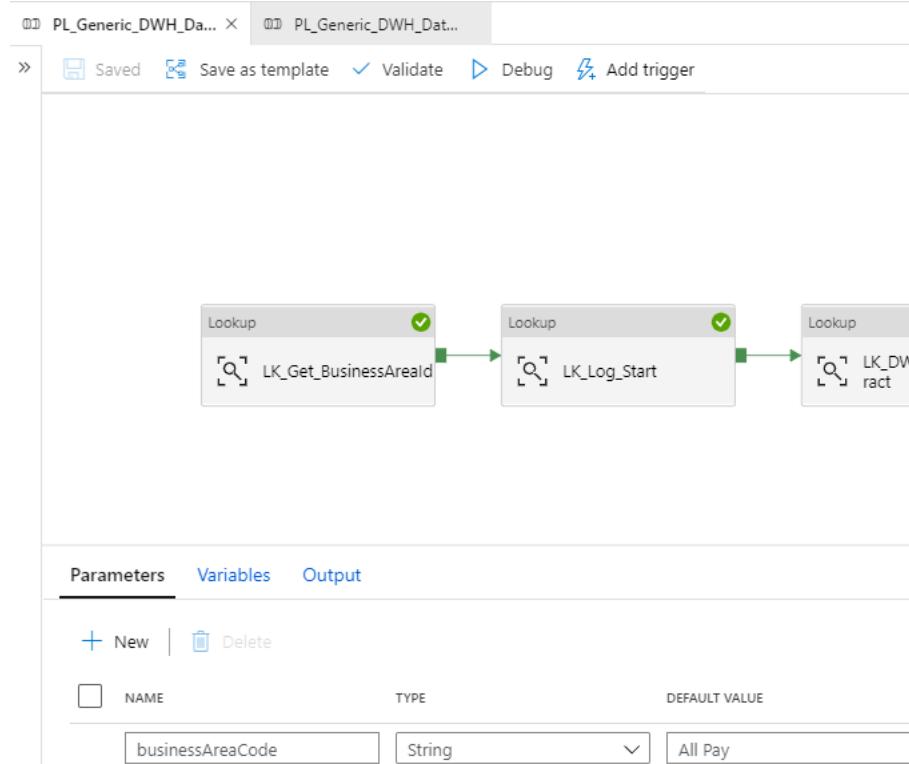
```
select * from [CONTROL].[SourceSystem]
select * from [CONTROL].[Entity]
```

Results

| EntityId | SourceSystemId | BusinessAreaId | Name      | Code | Description                           | SourceSchema | SourceTable     | FileFormat | RootRel |
|----------|----------------|----------------|-----------|------|---------------------------------------|--------------|-----------------|------------|---------|
| 1        | 1              | 1              | CSSDEALER | FCD  | Scoring data from DWH for CSS All Pay | report       | FACT_CSS_DEALER | CSV        | OnPrem  |

4. Add an entry for the new entity in Control.EntityWatermark table. Use value 19000101 for Start Date and current date for end date.

5. Execute pipeline Lithia-Data-Platform-Dev-df - PL\_Generic\_DWH\_Datalake\_Master



This will in turn execute the child to extract data from On prem using the Stored procedure created .



- [Design Overview and Approach](#)
  - [Logical Architecture](#)
  - [Data Lake Storage](#)
  - [Data Factory](#)
  - [Data Lake Storage](#)

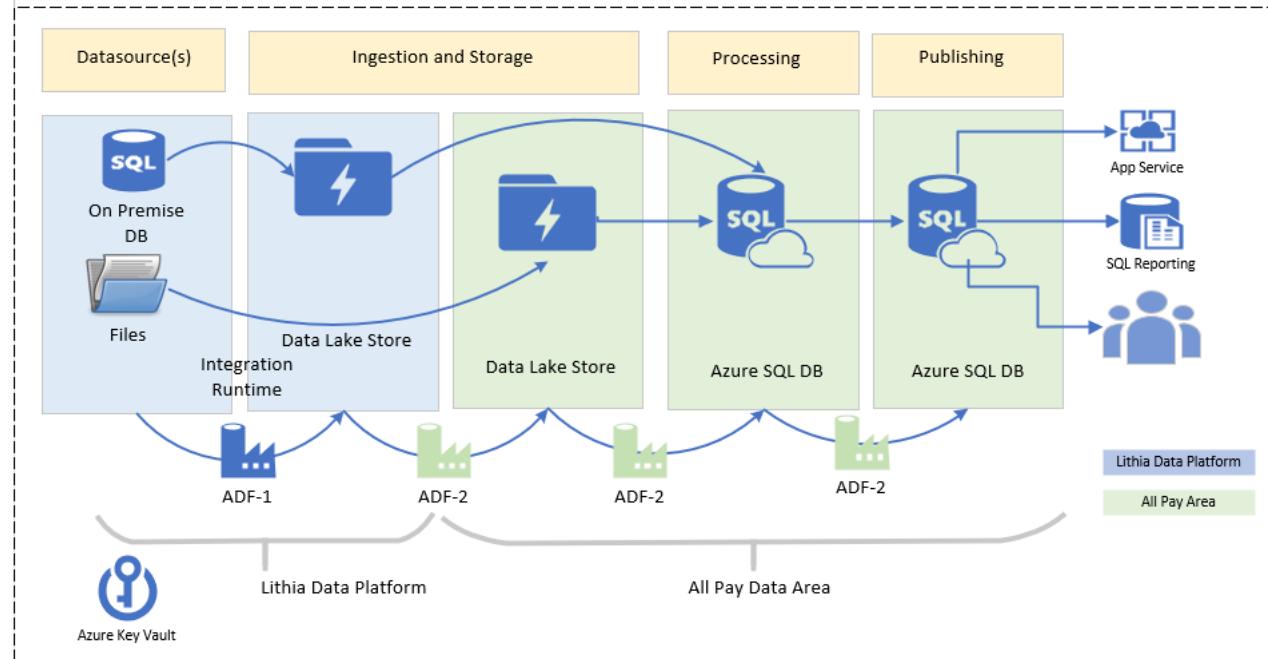
## Design Overview and Approach

This section details the overview of the design and approach taken. The section covers the following subsections:

- Logical Architecture

### Logical Architecture

The following diagram depicts the logical architecture of the solution. The diagram shows four main technical areas of the solution surrounding a central data hub of the Data Lake Store.



Below is a brief description of each of the technical areas:

#Lithia Data Platform

### Data Lake Storage

This is the decoupled storage systems where data is ingested into platform using a data factory . All raw data ingested into the system will be channelled through here for storage.

### Data Factory

Data Factory provides a single hybrid data integration service for all skill levels. ##Framework DB #All Pay Data Platform

## Data Lake Storage

##Data Transformation this component provides our transformation layer, providing the compute & logic required to process data, perform quality and validation processing and to produce data sets for the other areas.SQL DB will be used as a data processing engine.

### AllPayArchitectureDiagram.vsdx

SQL Data Warehouse / Azure Synapse is a cloud-based Enterprise Data Warehouse (EDW) that leverages Massively Parallel Processing (MPP) to quickly run complex queries across petabytes of data. Use SQL Data Warehouse as a key component of a big data solution. Import big data into SQL Data Warehouse with simple PolyBase T-SQL queries, and then use the power of MPP to run high-performance analytics. As you integrate and analyze, the data warehouse will become the single version of truth your business can count on for insights.

### Good Reads :

- <https://techcommunity.microsoft.com/t5/DataCAT/Azure-SQL-Data-Warehouse-loading-patterns-and-strategies/ba-p/305456>
- <https://docs.microsoft.com/en-us/azure/sql-data-warehouse/sql-data-warehouse-tables-overview#unsupported-table-features>

### #KeyVault Naming and Use

#### Naming Structure

- Attempt to stick with naming standards we have in the image below. Mainly try to make the name clear, hyphen between words, with capital letters at the beginning of each word.
- Don't use -Dev or -Prod in the name unless it will specifically be used for that resource across all environments. We will add each key/secret by name to each environments KeyVault, so the name can be referenced the same way in each environment.

### #Resource Groups

- Resources groups, in general, are used to separate a group or related azure resources.
- At Lithia, we will use a single resource group to separate projects, and environments
- Naming on resource groups generally falls into the below naming convention o ---rg o For instance, the Dev environment for the FinCo project will be named AZWU2-FinCO-DEV-rg o These conventions started after a few of our projects got off the ground, so it's not consistent everywhere, but for future projects this is what we are aiming for.

|                          | Name ↑↓                      | Subscription ↑↓                         |
|--------------------------|------------------------------|---|
| <input type="checkbox"/> | AZWCU-DIG-AP-TEST-RG         | Enterprise Dev/Test                     |
| <input type="checkbox"/> | AZWU2-DIG-AP-RG              | Enterprise Dev/Test                     |
| <input type="checkbox"/> | AZWU2-DIG-AP-RG-TEST         | Enterprise Dev/Test                     |
| <input type="checkbox"/> | AZWU2-LIT-PROFISEE-DEV-RG    | Enterprise Dev/Test                     |
| <input type="checkbox"/> | AZWU2-LIT-PROFISEE-TEST-RG   | Enterprise Dev/Test                     |
| <input type="checkbox"/> | AZWUSPROFRG                  | Lithia Motors Azure EA                  |
| <input type="checkbox"/> | DataCatalogs-westus          | Visual Studio Professional Subscription |
| <input type="checkbox"/> | Lithia-Data-Platform-Dev-rg  | Enterprise Dev/Test                     |
| <input type="checkbox"/> | Lithia-Data-Platform-Prod-rg | Lithia Motors Azure EA                  |
| <input type="checkbox"/> | Lithia-Data-Platform-Test-rg | Enterprise Dev/Test                     |
| <input type="checkbox"/> | test-rg                      | Visual Studio Professional Subscription |

###Introduction The following are the naming standards to be adopted while developing Azure SQL DB Objects :

| Object Type       | Naming Standard | Example                     | Explanation   |
|-------------------|-----------------|-----------------------------|---|
| Schema            |                 | Audit                       | Schema to hold information about Auditing of the different processes                  |
| Tables            | .               | Control.Entity              | Schema is Control and Purpose of the table is hold the information about the Entities |
| Stored Procedures | .               | [Audit].[ObtainErrorDetail] | Schema is Audit and Purpose is to ObtainErrorDetail                                   |
| Views             | .               | {Purpose/Related table}     |   |
| Functions         | .               |                             |   |

### #Database Naming Conventions

Database Name - DataMove Schema Name -

1. LDPCTL
2. AUDIT
3. CONTROL

Database Name - ETLDB (All Pay) Schema Name -

- Staging
- Transformation
- Curated

Schemas currently in use:

1. Report
2. Dbo
3. MDP
4. Staging @<55C3A584-FDCF-628D-A00C-C8CC565E1D2F> update this part. Add the database Name

Please create a separate schema for the various datasets you will be using. The staging schema can be used for placing the raw data that comes in from ADF. o For staging naming, please use something like staging.\_DataSet o Putting the source name at the beginning will help make sure there is no conflict with table/proc names when we merge the two DataWarehouses. o Below are some examples of some of our names that exist (for reference).

Here is the folder structure for the Data Lake Storage -

| Name            | Access Tier | Access Tier |
|-----------------|-------------|-------------|
| AllPay          |             |             |
| Archive         |             |             |
| AutoPoint       |             |             |
| Constellation   |             |             |
| DealerSocket    |             |             |
| DriveCentric    |             |             |
| ELeads          |             |             |
| Experian        |             |             |
| GoogleAds       |             |             |
| GoogleAnalytics |             |             |
| Historical      |             |             |
| Logs            |             |             |
| Marketing       |             |             |
| MDP             |             |             |

#### Naming Structure

##Inbound Container //YYYY/MM/DD/. • Files will come in raw format, with the original name, structure, extension, and folder structure if the data is in nested folders in the source system. • In general, the date the file was brought in will determine the full path it's placed under. • No changes to the file should happen here. • There can be more of a hierarchy between data source and the YYYY/MM/dd hierarchy in the case it's needed to keep things clearly defined. • The DataSource should be the name of the system (e.g. GoogleAdWords) where the data is coming from.

| Name                         | Access Tier    | Access Tier Last Modified | Last Modified         | Blob Type  | Content Type |
|------------------------------|----------------|---------------------------|-----------------------|------------|--------------|
| 20200727_FACT_CSS DEALER.csv | Hot (inferred) |                           | 7/28/2020, 1:57:23 PM | Block Blob | application/ |

##Outbound Container //YYYY/MM/DD/. • Files will be placed in their folder in the consumable format. • Consumers of the data should define the format they want if they will be consuming it directly. Otherwise the developer should specify. • The ConsumerGroup will be used to separate the consumers from trying to access something not meant for them. • If two or more consumer groups want the same file, a file will be placed in each of their individual outbound directory. • There can be more of a hierarchy defined between data source and the YYYY/MM/dd hierarchy in the case it's needed to keep things clearly defined.

File Names (Outbound) yyyyMMdd. • Files where only one daily file will be present. Reloading will overwrite the daily file.

yyyyMMddHHmmss. • Files where multiple versions of the same files can be present. Reloading will not overwrite the previous file.

| Name                         | Access Tier    | Access Tier Last Modified | Last Modified         | Blob Type  | Content Type |
|------------------------------|----------------|---------------------------|-----------------------|------------|--------------|
| 20200727_FACT_CSS DEALER.csv | Hot (inferred) |                           | 7/28/2020, 3:40:32 PM | Block Blob | application/ |

#Introduction The Azure Data Factory (ADF) is a service designed to allow developers to integrate different data sources. It's actually a platform of Microsoft Azure to solve problems related to data sources, integration, and to store relational and non-relational data. The role of Azure Data Factory is to create data factories on the Cloud. In other words, ADF is a managed Cloud service that is built for complex hybrid extract-transform-load (ETL), extract-load-transform (ELT), and data integration projects. ADF also provides an up-to-the moment monitoring dashboard, which means you can deploy your data pipelines and immediately begin to view them as part of your monitoring dashboard. Azure Data factory supports computing services such as HD Insight, Hadoop, Spark, Azure Data Lake, and Analytics to do all these tasks.

The following are the naming standards to be adopted when developing new Data Factory and Pipelines:

## #Naming conventions

1. Object names must start with a letter or a number, and can contain only letters, numbers, and the dash (-) character.
2. Maximum number of characters in a table name: 260.
3. Object names must start with a letter number, or an underscore (\_).
4. Following characters are not allowed: “.”, “+”, “?”, “/”, “<”, “>”, “\*”, “%”, “&”, “:”, “\” (Microsoft, 2017 [<https://docs.microsoft.com/en-us/azure/data-factory/data-factory-naming-rules>])

## #Data Factory

?????

For example the Data Factory which is used to trigger the processing data from outbound to inbound would be called:

AZWU2APTEST-DFY-DEV

Where:

AZ- Is "Azure". - e.g. dapr is for data processing ??? - e.g. dev. Name of environment namely: dev (development), uat (pre-production) or prd (Production)

#Linked Services and Datasets |Type|Linked Service|Name|Linked Service|Dataset|Full|-----|Azure|Azure Blob storage|ABLB|LS\_ABLB|DS\_ABLB|LS\_ABLB\_Example|  
||Azure Data Lake Store|ADLS|LS\_ADLS|DS\_ADLS|LS\_ADLS\_Example| ||Azure SQL Database|ASQL|LS\_ASQ|DS\_ASQ|LS\_ASQ\_Example| ||Azure SQL Data  
Warehouse|ASDW|LS\_ASDW|DS\_ASDW|LS\_ASDW\_Example| ||Azure Table storage|ATBL|LS\_ATBL|DS\_ATBL|LS\_ATBL\_Example| ||Azure  
DocumentDB|ADOC|LS\_ADOC|DS\_ADOC|LS\_ADOC\_Example| ||Azure Search Index|ASER|LS\_ASER|DS\_ASER|LS\_ASER\_Example| |Databases|SQL  
Server\*|MSQL|LS\_SQL|DS\_SQL|LS\_SQL\_Example| ||Oracle\*|ORAC|LS\_ORAC|DS\_ORAC|LS\_ORAC\_Example|  
||MySQL\*|MYSQ|LS\_MYSQ|DS\_MYSQ|LS\_MYSQ\_Example| ||DB2\*|DB2|LS\_DB2|DS\_DB2|LS\_DB2\_Example|  
||Teradata\*|TDAT|LS\_TDAT|DS\_TDAT|LS\_TDAT\_Example| ||PostgreSQL\*|POST|LS\_POST|DS\_POST|LS\_POST\_Example|  
||Sybase\*|SYBA|LS\_SYBA|DS\_SYBA|LS\_SYBA\_Example| ||Cassandra\*|CASS|LS\_CASS|DS\_CASS|LS\_CASS\_Example|  
||MongoDB\*|MONG|LS\_MONG|DS\_MONG|LS\_MONG\_Example| ||Amazon Redshift|ARED|LS\_ARED|DS\_ARED|LS\_ARED\_Example| |File|File  
System\*|FILE|LS\_FILE|DS\_FILE|LS\_FILE\_Example| ||HDFS\*|HDFS|LS\_HDFS|DS\_HDFS|LS\_HDFS\_Example| ||Amazon  
S3|AMS3|LS\_AMS3|DS\_AMS3|LS\_AMS3\_Example| ||FTP|FTP|LS\_FTP|DS\_FTP|LS\_FTP\_Example| |Others|Salesforce|SAFC|LS\_SAFC|DS\_SAFC|LS\_SAFC\_Example|  
||Generic ODBC\*|ODBC|LS\_ODBC|DS\_ODBC|LS\_ODBC\_Example| ||Generic OData|ODAT|LS\_ODAT|DS\_ODAT|LS\_ODAT\_Example| ||Web Table (table from  
HTML)|WEBT|LS\_WEBT|DS\_WEBT|LS\_WEBT\_Example| ||GE Historian\*|GEHI|LS\_GEH|DS\_GEH|LS\_GEH\_Example|

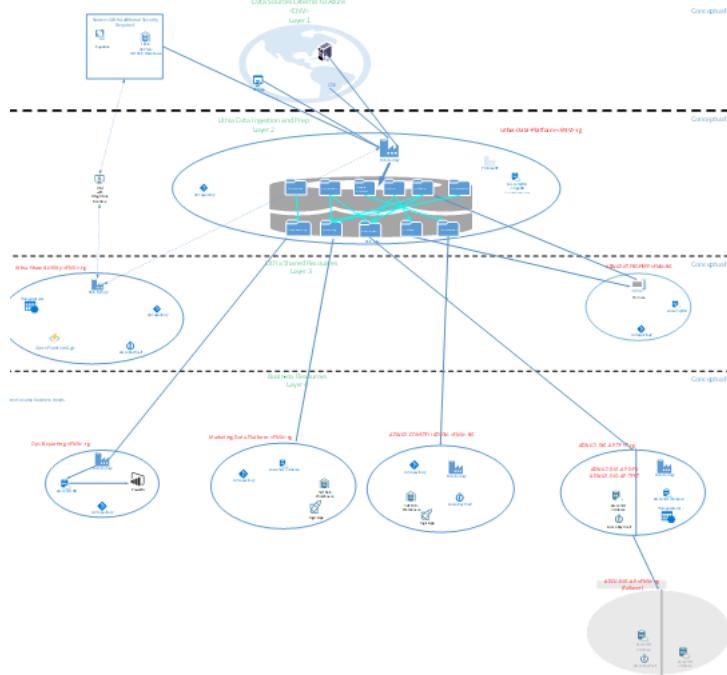
## #Pipelines

- Use KeyVault for storing connection information. DO NOT hard code credentials into the Linked Services.
- You can use service principals as well if you prefer. Some developers may not have permissions to create these, so this could cause delays.
- Avoid doing any mapping between ADF and Tables in the database if possible.
  - Use a staging table with the same names as the file being imported.
  - Then map between staging and final tables in stored procedures.
  - Mapping Sink to Source in ADF can be a headache.

| Type                         | Name                                 | Action                            | Example                                 |
|------------------------------|--------------------------------------|-----------------------------------|---|
| Data movement Activity       | PL_DATA_NA                           |                                   | PL_DATA_DS_SQL_Person_To_DS_ABLB_Person |
| Data transformation pipeline | PL_TRAN_SPRC - Stored Procedure      |                                   | PL_TRAN_SPRC_CleanDimAccount            |
|                              | PL_TRAN_DNET - Script                |                                   | PL_TRAN_DNET_AggregateSales             |
|                              | PL_TRAN_ADLK - Azure Data Lake       |                                   | PL_TRAN_ADLK_AggregateSales             |
|                              | PL_TRAN_HIVE - Hive                  |                                   | PL_TRAN_HIVE_AggregateSales             |
|                              | PL_TRAN_PIG - Pig                    |                                   | PL_TRAN_PIG_AggregateSales              |
|                              | PL_TRAN_MAPR - MapReduce             |                                   | PL_TRAN_MAPR_AggregateSales             |
|                              | PL_TRAN_HADP - Hadoop Stream         |                                   | PL_TRAN_HADP_StreamData                 |
|                              | PL_TRAN_AML - Azure Machine Learning | PL_TRAN_AML_CalculateMonthlyChurn |   |

#Activity \_ Ex: LK\_LogStart where LK=LookUp Activity and LogStart is the Purpose

#Variables For variable naming follow a lowerCamelCase Ex: sourceSystemCode = "reportDate"



Original Visio Diagram available [Azure-Architecture-Lithia-Data-Platform](#)

- - [Framework DB](#)
- [Architectural Benefits](#)

## #Purpose of the Project

Modernize payroll management to a web application (WebApp) and RMDB (SQL). Existing system is built on Excel and macros to accommodate the infinite flexibility required by the Payroll team. This requires many different highly complex pay plans across dealerships and auto groups.

AllPay WebApp replaces the existing Excel-based processes. This project implements technology and architecture proven in previous projects, such as the Marketing Data Platform (a.k.a. MDP/AdCo).

## #Technology and Services

### ##Application

#### ###WebApp

#### ###Migrate IIS to Azure PaaS

#### ##SQL Database

#### ###App databases - App databases persist employee and earnings data

#### ###Azure DMA to migrate app databases from on-prem DBs to Azure SQL

## Framework DB

Store for Auditing and Logging information for ADF Pipelines

ETL

##DataFactory The Azure Data Factory (ADF) is a service designed to allow developers to integrate different data sources. It's actually a platform of Microsoft Azure to solve problems related to data sources, integration, and to store relational and non-relational data. The role of Azure Data Factory is to create data factories on the Cloud.

##Azure DevOps

Advanced Incentive Pr... +

- Overview
- Boards
- Repos**
- Files
- Commits
- Pushes
- Branches**
- Tags
- Pull requests

## Branches

Mine All Stale

Branch

development

Commit

6fd2f1db

master Default Compare

6fd2f1db

## ###CI/CD Pipelines and Deployment Management

Advanced Incentive Pr... +

- Overview
- Boards
- Repos
- Pipelines**
- Environments
- Releases
- Library
- Task groups
- Deployment groups

## Pipelines

Recent All Runs

Recently run pipelines

Pipeline

Last run

CI\_AllPay\_ETLDB

#1411 • Merged PR 585: merge changes from develop

Manually triggered for master

CI\_AllPay\_WebApp

#20200818.9 • Merged PR 576: Changes for test env

Individual CI for develop

##Task tracking

LithiaMotors / Advanced Incentive Program / Boards / Sprints

**AP Advanced Incentive Pr...** +

Overview

Boards

Work items

Boards

Backlogs

Sprints

Queries

Plans

Retrospectives

Portfolio plans (Beta)

Repos

Pipelines

Test Plans

Artifacts

All Pay ETL Development Team star 8

Taskboard Backlog Capacity Analytics + New Work Item Column Options

Filter by keyword Types

Collapse all

New **69.25 h**

Active **8 h**

Blocked

**7972** Azure Devops Branching Strategy  
MD Moupiya Das **0.25 h**  
State Blocked  
Unplanned-Spri...

**7973** Analysis  
MD Moupiya Das **0.25**  
State New

**7826** Develop Company ETL-DB to Application DB - 2  
MD Moupiya Das **8 h**  
State New  
Required-for-p...

**7974** Design ,Configure and Develop ADF , SQL Scripts  
MD Moupiya Das **2**  
State Active  
Required-for-p...

**78** Report  
MD Moupiya Das State Required-for-p...

**78** Wiki  
MD Moupiya Das State Required-for-p...

##Azure Key Vault

For more info on setup of components refer [here](#)

#Benefits of the Solution

## Architectural Benefits

The following is a list of architectural benefits that is brought to the All Pay and Lithia platform:

- **Reduced costs** – No infrastructure to purchase and manage, pay only for what you use
  - **Improved speed and agility** – Enable faster time to market by allowing development teams to focus on delivering business value rather than procuring, configuring any required infrastructure
  - **Scalability** – The ability to easily scale the platform either in compute or storage as needed
  - **Costs** - Reduced up front (capital) investment on hardware. Costs can be significantly reduced when less resource is required.
  - **Decoupled** - Decoupling each component within the architect enables the platform to be more flexible and so enable new technologies to be introduced into the platform without wholesale changes to the architecture.
- [Introduction](#)  
 • [ALLPAY ETL DB CI Process](#)

## Introduction

This page contains all the steps involved in CI process for Azure Repos (ALLPAY)

## ALLPAY ETL DB CI Process

Set up Visual Studio and Clone repository. Click on "Clone a repository".

# Visual Studio 2019

Open recent

◀ This month

- LDP-Databases  
C:\Users\SarikaPinupolu\Source\Repos
- AllPayETLDB  
C:\Users\SarikaPinupolu\Source\Repos

1/10/2022 2:11 PM

1/7/2022 10:23 AM

Get started

- Clone a repository**  
Get code from an online repository like GitHub or Azure DevOps
- Open a project or solution**  
Open a local Visual Studio project or .sln file
- Open a local folder**

Click on "Azure Devops"

## Clone a repository

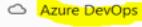
Enter a Git repository URL

Repository location

Path

 ...

Browse a repository

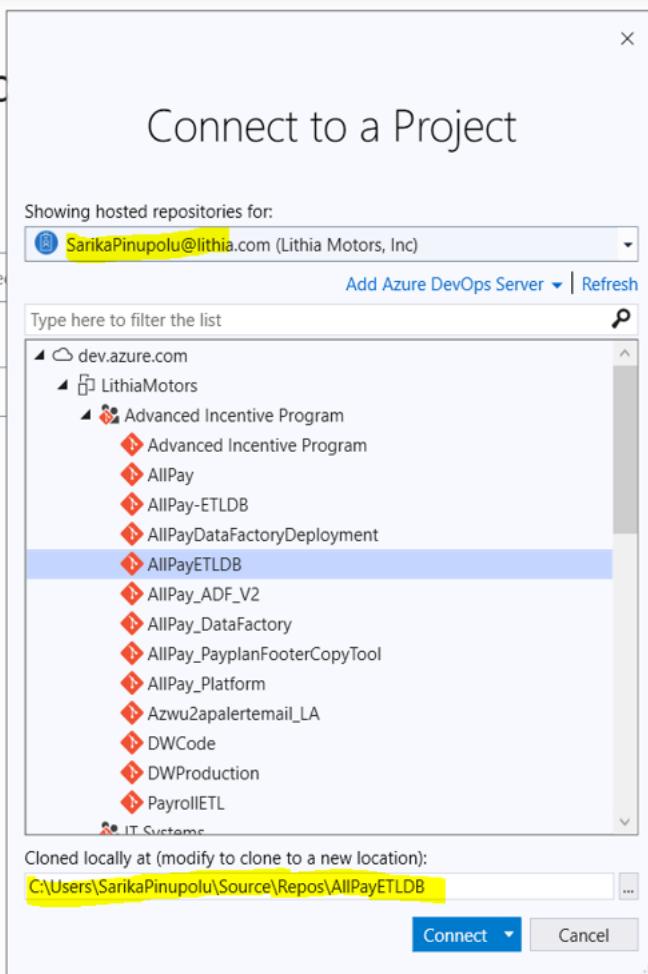


Azure DevOps



GitHub

Provide the necessary details like login information and the DB required to be cloned. Also provide the path where the DB needs to be cloned.



Create Branch in Azure repo and checkout this branch in Visual Studio to deploy the necessary changes. For ALLPAY ETL we have 2 branches, development and Master. **Development branch is used to push the changes to Test and Repo. Master is used for UAT and PROD.**

Azure DevOps    UthaisMotors / Advanced Incentive Program / Repos / Branches / AllPayETLDB

Advanced Incentive Pr... +

Overview

Boards

Repos

Files

Commits

Pushes

Branches

Tags

Branches

Mine All Stale

New branch

Search branch name

| Branch        | Commit   | Author | Author... | Behind   Ahead | Status | Pull Req... |
|---------------|----------|--------|-----------|----------------|--------|-------------|
| P development | 651309db | Sa...  | Yester... | 22   43        | Green  | Red         |
| P master      | 88a46170 | Sa...  | Yester... | 0   0          | Green  | Red         |

Select development branch or Master respectively. Provide the work item associated with your changes.

## Create a branch

Name \*

Based on

development

Work items to link

Search work items by ID or title

Cancel Create

Once branch is created , checkout the branch in VS. Add all the required changes, commit and push the changes.

Git Changes - AllPayETLDB

SP\_01\_20\_DIMCompany

↑ 0 outgoing / 0 incoming

Enter a message

Commit All  Amend

Changes (3)

- C:\Users\SarikaPinupolu\Source\Repos\All...
- Staging\Tables
  - Staging.Dim\_Company.sql
- Transformation\StoredProcedures
  - Transformation.GetBadRecordsAOPS...
  - Transformation.trans\_expandedFI.sql

Stashes

Solution Explorer Git Changes Team Explorer

AllPayETLDB SP\_01\_20\_DIMCompany

The screenshot shows a GitHub repository interface for 'AllPayETLDB'. The left sidebar displays branches: 'master', 'SP\_01\_20\_DIMCompany' (selected), and 'remotes/origin'. The main area shows pull requests under 'Outgoing (1)'. PR #5764, titled 'DIM\_company.ExpandedFI', has been merged into 'master'. A local history section shows the commit history for this branch.

| ID                  | Title                  | Author        | Date        |
|---------------------|------------------------|---------------|-------------|
| SP_01_20_DIMCompany | DIM_company.ExpandedFI | Sarika Pin... | 1/20/202... |

Local History:

- Merged PR 5564: ROMLS
- Merged PR 5548: ADS and SMIS/SPE/AOP
- Merged PR 5158: FSD and RAFlightIndividual changes
- Merged PR 5118: DataLoad check SP
- Merged PR 4782: DBRestore
- Merged PR 4738: Expanded FI Cal month changes
- Merged PR 4728: ExpandedFI

Next step in the process is to create a pull request. Click on "Create a pull request" blue tab on the page.

| Branches                                  |           |        |                    |                |        |             | New br...             |
|---|-----------|--------|--------------------|----------------|--------|-------------|-----------------------|
| Mine                                      | All       | Stale  | Search branch name |                |        |             |                       |
| You updated  SP_01_20_DINCompany Just now |           |        |                    |                |        |             | Create a pull request |
| Branch                                    | Commit    | Author | Authore...         | Behind   Ahead | Status | Pull Req... |                       |
| development                               | 0c3118319 | Sa...  | Dec 7, ...         | 21             | SU...  |             |                       |

That request opens up to a page with your changed files. Make sure you selected development and master branch accordingly for ALLPAY. Once you validated the changed files as per your changes hit the "Create" button at the end of the page.

Overview Files 1 Commits 1

Dimcompany

Description

Test

Markdown supported Drag & drop, paste, or select files to insert.

@ # ⚡️ 🎧 ↴ ↵ B I </> ⌂ ⌃ ⌄ ⌅ ⌆

Test

Optional reviewers Hide required reviewers

Search to add optional reviewers

Required reviewers

Search to add required reviewers

Work items to link

Search work items by ID or title

Tags

Create

Then hit "Approve" and "Complete" buttons to complete the merge process.

Dimcompany

Active | IS826 Sarika Pinupolu SP\_01\_21\_dimcom into development

Approve Complete

## Complete pull request

X

Merge type



Post-completion options

- Complete associated work items after merging
- Delete SP\_01\_21\_dimcom after merging
- Customize merge commit message

Cancel

Complete merge

Make sure the process is successful else perform the root cause analysis of the issue and complete the CI process.

### Branches

Mine All Stale

Search

| Branch      | Commit   | Author | Authore... | Behind   Ahead | Status          |
|-------------|----------|--------|------------|----------------|-----------------|
| development | f840998f | Sa...  | Just now   | 22   46        | <span>落后</span> |
| master      | 88dd6170 | Sa...  | Yester...  |                | <span>同步</span> |

- [Introduction](#)
- [ALLPAY ETL DB CD Process](#)

## Introduction

This page contains all the steps involved in CD process for Azure Repos (ALLPAY)

## ALLPAY ETL DB CD Process

Select <https://dev.azure.com/LithiaMotors/> and select Advanced Incentive Program and select repos and select ALLPAYETLDB.

The screenshot shows the Azure DevOps interface for the 'AllPayETLDB' repository. The left sidebar has 'Advanced Incentive Pr...' selected. The main area shows the repository structure:

- Root folder: AllPayETLDB
  - .gitattributes
  - .gitignore
  - AllPayETLDB.sln
  - AllPayETLDB.sqlproj
- Subfolder: AllPay
  - .gitattribute

Select release and to execute the ALLPAY ETL CD process - Select CD\_AllPayETL\_Database\_Development pipeline or provide the pipeline information in the search bar.

CD\_AlipayETL\_Database\_Development

Releases Deployments Analytics

Created Stages

Release-106 1/26/2021, 8:00:01 PM TEST  
Release-105 1/25/2021, 8:00:01 PM TEST  
Release-104 1/22/2021, 8:00:04 PM TEST  
Release-103 1/21/2021, 8:00:01 PM TEST

Then select the Create Release which will ask for the system it needs to be deployed, provide description and click create.

### Create a new release

**Pipeline** Click on a stage to change its trigger from automated to manual.

**TEST**

Stages for a trigger change from automated to manual. ⓘ

**Artifacts** Select the version for the artifact sources for this release

| Source alias                      | Version |
|-----------------------------------|---------|
| _CI_AllPay_ETL_Database_Develo... | 4459    |

**Release description**

**Create** **Cancel**

Click Create and deployment process will begin.

This page lists down the data sources for All Pay Application. #Source Systems

|#|Source System Name|Description| Data Source| |-|-|-|-|-|-|-| |1|CSS| Customer Satisfaction Score|SQL DB + Files extracted from Application Database |2|F&I Log||  
|3|RAPIndividual|| |4|RAPTotal|| |5|SMIS|| |6|AOP/SPE|| |7|AdvisorDailySales (CDK Only)|| #Source System Files and Database Table Details

Source System Files and Database Table Details - CSS

| # | Source System | Table Name        | Details of extraction                    | Frequency | Extraction Process | File Type      |
|---|---------------|-------------------|--|-----------|--------------------|----------------|
| 1 | CSS           | PayCalendar       | Data to be extracted from PayrollDB.ref. | On Demand | Manual             | .csv           |
| 2 | CSS           | Source            | Data to be extracted from PayrollDB.ref. | On Demand | Manual             | .csv           |
| 3 | CSS           | SourceSystem      | Data to be extracted from PayrollDB.ref. | On Demand | Manual             | .csv           |
| 4 | CSS           | SourceSystemField | Data to be extracted from PayrollDB.ref. | On Demand | Manual             | .csv           |
| 5 | CSS           | Organization      | Data to be extracted from PayrollDB.ref. | On Demand | Manual             | .csv           |
| 6 | CSS           | Dim_Company       | DW_PROD                                  | Daily     | Automated          | Not Applicable |
| 7 | CSS           | Fact_CSS_Company  | DW_PROD                                  | Daily     | Automated          | Not Applicable |

## RAP Edge Cases

### Scenario 1 - Delay in receiving RO's in MLS Data set

- **Test Data** - Company 106; SA 174102; RO 842964 March 2021
- **Results** -- CDK RAP Warranty - Total ROs: 76 -- DWH Fact RO plus MIS - Total ROs: 75 before 4/4 and after 4/4 Total ROs: 76 despite the fact the RO was closed on 3/31 in the CDK application (ServiceSalesMLSClosed dataset ).
- **Issue:** CDK service report do not match with DWH data after join with MLS Closed Service Data when there is a delay in the RO receival in MLS Service data set. Resolved once CDK sent data on 4/4.

#### \*\*\*\*Scenario 2- Data not received in ServiceSalesMLSClosed, hence ROCount mismatch.

- Both of the original ROs were opened under "Customer" labor type. RO 404769 was closed on 3/29 and RO 404881 was closed on 3/31 in the CDK application. The CDK RAP is counting these two under "Warranty" labor type. Assumption is that new Warranty lines were added for both. But were not sent in the ServiceSalesMLSClosed dataset.
- **Test Data** - Store L0267, Service Advisor #173262 (Hatfield), March 2021 -- CDK RAP Warranty - Total ROs: 35 -- DWH Fact RO plus MIS - Total ROs: 33
- **Issue:** CDK service report do not match with DWH data after join with MLS Closed Service Data when there is a delay in the RO receival in MLS Service data set.
- Ticket Open with CDK, looking into delay, no issue with ETL process or logic

#### Scenario 3 – Data not received in ServiceSalesMLSClosed, hence ROCount mismatch

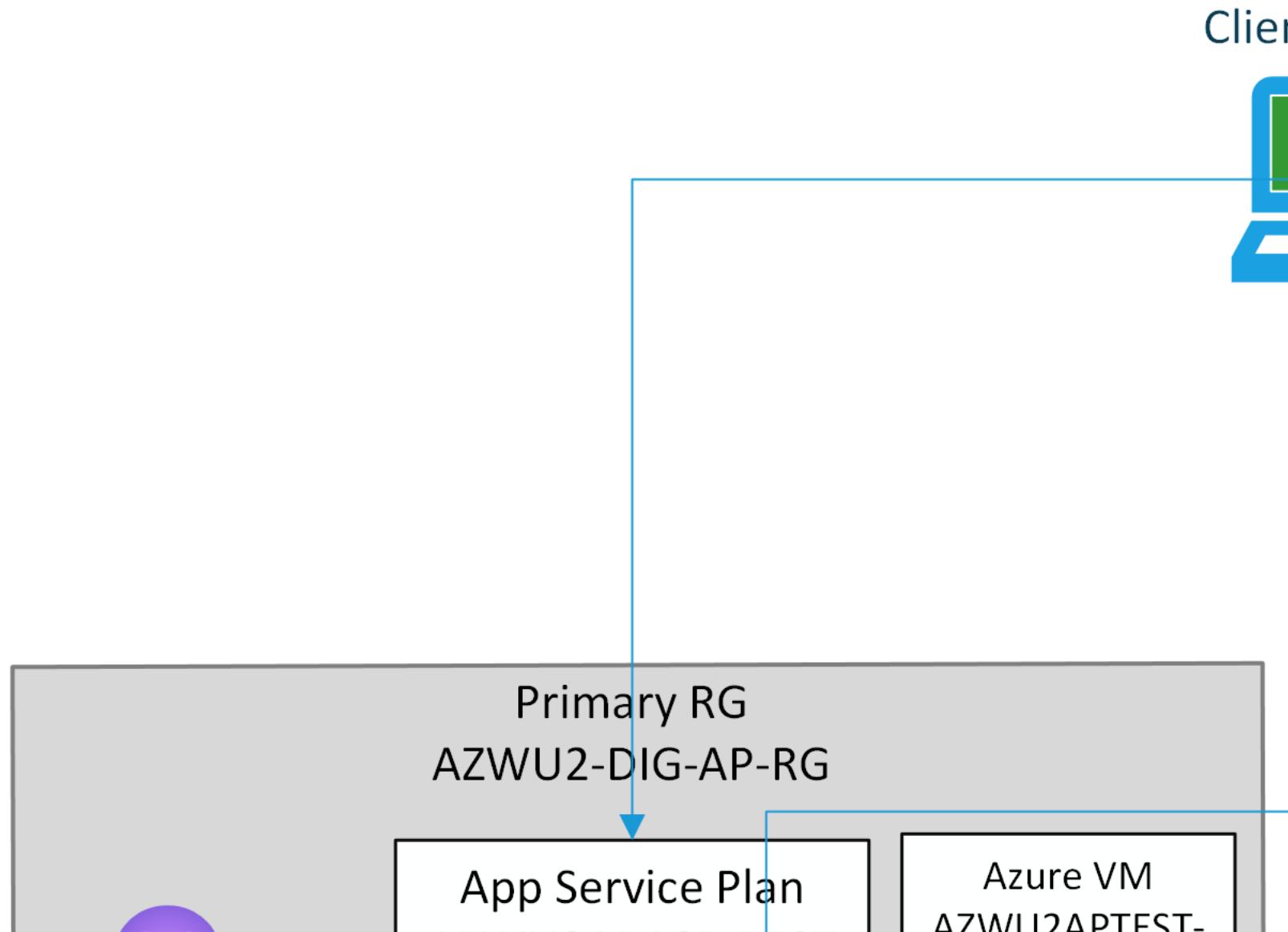
- Data was received in Service Sales data (ingested in DWH). But it no longer exists in CDK service data, hence its not counting it in RAP.
- **Test Data** - Store L0072, Service Advisor #87130 (Stevenson), March 2021 -- CDK RAP Internal - Total ROs: 671 -- DWH Fact RO - Total ROs: 672
- **Issue:** CDK service report does not match with DWH data after join with MLS Closed Service Data. This RO doesn't show up on the RAP as Internal or not accounted to count into Total Internal RO Count. However, in the raw Service Data we receive this RO has lines Internal only
- Ticket Open with CDK, they report never seeing anything like this in 20 years. No Issue with ETL process or logic.

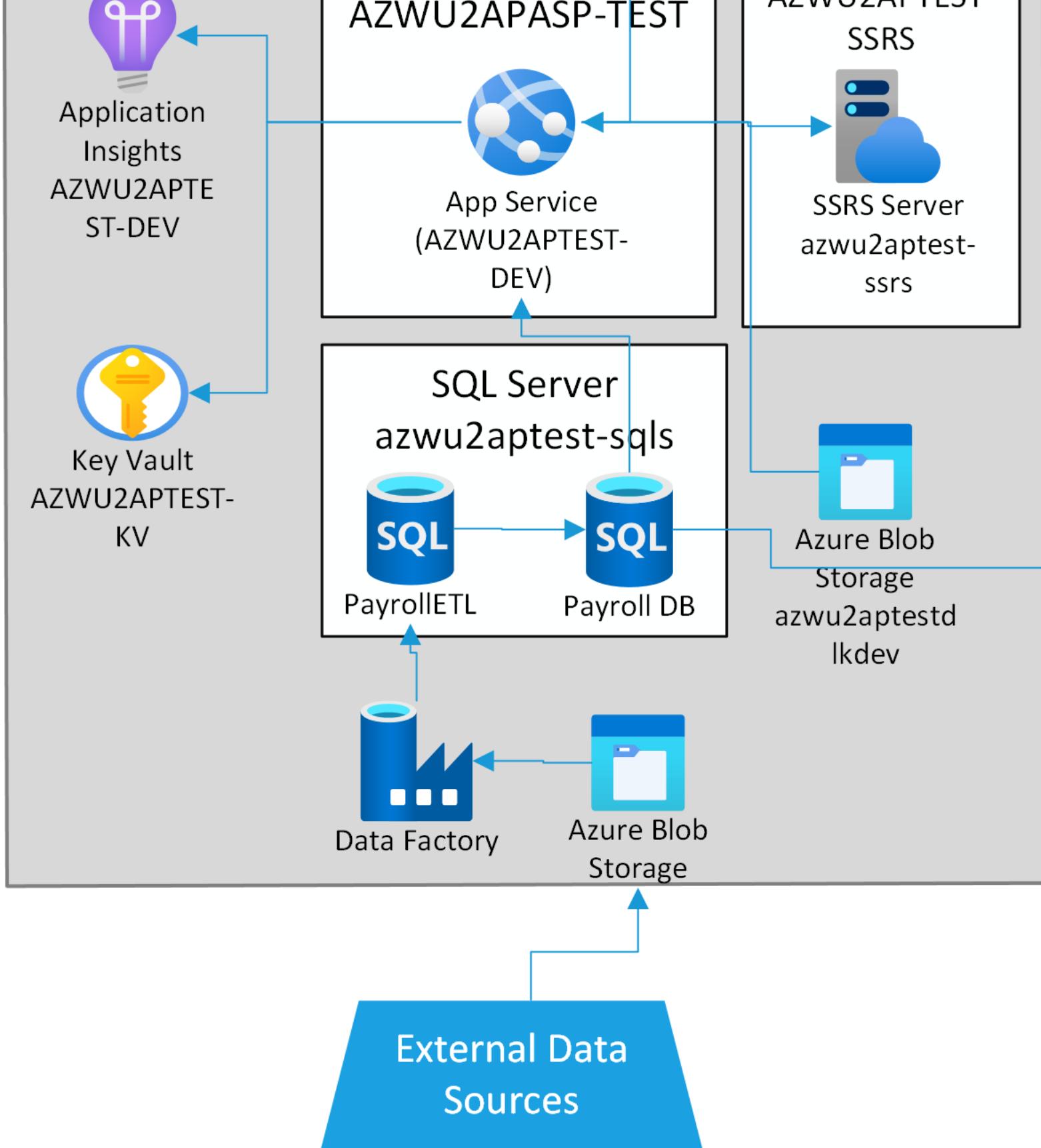
## #Table of Contents

[Getting Started](#) [Developer Information](#)

The All Pay Dev environment consists of two resource groups:

- Primary RG located in West US 2
- Secondary RG located in Central US





#AllPay Environment Summary

| Primary Environment  | Current Version | Secondary/Failover     | Current Version |
|----------------------|-----------------|------------------------|-----------------|
| Production (primary) | v1.38.1         | Production (secondary) | Primary*        |
| UAT                  | v1.38.1         | --                     | --              |
| Test                 | v1.38.1         | --                     | --              |
| Dev (primary)        | Latest**        | Dev (secondary)        | Latest* **      |

\* Secondary/Failover servers will always match Primary unless otherwise noted. \*\* Dev environment will always have the latest updates from develop branch

See [App Release Management](#) for process details around creating and promoting software releases.

# #Release History

###Deployments

| Release                | Test       | UAT        | Prod       | Health & Days                     | Size |
|------------------------|------------|------------|------------|-----------------------------------|------|
| <a href="#">1.38.1</a> | 06/13/2023 | 06/14/2023 | 06/15/2023 | 2                                 | 4    |
| <a href="#">1.37.1</a> | 05/25/2023 | 05/26/2023 | 05/31/2023 | 4                                 | 6    |
| <a href="#">1.36.8</a> | 05/08/2023 | 05/08/2023 | 5/11/2023  | 3                                 | 12   |
| <a href="#">1.36.7</a> | 05/03/2023 | 05/03/2023 |            | 1                                 | 11   |
| <a href="#">1.36.6</a> | 04/21/2023 | 04/25/2023 |            | 1                                 | 6    |
| <a href="#">1.36.5</a> | 03/31/2023 | 04/04/2023 | 04/06/2023 | 1                                 | 3    |
| <a href="#">1.36.4</a> | 03/10/2023 | 03/13/2023 | 03/14/2023 | 1                                 | 4    |
| <a href="#">1.36.3</a> | 02/28/2023 | 03/07/2023 | 03/08/2023 | 1                                 | 1    |
| <a href="#">1.36.2</a> | 02/20/2023 | 02/21/2023 |            | 1                                 | 2    |
| <a href="#">1.36.1</a> | 02/09/2023 | 02/13/2023 | 02/15/2023 | 1                                 | 4    |
| <a href="#">1.36.0</a> | 01/26/2023 | 01/27/2023 | 01/30/2023 | 1                                 | 5    |
| <a href="#">1.35.2</a> | 01/11/2023 | 01/11/2023 | 01/16/2023 | 1                                 | 1    |
| <a href="#">1.35.1</a> | 12/30/2022 | 01/03/2023 | 01/09/2023 | 1                                 | 1    |
| <a href="#">1.34.0</a> | 12/8/2022  | 12/14/2022 | 12/15/2022 | 7                                 | 4    |
| <a href="#">1.33.0</a> | 12/01/2022 | 12/06/2022 | 12/08/2022 | 7                                 | 5    |
| <a href="#">1.32.2</a> | 11/16/2022 | 11/21/2022 | 11/29/2022 | 13                                | 3    |
| <a href="#">1.31.1</a> | 11/09/2022 | 11/11/2022 | 11/16/2022 | 7                                 | 7    |
| <a href="#">1.30.0</a> | 11/02/2022 | 11/04/2022 | 11/07/2022 | 5                                 | 6    |
| <a href="#">1.29.5</a> | 10/28/2022 | 11/01/2022 | 11/03/2022 | -                                 | 6    |
| <a href="#">1.29.4</a> | 10/26/2022 |            | -          |                                   | 6    |
| <a href="#">1.29.3</a> | 10/24/2022 | 10/24/2022 | 10/26/2022 | -                                 | 3    |
| <a href="#">1.29.2</a> | 10/17/2022 | 10/21/2022 |            | -                                 | 3    |
| <a href="#">1.29.1</a> | 10/13/2022 | 10/14/2022 | 10/17/2022 | -                                 | 8    |
| <a href="#">1.29.0</a> | 10/11/2022 |            | -          |                                   | 8    |
| <a href="#">1.28.2</a> | 10/07/2022 | 10/07/2022 | 10/10/2022 | -                                 | 5    |
| <a href="#">1.27.0</a> | 09/20/2022 | 09/22/2022 | 09/22/2022 | 2                                 | 6    |
| <a href="#">1.26.0</a> | 09/07/2022 | 09/14/2022 | 09/15/2022 | 8                                 | 6    |
| <a href="#">1.25.0</a> | 08/30/2022 | 09/07/2022 | 09/14/2022 | 15                                | 5    |
| <a href="#">1.24.0</a> | 08/18/2022 | 08/22/2022 | 09/07/2022 | 24                                | 5    |
| <a href="#">1.23.2</a> | 08/09/2022 | 08/10/2022 | 08/11/2022 | 2                                 | 6    |
| <a href="#">1.23.1</a> | 08/02/2022 | 08/02/2022 | 08/04/2022 | 2                                 | 2    |
| <a href="#">1.22.0</a> | 07/20/2022 | 07/22/2022 | 07/27/2022 | 7                                 | 5    |
| <a href="#">1.21.0</a> | 07/13/2022 | 07/15/2022 | 07/20/2022 | 7                                 | 9    |
| <a href="#">1.20.1</a> | 06/24/2022 | 06/30/2022 | 07/14/2022 | 10                                | 7    |
| <a href="#">1.19.0</a> | 06/17/2022 | 06/21/2022 | 06/29/2022 | 12                                | 4    |
| <a href="#">1.18.2</a> | 06/16/2022 | 06/16/2022 | 06/21/2022 | 5                                 | 4    |
|                        |            |            |            | Item had to be reverted from Prod |      |
| <a href="#">1.17.1</a> | 05/26/2022 | 05/31/2022 | 06/06/2022 | 11                                | 1    |
| <a href="#">1.17.0</a> | 05/26/2022 | 05/31/2022 | 05/31/2022 | 5                                 | 2    |
| <a href="#">1.16.0</a> | 05/23/2022 | 05/24/2022 | 05/25/2022 | 2                                 | 3    |
| <a href="#">1.15.2</a> | 05/19/2022 | 05/19/2022 | 05/23/2022 | 4                                 | 5    |
| <a href="#">1.14.1</a> | 05/09/2022 | 05/10/2022 | 05/12/2022 | 3                                 | 5    |
| <a href="#">1.13.0</a> | 04/27/2022 | 05/02/2022 | 05/09/2022 | 12                                | 4    |
| <a href="#">1.12.0</a> | 04/20/2022 | 04/26/2022 | 04/28/2022 | 8                                 | 6    |
| <a href="#">1.11.0</a> | 04/15/2022 | 04/20/2022 | 04/26/2022 | 11                                | 4    |
| <a href="#">1.10.1</a> | N/A        | 04/15/2022 | 04/18/2022 | 3                                 | 1    |
| <a href="#">1.10.0</a> | 04/11/2022 | 04/12/2022 | 04/14/2022 | 3                                 | 1    |
| <a href="#">1.9.0</a>  | 04/04/2022 | 04/07/2022 | 04/12/2022 | 8                                 | 17   |
| <a href="#">1.8.0</a>  | 03/17/2022 | 03/22/2022 | 03/24/2022 | 7                                 | 5    |
| <a href="#">1.7.0</a>  | 03/10/2022 | 03/15/2022 | 03/22/2022 | 12                                | 6    |
| <a href="#">1.6.0</a>  | 03/01/2022 | 03/10/2022 | 03/14/2022 | 13                                | 4    |

| <b>Release</b>         | <b>Test</b> | <b>UAT</b> | <b>Prod</b> | <b>Health &amp; Days</b> | <b>Size</b> |
|------------------------|-------------|------------|-------------|--------------------------|-------------|
| <a href="#">1.5.0</a>  |             | 02/21/2022 | 02/28/2022  | 03/1/2022 9              | 5           |
| 1.4.2                  |             | 02/14/2022 | 02/15/2022  | 02/21/2022 7             | 2           |
| <a href="#">1.3.23</a> |             | 02/02/2022 | 02/08/2022  | 02/10/2022 8             | 1           |
| <a href="#">1.3.22</a> |             | 01/19/2022 | 01/19/2022  | 02/10/2022 22            | 12          |
| <a href="#">1.3.21</a> |             | 01/11/2022 | 01/18/2022  | 01/24/2022 12            | 7           |
| <a href="#">1.3.20</a> |             | 12/10/2021 | 01/03/2022  | 01/06/2022               | 11          |
| <a href="#">1.3.19</a> |             | 12/10/2021 | 12/21/2021  | 12/27/2021               |             |
| <a href="#">1.3.18</a> |             | 11/29/2021 | 12/09/2021  | 12/14/2021               |             |
| <a href="#">1.3.17</a> |             | 11/05/2021 | 11/11/2021  | 11/15/2021               |             |
| <a href="#">1.3.16</a> |             | 11/05/2021 | 11/11/2021  | 11/15/2021               |             |
| <a href="#">1.3.15</a> |             | 10/22/2021 | 11/01/2021  | 11/04/2021               |             |
| <a href="#">1.3.14</a> |             | 10/07/2021 | 10/21/2021  | 10/25/2021               |             |
| <a href="#">1.3.13</a> |             | 09/14/2021 | 10/7/2021   | 10/11/2021               |             |
| <a href="#">1.3.12</a> |             | 09/01/2021 | 09/10/2021  | 09/22/2021               |             |
| <a href="#">1.3.11</a> |             | 08/20/2021 | 08/31/2021  | 09/07/2021               |             |
| <a href="#">1.3.10</a> |             | 08/11/2021 | 08/19/2021  | 08/30/2021               |             |
| <a href="#">1.3.9</a>  |             | 08/02/2021 | 08/11/2021  | 08/19/2021               |             |
| <a href="#">1.3.8</a>  |             | 07/01/2021 | 07/07/2021  | 07/12/2021               |             |
| <a href="#">1.3.7</a>  |             | 06/24/2021 | 06/28/2021  | 06/29/2021               |             |
| <a href="#">1.3.6</a>  |             | 06/16/2021 | 06/23/2021  | 06/24/2021               |             |
| <a href="#">1.3.5</a>  |             | 06/09/2021 | 06/14/2021  | 06/15/2021               |             |
| <a href="#">1.3.4</a>  |             | 05/28/2021 | 06/03/2021  | 06/09/2021               |             |
| <a href="#">1.3.3</a>  |             | 05/18/2021 | 05/26/2021  | 06/03/2021               |             |
| <a href="#">1.3.2</a>  |             | 05/12/2021 | 05/18/2021  | 05/24/2021               |             |
| <a href="#">1.3.1</a>  |             | 05/05/2021 | 05/11/2021  | 05/17/2021               |             |
| <a href="#">1.3.0</a>  |             | 05/03/2021 | 05/05/2021  | 05/10/2021               |             |
| <a href="#">1.2.25</a> |             | 04/22/2021 | 04/29/2021  | 05/05/2021               |             |
| <a href="#">1.2.24</a> |             | 04/07/2021 | 04/14/2021  | 04/27/2021               |             |
| <a href="#">1.2.23</a> |             | 03/16/2021 | 03/19/2021* | 03/25/2021               |             |
| <a href="#">1.2.22</a> |             | 03/03/2021 | 03/11/2021  | 03/18/2021               |             |
| <a href="#">1.2.21</a> |             | 02/10/2021 | 02/24/2021  | 03/10/2021               |             |
| <a href="#">1.2.20</a> |             | 01/14/2021 | 02/10/2021  | 02/11/2021               |             |
| <a href="#">1.2.19</a> |             | 01/07/2021 | 01/14/2021  | 02/10/2021               |             |
| <a href="#">1.2.18</a> |             | 12/31/2020 | 01/06/2021  | 01/07/2021               |             |
| <a href="#">1.2.17</a> |             | 12/18/2020 | 12/30/2020  | 01/06/2021               |             |
| <a href="#">1.2.16</a> |             | 12/04/2020 | 12/18/2020  | 12/23/2020               |             |
| <a href="#">1.2.15</a> |             | 11/19/2020 | 12/03/2020  | 12/14/2020               |             |
| <a href="#">1.2.14</a> |             | 11/10/2020 | 11/24/2020  | 12/02/2020               |             |
| <a href="#">1.2.13</a> |             | 10/26/2020 | 11/10/2020  | 11/12/2020               |             |
| <a href="#">1.2.12</a> |             | 10/23/2020 | 10/28/2020  | 11/04/2020               |             |
| <a href="#">1.2.11</a> |             | 10/22/2020 | 10/28/2020  | 11/04/2020               |             |
| <a href="#">1.2.10</a> |             | 10/7/2020  | 10/7/2020   | 10/19/2020               |             |
| <a href="#">1.2.9</a>  |             | 9/23/2020  | 9/23/2020   | 10/2/2020                |             |
| <a href="#">1.2.8</a>  |             | 9/17/2020  | 9/17/2020   | 9/22/2020                |             |
| <a href="#">1.2.7</a>  |             | 9/2/2020   | 9/2/2020    | 9/9/2020                 |             |

#### ###Deployments

| <b>Release</b> | <b>Test</b> | <b>UAT</b> | <b>Prod</b> |
|----------------|-------------|------------|-------------|
| v1.38.1        | 06/13/2023  | 06/14/2023 | 06/15/2023  |

#### ##Release Notes

##Included ADO Work Items

####QA/UAT: | ITEM | QA | UAT | -----|-----|-----| #132100 |PASS|| #132227 | PASS|| #132741 |PASS|| #132768 |PASS||

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#### Release Health

| <b>Topic</b>        | <b>Count</b> |
|---------------------|--------------|
| Release Size        | ■ 4          |
| QA Release Errors   | ■ 0          |
| QA findings         | ■ 0          |
| QA Hot Fixes        | ■ 0          |
| UAT Release Errors  | ■ 0          |
| UAT findings        | ■ 0          |
| UAT Hot Fixes       | ■ 0          |
| Prod Release Errors | ■ 0          |
| Prod Defects        | ■ 0          |
| Prod Hot Fixes      | ■ 0          |

| Topic                                      | Count |
|--|-------|
| TOTAL                                      | ■ 0   |
| ■ 1 or less in any of the above categories |       |
| ■ 2-4 total of any of the above categories |       |
| ■ 5 or more total of the above categories  |       |

## Release Size

- 1 - 7 Items
  - 8-11 Items
  - 12+ \*\*
- \*\*

## Historical Releases

### ###Deployments

| Release | Test       | UAT        | Prod       |
|---------|------------|------------|------------|
| v1.37.1 | 05/25/2023 | 05/26/2023 | 05/31/2023 |

### ###Release Notes

#### ###Included ADO Work Items

```
####QA/UAT: | ITEM | QA | UAT | -----|-----|-----| #127694 |PASS | PASS || #127964 |N/A | N/A || #129605 |PASS | PASS || #129916 |PASS | PASS || #130950
|PASS | PASS || #130961 |PASS | PASS |
```

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## Release Health

| Topic               | Count |
|---------------------|-------|
| Release Size        | ■ 6   |
| QA Release Errors   | ■ 0   |
| QA findings         | ■ 0   |
| QA Hot Fixes        | ■ 0   |
| UAT Release Errors  | ■ 0   |
| UAT findings        | ■ 0   |
| UAT Hot Fixes       | ■ 0   |
| Prod Release Errors | ■ 0   |
| Prod Defects        | ■ 0   |
| Prod Hot Fixes      | ■ 0   |
| TOTAL               | ■ 0   |

- 1 or less in any of the above categories
- 2-4 total of any of the above categories
- 5 or more total of the above categories

## Release Size

- 1 - 7 Items
  - 8-11 Items
  - 12+ \*\*
- \*\*

### ###Deployments

| Release | Test      | UAT        | Prod      |
|---------|-----------|------------|-----------|
| v1.36.6 | 4/21/2023 | 04/25/2023 |           |
| v1.36.7 | 5/3/2023  | 5/3/2023   |           |
| v1.36.8 | 5/8/2023  | 5/8/2023   | 5/11/2023 |

###Release Notes 1.36.7 : We had a break/fix cycle in UAT, so we're incrementing the version from v1.36.6 to v1.36.7 to include the new work items.

1.36.8 : We had a break/fix cycle in UAT, so we're incrementing the version from v1.36.7 to v1.36.8 to include the new work items.

#### ###Included ADO Work Items

```
####QA/UAT: | ITEM | QA | UAT | -----|-----|-----| #109411 |PASS | PASS || #120686 |PASS | PASS || #125902 | N/A | N/A || #127009 |PASS | PASS || #127621
|PASS | PASS || #127622 |PASS | PASS || #127650 |PASS | PASS || #127845 | N/A | N/A |
```

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## Release Health

| Topic        | Count |
|--------------|-------|
| Release Size | ■ 6   |

| Topic                                      | Count |
|--|-------|
| QA Release Errors                          | ■ 0   |
| QA findings                                | ■ 0   |
| QA Hot Fixes                               | ■ 0   |
| UAT Release Errors                         | ■ 0   |
| UAT findings                               | ■ 0   |
| UAT Hot Fixes                              | ■ 0   |
| Prod Release Errors                        | ■ 0   |
| Prod Defects                               | ■ 0   |
| Prod Hot Fixes                             | ■ 0   |
| TOTAL                                      | ■ 0   |
| ■ 1 or less in any of the above categories |       |
| ■ 2-4 total of any of the above categories |       |
| ■ 5 or more total of the above categories  |       |

## Release Size

- 1 - 7 Items
- 8-11 Items
- 12+

## ###Deployments

**Release Test UAT Prod**  
v1.36.5 3/31/2023 04/04/2023 04/06/2023

## ###Included ADO Work Items

####QA/UAT: | ITEM | QA | UAT | -----|-----|-----| #124684 |PASS| PASS || #126292 |PASS| PASS || #126302 |PASS| PASS || #126426 |PASS| PASS |

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## Release Health

| Topic                                      | Count |
|--|-------|
| Release Size                               | ■ 1   |
| QA Release Errors                          | ■ 0   |
| QA findings                                | ■ 0   |
| QA Hot Fixes                               | ■ 0   |
| UAT Release Errors                         | ■ 0   |
| UAT findings                               | ■ 0   |
| UAT Hot Fixes                              | ■ 0   |
| Prod Release Errors                        | ■ 0   |
| Prod Defects                               | ■ 0   |
| Prod Hot Fixes                             | ■ 0   |
| TOTAL                                      | ■ 0   |
| ■ 1 or less in any of the above categories |       |
| ■ 2-4 total of any of the above categories |       |
| ■ 5 or more total of the above categories  |       |

## Release Size

- 1 - 7 Items
- 8-11 Items
- 12+

## ###Deployments

**Release Test UAT Prod**  
v1.36.4 3/10/2023 3/13/2023 3/14/2023

## ###Included ADO Work Items

####QA/UAT: | ITEM | QA | UAT | -----|-----|-----| #119386 |PASS| PASS || #123471 |PASS| PASS || #123480 |N/A| N/A || #123750 |PASS| N/A |

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## Release Health

| Topic             | Count |
|-------------------|-------|
| Release Size      | ■ 4   |
| QA Release Errors | ■ 0   |
| QA findings       | ■ 0   |

| Topic                                      | Count |
|--|-------|
| QA Hot Fixes                               | ■ 0   |
| UAT Release Errors                         | ■ 0   |
| UAT findings                               | ■ 0   |
| UAT Hot Fixes                              | ■ 0   |
| Prod Release Errors                        | ■ 0   |
| Prod Defects                               | ■ 0   |
| Prod Hot Fixes                             | ■ 0   |
| TOTAL                                      | ■ 0   |
| ■ 1 or less in any of the above categories |       |
| ■ 2-4 total of any of the above categories |       |
| ■ 5 or more total of the above categories  |       |

#### Release Size

- 1 - 7 Items
- 8-11 Items
- 12+

#### ###Deployments

| Release | Test       | UAT      | Prod     |
|---------|------------|----------|----------|
| v1.36.3 | 02/28/2023 | 3/7/2023 | 3/8/2023 |

#### ###Included ADO Work Items

####QA/UAT: | ITEM | QA | UAT | -----|-----|-----| #122347 |PASS | PASS |

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#### Release Health

| Topic                                      | Count |
|--|-------|
| Release Size                               | ■ 1   |
| QA Release Errors                          | ■ 0   |
| QA findings                                | ■ 0   |
| QA Hot Fixes                               | ■ 0   |
| UAT Release Errors                         | ■ 0   |
| UAT findings                               | ■ 0   |
| UAT Hot Fixes                              | ■ 0   |
| Prod Release Errors                        | ■ 0   |
| Prod Defects                               | ■ 0   |
| Prod Hot Fixes                             | ■ 0   |
| TOTAL                                      | ■ 0   |
| ■ 1 or less in any of the above categories |       |
| ■ 2-4 total of any of the above categories |       |
| ■ 5 or more total of the above categories  |       |

#### Release Size

- 1 - 7 Items
- 8-11 Items
- 12+

#### ###Deployments

| Release | Test       | UAT        | Prod     |
|---------|------------|------------|----------|
| v1.36.2 | 02/20/2023 | 02/21/2023 | 3/1/2023 |

#### ###Included ADO Work Items

####QA/UAT: | ITEM | QA | UAT | -----|-----|-----| #121157 |PASS | PASS | | #121963 | PASS | PASS |

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#### Release Health

| Topic              | Count |
|--------------------|-------|
| Release Size       | ■ 2   |
| QA Release Errors  | ■ 0   |
| QA findings        | ■ 0   |
| QA Hot Fixes       | ■ 0   |
| UAT Release Errors | ■ 0   |

## Topic Count

|                     |     |
|---------------------|-----|
| UAT findings        | ■ 0 |
| UAT Hot Fixes       | ■ 0 |
| Prod Release Errors | ■ 0 |
| Prod Defects        | ■ 0 |
| Prod Hot Fixes      | ■ 0 |
| TOTAL               | ■ 0 |

- 1 or less in any of the above categories
- 2-4 total of any of the above categories
- 5 or more total of the above categories

## Release Size

- 1 - 7 Items
- 8-11 Items
- 12+

## ###Deployments

### Release Test UAT Prod

v1.36.1 02/09/2023 02/13/2023 02/15/2023

## ###Included ADO Work Items

####QA/UAT: | ITEM | QA | UAT | -----|-----|-----| #109683 |PASS | PASS || #111425 |PASS | PASS || #113894 |PASS | PASS || #114195 |PASS | PASS |

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## Release Health

### Topic Count

|                     |     |
|---------------------|-----|
| Release Size        | ■ 4 |
| QA Release Errors   | ■ 0 |
| QA findings         | ■ 0 |
| QA Hot Fixes        | ■ 0 |
| UAT Release Errors  | ■ 0 |
| UAT findings        | ■ 0 |
| UAT Hot Fixes       | ■ 0 |
| Prod Release Errors | ■ 0 |
| Prod Defects        | ■ 0 |
| Prod Hot Fixes      | ■ 0 |
| TOTAL               | ■ 0 |

- 1 or less in any of the above categories
- 2-4 total of any of the above categories
- 5 or more total of the above categories

## Release Size

- 1 - 7 Items
- 8-11 Items
- 12+

## ###Deployments

### Release Test UAT Prod

v1.36.0 01/26/2023 01/27/2023 01/30/2023

## ###Included ADO Work Items

####QA/UAT: | ITEM | QA | UAT | -----|-----|-----| | | |

CAB -

## Release Health

### Topic Count

|                    |     |
|--------------------|-----|
| Release Size       | ■ 4 |
| QA Release Errors  | ■ 0 |
| QA findings        | ■ 0 |
| QA Hot Fixes       | ■ 0 |
| UAT Release Errors | ■ 0 |
| UAT findings       | ■ 0 |
| UAT Hot Fixes      | ■ 0 |

**Topic****Count**

Prod Release Errors ■ 0

Prod Defects ■ 0

Prod Hot Fixes ■ 0

TOTAL ■ 0

■ 1 or less in any of the above categories

■ 2-4 total of any of the above categories

■ 5 or more total of the above categories

**Release Size**

■ 1 - 7 Items

■ 8-11 Items

■ 12+

11082145499

## ###Deployments

**Release Test UAT Prod**

v1.35.2 01/11/2022 01/11/2022 01/16/2023

## ###Included ADO Work Items

####QA/UAT: | ITEM | QA | UAT | -----|-----|-----| #113959 || |

CAB -

**Release Health****Topic****Count**

Release Size ■ 1

QA Release Errors ■ 0

QA findings ■ 0

QA Hot Fixes ■ 0

UAT Release Errors ■ 0

UAT findings ■ 0

UAT Hot Fixes ■ 0

Prod Release Errors ■ 0

Prod Defects ■ 0

Prod Hot Fixes ■ 0

TOTAL ■ 0

■ 1 or less in any of the above categories

■ 2-4 total of any of the above categories

■ 5 or more total of the above categories

**Release Size**

■ 1 - 7 Items

■ 8-11 Items

■ 12+

11082145499

## ###Deployments

**Release Test UAT Prod**

v1.35.1 12/30/2022 1/3/2023 01/09/2023

## ###Included ADO Work Items

####QA/UAT: | ITEM | QA | UAT | -----|-----|-----| #113812 | PASS | PASS || #109028 | PASS | PASS || #110549 | PASS | PASS || #111943 | N/A | N/A || #112251 | PASS | PASS |

CAB -

**Release Health****Topic****Count**

Release Size ■ 5

QA Release Errors ■ 0

QA findings ■ 0

QA Hot Fixes ■ 0

UAT Release Errors ■ 0

UAT findings ■ 0

UAT Hot Fixes ■ 0

Prod Release Errors ■ 0

Prod Defects ■ 0

| Topic                                      | Count |
|--|-------|
| Prod Hot Fixes                             | ■ 0   |
| TOTAL                                      | ■ 0   |
| ■ 1 or less in any of the above categories |       |
| ■ 2-4 total of any of the above categories |       |
| ■ 5 or more total of the above categories  |       |

#### Release Size

- 1 - 7 Items
- 8-11 Items
- 12+

11082145499

#### ###Deployments

**Release Test      UAT Prod**

v1.35.0 12/27/2022

#### ###Included ADO Work Items

####QA/UAT: | ITEM | QA | UAT | -----|-----|-----| #109028 |PASS| | #110549 |FAIL| | #111943 |NA| | #112251 |FAIL| |

CAB -

#### Release Health

##### Topic      Count

|                     |     |
|---------------------|-----|
| Release Size        | ■ 4 |
| QA Release Errors   | ■ 0 |
| QA findings         | ■ 0 |
| QA Hot Fixes        | ■ 0 |
| UAT Release Errors  | ■ 0 |
| UAT findings        | ■ 0 |
| UAT Hot Fixes       | ■ 0 |
| Prod Release Errors | ■ 0 |
| Prod Defects        | ■ 0 |
| Prod Hot Fixes      | ■ 0 |
| TOTAL               | ■ 0 |

- 1 or less in any of the above categories
- 2-4 total of any of the above categories
- 5 or more total of the above categories

#### Release Size

- 1 - 7 Items
- 8-11 Items
- 12+

11082145499

#### ###Deployments

**Release Test      UAT      Prod**

v1.34.0 12/8/2022 12/14/2022 12/15/2022

#### ###Included ADO Work Items

####QA/UAT: | ITEM | QA | UAT | -----|-----|-----| #104625 |PASS| PASS| | #109434 |PASS| PASS| | #111021 |N/A| N/A| | #111031 |N/A| N/A|

CAB -

#### Release Health

##### Topic      Count

|                     |     |
|---------------------|-----|
| Release Size        | ■ 4 |
| QA Release Errors   | ■ 0 |
| QA findings         | ■ 0 |
| QA Hot Fixes        | ■ 0 |
| UAT Release Errors  | ■ 0 |
| UAT findings        | ■ 0 |
| UAT Hot Fixes       | ■ 0 |
| Prod Release Errors | ■ 0 |
| Prod Defects        | ■ 0 |
| Prod Hot Fixes      | ■ 0 |
| TOTAL               | ■ 0 |

- 1 or less in any of the above categories

- 2-4 total of any of the above categories
- 5 or more total of the above categories

## Release Size

- 1 - 7 Items
- 8-11 Items
- 12+

1108214

## ###Deployments

| <b>Release</b> | <b>Test</b> | <b>UAT</b> | <b>Prod</b> |
|----------------|-------------|------------|-------------|
| v1.33.0        | 12/1/2022   | 12/6/2022  | 12/8/2022   |

v1.33.0 12/1/2022 12/6/2022 12/8/2022

## ###Included ADO Work Items

####QA/UAT: | ITEM | QA | UAT | -----|-----|-----| #106391 | PASS | PASS || #109681 | PASS | PASS || #110424 | PASS | PASS || #96477 | N/A | N/A || #88927 | N/A | N/A |

CAB -

## Release Health

| <b>Topic</b>        | <b>Count</b> |
|---------------------|--------------|
| Release Size        | ■ 5          |
| QA Release Errors   | ■ 0          |
| QA findings         | ■ 0          |
| QA Hot Fixes        | ■ 0          |
| UAT Release Errors  | ■ 0          |
| UAT findings        | ■ 0          |
| UAT Hot Fixes       | ■ 0          |
| Prod Release Errors | ■ 0          |
| Prod Defects        | ■ 0          |
| Prod Hot Fixes      | ■ 0          |
| TOTAL               | ■ 0          |

- 1 or less in any of the above categories

- 2-4 total of any of the above categories

- 5 or more total of the above categories

## Release Size

- 1 - 7 Items
- 8-11 Items
- 12+

110821

## ###Deployments

| <b>Release</b> | <b>Test</b> | <b>UAT</b> | <b>Prod</b> |
|----------------|-------------|------------|-------------|
|----------------|-------------|------------|-------------|

v1.32.0 11/16/2022

v1.32.1 11/18/2022 11/21/2022 \*

v1.32.2 11/23/2022 11/23/2022 11/29/2022

####Notes: v1.32.1 is to address a deployment issue with 109196. v1.32.2 is to address a bug found with 96516 which is bug 110824

## ###Included ADO Work Items

####QA/UAT: | ITEM | QA | UAT | -----|-----|-----| #96516 | PASS| PASS || #110824 | \*| PASS || #108482 |PASS | PASS || #109196 |PASS | PASS || #110865 | \* | \*

CAB -

## Release Health

| <b>Topic</b>        | <b>Count</b> |
|---------------------|--------------|
| Release Size        | ■ 4          |
| QA Release Errors   | ■ 0          |
| QA findings         | ■ 1          |
| QA Hot Fixes        | ■ 1          |
| UAT Release Errors  | ■ 0          |
| UAT findings        | ■ 0          |
| UAT Hot Fixes       | ■ 1          |
| Prod Release Errors | ■ 0          |
| Prod Defects        | ■ 0          |
| Prod Hot Fixes      | ■ 0          |
| TOTAL               | ■ 0          |

- 1 or less in any of the above categories
- 2-4 total of any of the above categories
- 5 or more total of the above categories

## Release Size

- 1 - 7 Items
- 8-11 Items
- 12+

11082

## ###Deployments

### Release Test      UAT      Prod

v1.31.0 11/09/2022 11/11/2022

v1.31.1 11/15/2022 11/15/2022 11/16/2022

####Notes: v1.31.1 addresses a UAT finding for the Bulk Processing items in this release.

## ###Included ADO Work Items

####QA/UAT: | ITEM | QA | UAT | -----|-----|-----| #101503 | PASS | PASS | #101504 | PASS | PASS | #104173 | PASS | PASS | #104828 | PASS | PASS | #104829 | PASS | PASS | #106398 | PASS | PASS | #108912 | PASS | PASS |

CAB -

## Release Health

| Topic               | Count |
|---------------------|-------|
| Release Size        | ■ 0   |
| QA Release Errors   | ■ 0   |
| QA findings         | ■ 0   |
| QA Hot Fixes        | ■ 0   |
| UAT Release Errors  | ■ 0   |
| UAT findings        | ■ 0   |
| UAT Hot Fixes       | ■ 0   |
| Prod Release Errors | ■ 0   |
| Prod Defects        | ■ 0   |
| Prod Hot Fixes      | ■ 0   |
| TOTAL               | ■ 0   |

- 1 or less in any of the above categories
- 2-4 total of any of the above categories
- 5 or more total of the above categories

## Release Size

- 1 - 7 Items
- 8-11 Items
- 12+

## ###Deployments

### Release Test      UAT      Prod

v1.30.0 11/02/2022 11/04/2022 11/07/2022

####Notes:

- The code for 106458 made it into the release, but the status wasn't updated, so it wasn't tested until we were ready to release to Prod and noticed the extra code. We pulled a group together to test it on the spot and determined that, while it did not do all it was supposed to, the code was harmless, so it could be released to Prod with the rest of the stories. A new bug was created to address the gap: 108912

## ###Included ADO Work Items

####QA/UAT: | ITEM | QA | UAT | -----|-----|-----| #100936 |PASS | PASS | #101004 |N/A | N/A | #104830 | PASS | PASS | #106115 | PASS | PASS | #106513 | PASS|PASS | #106458 | See Notes | See Notes |

CAB -

## Release Health

| Topic              | Count |
|--------------------|-------|
| Release Size       | ■ 6   |
| QA Release Errors  | ■ 0   |
| QA findings        | ■ 0   |
| QA Hot Fixes       | ■ 0   |
| UAT Release Errors | ■ 0   |
| UAT findings       | ■ 0   |

| Topic               | Count |
|---------------------|-------|
| UAT Hot Fixes       | ■ 0   |
| Prod Release Errors | ■ 0   |
| Prod Defects        | ■ 0   |
| Prod Hot Fixes      | ■ 0   |
| TOTAL               | ■ 0   |

■ 1 or less in any of the above categories  
 ■ 2-4 total of any of the above categories  
 ■ 5 or more total of the above categories

## Release Size

- 1 - 7 Items
  - 8-11 Items
  - 12+

### ###Deployments

| Release | Test       | UAT        | Prod       |
|---------|------------|------------|------------|
| v1.29.4 | 10/26/2022 |            |            |
| v1.29.5 | 10/28/2022 | 11/01/2022 | 11/03/2022 |

#### ####Notes:

- v1.29.5 addresses bug 105824 which was found during v1.29.4 testing

### ###Included ADO Work Items

CAB -

## Release Health

| Topic               | Count |
|---------------------|-------|
| Release Size        | ■ 6   |
| QA Release Errors   | ■ 0   |
| QA findings         | ■ 0   |
| QA Hot Fixes        | ■ 0   |
| UAT Release Errors  | ■ 0   |
| UAT findings        | ■ 0   |
| UAT Hot Fixes       | ■ 0   |
| Prod Release Errors | ■ 0   |
| Prod Defects        | ■ 0   |
| Prod Hot Fixes      | ■ 0   |
| TOTAL               | ■ 0   |

■ 1 or less in any of the above categories  
 ■ 2-4 total of any of the above categories  
 ■ 5 or more total of the above categories

### Release Size

- 1 - 7 Items
  - 8-11 Items
  - 12+

### ### Deployments

**Release Test UAT Prod**  
v1.29.4

v1.29.4

## ##Included ADO Work Items

####QA/UAT: | ITEM | QA | UAT | -----|-----|-----| | | | | | | |

| Release Health    |       |
|-------------------|-------|
| Topic             | Count |
| Release Size      | ■ 3   |
| QA Release Errors | ■ 0   |
| QA findings       | ■ 0   |
| QA Hot Fixes      | ■ 0   |

## Topic Count

|                     |     |
|---------------------|-----|
| UAT Release Errors  | ■ 0 |
| UAT findings        | ■ 0 |
| UAT Hot Fixes       | ■ 0 |
| Prod Release Errors | ■ 0 |
| Prod Defects        | ■ 0 |
| Prod Hot Fixes      | ■ 0 |
| TOTAL               | ■ 0 |

- 1 or less in any of the above categories
- 2-4 total of any of the above categories
- 5 or more total of the above categories

## Release Size

- 1 - 7 Items
- 8-11 Items
- 12+

## ###Deployments

### Release Test UAT Prod

|         |            |            |            |
|---------|------------|------------|------------|
| v1.29.2 | 10/17/2022 | 10/21/2022 | n/a        |
| v1.29.3 | 10/24/2022 | 10/24/2022 | 10/26/2022 |

- v1.29.3 fixes bug with 102677 DB | Add "Tips - TIPS" Source System Field for Store Input Sheets

## ###Included ADO Work Items

####QA/UAT: | ITEM | QA | UAT | -----|-----|-----| | #96556 | PASS | PASS | | #102677 | PASS | PASS | | #105541 | N/A | N/A |

CAB - [https://lithia.service-now.com/nav\\_to.do?uri=change\\_request.do?sys\\_id=100cc7111b3a59908a372025604bcb93](https://lithia.service-now.com/nav_to.do?uri=change_request.do?sys_id=100cc7111b3a59908a372025604bcb93)

## Release Health

### Topic Count

|                     |     |
|---------------------|-----|
| Release Size        | ■ 3 |
| QA Release Errors   | ■ 0 |
| QA findings         | ■ 0 |
| QA Hot Fixes        | ■ 0 |
| UAT Release Errors  | ■ 0 |
| UAT findings        | ■ 0 |
| UAT Hot Fixes       | ■ 0 |
| Prod Release Errors | ■ 0 |
| Prod Defects        | ■ 0 |
| Prod Hot Fixes      | ■ 0 |
| TOTAL               | ■ 0 |

- 1 or less in any of the above categories
- 2-4 total of any of the above categories
- 5 or more total of the above categories

## Release Size

- 1 - 7 Items
- 8-11 Items
- 12+

## ###Deployments

### Release Test UAT Prod

|         |            |            |
|---------|------------|------------|
| v1.29.1 | 10/13/2022 | 10/14/2022 |
|---------|------------|------------|

## ###Included ADO Work Items

####QA/UAT: | ITEM | QA | UAT | -----|-----|-----| | #96521 | PASS | PASS | | #104483 | PASS| PASS | | #99877 | PASS | PASS | | #103476 | PASS | PASS | | #101242 | PASS | PASS | | #101256 | PASS | PASS | | #103323 | PASS| PASS | | #99940 | PASS| PASS | | #106206 | PASS | PASS | | #106286 | PASS | PASS |

CAB -

## Release Health

### Topic Count

|                   |     |
|-------------------|-----|
| Release Size      | ■ 8 |
| QA Release Errors | ■ 0 |
| QA findings       | ■ 0 |

**Topic**      **Count**

|                     |     |
|---------------------|-----|
| QA Hot Fixes        | ■ 0 |
| UAT Release Errors  | ■ 0 |
| UAT findings        | ■ 0 |
| UAT Hot Fixes       | ■ 0 |
| Prod Release Errors | ■ 0 |
| Prod Defects        | ■ 0 |
| Prod Hot Fixes      | ■ 0 |
| TOTAL               | ■ 0 |

■ 1 or less in any of the above categories

■ 2-4 total of any of the above categories

■ 5 or more total of the above categories

## Release Size

- 1 - 7 Items
- 8-11 Items
- 12+

## ###Deployments

**Release Test      UAT Prod**

v1.29.0 10/11/2022

## ###Included ADO Work Items

####QA/UAT: | ITEM | QA | UAT | -----|-----|-----| #96521 |PASS| | #104483 |PASS| | #99877 | PASS| | #103476 |PASS| | #101242 | PASS| | #101256 | PASS| | #103323 | FAIL| | #99940 | FAIL| |

CAB -

## Release Health

**Topic**      **Count**

|                     |     |
|---------------------|-----|
| Release Size        | ■ 8 |
| QA Release Errors   | ■ 0 |
| QA findings         | ■ 0 |
| QA Hot Fixes        | ■ 0 |
| UAT Release Errors  | ■ 0 |
| UAT findings        | ■ 0 |
| UAT Hot Fixes       | ■ 0 |
| Prod Release Errors | ■ 0 |
| Prod Defects        | ■ 0 |
| Prod Hot Fixes      | ■ 0 |
| TOTAL               | ■ 0 |

■ 1 or less in any of the above categories

■ 2-4 total of any of the above categories

■ 5 or more total of the above categories

## Release Size

- 1 - 7 Items
- 8-11 Items
- 12+

## ###Deployments

**Release Test      UAT      Prod**

v1.28.0 09/26/2022 10/06/2022

v1.28.2 10/07/2022 10/07/2022

**Notes:**

2022-09-27: It was agreed in this morning's standup to delay testing until we can add 104545 to the release.

**Patches:**

- v1.28.1: break/fix cycle for 101255
- v1.28.2: break/fix cycle for 101255

## ###Included ADO Work Items

####QA/UAT: | ITEM | QA | UAT | -----|-----|-----| #98086 | PASS| PASS| | #99245 | PASS| PASS| | #104545 | PASS| PASS| | #105449 | PASS| PASS| | #101255 | N/A | N/A |

CAB -

## Release Health

### Topic Count

|                     |     |
|---------------------|-----|
| Release Size        | ■ 2 |
| QA Release Errors   | ■ 0 |
| QA findings         | ■ 0 |
| QA Hot Fixes        | ■ 0 |
| UAT Release Errors  | ■ 0 |
| UAT findings        | ■ 0 |
| UAT Hot Fixes       | ■ 0 |
| Prod Release Errors | ■ 0 |
| Prod Defects        | ■ 0 |
| Prod Hot Fixes      | ■ 0 |
| TOTAL               | ■ 0 |

■ 1 or less in any of the above categories

■ 2-4 total of any of the above categories

■ 5 or more total of the above categories

### Release Size

■ 1 - 7 Items

■ 8-11 Items

■ 12+

### ###Deployments

#### Release Test UAT Prod

v1.27.0 09/20/2022 09/22/2022 09/22/2022

### ###Included ADO Work Items

####QA/UAT: | ITEM | QA | UAT | -----|-----|-----| #96525 |PASS | PASS || #98731 | PASS | PASS || #100028 | N/A | N/A || #100034 | N/A| N/A || #102335 |PASS | PASS || #102678 | PASS | PASS |

CAB - CAB - CHG0037175 [https://lithia.service-now.com/nav\\_to.do?uri=change\\_request.do?sys\\_id=5aedbb9a1b8211d08a372025604bcb97](https://lithia.service-now.com/nav_to.do?uri=change_request.do?sys_id=5aedbb9a1b8211d08a372025604bcb97)

## Release Health

### Topic Count

|                     |     |
|---------------------|-----|
| Release Size        | ■ 6 |
| QA Release Errors   | ■ 0 |
| QA findings         | ■ 0 |
| QA Hot Fixes        | ■ 0 |
| UAT Release Errors  | ■ 0 |
| UAT findings        | ■ 0 |
| UAT Hot Fixes       | ■ 0 |
| Prod Release Errors | ■ 0 |
| Prod Defects        | ■ 0 |
| Prod Hot Fixes      | ■ 0 |
| TOTAL               | ■ 0 |

■ 1 or less in any of the above categories

■ 2-4 total of any of the above categories

■ 5 or more total of the above categories

### Release Size

■ 1 - 7 Items

■ 8-11 Items

■ 12+

### ###Deployments

#### Release Test UAT Prod

v1.26.0 09/07/2022 09/14/2022 09/15/2022

### ###Included ADO Work Items

CAB - CHG0037123 [https://lithia.service-now.com/nav\\_to.do?uri=change\\_request.do?sys\\_id=b3f3ebc01b4ad9900b7ceac2604bcb0a](https://lithia.service-now.com/nav_to.do?uri=change_request.do?sys_id=b3f3ebc01b4ad9900b7ceac2604bcb0a)

####QA/UAT: | ITEM | QA | UAT | -----|-----|-----| #89940 |PASS | PASS || #93748 |PASS | PASS || #95096 | PASS | PASS || #96616 |PASS | PASS || #98556 |PASS | PASS || #100955 |PASS | PASS |

## Release Health

| Topic               | Count |
|---------------------|-------|
| Release Size        | ■ 5   |
| QA Release Errors   | ■ 0   |
| QA findings         | ■ 0   |
| QA Hot Fixes        | ■ 0   |
| UAT Release Errors  | ■ 0   |
| UAT findings        | ■ 0   |
| UAT Hot Fixes       | ■ 0   |
| Prod Release Errors | ■ 0   |
| Prod Defects        | ■ 0   |
| Prod Hot Fixes      | ■ 0   |
| TOTAL               | ■ 0   |

- 1 or less in any of the above categories
- 2-4 total of any of the above categories
- 5 or more total of the above categories

### Release Size

- 1 - 7 Items
- 8-11 Items
- 12+

79955

### ###Deployments

| Release | Test    | UAT                                | Prod      |
|---------|---------|------------------------------------|-----------|
| v1.25.0 | 8/30/22 | 9/7/2022 (Hotfix deployed 9/12/22) | 9/14/2022 |

### ###Included ADO Work Items

CAB - CHG0037038 [https://lithia.service-now.com/nav\\_to.do?uri=change\\_request.do?sys\\_id=17c10e191bf5dd540b7ceac2604bcbea](https://lithia.service-now.com/nav_to.do?uri=change_request.do?sys_id=17c10e191bf5dd540b7ceac2604bcbea)

####QA/UAT: | ITEM | QA | UAT | |-----|----|-----| | #18277 |PASS| PASS || #94134 | PASS| PASS || #96307 |PASS | PASS || #96626 |PASS | PASS || #96634 | PASS| PASS |

PASS |

## Release Health

| Topic               | Count |
|---------------------|-------|
| Release Size        | ■ 5   |
| QA Release Errors   | ■ 0   |
| QA findings         | ■ 0   |
| QA Hot Fixes        | ■ 0   |
| UAT Release Errors  | ■ 0   |
| UAT findings        | ■ 1   |
| UAT Hot Fixes       | ■ 1   |
| Prod Release Errors |       |
| Prod Defects        |       |
| Prod Hot Fixes      |       |
| TOTAL               |       |

- 1 or less in any of the above categories
- 2-4 total of any of the above categories
- 5 or more total of the above categories

### Release Size

- 1 - 7 Items
- 8-11 Items
- 12+

7

### ###Deployments

| Release | Test       | UAT        | Prod       |
|---------|------------|------------|------------|
| v1.24.0 | 08/17/2022 | 08/22/2022 | 09/07/2022 |

### ###Included ADO Work Items

CAB - CHG0036942 [https://lithia.service-now.com/nav\\_to.do?uri=change\\_request.do?sys\\_id=cc9227571b1111d00b7ceac2604bcb53](https://lithia.service-now.com/nav_to.do?uri=change_request.do?sys_id=cc9227571b1111d00b7ceac2604bcb53)

####QA/UAT: | ITEM | QA | UAT | -----|-----|-----| #69242 |PASS|PASS || #84832 |PASS |PASS| #94159 |PASS |PASS || #96262 |PASS |PASS || #96272 |PASS |PASS |

## Release Health

| Topic               | Count |
|---------------------|-------|
| Release Size        | ■ 5   |
| QA Release Errors   | ■ 0   |
| QA findings         | ■ 0   |
| QA Hot Fixes        | ■ 0   |
| UAT Release Errors  | ■ 1   |
| UAT findings        | ■ 1   |
| UAT Hot Fixes       | ■ 1   |
| Prod Release Errors | ■ 0   |
| Prod Defects        | ■ 0   |
| Prod Hot Fixes      | ■ 0   |
| TOTAL               | ■ 2   |

- 1 or less in any of the above categories
- 2-4 total of any of the above categories
- 5 or more total of the above categories

### Release Size

- 1 - 7 Items
- 8-11 Items
- 12+

79

### ###Deployments

| Release | Test       | UAT        | Prod       |
|---------|------------|------------|------------|
| v1.23.2 | 08/09/2022 | 08/10/2022 | 08/11/2022 |

### ###Included ADO Work Items

####QA/UAT: | ITEM | QA | UAT | -----|-----|-----| #35592 |PASS | PASS || #93548 | PASS| PASS || #94222 | PASS| PASS || #94996 | PASS| FAIL || #95843 | PASS| FAIL || #96258 |PASS | PASS |

##CAB - CHG0036838 [https://lithia.service-now.com/nav\\_to.do?uri=change\\_request.do?sys\\_id=8e196b7e1b4519588a372025604bcb14](https://lithia.service-now.com/nav_to.do?uri=change_request.do?sys_id=8e196b7e1b4519588a372025604bcb14)

## Release Health

| Topic               | Count |
|---------------------|-------|
| Release Size        | ■ 6   |
| QA Release Errors   | ■ 0   |
| QA findings         | ■ 0   |
| QA Hot Fixes        | ■ 0   |
| UAT Release Errors  | ■ 1   |
| UAT findings        | ■ 3   |
| UAT Hot Fixes       | ■ 0   |
| Prod Release Errors | ■ 0   |
| Prod Defects        | ■ 0   |
| Prod Hot Fixes      | ■ 0   |
| TOTAL               | ■ 4   |

- 1 or less in any of the above categories
- 2-4 total of any of the above categories
- 5 or more total of the above categories

### Release Size

- 1 - 7 Items
- 8-11 Items
- 12+

### ###Deployments

| Release | Test       | UAT        | Prod       |
|---------|------------|------------|------------|
| v1.23.0 | 07/29/2022 | 08/01/2022 |            |
| v1.23.1 | 08/02/2022 | 08/02/2022 | 08/04/2022 |

- v1.23.1 removes bug 93548 from the release.

##Included ADO Work Items

####QA/UAT: | ITEM | QA | UAT | -----|-----|-----| #93309 |PASS| PASS| #93548 Off Cycle - Reversals cause issue with history | PASS | FAIL || #93722 |PASS| PASS|

##CAB - CHG0036831 [https://lithia.service-now.com/nav\\_to.do?uri=change\\_request.do?sys\\_id=6f719c721b41d1588a372025604bcb34](https://lithia.service-now.com/nav_to.do?uri=change_request.do?sys_id=6f719c721b41d1588a372025604bcb34)

## Release Health

| Topic               | Count  |
|---------------------|--|
| Release Size        | ■ 3  |
| QA Release Errors   | ■ 0  |
| QA findings         | ■ 0  |
| QA Hot Fixes        | ■ 1 #93548 Failed UAT and needed to be mod'd |
| UAT Release Errors  | ■ 0  |
| UAT findings        | ■ 1  |
| UAT Hot Fixes       | ■ 0  |
| Prod Release Errors | ■ 0  |
| Prod Defects        | ■ 0  |
| Prod Hot Fixes      | ■ 0  |
| TOTAL               | ■ 2  |

- 1 or less in any of the above categories
- 2-4 total of any of the above categories
- 5 or more total of the above categories

## Release Size

- 1 - 7 Items
- 8-11 Items
- 12+

## ##Deployments

| Release | Test      | UAT       | Prod      |
|---------|-----------|-----------|-----------|
| v1.22.0 | 7/20/2022 | 7/22/2022 | 7/27/2022 |

## ##Included ADO Work Items

####QA/UAT: | ITEM | QA | UAT | -----|-----|-----| #90414 | PASS| PASS| #91572 |PASS| PASS (with feature hidden at this time) || #91577 | PASS| PASS (with feature hidden at this time) || #92219 | PASS | PASS || #92550 | PASS | PASS Working as designed but has created another bug #TBD @ and @<70A5C559-EE5A-61EC-8FA2-F4BE96CAF950> will be entering for next sprint |

##CAB - CHG0036733 [https://lithia.service-now.com/nav\\_to.do?uri=change\\_request.do?sys\\_id=27085e861b7011908a372025604bcb23](https://lithia.service-now.com/nav_to.do?uri=change_request.do?sys_id=27085e861b7011908a372025604bcb23)

## Release Health

| Topic               | Count |
|---------------------|-------|
| Release Size        | ■ 5   |
| QA Release Errors   | ■ 0   |
| QA findings         | ■ 0   |
| QA Hot Fixes        | ■ 0   |
| UAT Release Errors  | ■ 0   |
| UAT findings        | ■ 1   |
| UAT Hot Fixes       | ■ 0   |
| Prod Release Errors | ■ 0   |
| Prod Defects        |       |
| Prod Hot Fixes      |       |
| TOTAL               |       |

- 1 or less in any of the above categories
- 2-4 total of any of the above categories
- 5 or more total of the above categories

## Release Size

- 1 - 7 Items
- 8-11 Items
- 12+

## ##Deployments

| Release | Test | UAT | Prod |
|---------|------|-----|------|
|---------|------|-----|------|

## ###Included ADO Work Items

####QA/UAT: | ITEM | QA | UAT | -----|-----|-----| #69237 |PASS| PASS || #79378 | PASS| PASS || #88012 | PASS| PASS|| #89366 |PASS| PASS || #89465 | NA| PASS|| #89466 | NA| PASS|| #91325 | NA| PASS|| #91639 | PASS| PASS|| #92497 | PASS| PASS|

##CAB - [CHG0036700](#)

## Release Health

| Topic               | Count |
|---------------------|-------|
| Release Size        | ■ 9   |
| QA Release Errors   | ■ 1   |
| QA findings         | ■ 0   |
| QA Hot Fixes        | ■ 0   |
| UAT Release Errors  | ■ 0   |
| UAT findings        | ■ 0   |
| UAT Hot Fixes       | ■ 0   |
| Prod Release Errors | ■ 0   |
| Prod Defects        | ■ 0   |
| Prod Hot Fixes      | ■ 0   |
| TOTAL               | ■ 1   |

- 1 or less in any of the above categories
- 2-4 total of any of the above categories
- 5 or more total of the above categories

## Release Size

- 1 - 7 Items
- 8-11 Items
- 12+

(was v1.20.0) v1.20.1 contains a fix for a bug found in Test.

Note that this release has a manual step required during deployment. The following script must be run on the target database:

```
DROP FUNCTION [orm].[f_GetSourceDefaultValueDefault]
```

## ##Deployments

| Release               | Test | UAT          | Prod              |
|-----------------------|------|--------------|-------------------|
| v1.20.0               |      | 6/24/2022    |                   |
| v1.20.1               |      | 6/28/2022    | 6/30/2022         |
| v1.20.1 - 83666 only* |      |              | 7/5/2022          |
| v1.20.1 - *           |      | Hotfix 92305 | 7/12/22 7/14/2022 |

- On 7/5/2022, Nelson Fender notified the team of an urgent bug in Production which was introduced in [v1.19.0](#). Rather than reverting, the team elected to promote the tested database code for 83666 into production, which addressed the issue. CAB - [CHG0036622](#)

## ###Included ADO Work Items

####QA/UAT: | ITEM | QA | UAT | -----|-----|-----| #77951 |PASS| PASS || #92305 |To be Hotfixed into UAT 7/12/22 | Hotfixed into UAT 7/12/22 PASS || #79371 |PASS| PASS|| #83666 |PASS| PASS || #85855 |PASS| PASS || #85942 |PASS| PASS|| #91335 | PASS| PASS|

##CAB - CHG0036622 [https://lithia.service-now.com/nav\\_to.do?uri=change\\_request.do?sys\\_id=d1bc6355875451186427c956cebb359f](https://lithia.service-now.com/nav_to.do?uri=change_request.do?sys_id=d1bc6355875451186427c956cebb359f)

## Release Health

| Topic               | Count |
|---------------------|-------|
| Release Size        | ■ 5   |
| QA Release Errors   | ■ 1   |
| QA findings         | ■ 2   |
| QA Hot Fixes        | ■ 2   |
| UAT Release Errors  | ■ 0   |
| UAT findings        | ■ 2   |
| UAT Hot Fixes       | ■ 2   |
| Prod Release Errors | ■ 0   |
| Prod Defects        | ■ 0   |
| Prod Hot Fixes      | ■ 0   |
| TOTAL               | ■ 9   |

- 1 or less in any of the above categories
- 2-4 total of any of the above categories
- 5 or more total of the above categories

## Release Size

- 1 - 7 Items
- 8-11 Items
- 12+

## ###Deployments

| Release | Test      | UAT       | Prod      |
|---------|-----------|-----------|-----------|
| v1.19.0 | 6/17/2022 | 6/21/2022 | 6/29/2022 |

## ###Included ADO Work Items

####QA/UAT: | ITEM | QA | UAT | -----|-----|-----| #82692 |Pass | PASS || #82773 |Not able to test | Not able to test| #85488 |Pass | PASS|| #89032 |Pass | PASS |

##CAB - CHG0036611 [https://lithia.service-now.com/nav\\_to.do?uri=change\\_request.do?sys\\_id=1c697c641b50dd98e49441d6b04bcba0](https://lithia.service-now.com/nav_to.do?uri=change_request.do?sys_id=1c697c641b50dd98e49441d6b04bcba0)

## Release Health

| Topic              | Count |
|--------------------|-------|
| Release Size       | ■ 4   |
| QA Release Errors  | ■ 0   |
| QA findings        | ■ 0   |
| QA Hot Fixes       | ■ 0   |
| UAT Release Errors | ■ 0   |
| UAT findings       | ■ 0   |
| UAT Hot Fixes      | ■ 0   |

Prod Release Errors

Prod Defects

Prod Hot Fixes

TOTAL

- 1 or less in any of the above categories
- 2-4 total of any of the above categories
- 5 or more total of the above categories

## Release Size

- 1 - 7 Items
- 8-11 Items
- 12+

## WhiteSource Scan

Security vulnerabilities identified: [104](#) Created new item to track: #89014

*WhiteSource is a task that looks for third party dependencies in our code, such as a grid control or a date picker. It will raise a red flag if it finds a dependency on an old package with known security risks. Most of the time, the mitigation is to update our code to reference an updated version of that package.*

## ###Deployments

| Release | Test      | UAT       | Prod      |
|---------|-----------|-----------|-----------|
| v1.18.0 | 6/14/2022 |           |           |
| v1.18.1 | 6/14/2022 |           |           |
| v1.18.2 | 6/16/2022 | 6/16/2022 | 6/21/2022 |

- Item 84907 was missing some deployment scripts. Version v1.18.1 addresses this.
- v1.18.2 addresses date pickers erroneously showing up for the new "Vehicle Allowance" row (84932).

## ###Included ADO Work Items

83666 unblocks 29568 on ETL side and should be released into prod shortly before 29568 #83666 #29568

####QA/UAT: | ITEM | QA | UAT | -----|-----|-----| #79577 | N/A | N/A || #83666 REMOVED FROM RELEASE POST PROD RELEASE |PASS | PASS|| #84907 |PASS | PASS || #84932 |PASS | PASS |

##CAB - CHG0036568 [https://lithia.service-now.com/nav\\_to.do?uri=%2Fchange\\_request.do%3Fsys\\_id%3Dffa532b287481dd06427c956cebb3556](https://lithia.service-now.com/nav_to.do?uri=%2Fchange_request.do%3Fsys_id%3Dffa532b287481dd06427c956cebb3556)

## Release Health

| Topic        | Count |
|--------------|-------|
| Release Size | ■ 4   |

## Topic Count

|                     |     |
|---------------------|-----|
| QA Release Errors   | ■ 1 |
| QA findings         | ■ 1 |
| QA Hot Fixes        | ■ 1 |
| UAT Release Errors  | ■ 0 |
| UAT findings        | ■ 0 |
| UAT Hot Fixes       | ■ 0 |
| Prod Release Errors | ■ 0 |
| Prod Defects        | ■ 1 |
| Prod Hot Fixes      |     |

TOTAL

- 1 or less in any of the above categories
- 2-4 total of any of the above categories
- 5 or more total of the above categories

## Release Size

- 1 - 7 Items
- 8-11 Items
- 12+

## WhiteSource Scan

Security vulnerabilities identified: [104](#) Created new item to track: #89014

*WhiteSource is a task that looks for third party dependencies in our code, such as a grid control or a date picker. It will raise a red flag if it finds a dependency on an old package with known security risks. Most of the time, the mitigation is to update our code to reference an updated version of that package.*

#Release v1.17.1

###Deployments

Release Test UAT Prod

v1.17.1 5/26/2022 5/31/2022 6/6/2022

###Included ADO Work Items

####QA/UAT: | ITEM | QA | UAT | -----|-----|-----| #84104 | PASS (regression only, see below)|PASS |

##CAB - CHG0036505 [https://lithia.service-now.com/nav\\_to.do?uri=change\\_request.do?sys\\_id=9c8618b31bb70dd0e49441d6b04bcb24](https://lithia.service-now.com/nav_to.do?uri=change_request.do?sys_id=9c8618b31bb70dd0e49441d6b04bcb24)

## Release Health

### Topic Count

|                     |     |
|---------------------|-----|
| Release Size        | ■ 1 |
| QA Release Errors   | ■ 0 |
| QA findings         | ■ 0 |
| QA Hot Fixes        | ■ 0 |
| UAT Release Errors  | ■ 0 |
| UAT findings        | ■ 0 |
| UAT Hot Fixes       | ■ 0 |
| Prod Release Errors | ■ 0 |
| Prod Defects        | ■ 0 |
| Prod Hot Fixes      | ■ 0 |

TOTAL ■ 0

- 1 or less in any of the above categories
- 2-4 total of any of the above categories
- 5 or more total of the above categories

## Release Size

- 1 - 7 Items
- 8-11 Items
- 12+

#Release v1.17.0

###Deployments

Release Test UAT Prod

**Release Test**    **UAT**    **Prod**  
v1.17.0 5/26/2022 5/26/2022 5/31/2022

#### ###Included ADO Work Items

####QA/UAT: | ITEM | QA | UAT | -----|-----|-----| #83683 | PASS| PASS| #83214 | PASS| PASS |

##CAB - CHG0036466 [https://lithia.service-now.com/nav\\_to.do?uri=change\\_request.do?sys\\_id=4fd3046877f05506427c956cebb35de](https://lithia.service-now.com/nav_to.do?uri=change_request.do?sys_id=4fd3046877f05506427c956cebb35de)

#### Release Health

| Topic               | Count |
|---------------------|-------|
| Release Size        | ■ 2   |
| QA Release Errors   | ■ 0   |
| QA findings         | ■ 0   |
| QA Hot Fixes        | ■ 0   |
| UAT Release Errors  | ■ 0   |
| UAT findings        | ■ 0   |
| UAT Hot Fixes       | ■ 0   |
| Prod Release Errors | ■ 0   |
| Prod Defects        | ■ 0   |
| Prod Hot Fixes      | ■ 0   |
| TOTAL               | ■ 0   |

- 1 or less in any of the above categories
- 2-4 total of any of the above categories
- 5 or more total of the above categories

#### Release Size

- 1 - 7 Items
- 8-11 Items
- 12+

#Release v1.16.0

#### ##Deployments

**Release Test**    **UAT**    **Prod**  
v1.16.0 5/23/2022 5/24/2022 5/25/2022

#### ###Included ADO Work Items

####QA/UAT: | ITEM | QA | UAT | -----|-----|-----| #61756 | PASS| PASS | #65624 | PASS (no op, just review)|N/A | #81381 | PASS | N/A - Not able to test, only happens in Prod|

##CAB - CHG0036431 [https://lithia.service-now.com/nav\\_to.do?uri=change\\_request.do?sys\\_id=8ede197b87eb85dc6427c956cebb351c](https://lithia.service-now.com/nav_to.do?uri=change_request.do?sys_id=8ede197b87eb85dc6427c956cebb351c)

#### Release Health

| Topic               | Count |
|---------------------|-------|
| Release Size        | ■ 3   |
| QA Release Errors   | ■ 0   |
| QA findings         | ■ 0   |
| QA Hot Fixes        | ■ 0   |
| UAT Release Errors  | ■ 0   |
| UAT findings        | ■ 0   |
| UAT Hot Fixes       | ■ 0   |
| Prod Release Errors | ■ 0   |
| Prod Defects        | ■ 0   |
| Prod Hot Fixes      | ■ 0   |
| TOTAL               | ■ 0   |

- 1 or less in any of the above categories
- 2-4 total of any of the above categories
- 5 or more total of the above categories

#### Release Size

- 1 - 7 Items
- 8-11 Items
- 12+

#Release v1.15.2 (Was v1.15.0) v1.15.1: The decision was made to include 83338 in the current release cycle, rather than to hotfix Prod. As a result we are converting this release to v1.15.1 and redeploying over lower environments. v1.15.2: Contains a fix to v1.15.0 feature 55714, recorded as bug 83676.

#### ###Deployments

| Release | Test | UAT | Prod |
|---------|------|-----|------|
|---------|------|-----|------|

|        |           |           |  |
|--------|-----------|-----------|--|
| 1.15.0 | 5/16/2022 | 5/17/2022 |  |
|--------|-----------|-----------|--|

|        |           |  |  |
|--------|-----------|--|--|
| 1.15.1 | 5/18/2022 |  |  |
|--------|-----------|--|--|

|        |           |           |           |
|--------|-----------|-----------|-----------|
| 1.15.2 | 5/19/2022 | 5/19/2022 | 5/23/2022 |
|--------|-----------|-----------|-----------|

#### ###Included ADO Work Items

####QA/UAT: | ITEM | QA | UAT | -----|-----|-----| #55714 | PASS | FAIL || #77914 |PASS | PASS || #79827 | PASS| PASS |

1.15.1 | ITEM | QA | UAT | -----|-----|-----| #83338 |PASS | PASS|

1.15.2 | ITEM | QA | UAT | -----|-----|-----| #55714 #83676 (DEFECT FIX FROM UAT FINDING)|PASS |PASS

##CAB - CHG0036420 [https://lithia.service-now.com/nav\\_to.do?uri=change\\_request.do?sys\\_id=6480b3971b67099ce49441d6b04bcbe0](https://lithia.service-now.com/nav_to.do?uri=change_request.do?sys_id=6480b3971b67099ce49441d6b04bcbe0)

#### Release Health

| Topic  | Count  |
|--|--------|
| Release Size                                 | ■ 4 +1 |
| QA Release Errors                            | ■ 0    |
| QA findings                                  | ■ 0    |
| QA Hot Fixes                                 | ■ 0    |
| UAT Release Errors                           | ■ 0    |
| UAT findings                                 | ■ 1    |
| UAT Hot Fixes                                | ■ 0    |
| Added an item after release was in UAT 83338 | ■ 1    |
| Prod Release Errors                          | ■ 0    |
| Prod Defects                                 | ■ 0    |
| Prod Hot Fixes                               | ■ 0    |
| TOTAL  | ■ 2    |

- 1 or less in any of the above categories
- 2-4 total of any of the above categories
- 5 or more total of the above categories

#### Release Size

- 1 - 7 Items
- 8-11 Items
- 12+

#Release v1.14.1 (was Release v1.14.0)

#### ###Deployments

| Test | UAT | Prod |
|------|-----|------|
|------|-----|------|

|          |           |           |
|----------|-----------|-----------|
| 5/9/2022 | 5/10/2022 | 5/12/2022 |
|----------|-----------|-----------|

#### ###Included ADO Work Items

####QA/UAT: | ITEM | QA | UAT | -----|-----|-----| #72266 |PASS | PASS || #76826 |PASS | PASS| #78786 |PASS | PASS || #79344 |PASS | PASS || #80888 |PASS | PASS|

##CAB -

#### Release Health

| Topic               | Count |
|---------------------|-------|
| Release Size        | ■ 5   |
| QA Release Errors   | ■ 0   |
| QA findings         | ■ 1   |
| QA Hot Fixes        | ■ 1   |
| UAT Release Errors  | ■ 0   |
| UAT findings        | ■ 0   |
| UAT Hot Fixes       | ■ 0   |
| Prod Release Errors | ■ 0   |
| Prod Defects        | ■ 0   |
| Prod Hot Fixes      | ■ 0   |
| TOTAL               | ■ 2   |

- 1 or less in any of the above categories
- 2-4 total of any of the above categories

■ 5 or more total of the above categories

## Release Size

- 1 - 7 Items
- 8-11 Items
- 12+

6

#Release v1.13.0

###Deployments

**Test      UAT      Prod**

4/27/2022 4/29/2022 5/9/2022

###Included ADO Work Items ####App Team:

#80407 --Hot fixed into QA environment 4/28

####QA/UAT: | ITEM | QA | UAT | -----|-----|-----| | #61851 |PASS w fix from #80407 |PASS| #66512 |PASS|PASS| #79037 |PASS|PASS| #80407 |PASS| PASS|

##CAB - CHG0036336 [https://lithia.service-now.com/nav\\_to.do?uri=change\\_request.do?sys\\_id=491477761b1f0518e49441d6b04bcb4a](https://lithia.service-now.com/nav_to.do?uri=change_request.do?sys_id=491477761b1f0518e49441d6b04bcb4a)

## Release v1.13.0 Health

| Topic                                   | Count |
|---|-------|
| Release Size                            | ■ 3   |
| QA Release Errors                       | ■ 0   |
| QA findings                             | ■ 1   |
| #80407                                  |       |
| QA Hot Fixes                            | ■ 1   |
| #80407 Hotfix deployed to QA 04/28      |       |
| UAT Release Errors                      | ■ 1   |
| App Deployment stalled. Redeploying 5/2 |       |
| UAT findings                            | ■ 0   |
| UAT Hot Fixes                           | ■ 0   |
| Prod Release Errors                     |       |
| Prod Defects                            |       |
| Prod Hot Fixes                          |       |
| TOTAL                                   |       |

- 1 or less in any of the above categories
- 2-4 total of any of the above categories
- 5 or more total of the above categories

## Release Size

- 1 - 7 Items
- 8-11 Items
- 12+

40707

#Release v1.12.0

###Deployments

**Test      UAT      Prod**

4/20/2022 4/26/2022 04/28/2022

###Included ADO Work Items ####App Team: [ADO Query](#) #14007 #68021 #70863 #73498 #76904 #78023

####QA/UAT: | ITEM | QA | UAT | -----|-----|-----| | #14007 |PASS|PASS| #68021 |PASS|PASS| #70863 |PASS| PASS| #73498 |PASS|PASS| #76904 |PASS| PASS| #78023 |PASS| PASS|

##CAB - CHG0036286 [https://lithia.service-now.com/nav\\_to.do?uri=change\\_request.do?sys\\_id=4ca4a17a870b8d906427c956cebb358b](https://lithia.service-now.com/nav_to.do?uri=change_request.do?sys_id=4ca4a17a870b8d906427c956cebb358b)

## Release v1.12.0 Health

| Topic              | Count |
|--------------------|-------|
| Release Size       | ■ 6   |
| QA Release Errors  | ■ 0   |
| QA findings        | ■ 0   |
| QA Hot Fixes       | ■ 0   |
| UAT Release Errors | ■ 0   |

**Topic****Count**

|                     |     |
|---------------------|-----|
| UAT findings        | ■ 0 |
| UAT Hot Fixes       | ■ 0 |
| Prod Release Errors | ■ 0 |
| Prod Defects        | ■ 0 |
| Prod Hot Fixes      | ■ 0 |
| TOTAL               | ■ 0 |

- 1 or less in any of the above categories
- 2-4 total of any of the above categories
- 5 or more total of the above categories

## Release Size

- 1 - 7 Items
- 8-11 Items
- 12+

#Release v1.11.0

## ###Deployments

| Test      | UAT       | Prod      |
|-----------|-----------|-----------|
| 4/13/2022 | 4/20/2022 | 4/26/2022 |

####Included ADO Work Items ####App Team: #66569 #67716 #74793 #75191

####QA/UAT: | ITEM | QA | UAT | -----|-----|-----|---| #66569  
| PASS (no op, regression check)

Tested by #78504 | PASS || #67716 | PASS

tested by #78503 | PASS || #74793 | PASS

tested by #78500 | PASS || #75191 | Nelson - This will fail in QA and UAT. That is expected and can be moved up environments with that considered. #78023 should full resolve it.

tested by #78499 | PASSED WITH EXCEPTION NOTED |

##CAB - CHG0036265 [https://lithia.service-now.com/nav\\_to.do?uri=change\\_request.do?sys\\_id=8aa1f30d1b4fc550e49441d6b04bcb9a](https://lithia.service-now.com/nav_to.do?uri=change_request.do?sys_id=8aa1f30d1b4fc550e49441d6b04bcb9a)

## Release v1.11.0 Health

**Topic****Count**

|                     |     |
|---------------------|-----|
| Release Size        | ■ 4 |
| QA Release Errors   | ■ 0 |
| QA findings         | ■ 2 |
| QA Hot Fixes        | ■ 0 |
| UAT Release Errors  | ■ 2 |
| UAT findings        | ■ 0 |
| UAT Hot Fixes       | ■ 0 |
| Prod Release Errors | ■ 0 |
| Prod Defects        |     |
| Prod Hot Fixes      |     |
| TOTAL               |     |

- 1 or less in any of the above categories
- 2-4 total of any of the above categories
- 5 or more total of the above categories

## Release Size

- 1 - 7 Items
- 8-11 Items
- 12+

#Release v1.10.1

## ###Deployments

**Test**    **UAT**    **Prod**  
4/15/2022 4/14/2022 4/18/2022

###Pull Request [PR 7335](#)

###Included ADO Work Items ####App Team: #78108

####QA/UAT: | ITEM | QA | UAT | -----|-----|-----|---| #78108 | N/A | PASS|

##CAB - CHG0036238

## Release v?? Health

### HOT FIX DID NOT GO THROUGH QA

| Topic               | Count |
|---------------------|-------|
| Release Size        | ■ 1   |
| QA Release Errors   | ■ 0   |
| QA findings         | N/A   |
| QA Hot Fixes        | N/A   |
| UAT Release Errors  | ■ 0   |
| UAT findings        | ■ 0   |
| UAT Hot Fixes       | ■ 2   |
| Prod Release Errors | ■ 0   |
| Prod Defects        | ■ 0   |
| Prod Hot Fixes      | ■ 0   |
| TOTAL               | ■ 2   |

- 1 or less in any of the above categories
- 2-4 total of any of the above categories
- 5 or more total of the above categories

## Release Size

- 1 - 7 Items
- 8-11 Items
- 12+

#Release v1.10.0

###Deployments

**Test**    **UAT**    **Prod**  
4/7/2022 4/12/2022 4/14/2022

###Included ADO Work Items ####App Team: #72479

####QA/UAT: | ITEM | QA | UAT | -----|-----|-----|---| #72479 | PASS | PASS |

##CAB - CHG0036211 and CHG0036218 [https://lithia.service-now.com/nav\\_to.do?uri=change\\_request.do?sys\\_id=3eccc3a2877241546427c956cebb35ed](https://lithia.service-now.com/nav_to.do?uri=change_request.do?sys_id=3eccc3a2877241546427c956cebb35ed) [https://lithia.service-now.com/nav\\_to.do?uri=change\\_request.do?sys\\_id=2b9ed6a687f201546427c956cebb3507](https://lithia.service-now.com/nav_to.do?uri=change_request.do?sys_id=2b9ed6a687f201546427c956cebb3507)

## Release v1.10.0 Health

| Topic               | Count  |
|---------------------|--|
| Release Size        | ■ 1  |
| QA Release Errors   | ■ 0  |
| QA findings         | ■ 1  |
| QA Hot Fixes        | ■ 1  |
| UAT Release Errors  | ■ 0  |
| UAT findings        | ■ 1<br>#47951 reintroduced into UAT            |
| UAT Hot Fixes       | ■ 0  |
| Prod Release Errors | ■ 1<br>Partially released and partially halted |
| Prod Defects        | ■ 0  |

| Topic                                      | Count |
|--|-------|
| Prod Hot Fixes                             | ■ 1   |
| TOTAL                                      | ■ 5   |
| ■ 1 or less in any of the above categories |       |
| ■ 2-4 total of any of the above categories |       |
| ■ 5 or more total of the above categories  |       |

## Release Size

- 1 - 7 Items
- 8-11 Items
- 12+

#Release v1.9.0

### ###Deployments

| Test       | UAT        | Prod       |
|------------|------------|------------|
| 04/04/2022 | 04/07/2022 | 04/12/2022 |

###Included ADO Work Items #####App Team: #61853 #71547 #71606 #71670 #71671 #71764 #72063 #73485 #73582 #69705 #70808 #67191 #72603 #75224 #76904 #76856 #77392  
 #####QA/UAT: | ITEM | QA | UAT | -----|-----|-----|---| #61853 |PASS|PASS| |#71547 |PASS|PASS| |#71606 |PASS|PASS| |#71670 |PASS|PASS| |#71671 |PASS|PASS| |#71764 |PASS (not store input sheet manual, new bug to be created) #76904 |PASS| |#72063 |PASS|PASS| |#73485 |PASS|PASS| |#73582 |PASS|PASS| |#69705 |PASS|PASS| |#70808 |PASS|PASS| |#67191 |PASS|PASS| |#72603 |PASS|PASS| |#75224 |PASS|PASS| |#76904 |FAIL - This actually broke functionality and the hotfix has been requested to be backed out. moved out of sprint|Not tested- Removed from Release| |#76856 |N/A|PASS| |#77392 | N/A Hotfixed to UAT| PASS|

##CAB - CHG0036193 [https://lithia.service-now.com/nav\\_to.do?uri=change\\_request.do?sys\\_id=a6cda08e87b249146427c956cebb35e1](https://lithia.service-now.com/nav_to.do?uri=change_request.do?sys_id=a6cda08e87b249146427c956cebb35e1)

## Release v1.9.0 Health

2nd Hotfix ended up breaking existing functionality and had to be reverted

| Topic               | Count         |
|---------------------|---------------|
| Release Size        | ■ 14          |
| QA Release Errors   | ■ 0           |
| QA findings         | ■ 2           |
| QA Hot Fixes        | ■ 2           |
| UAT Release Errors  | ■ 0           |
| UAT findings        | ■ 1<br>#77392 |
| UAT Hot Fixes       | ■ 1<br>#77392 |
| Prod Release Errors | ■ 0           |
| Prod Defects        |               |
| Prod Hot Fixes      |               |
| TOTAL               |               |

- 1 or less in any of the above categories
- 2-4 total of any of the above categories
- 5 or more total of the above categories

## Release Size

- 1 - 7 Items
- 8-11 Items
- 12+

**RISK** - High - This release will not be in Prod by 04/15. This is a very large release with a target date of being in prod by 04/15. This release has not yet been cut or moved into QA.

#Release v1.8.0

### ###Deployments

| Test      | UAT       | Prod      |
|-----------|-----------|-----------|
| 3/17/2022 | 3/23/2022 | 3/24/2022 |

###Included ADO Work Items #####App Team: #46205 #69660 #69709 #71581 #72279

####QA/UAT: | ITEM | QA | UAT | -----|-----|-----|---| #46205 |PASS | PASS || #69660 |PASS | PASS| #69709 |PASS | PASS| #71581 |PASS | PASS| #72279 |PASS | PASS|

##CAB - CHG0036090 [https://lithia.service-now.com/nav\\_to.do?uri=change\\_request.do?sys\\_id=b28acef7879e0d106427c956cebb3554](https://lithia.service-now.com/nav_to.do?uri=change_request.do?sys_id=b28acef7879e0d106427c956cebb3554)

## Release v1.8.0 Health

| Topic               | Count |
|---------------------|-------|
| QA Release Errors   | ■ 0   |
| QA findings         | ■ 1   |
| QA Hot Fixes        | ■ 1   |
| UAT Release Errors  | ■ 0   |
| UAT findings        | ■ 0   |
| QA Hot Fixes        | ■ 0   |
| Prod Release Errors | ■ 1   |
| Prod Defects        | ■ 1   |
| Prod Hot Fixes      | ■ 0   |
| TOTAL               | ■ 4   |

- 1 or less in any of the above categories
- 2-4 total of any of the above categories
- 5 or more total of the above categories

#Release v1.7.0

### ###Deployments

Test      UAT      Prod

03/10/2022 3/15/2022 3/22/2022

##Included ADO Work Items ####App Team: #71138 #70549 #70678 #71588 #66908 #66754

####QA/UAT: | ITEM | QA | UAT | -----|-----|-----|---| #71138 |PASS | PASS Only appears in Prod || #70549 | PASS | PASS | #70678 | PASS | PASS | #71588 | PASS | PASS | #66908 | PASS | PASS | #66754 | PASS | PASS

##CAB - CHG0036077 [https://lithia.service-now.com/nav\\_to.do?uri=change\\_request.do?sys\\_id=2f08801f875a45106427c956cebb3592](https://lithia.service-now.com/nav_to.do?uri=change_request.do?sys_id=2f08801f875a45106427c956cebb3592)

## Release v1.7.0 Health

| Topic               | Count |
|---------------------|-------|
| QA Release Errors   | ■ 0   |
| QA findings         | ■ 0   |
| QA Hot Fixes        | ■ 0   |
| UAT Release Errors  | ■ 0   |
| UAT findings        | ■ 0   |
| UAT Hot Fixes       | ■ 0   |
| Prod Release Errors | ■ 0   |
| Prod Defects        | ■ 0   |
| Prod Hot Fixes      | ■ 0   |
| TOTAL               | ■ 0   |

- 1 or less in any of the above categories
- 2-4 total of any of the above categories
- 5 or more total of the above categories

#Release v1.6.0

### ###Deployments

Test      UAT      Prod

03/01/2022 03/10/2022 3/14/2022

##Included ADO Work Items ####App Team: #66932 #66939 #66514 #66921

##QA/UAT: |ITEM |QA| UAT |---|---|---|---| #66932 |PASS|PASS| #66939 |PASS| PASS| #66514 |PASS|PASS| #66921 |PASS|PASS|

#72182 (a result of 66939) (PASS) #72178 (a result of 66939 Hotfixed into QA) (PASS) CAB - CHG0036040 [https://lithia.service-now.com/nav\\_to.do?uri=change\\_request.do?sys\\_id=f38e0b641b9685d0e49441d6b04bcbe4](https://lithia.service-now.com/nav_to.do?uri=change_request.do?sys_id=f38e0b641b9685d0e49441d6b04bcbe4)

#Release v1.5.0 Sprint 42 Release 1

### ###Deployments

**Test      UAT      Prod**

02/21/2022 2/28/2022 3/1/2022

###Included ADO Work Items ####App Team: #63559 #61755 #67682 #67684

####QA/UAT: |ITEM|QA| UAT| --|--|--| | #63559 |PASS|PASS| | #61755 ||PASS| | #67682 |PASS|PASS| | #67684 |PASS|PASS|

CAB - CHG0035956 [https://lithia.service-now.com/nav\\_to.do?uri=change\\_request.do?sys\\_id=c2e69948877949106427c956cebb3558](https://lithia.service-now.com/nav_to.do?uri=change_request.do?sys_id=c2e69948877949106427c956cebb3558)

#Release v1.4.2 Sprint 41 release 2

### ###Deployments

**Test      UAT      Prod**

02/14/2022 02/15/2022 02/21/2022

###Included ADO Work Items ####App Team: #59164 #63649

####QA/UAT: |ITEM|QA| UAT| --|--|--| | #59164 |PASS|PASS| | #63649 |PASS|PASS|

CAB CHG0035919 [https://lithia.service-now.com/nav\\_to.do?uri=change\\_request.do?sys\\_id=a36d434e87f105106427c956cebb3515](https://lithia.service-now.com/nav_to.do?uri=change_request.do?sys_id=a36d434e87f105106427c956cebb3515)

#Release v1.4.1 REV1 - Hotfix 69464###Deployments

**Test      UAT      Prod**

02/2022 02/20/2022 2/15/2022

###Included ADO Work Items ####App Team: #69464

####QA/UAT: |ITEM|QA| UAT| --|--|--| | #69464 |N/A|N/A|

CAB - CHG0035887 [https://lithia.service-now.com/nav\\_to.do?uri=change\\_request.do?sys\\_id=c2e69948877949106427c956cebb3558](https://lithia.service-now.com/nav_to.do?uri=change_request.do?sys_id=c2e69948877949106427c956cebb3558)

#Release v1.4.1 Sprint 41 release 1 ##(Semantic v) 1.4.1

### ###Deployments

**Test      UAT      Prod**

02/10/2022 02/11/2022 02/14/2022

###Included ADO Work Items ####App Team: #68203 #59165

####QA/UAT: |ITEM|QA| UAT| --|--|--| | #68203 |PASS|PASS| | #59165 |PASS|PASS|

CAB - CHG0035878 [https://lithia.service-now.com/nav\\_to.do?uri=change\\_request.do?sys\\_id=ed3eba6f872545106427c956cebb3520](https://lithia.service-now.com/nav_to.do?uri=change_request.do?sys_id=ed3eba6f872545106427c956cebb3520)

#Release v1.3.23 ##(Semantic v1.4.0)

### ###Deployments

**Test      UAT      Prod**

02/02/2022 02/08/2022 02/22/2022

###Included ADO Work Items ####App Team: #64241 #61857 #63877 #65551 #61845 #65431 #63806 #63822 #63820 #63617 #64060

Hotfixed into UAT #68485

####QA/UAT: |ITEM|QA| UAT| --|--|--| | #64241 |PASS| PASS| | #61857 |PASS|PASS| | #63877 |PASS|PASS| | #65551 |PASS| PASS| | #65431 |PASS|PASS| | #61845 |PASS|PASS| | #63806 |PASS|PASS| | #63822 |PASS| PASS| | #63820 |PASS|PASS| | #63617 |PASS|PASS| | #64060 |PASS|PASS| | #68485 |N/A Hotfixed into UAT| PASS|

CAM# CHG0035857 [https://lithia.service-now.com/nav\\_to.do?uri=change\\_request.do?sys\\_id=d3e692521b6505148a372025604bcbb4](https://lithia.service-now.com/nav_to.do?uri=change_request.do?sys_id=d3e692521b6505148a372025604bcbb4)

#Release v1.3.22 ###Deployments

**Test      UAT      Prod**

01/19/2022 01/26/2022 02/10/2022

###Included ADO Work Items ####App Team: #58063 #61755 -- REMOVED FROM RELEASE #47464 #55775 #63559 - REMOVED FROM RELEASE #61834 #62029 #55777 #59163 #61834 #61839 #61988

####QA/UAT: |ITEM|QA| UAT| --|--|--| | #58063 #58062 needs to pass and deployed 1st as part of 1.3.21 to add the new fields, then once successful this can go in and remove | This needs to be pulled from the release until ETL data is flowing|N/A pulled from release| | #61755 |PASS| FAIL - REMOVED FROM RELEASE | | #47464 |PASS|PASS| | #55775

|PASS|PASS| #63559 |PASS|FAIL - REMOVED FROM RELEASE| #61834 |PASS|PASS| #62029 |PASS|PASS| #55777 |PASS|PASS| #59163 |PASS|PASS| #61834 |PASS|PASS| #61839 |PASS|PASS| #61988 |PASS|PASS|

CAB - CHG0035804 [https://lithia.service-now.com/nav\\_to.do?uri=change\\_request.do?sys\\_id=10892f5b1b1dc1500b7ceac2604bcbff](https://lithia.service-now.com/nav_to.do?uri=change_request.do?sys_id=10892f5b1b1dc1500b7ceac2604bcbff)

#Release v1.3.21 ###Deployments

**Test      UAT      Prod**

01/11/22 01/18/2022 01/24/2022

###Included ADO Work Items #####App Team: #57530 #54946 (Once released notify ETL Team) #57774 #58062 #55701 #59160 #58063 **#58062 needs to pass and deployed 1st as part of 1.3.21 to add the new fields, then once successful this can go in and remove**

####QA/UAT: |ITEM |QA| UAT| |--|--|--| #57530 |PASS|PASS| #54946 |PASS|PASS| #57774 |PASS|PASS| #58062 |PASS|PASS| #55701 |PASS|PASS| #59160 |PASS|PASS| #61755 |NA|REMOVED FROM Release -- Moved to Release 1.3.22| #58063 58062 All Pay app - Add new Time Card Source Systems(SS) & Source System Fields(SF) Release Ready needs to pass and deployed 1st as part of 1.3.21 to add the new fields, then once successful this can go in and remove |NA|REMOVED FROM Release -- Moved to release 1.3.22|

#54946 Once this has it's feature flags turned on the DB load will need to be manually ran #61755 - REMOVED FROM SPRINT -- Moved to Sprint 1.3.22

CAB - CHG0035753 [https://lithia.service-now.com/nav\\_to.do?uri=change\\_request.do](https://lithia.service-now.com/nav_to.do?uri=change_request.do)

#Release v1.3.20 ###Deployments

**Test      UAT      Prod**

12/21/2021 01/03/2022 01/06/2022

###Included ADO Work Items #####App Team: #43518 #56470 #55069 #55363 #54948 #52418 #58556 #26079 #57531 #41320 #55364

####QA/UAT: |ITEM |QA| UAT| |--|--|--| #43518 |PASS|PASS| #56470 |PASS|PASS| #55069 |PASS|PASS| #55363 |PASS|This is a UAT Pass for now. We can't fully test this because it errors out because case expressions are greater than 10. That should be fixed with #47464 When I try it with a super small grid it works as expected. | #54948 |PASS|FAIL - HOTFIX Has been deployed to UAT for retest -- PASS 1/6/22 after hotfix| #52418 |PASS|PASS| #58556 |PASS|PASS| #26079 |PASS|PASS| #57531 |PASS|PASS - Will need to update footers once in Prod - Note for BFT| #41320 |PASS|PASS| #55364 |PASS|PASS|

CAB Link - [https://lithia.service-now.com/nav\\_to.do?uri=change\\_request.do?sys\\_id=1893f2831bf849508a372025604bcb97](https://lithia.service-now.com/nav_to.do?uri=change_request.do?sys_id=1893f2831bf849508a372025604bcb97) CHG0035654

#Release v1.3.19 ###Deployments

**Test      UAT      Prod**

12/21/2021 12/27/2021

###Included ADO Work Items #####App Team: #48454 #7662 #48457 #48459 #51884 #55414 #48457 Duplicate, or is this supposed to be a different story? -sean #55016

####QA/UAT: |ITEM |QA| UAT| |--|--|--| #48454 |PASS|PASS| #7662 |PASS|HOW TO TEST?| #48457 |PASS|PASS| #48459 |PASS|PASS| #51884 |PASS|HOW TO TEST?| #55414 |PASS| #48457 |PASS|PASS| Duplicate, or is this supposed to be a different story? -sean | #55016 ||HOW TO TEST?|

#Release v1.3.18 ###Deployments

**Test      UAT      Prod**

11-29-2021 12/09/2021 12/21/2021

###Included ADO Work Items #####App Team: #51889 #52410 #52409 #51858 #52465 #48177 #50744 #50763 #50759 #50764 #50765 #50766 #48455

####QA/UAT: |ITEM |QA|Feature Flag in QA |UAT|Feature Flag In UAT|Notes| |--|--|--| #51889 |PASS|N/A|PASS|N/A|| #52410 |PASS|N/A|PASS|N/A|| #52409 |PASS|N/A|PASS|N/A|| #51858 |PASS|N/A|PASS|N/A|| #52465 |PASS|N/A|PASS|N/A|| #48177 |PASS|N/A|PASS|N/A|| #50744 |PASS|ON|PASS|ON|IN ETL UAT| #50763 |PASS|ON|PASS|OFF|NOT IN ETL QA YET| #50759 |PASS|ON|PASS|OFF|NOT IN ETL QA YET| #50764 |PASS|ON|PASS|OFF|NOT IN ETL QA YET| #50765 |BLOCKED|ON|PASS|OFF|WILL NOT HAVE DATA, ETL not doing| #50766 |PASS|ON|PASS|OFF|IN ETL QA| #48455 |N/A|N/A|PASS|N/A|

Definitions:

Feature Flag ON means that the feature is available to be used Feature Flag OFF means that feature is currently not available to be used

CAB - CHG0035593

#Release #48632 ###Deployments

|Test| UAT | Prod | |--|--| ||12/06/2021| Target move to prod on 11/29 ---> 12/06

###Included ADO Work Items #####App Team: #48632 #40045

MUST BE COORDINATED WITH ETL RELEASE 1.0.8.22 THIS CAN NOT BE DEPLOYED BETWEEN THE 11th and 20th OF ANY MONTH!

Was in release 1.3.15 but must be pulled due to the above dependency

####QA/UAT: |ITEM |QA| UAT| |--|--|--| #48632 |PASS|PASS| #40045 |PASS|PASS|

CAB - CHG0035505

#Release HOTFIX 57243 ###Deployments

| Test       | UAT        | Prod       |
|------------|------------|------------|
| 12/08/2021 | 12/08/2021 | 12/08/2021 |

###Included ADO Work Items #####App Team: #57243

####QA/UAT: |ITEM|QA| UAT| --|--|--| #57243 |||

#Release v1.3.17 ###Deployments

|Test| UAT | Prod | --|--| | 11/12/2021|11/22/2021|11/29/2021| Target move to prod on Monday 11/29

###Included ADO Work Items #####App Team: #42979 #50665 #51848 #48841 #26106 #51876 #48045 #53468 #54094

####QA/UAT: |ITEM|QA| UAT| --|--|--| #42979 |PASS|PASS| | #50665 |PASS|PASS| | #51848 |PASS|PASS| | #48841 |PASS|PASS| | #26106 |PASS|PASS| | #51876 |PASS|PASS| | #48045 |PASS|PASS| | #53468 |PASS|PASS| | #54094 |PASS|PASS|

CAB - CHG0035463

#Release hotfix for 55767 and 21284 ###Deployments

| Test       | UAT        | Prod       |
|------------|------------|------------|
| 11/29/2021 | 11/29/2021 | 11/29/2021 |

###Included ADO Work Items #####App Team:

####QA/UAT: |ITEM|QA| UAT| --|--|--| #55767 ||| | #21284 |||

#Release Hotfix #54907 #53342 ###Deployments

| Test       | UAT        | Prod       |
|------------|------------|------------|
| 11/19/2021 | 11/19/2021 | 11/19/2021 |

###Included ADO Work Items #####App Team: #54907 #53342

####QA/UAT: |ITEM| UAT| --|--|--| | #54907 |PASS| | #53342 |PASS|

CAB = CHG0035440

#Release v1.3.16 ###Deployments

| Test      | UAT        | Prod       |
|-----------|------------|------------|
| 11/5/2021 | 11/11/2021 | 11/15/2021 |

###Included ADO Work Items #####App Team: #47853 #47854 #49874 #50090 #50179 #39415

HOT FIX #53342 -- REMOVED FROM RELEASE 11/15/2021

####QA/UAT: |ITEM|QA| UAT| --|--|--| | #47853 |PASS|PASS| | #47854 |PASS|PASS| | #49874 |PASS|PASS| | #50090 |PASS|PASS with Exception| | #50179 |PASS|PASS| | #39415 |PASS|PASS| | #53342 |HOT FIX to UAT| FAIL - REMOVED FROM RELEASE|

CAB - CHG0035425

#Release v1.3.15 ###Deployments

| Test       | UAT       | Prod      |
|------------|-----------|-----------|
| 10/22/2021 | 11/1/2021 | 11/4/2021 |

###Included ADO Work Items #####App Team: #26075 #26105 #28120 #30371 #38181 #39405 #39407 #40919 #45808 #46562 #46608 #47951 #48632 -- REMOVED FROM RELEASE, ETL RELEASE DEPENDENCY #48479 #51342

Bug Found during UAT -- #51579

CAB - CHG0035373

####QA/UAT: |ITEM|QA| UAT| --|--|--| | #26075 |PASS|PASS| | #26105 |PASS|PASS| | #28120 |PASS|PASS| | #30371 |PASS|PASS| | #38181 |PASS|PASS| | #39405 |PASS|PASS| | #39407 |PASS|PASS| | #40919 |PASS|PASS| | #45808 |PASS|PASS| | #46562 |PASS|PASS| | #46608 |PASS|PASS| | #47951 |PASS|PASS| | #48632 |PASS| The request is to pull this from release 1.3.15 as this depends on the ETL going to Prod at the same time. Currently on the ETL side the story is in QA with a target completion of Friday, Then moving to UAT. This can not be deployed between the 11th and 20th of any month. Separating this out from the release will allow the release to continue on to production. Created subtask to track it's removal| | #48479 |PASS|PASS| | #51342 HOT FIXED INTO UAT | | PASS|

#Release MANUAL DB UPDATES - 504,502,503 ###Deployments

| Test | UAT | Prod |
|------|-----|------|
|------|-----|------|

10/27/2021

##Included ADO Work Items #####App Team: #50720

####QA/UAT: |ITEM |QA| UAT| |--|--|--| | #50720 [|2:29 PM] Taylor Ward - I am able to find employees from all 3 stores in Dev & Test. This is a pass in Test/Dev. <[CAB - \[https://lithia.service-now.com/nav\\\_to.do?uri=change\\\_request.do?sys\\\_id=878774541b2330108a372025604bcb2b\]\(https://lithia.service-now.com/nav\_to.do?uri=change\_request.do?sys\_id=878774541b2330108a372025604bcb2b\) CHG0035322](https://teams.microsoft.com/l/message/19:614c5d0f27f545698c8e7296522e0410@thread.skype/1635366557793?tenantId=f1a215ee-6910-4213-aec6-ac36fdca6048&groupId=f2951bc5-f13c-4505-9883-194bfe2b3824&parentMessageId=1635362513892&teamName=Advanced Incentive Comp&channelName=General&createdTime=1635366557793> ||</a></p></div><div data-bbox=)

UAT Approvals Create appropriate backups - COMPLETE Create back-out plan documentation - COMPLETE IF PROD: Create CAB request (can be submitted as an emergency change as subtask). - IN PROGRESS FOR PROD Notify Business Team of intentions to deploy manually. - Alert sent in teams - COMPLETE Task for ETL Team approval and assign to ETL team member. - Uma Approved - COMPLETE Task for QA approval and assign to QA. -- APPROVED - COMPLETE Task for App Team approval and assign to SEM. - APPROVED - COMPLETE Notify DevOps team of intentions to deploy manually. - Alert sent in teams - COMPLETE Post intentions to deploy in Teams - Advanced Incentive Comp – General chat. - COMPLETE Ensure all subtasks are completed and closed prior to manual deployment.

PROD Approvals (Pending UAT success) Create appropriate backups - COMPLETE Create back-out plan documentation - COMPLETE IF PROD: Create CAB request (can be submitted as an emergency change as subtask). - IN PROGRESS FOR PROD Notify Business Team of intentions to deploy manually. - Alert sent in teams - Task for ETL Team approval and assign to ETL team member. - Uma Approved - COMPLETE Task for QA approval and assign to QA. -- Approved - COMPLETE Task for App Team approval and assign to SEM. - Andy Approved - COMPLETE Notify DevOps team of intentions to deploy manually. - Alert sent in teams Post intentions to deploy in Teams - Advanced Incentive Comp – General chat. Ensure all subtasks are completed and closed prior to manual deployment.

RELEASE HOT FIX - 51074 #51074

###Deployments

**Test      UAT      Prod**

10/29/2021 10/29/2021

CAB - CHG0035344

#Release v1.3.14 ###Deployments

**Test      UAT      Prod**

10/07/2021 10/21/2021 10/25/2021

##Included ADO Work Items #####App Team: #39411 #42760 #43524 #42874 #43819 #43740 #42869 #49681 -- Bug Fix pulled into UAT

\*\*\*\* #42757 \*\* *Needs to be tested with this Release when v1.3.14 gets to UAT.*\*\*

####Test Cases: #38196

####QA/UAT: |ITEM |QA| UAT| |--|--|--| | #39411 |PASS|PASS| | #42760 |PASS|PASS| | #43524 |PASS|PASS| | #42874 |PASS| PASS| | #43819 |PASS|PASS| | #43740 |PASS|PASS| | #42869 |PASS|PASS| | #42757 |PASS|PASS| | #49681 | | PASS| | Test Case #38196 |||

**Hotfix** - Disable call to “HistoricalDataForEmployeeByPeriod\_Read” for the Create Adjustment / Termination Check view, and hide the Historical Data grid so that the “calculate” function will not collide with the historical data calculation. TBD #48654 and to be undone in #49690 at a later time

**Hotfix 2** - Making a field not required. #49681

CAB - CHG0035306

#Release v1.3.13 ###Deployments

**Test      UAT      Prod**

09/14/2021 10/07/2021 10/11/2021

##Included ADO Work Items #####App Team: #39857 #43164 #36840 #42759 #41732 #42758

####QA/UAT: |ITEM |QA| UAT| |--|--|--| | #39857 |PASS| PASS| | #43164 |PASS|PASS| | #36840 |PASS|PASS| | #42759 |PASS|PASS| | #41732 |PASS|PASS| | #42758 | FAIL -- Restested on 10/6 with dev adjustments - PASS |PASS|

#Release v1.3.12-hotfix

## Rollback changes for #40045

###Deployments

**Test      UAT      Prod**

-- 09/22/2021 09/22/2021

##Included ADO Work Items #####App Team:

#40045

####QA/UAT: |ITEM |QA| UAT| |--|--|--| | #40045 |||

CAB - CHG0035015

#Release v1.3.12 ###Deployments

**Test      UAT      Prod**  
09/01/2021 09/10/2021 09/22/2021

###Included ADO Work Items #####App Team:

#38172 #39402 #39408 #39418 #40032 #40045 #40901 #40933 #41140 #41454 #41707

####QA/UAT: |ITEM|QA|UAT|--|--|--| #38172 |PASS|PASS| #39402 |PASS|PASS| #39408 |Conditional PASS. Refer to story for comments bug #44106 created |PASS| #39418 |Hot Fix Applied after initial failure, Girish passed after hot fix deployed| PASS| #40032 |PASS|PASS| #40045 |PASS|PASS| #40901 |PASS|| #40933 |PASS|PASS| #41140 |PASS| PASS| #41454 |PASS|PASS| #41707 |PASS|PASS|

\*\* #41732 may be resolved with #400326

CAB - CHG0035015

\*\* #40045 was removed from the release as it would disrupt the ETL nightly process. This story will remain in lower environments until the FILog work is complete on the ETL side.

#Release v1.3.11 ###Deployments

**Test      UAT      Prod**

08/20/2021 08/31/2021 09/07/2021

NEED TO REMEMBER: ADD GROUPS TO APP REGISTRATION FOR ENVIRONMENT AND UPDATE MANIFEST. ASK BFT TO CLEAR BROWSER TEMP FILES AND SIGN-OUT / BACK IN ONCE DEPLOYED. --Also note that users will need to remove browser history--

###Included ADO Work Items #####App Team: #38170

####QA/UAT: |ITEM|QA|UAT|--|--|--| #38170 |PASS|PASS|

These must be resolved prior to deploying to each environment. Test - INC0348444 UAT = INC0349138 and Prod = INC0349139 (COMPLETE)

CAB - CHG0034949

Special Notes: As part of an upcoming All Pay Application release to increase performance, once released you will need to do the following steps.

If you have not bookmarked the application page please do so prior to starting the steps below

Please close the application and Press the Windows Button + R to open the "Run" dialog box.

Enter this text: %temp%

Click "OK." This will open your temp folder.

Press Ctrl + A to select all.

Press "Delete" on your keyboard and click "Yes" to confirm.

All temporary files will now be deleted. Note: Some files may not be able to be deleted. If you are prompted about files that are missing or in use, click the check box next to "Do this for all current items" and click "Skip."

Please note that if you run into an error telling you that you do not have permission to perform this task, do not worry. Clear all error messages and continue with the steps below

Clear your Google history

On your Android phone or tablet, open the Chrome app .

At the top right, tap More History.

If your address bar is at the bottom, swipe up on the address bar. Tap History .

Tap Clear browsing data.

Next to "Time range," select how much history you want to delete. To clear everything, tap All time.

Check "Browsing history." Uncheck any other data you don't want to delete.

Tap Clear data.

To delete your search history, learn about clearing activity saved in My Activity.

Clear your Edge history

To clear browsing data on your computer, make sure sync is turned off. Items that are synced will be cleared across all synced devices.

Here's how to clear your browsing data in Microsoft Edge:

Select Settings and more > Settings > Privacy, search, and services .

Under Clear browsing data, select Choose what to clear.

Choose a time range from the Time range drop-down menu.

Choose the types of data you want to clear (see the table below for descriptions). For example, you may want to remove browsing history and cookies but keep passwords and form fill data.

Select Clear now.

Try to log into the application again, if you get an "access denied" error, please try signing out in the top right corner of the app and log back in.

#Release v1.3.10 ###Deployments

| Test       | UAT        | Prod       |
|------------|------------|------------|
| 08/11/2021 | 08/19/2021 | 08/30/2021 |

#### NEED TO REMEMBER TO UPDATE LOGIC APP IN AZURE WHEN DEPLOYING THIS RELEASE.

###Included ADO Work Items #####App Team: #31566 #37663 #37880 #39400 #39848

####QA/UAT: |ITEM|QA| UAT| |--|--|--| | #31566 |PASS|PASS| | #37663 |PASS|PASS| | #37880 |PASS|PASS| | #39400 |PASS|PASS| with the following errors I opened 3 bugs based on this User Story so that we could get it passed. #42869, #42867, #42874 || #39848 |PASS|PASS|

#Release v1.3.9 ###Deployments

| Test       | UAT        | Prod       |
|------------|------------|------------|
| 08/02/2021 | 08/11/2021 | 08/19/2021 |

###Included ADO Work Items #####App Team: #31970 #35154 #33157 #38048 #38161 #34763 #32063 #36429 #38234 #35979

Review #6752 as well once this goes into Prod with the reporting team

####QA/UAT: |ITEM|QA| UAT| |--|--|--| | #31970 |PASS|PASS| | #35154 |PASS|PASS| | #33157 |PASS|PASS| | #38048 |PASS|PASS| | #38161 |PASS|PASS| | #34763 |PASS|PASS| | #32063 |PASS|PASS| | #38234 |PASS|PASS| | #36429 |PASS|PASS| | #35979 || | Removed #38170 from the release. The sign out button was working but caused other issues. Further investigation is needed.

CAB form for 1.3.9 [https://lithia.service-now.com/sysapproval\\_approver\\_list.do?sysparm\\_query=sysapproval%3Dd185dd0e1b46f810e49441d6b04bcbaa%5E&sysparm\\_view=](https://lithia.service-now.com/sysapproval_approver_list.do?sysparm_query=sysapproval%3Dd185dd0e1b46f810e49441d6b04bcbaa%5E&sysparm_view=) Please approve.

#Release v1.3.8 ###Deployments

| Test   | UAT    | Prod    |
|--------|--------|---------|
| 7/1/21 | 7/7/21 | 7/12/21 |

###Included ADO Work Items #####App Team: #34068

####QA/UAT: |ITEM|QA| UAT| |--|--|--| | #34068 |PASS|PASS|

#37095

#Release v1.3.7 ###Deployments

| Test       | UAT        | Prod       |
|------------|------------|------------|
| 06/24/2021 | 06/28/2021 | 06/29/2021 |

###Included ADO Work Items #####App Team: #31212 #31220 #31334 #33218 #33343 #33342

####QA/UAT: |ITEM|QA| UAT| |--|--|--| | #31212 |PASS|PASS| | #31220 |PASS|PASS| | #31334 |PASS|PASS| | #33218 |PASS|PASS| | #33343 |PASS|PASS| | #33342 |PASS|PASS|

HOT FIX items Included in 1.3.7 Hotfix Moved to Prod on 06/30

#33264 #34715

HOT FIX items Included in 1.3.7 Hotfix Moved to Prod on 07/01 #33363

#Release v1.3.6 ###Deployments

| Test       | UAT        | Prod       |
|------------|------------|------------|
| 06/16/2021 | 06/23/2021 | 06/24/2021 |

###Included ADO Work Items #####App Team: #31418 #31468 #31306 #31159 #31823 #29922 #31166

####QA/UAT: |ITEM|QA| UAT| |--|--|--| | #31418 |PASS|PASS| | #31468 |PASS|PASS| | #31306 |PASS|PASS| | #31159 |PASS|PASS| | #31823 |PASS|PASS| | #33216 and #33218 created as a result of this|PASS on 31823| | #29922 |PASS|PASS| | #31166 |PASS|PASS Taylor Ward - @Tiffany Misener @Girish Prabhakara i updated it last week or the week before, i think they are using the prod version going forward and not test. once the ETL stories have gone up into prod and testing is complete, we can change the test versions of the reports to match the prod version. right now UAT and prod are using "Test" and Dev/UAT just started using the prod version (which includes these updates) this week.|

#Release v1.3.5 ###Deployments

| Test     | UAT       | Prod      |
|----------|-----------|-----------|
| 6/9/2021 | 6/14/2021 | 6/15/2021 |

###Included ADO Work Items #####App Team: #18439 #25940 #29922 #29998 - Additional piece needed for this in Release 1.3.6 #30014 #30268

####QA/UAT: |ITEM|QA| UAT| |--|--|--| | #18439 |PASS|PASS| | #25940 |Partial fail. 3 stores not showing up.|PASS| | #29922 |FAIL - Both BN1 codes are not pulling. Needs retesting once the new code is implemented (Can't be tested until [https://dev.azure.com/LithiaMotors/Advanced%20Incentive%20Program/\\_workitems/edit/31418](https://dev.azure.com/LithiaMotors/Advanced%20Incentive%20Program/_workitems/edit/31418)) is complete|N/A (Not fixed in

this release fully. Will go in as hot fix later) | #29998 |PASS| PASS| |#30014 |PASS| PASS with Exception: The decimals are rounding to a full percentage instead of showing as like 96.774% like in the request. Nelson creating ticket for rounding issue. || #30268 |PASS| PASS|

#### #Release v1.3.4 ###Deployments

**Test      UAT      Prod**

05/28/2021 06/03/2021 06/09/2021

###Included ADO Work Items #####App Team: #27102 #28657 #29398 #29802

####QA/UAT: |ITEM |QA| UAT| |--|--|--| | #27102 |PASS|PASS| | #28657 |PASS|PASS| | #29398 |PASS|PASS| | #29802 |N/A - No testing for this item| N/A|

Hotfix #31187

#### #Release v1.3.3 ###Deployments

**Test      UAT      Prod**

05/18/2021 05/26/2021 06/03/2021

###Included ADO Work Items #####App Team: #27226 #27381 #28549 #27704 #23724 #27382 #27823 #28923 #29997

####QA/UAT: |ITEM |QA| UAT| |--|--|--| | #27226 |PASS|PASS| | #27381 |PASS|PASS| | #28549 |Unable to test since DIPS doesn't generate in TEST env. Will need to test in UAT|PASS| | #27704 |PASS|PASS| | #23724 |PASS|PASS| | #27382 |PASS|PASS| | #27823 |PASS|PASS| | #28923 |PASS|PASS| | #29997 |N/A|PASS|

#### #Release v1.3.2 ###Deployments

**Test      UAT      Prod**

05/12/2021 05/18/2021 05/24/2021

###Included ADO Work Items #####App Team: #24409 #25131 #25155 #26058 #26066 #26546 #26598

####QA/UAT: |ITEM |QA| UAT| |--|--|--| | #24409 |PASS|PASS| | #25131 |PASS|PASS| | #25155 |Partial PASS. OTP value is not pulling into the report. BTP value is slightly different. Will be verified in UAT|PASS| | #26058 |PASS|PASS| | #26066 |PASS|PASS| | #26546 |PASS|PASS| | #26598 |PASS|PASS|

CHG0034389

#### #Release v1.3.1 ###Deployments

**Test      UAT      Prod**

05/05/2021 05/11/2021 05/17/2021

###Included ADO Work Items #####App Team: #19192 #21111 #25160 #26533 #27517

####QA/UAT: |ITEM |QA| UAT| |--|--|--| | #19192 |PASS|PASS| | #21111 |PASS|PASS| | #25160 |PASS|PASS| | #26533 |PASS|PASS| | #27517 |PASS|PASS|

#### #Release v1.3.0 ###Deployments

**Test      UAT      Prod**

05/03/2021 05/05/2021 05/10/2021

###Included ADO Work Items #####App Team: #24992 #26850

####QA/UAT: |ITEM |QA| UAT| |--|--|--| | #24992 |PASS|PASS| | #26850 |Partial PASS. Bug #27524 needs to be fixed|PASS|

#### #Release v1.2.25 ###Deployments

**Test      UAT      Prod**

04/22/2021 04/29/2021 05/05/2021

###Included ADO Work Items #####App Team: #13987 #18270 #18646 #23330 #22986 #24968 #25115

####QA/UAT: |ITEM |QA| UAT| |--|--|--| | #13987 |PASS|PASS| | #18270 |PASS|PASS| | #18646 |PASS|PASS| | #23330 |PASS| PASS| | #22986 |PASS|PASS| | #24968 |PASS|PASS| | #25115 |PASS|PASS|

Will include #27544

CAB - [https://lithia.service-now.com/nav\\_to.do?uri=%2Fchange\\_request.do%3Fsys\\_id%3Deea803bf1bbf201075f6ed3cbc4bcb7f%26sysparm\\_view%3D%26sysparm\\_domain%3Dnull%26sysparm\\_domain\\_scope%3Dnull](https://lithia.service-now.com/nav_to.do?uri=%2Fchange_request.do%3Fsys_id%3Deea803bf1bbf201075f6ed3cbc4bcb7f%26sysparm_view%3D%26sysparm_domain%3Dnull%26sysparm_domain_scope%3Dnull)

#### #Release v1.2.24 ###Deployments

**Test      UAT      Prod**

04/06/2021 04/14/2021 04/27/2021

##Included ADO Work Items #####App Team: #22863 #20980 #17111 #19226 #19910 #22548 #23043 #22553 #13835 #15649 #21095 #21175 #23465 #24461  
####QA/UAT: |ITEM |QA| UAT| |--|--| | #22863 |PASS|PASS| | #20980 |@Girish - #23170 may need to be removed for this to work as they impact the same code but was a hot fix to pass footer testing. PASS|PASS| | #17111 |PASS|PASS| | #19226 |PASS|PASS| | #19910 |Partial PASS. Unable to view DIPS to compare data between Tech report and DIPS. Compared report data from TEST and DIPS from UAT. The numbers match.|PASS| | #22548 |PASS|PASS| | #23043 |PASS|PASS| | #22553 |PASS|PASS| | #13835 |PASS|PASS| | #15649 |PASS|PASS| | #21095 |PASS|PASS WITH EXCEPTION - @Girish Prabhakara do you think we could open a story for the sorting (this may span multiple parts of the app) and another story for the divested stores that are showing blank company numbers? I think for this bug we are ok to pass for prod ready (2 stories 1 for divested stores and 1 for sorting)| | #21175 |PASS|PASS| | #23465 |PASS|PASS| | #24461 |PASS|PASS|

#Release v1.2.23 HOT FIX ###Deployments

| Test | UAT       | Prod      |
|------|-----------|-----------|
| --   | 3/30/2021 | 3/30/2021 |

##Included ADO Work Items #####App Team:

#23170

####QA/UAT: |ITEM |QA| UAT| |--|--| | #23170 |Pass| Pass|

#Release v1.2.23 ###Deployments

| Test       | UAT        | Prod      |
|------------|------------|-----------|
| 03/16/2021 | 3/19/2021* | 3/25/2021 |

##Included ADO Work Items #####App Team:

#18352 #18404 #18483 #17929 #13445 #18824 #18357 #19191 #19196 #19937 #20064 #17931

####QA/UAT: |ITEM |QA| UAT| |--|--| | #17929 |PASS|N/A| | #18352 |PASS|PASS| | #18404 |PASS| PASS| | #18483 |PASS| PASS| | #13445 |PASS| PASS| | #18824 |PASS| PASS| | #18357 |PASS|PASS| | #19191 |PASS| Will require hotfix for button name change. The button will be renamed as part of the bug fix for 22553 AllPay app - Store input page editable when locked | #19196 |PASS| PASS| | #19937 | | UAT APPROVED - Not testable in current release. Depends on 20980 AllPay app - Pay Calendar date fields in all pages II to be able to show the dates. Will be needed to be tested either in backend SQL or wait for 20980. A call will be set up to review backend SQL change at 4pm today| | #20064 |PASS| PASS| | #17931 |PASS| N/A |

|

\*Approval was granted to expedite to UAT without completing QA work. This was due to the desire to unblock footers and that testing would be able to be preformed better in UAT with a larger data set. Approvals were received from QA, BFT, ETL.445

#Release v1.2.23 ###Deployments

| Test | UAT        | Prod       |
|------|------------|------------|
| n/a  | 03/30/2021 | 03/30/2021 |

##Included ADO Work Items #####App Team:

#23170

####QA/UAT: |ITEM |QA| UAT| |--|--| | #23170 |PASS|PASS|

#Release v1.2.22 ###Deployments

| Test       | UAT        | Prod     |
|------------|------------|----------|
| 03/03/2021 | 03/11/2021 | 03/18/20 |

##Included ADO Work Items #####App Team: #13006 #13961 #16628 #16846 #16951 #18197 #18287 #18972 #19494

####QA/UAT: |ITEM |QA| UAT| |--|--| | #13006 |PASS| PASS| | #13961 |PASS| PASS| | #16628 |PASS|PASS| | #16846 |Needs to be tested in UAT since TEST env doesn't have enough data.| PASS with BUG created for fast follow in #21175 1.2.23| | #16951 |PASS| PASS| | #18197 |Needs to be tested in UAT since SSRS page doesn't display all info in TEST.| PASS| | #18287 |PASS| PASS| | #18972 |PASS| PASS| | #19494 |Same as 16846| PASS|

#Release v1.2.21 ###Deployments

| Test       | UAT        | Prod       |
|------------|------------|------------|
| 02/10/2021 | 02/24/2021 | 03/10/2021 |

##Included ADO Work Items #####App Team: #8908 #8909 #13984 #15045 #15687 #15988 #16002 #16845 #16925 #17778 #13972 #15322 #15827 #15901 #16037 #16206 #16299

####QA/UAT: |ITEM |QA| UAT| |--|--| | #15045 |PASS| PASS| | #15687 |PASS|PASS| | #13984 |PASS| PASS| | #16002 |PASS| PASS| | #16925 |PASS| PASS| | #16299 |PASS| PASS| | #13972 |PASS| PASS - additional item created| | #15827 |PASS| PASS| | #15901 |PASS| PASS| | #16037 |PASS| PASS| | #16206 |PASS| PASS| | #8908 |PASS|PASS| | #8909 |PASS|PASS| | #17778 |PASS| PASS| | #16845 |PASS|PASS| | #15988 |PASS| PASS| | #15322 |PASS| PASS|

#Release v1.2.20 ###Deployments

| Test       | UAT        | Prod       |
|------------|------------|------------|
| 01/14/2021 | 02/10/2021 | 02/11/2021 |

###Included ADO Work Items #####App Team: #14896

####QA/UAT: |ITEM|QA|UAT| |--|--|--| | #14896| PASS|PASS

#Release v1.2.19 ###Deployments

## Test      UAT      Prod

01/07/2021 01/14/2021 02/10/2021

###Included ADO Work Items #####App Team: #14594 #10130 #12550 #1535

#17072 - hot fix #17073 - hot fix #17074 - hot fix

####QA/UAT: |ITEM|QA|UAT| |-|-|-|-| #14594 | PASS (Also observed #15322)|PASS|| #10130 |PASS|PASS| #12550 |PASS|PASS|| #15356 |PASS|PASS| #17072 |PASS|PASS| #17073 |PASS|PASS| #17074 |PASS|PASS|

#Release v1.2.18 ###Deployments

### Test      UAT      Prod

12/31/2020 1/6/2021 1/7/2021

###Included ADO Work Items #####App Team: #15596 #9614 #12949 #12844 #12740 #12882 #1212

####QA/UAT: [ITEM|QA|UAT|---|---|---| #9614|PASS|PASS||#12949|PASS|PASS||#12844|PASS|PASS 1/7 JH #15119 Created for current Sprint and it passes as well JH| #12740|PASS|PASS||#12882|PASS|PASS||#12128|PASS|PASS|

#Release v1.2.17 ###Deployments

## Test      UAT      Production

12/18/2020 12/30/2020 -- (14654. and 14655. deployed 12/31/2020) 01/06/2021

###Included ADO Work Items #####App Team: #10119 #10120 #12297 #10122 #10123 #12297 #10972 #12957 #11786 #12828 #12956 #1316

#14654 #14655

####QA/UAT: |Release| ITEM |QA| UAT| ---|---|---| 1|2.17| #10119 |PASS| PASS| 1|2.17| #12297 |PASS - Additional bugs found| PASS - New bug created relating to receiving an error message but still saving.| 1|2.17| #10120 |PASS| PASS| 1|2.17| #10123 |PASS| PASS| 1|2.17| #10972 |PASS| PASS| 1|2.17| #12957 |PASS| PASS| 1|2.17| #11786 |PASS| PASS| 1|2.17| #12828 |PASS| PASS| 1|2.17| #12956 |PASS| PASS| 1|2.17| #13169 |PASS| PASS| 1|2.17| #10122 |PASS| PASS| 1|2.17| #14654 |N/A| PASS| 1|2.17| #14655 |N/A| PASS|

#Release v1.2.16 ###Deployments

### Test      UAT      Prod

12/4/2020 12/18/2020 12/23/2020

###Included ADO Work Items #####App Team: #7445 #10743 and #13147 #13147 #11711 and #13392 #11988 #12465 #10125 #10126

####QA/UAT: |Release| ITEM |QA| UAT| --| --| --| |1.2.16| #7445 | PASS | FAIL 12/18 TM. -- PASS 12/22 TM| |1.2.16| #10125 | PASS |Unable to initially test, no UAT permission groups -- 12/23PASS JH| |1.2.16| #10127 | PASS | Unable to initially test, no UAT permission groups -- 12/23PASS JH| |1.2.16| #10743 and #13147 | 12/11 PASS| FAIL 12/18 JH -- PASS 12/22 JH with new story #13790 | |1.2.16| #11711 and #13392 | PASS | Only able to be tested in DEV| |1.2.16| #11988 | PASS | 12/22 PASS contingent on the addition of #13835 Summary Sheet Report UAT Finding - Increase Column Width New to be done in the future | |1.2.16| #12465 | FAIL | CONDITIONAL PASS 12/18 TM - pending known validation issue I was able to edit a pay calendar and the changes were saved. but the changes did not validate before the entry was saved. |

#Release v1.2.15 ###Deployments

### Test      UAT      Prod

11/19/2020 12/3/2020 12/14/2020

###Included ADO Work Items #####App Team: #11018 #11182 #12295 #11259 #11280 #11344 #12490 #11401 #12489 #11500 #11785 #11787 #11820 #12033 #9613

###QA/UAT Status | Release| ITEM | QA| UAT | |-|-|-| |1.2.15| #11018|PASS|12/07 - PASS TM| |1.2.15| #11182|#12295|PASS|12/07 - PASS TM| |1.2.15| #11259| PASS| 12/04 - PASS TM| |1.2.15| #11280|PASS| 12/04 - PASS TM| |1.2.15| #11344|#12490|PASS (FAILS in test but works in UAT, Verified in UAT it appears to be env related)| 12/04 PASS TM| |1.2.15| #11401|#12489|12/02 - PASSED|12/04 PASS TM| |1.2.15| #11500|PASS| 12/04 PASS TM| |1.2.15| #11785|PASS| 12/04 PASS TM| ||1.2.15| #11787|PASS| N/A| |1.2.15| #11820|N/A| N/A| |1.2.15| #12033|PASS| N/A| |1.2.15| #9613|PASS| PASS 12/07 TM|

#Release v1.2.14 ###Deployments

### Test      UAT      Prod

Test CAT Prod  
11/10/2020 11/24/2020 12/2/2020

###Included ADO Work Items #####App Team: #7545 #9299 #10741 #10829 #10830 #10832 #10946 #10971 #10989 #1116

####QA/UAT: |Release| ITEM |QA| UAT|ADO Link| --|---| |1.2.14| #7545 | PASS |PASS TM 12/1 -- FAIL TM  
11/25|https://dev.azure.com/LithiaMotors/Advanced%20Incentive%20Program/\_workitems/edit/12280| |1.2.14| #9299 | PASS| N/A| |1.2.14| #10741 | PASS| PASS TM 11/25 || |1.2.14| #10829 |PASS| PASS TM 11/25 || |1.2.14| #10830 | PASS|PASS TM 11/25 | |1.2.14| #10837 |PASS with UI changes needed |PASS with UI changes needed TM 11/25 || |1.2.14| #10946 |PASS|PASS TM 11/25 || |1.2.14| #10971 |PASS|N/A| |1.2.14| #10989 |PASS|FAIL TM 11/25 Approved to move to Production and fix in Sprint  
11|https://dev.azure.com/LithiaMotors/Advanced%20Incentive%20Program/\_workitems/edit/12297|| |1.2.14| #11190 |PASS| PASS TM 12/1 -- FAIL TM

#Release v1.2.13 ###Deployments

**Test      UAT      Prod**  
10/26/2020 11/10/2020 11/12/2020

###Included ADO Work Items #####App Team: #10073 #9107 #9930 #7494 #9687 #10185 #10178 #10528

**Added late as Hotfix:**

#10466 #10879

5238

#Release v1.2.12 ###Deployments

**Test      UAT      Prod**  
10/23/2020 10/28/2020 11/04/2020

###Included ADO Work Items #####ETL Team: #10565 #10690

###Notes This release was a minor update required by the ETL team. Details can be found here:  
[https://dev.azure.com/LithiaMotors/Advanced%20Incentive%20Program/\\_git/AllPay/pullrequest/935](https://dev.azure.com/LithiaMotors/Advanced%20Incentive%20Program/_git/AllPay/pullrequest/935)

#Release v1.2.11 ###Deployments

**Test      UAT      Prod**  
10/22/2020 10/28/2020 11/04/2020

###Included ADO Work Items #9300 #9339 #9340 #9366 #9505 #9615 #9925 #9961 #9989 #10563 #10375

#Release v1.2.10 ###Deployments

**Test      UAT      Prod**  
10/7/2020 10/7/2020 10/19/2020

###Included ADO Work Items #8079 #9612 #8652 #9493 #8318 #9948 #9949

#Release v1.2.9 ###Deployments

**Test      UAT      Prod**  
9/23/2020 9/23/2020 10/2/2020

###Included ADO Work Items #7878 #8650

#Release v1.2.8 ###Deployments

**Test      UAT      Prod**  
9/17/2020 9/17/2020 9/22/2020

###Included ADO Work Items #7523 #7829 #7865 #7882 #8628 #8649

#Release v1.2.7 ###Deployments

**Test      UAT      Prod**  
9/2/2020 9/2/2020 9/9/2020

###Included ADO Work Items #6750 #8206 #8205 #6739 #7564 #7563 #7444 #8125 #6740 #7836

#Release HOT FIX - BUG 15596 ###Deployments

**Test      UAT      Prod**  
TBD TBD 1/25/2021

###Included ADO Work Items #####App Team: #15596

####QA/UAT: |ITEM|QA|UAT| |--|--|--| |#15596| PASS |N/A|

#Source System Field Extensions

###Description:

Source system field extensions are a way to influence the run-time 'behaviors' of **individual Source System Fields** within the AllPay 'system'. This includes front end (UI) behavioral changes as well as backend db behavioral changes.

Source system field 'extensions' are implemented as a single row in the table below per each source system field that needs 'extending' for any reason.

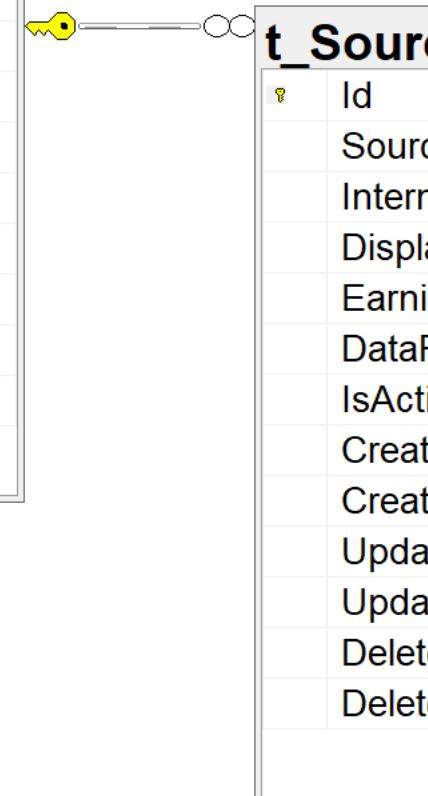
Null values in any of the extension columns will produce no effect for that field.

###Environments: All

###Data Table: ref.t\_SourceSystemFieldExtensions

## t\_SourceSystem (ref)

|                   |
|-------------------|
| Id                |
| InternalName      |
| DisplayName       |
| IsActive          |
| CreatedByUserName |
| CreatedTimestamp  |
| UpdatedByUserName |
| UpdatedTimestamp  |
| DeletedByUserName |
| DeletedTimestamp  |



##Current Field Extensions (columns): these are the current table columns 'switches' that can be used to influence the field behaviors...

####ValueType : defines the expected 'type' of the field ValueString value. used in grid field formatting.

####IsCalculatedFromPeriodRange : sets the aggregation behavior of the field (e.g. timetracking fields)

####DataFetchOverrideTableField if set, this is the table [schema].[name] of where to fetch the field value from.

####IsHidden if set to true, field will be 'invisible' in the UI (absent in dropdown lists, etc).

####FetchForPeriod details forthcoming

####EIBClassificationId details forthcoming

## Automated database copying of PayRoll DB from Production to lower environments

### SCOPE

1. Ideally, we'd like a full copy of the PayRoll database so the data is in sync (not just payplans but also footers, payroll data, templates, etc.) - Taylor Ward

### CONSIDERATIONS/RISKS

1. Copying does not cause permissions errors
  - a. Permissions will not be affected if we copy only select tables down as outlined in the spike output.
2. Shouldn't copy down ETL schema (over write ETL in lower environments)
  - a. If this is a requirement than we cannot copy the full database down as per Taylor's request.
  - b. The challenge with this is described in #5 below.
3. Need to identify which tables will be copied and a plan for preserving IDs (see **Payroll Tables to Copy.xlsx** attached to #46477).
  - b. Preservation plan addressed here --
4. The automation should happen periodically (1-3 weeks).
  - a. Automation schedule identified here --
5. Load IDs in Prod will not align with lower environments / Differing ID's/ID mismatch in envs, SourceSystemField IDs will not match with lower environments (especially for SMIS and need check for other too) ETL needs historic data in lower environments.
  - a. This will be accounted for by...
4. How this would be tested/verified. (see test cases and test strategy section below)
  - a. This will be tested and verified by (see test cases and test strategy section below)
5. Roll back strategy in case of failure or error
  - a. Rollback strategy will rely primarily on Point-In-Time-Restore (PITR) with DB backups as a secondary measure. Backups will be retained for 2 business days before deletion.
  - b. List of errors documented here...
6. Performance or duration thresholds and notifications if delayed, successful or failure.
  - a. Performance thresholds are...
  - b. Duration thresholds are...
  - c. Notification strategy for delayed, successful or failure, distribution method, frequency, steps to correct/resolve
8. HRIS team for some of their reports hard code IDs from tables and when we copy them down
  - a. This is addressed by...
10. Different phases of work in each environment Ideally, we only trigger automation when both teams are in code freeze
  - a. This is addressed by..
11. Merge conflicts
  - a. This is addressed by..

### BLOCKERS

1. Excluding ETL Schema.
  - a. A full copy of the PayRoll database cannot be achieved without the objects in the ETL schema.
2. Copying select tables only.
  - a. Excluding the tables in the ETL schema is challenging because they include columns such as SourceSystemFieldId, PayrollId, LoadId, etc. Some of these IDs will likely differ between environments.

### Source System fields to be copied and frequency

### Pay Plan data fields to be copied and frequency

### DEPENDENCIES

1. HRIS team for some of their reports hard code IDs from tables and when we copy them down
2. ETL and App development in lower environments (Could overwrite work in progress)

### ASSOCIATED WORK ITEMS

- This spike should be split between ENG and TechBA #46477

- Research and document tables that can be copied into lower env.s and what is the feasibility and complexity around doing this?
- Identify and document risks
- Identify and document roll back strategy in case of failure or error
- Determine how to handle Differing ID's/ID mismatch in envs
- Need to identify which tables will be copied and a plan for preserving IDs
- Identify roll back strategy
- Identify error messages and associated actions and escalations
- Identify and document performance or duration thresholds and notifications if delayed, successful or failure.
- Determine if Copying PayPlans tool should be used in this, modified or completely separate and justify

## TEST STRATEGY

## TEST CASES

## DEFINITION OF DONE

## NICE TO HAVE, NON MVP

1. Nice to have -- the ability to copy down on demand -- Not required.

- a. Will or will not include decision

## Manual DB copy Production to UAT or Test Process

\*\*Back out plan: Swap the backed-up Database to its original name if the implementation fails & validate the UAT ADF connections to the DB

\*\*Contact Cloud Engineering Team just in case of any major issues / security concerns

1. Business Approval for Prod to UAT AllPayETL db restore

2. DevOps Code Deployment Freeze to UAT and PROD

3. Monitor Production Loads for completion

4. UAT ETL Load Freeze - Disable all the ADF Triggers if active

5. Take UAT scripts back up (security, users, user role, external data source, external table)

a. External table references will need to be re-created and permissions re-assigned, Replace external data sources with UAT specific details; Alter EXTERNAL DATA SOURCE [SQLServerInstance] set LOCATION = N'azwu2apsqls-uat.database.windows.net' b. *backups should also be taken of certain individual tables such as t\_Reports, t\_SourceSystemFieldExtensions and t\_FeatureFlag.*

Alter EXTERNAL DATA SOURCE [SQLServerInstanceDM] set LOCATION = N'ldp-uat-sqlsv.database.windows.net' 6. PROD to UAT Database restore (via temp Server)

- a. \*\*when creating new server - downgrade the config to 2vcores

7. Rename the existing UAT database

8. PayRoll DB Prod to UAT restore - confirmation

- a. external tables are dependent on the Payroll db objects

9. Execute UAT Restore scripts from Step #5

10. Test for the Linked Service connection from UAT ADF to the restored DB

11. Check for the SourceFiles in Datalake

- a. \*\*Handle records for dim\_company (other tables as applicable/needed) based on the environment specific LOADIDs

12. ETL smoke test for all sources

a. Initial Loads can fail here due to lack of execute permission: GRANT EXECUTE ON SCHEMA ::Transformation TO [AZWU2APDFY-UAT] GRANT EXECUTE ON SCHEMA ::Curated TO [AZWU2APDFY-UAT] GRANT EXECUTE ON SCHEMA ::Staging TO [AZWU2APDFY-UAT] GRANT EXECUTE ON SCHEMA ::Shared TO [AZWU2APDFY-UAT] GRANT EXECUTE ON SCHEMA ::dbo TO [AZWU2APDFY-UAT]

13. ETL Load Data Validation

14. Test Database DevOps pipeline (dummy - E2E)

15. Enable ADF Triggers if applicable

16. Business Validation & Sign off

17. App Team Sign off

18. Clean up unwanted Azure Resources

## AllPay Payplan Copy Tool

Source Environment

MIKESANDBOX2

Target Environment

MIKE

Validate t\_SourceSystem and t\_SourceSystemField

1. Validate DB Table Consistency

ALL PASSED

## Table Validation Output

```
"FootersOnly": "True"  
},  
"FullCompareValidation": {  
    "TableCount": 12,  
    "TableList": "[lkup].[t_PayPlanStatus], [lkup].[t_PayPlanUsage], [lkup].[t_PayRateType],  
[ref].[t_Tag], [lkup].[t_DataType], [lkup].[t_DataFormatType], [lkup].[t_PayPlanCommissionP  
    "InvalidCount": 0,  
    "FullCompareMessages": []  
}  
}
```

2. Compare Pay Plans

3. Validate Selected PP

**PASSED: 3 PayPlans re**

Source Pay Plans    Selected Count: 3

| Selected                            | Id   | Usage | Name                                | F.Name |
|-------------------------------------|------|-------|-------------------------------------|--------|
| <input type="checkbox"/>            | 3824 | 4     | Failover_Testing_Footer             |        |
| <input type="checkbox"/>            | 3828 | 4     | db test 12/22                       |        |
| <input type="checkbox"/>            | 3830 | 4     | Test-15045                          |        |
| <input type="checkbox"/>            | 3840 | 4     | MyLittleFooter                      |        |
| <input type="checkbox"/>            | 3841 | 4     | testfooter123                       |        |
| <input checked="" type="checkbox"/> | 3848 | 4     | SM - Commission - Monthly COM       |        |
| <input checked="" type="checkbox"/> | 3849 | 4     | SM - Tech - RTH - Closed RO         |        |
| <input checked="" type="checkbox"/> | 3850 | 4     | SM - Tech - Body Shop - Input Sheet |        |
| <input type="checkbox"/>            | 3851 | 4     | SM - Sales Rep - Semi-Monthly COM   |        |
| <input type="checkbox"/>            | 3852 | 4     | SM - Sales Rep - Monthly COM        |        |

Select All

UnSelect All

## PP Compare Output

```
},  
"OrganizationValidationForPayPlans": {},  
"PayGroupValidationForPayPlans": {}  
}  
}
```



## Sandbox resources:

Resource Group: [AllPayScratchRG](#) SQL Server: [allpayscratchsqlsvr](#) Key vault: [AllPayScratchKV](#)

To import and use a database into the sandbox, you will need to use the SQL Server user LitAdmin (password in the key vault). Once you import the database it will still have all the old users but most will not work (including PayRollAppUser).

To run the application locally against your sandbox DB, we have a separate user SandboxAppUser (password in key vault) that can be used in your connection string. You will need to add the SandboxAppUser to your database by executing the following script:

```
-- For login login_name, create a user in the database
CREATE USER [SandboxAppUser]
    FOR LOGIN [SandboxAppUser]
    WITH DEFAULT_SCHEMA = dbo
GO

-- Add user to the database owner role
EXEC sp_addrolemember N'db_owner', N'SandboxAppUser'
GO
```

| ADO #                         | Feature Flag Status QA | Feature Flag Status UAT | Feature Flag Status PROD | Impact of Feature Flag                   | Criteria for removing | Feature Flag Removed Date QA | Feature Flag Removed Date UAT | Feature Flag Removed Date PROD |
|-------------------------------|------------------------|-------------------------|--------------------------|--|-----------------------|------------------------------|-------------------------------|--------------------------------|
| #40045                        | ON                     | ON                      | ON                       | Allows for FI Log ingestion              | TBD                   | TBD                          | TBD                           | TBD                            |
| #50744                        | ON                     | ON                      | ON (1/6/22)              | RAPINDV data ingestion of W/BW           | TBD                   | TBD                          | TBD                           | TBD                            |
| #50763                        | ON                     | ON (1/6/22)             | ON 1/10/22               | TBD                                      | TBD                   | TBD                          | TBD                           | TBD                            |
| #50759                        | ON                     | OFF                     | OFF                      | TBD                                      | TBD                   | TBD                          | TBD                           | TBD                            |
| #50764                        | ON                     | ON                      | ON                       | TBD                                      | TBD                   | TBD                          | TBD                           | TBD                            |
| #50765                        | ON                     | OFF                     | OFF                      | TBD                                      | TBD                   | TBD                          | TBD                           | TBD                            |
| #50766                        | ON                     | ON (1/6/22)             | ON 1/10/22               | TBD                                      | TBD                   | TBD                          | TBD                           | TBD                            |
| Performance Dashboard         | ON                     | OFF                     | OFF                      | TBD                                      | TBD                   | TBD                          | TBD                           | TBD                            |
| TimecardHrs                   | ON                     | ON                      | ON                       | TBD                                      | TBD                   | TBD                          | TBD                           | TBD                            |
| TimecardDays                  | ON                     | ON                      | ON                       | TBD                                      | TBD                   | TBD                          | TBD                           | TBD                            |
| DisplayStoreInputImportButton | ON                     | ON                      | ON                       | Displays Store Input Sheet Button        | TBD                   | TBD                          | TBD                           | TBD                            |
| DisplayEquationBuilderOnGrids | ON                     | OFF                     | OFF                      | Displays Equation Builder for Grid Plans | TBD                   | TBD                          | TBD                           | TBD                            |
| Source System                 | DEV                    | TEST                    | UAT                      | PROD                                     |                       |                              |                               |                                |
| FI                            | 1                      | 1                       | 1                        | 1  |                       |                              |                               |                                |
| RAP Individual                | 1                      | 1                       | 1                        | 1  |                       |                              |                               |                                |
| RAP Total                     | 0                      | 1                       | 0                        | 0  |                       |                              |                               |                                |
| Advisor Daily Sales           | 0                      | 1                       | 1                        | 1  |                       |                              |                               |                                |
| CSSDealer                     | 0                      | 1                       | 0                        | 0  |                       |                              |                               |                                |
| Performance Dashboard         | 0                      | 1                       | 0                        | 0  |                       |                              |                               |                                |
| MIS Standard                  | 0                      | 1                       | 1                        | 1  |                       |                              |                               |                                |
| SPE Standard                  | 0                      | 1                       | 1                        | 1  |                       |                              |                               |                                |
| TimecardHrs                   | 0                      | 1                       | 1                        | 1  |                       |                              |                               |                                |
| TimecardDays                  | 0                      | 1                       | 1                        | 1  |                       |                              |                               |                                |

**Determine type of feature flag:**

- Data Flags - these are typically table based and used to reduce dependency between teams releasing data tables and the data that feeds them. It is anticipated that once both ETL and APP team have deployed the tables and data feed successfully in production that these will be removed.
- UI Flags – These are typically in the JSON config. These show or hide a specific UI element.

When determining the need to use a feature flag the removal criteria should be discussed and agreed upon by any team impacted (APP, ETL, Reporting, BFT, Support, other)

Factors that should be considered when determining the feature flag removal criteria include

- Stability – Is functionality and overall system stable
- Consistency/Reliability – Is the performance of the functionality impacted consistent?
- Confidence – measure of the teams confidence that all items have been accounted for
- Risks and Impacts Identified with mitigation strategies identified.
- Awareness of impacted teams – Other stakeholders are aware and approve of the removal and concerns have been addressed.

**Steps:**

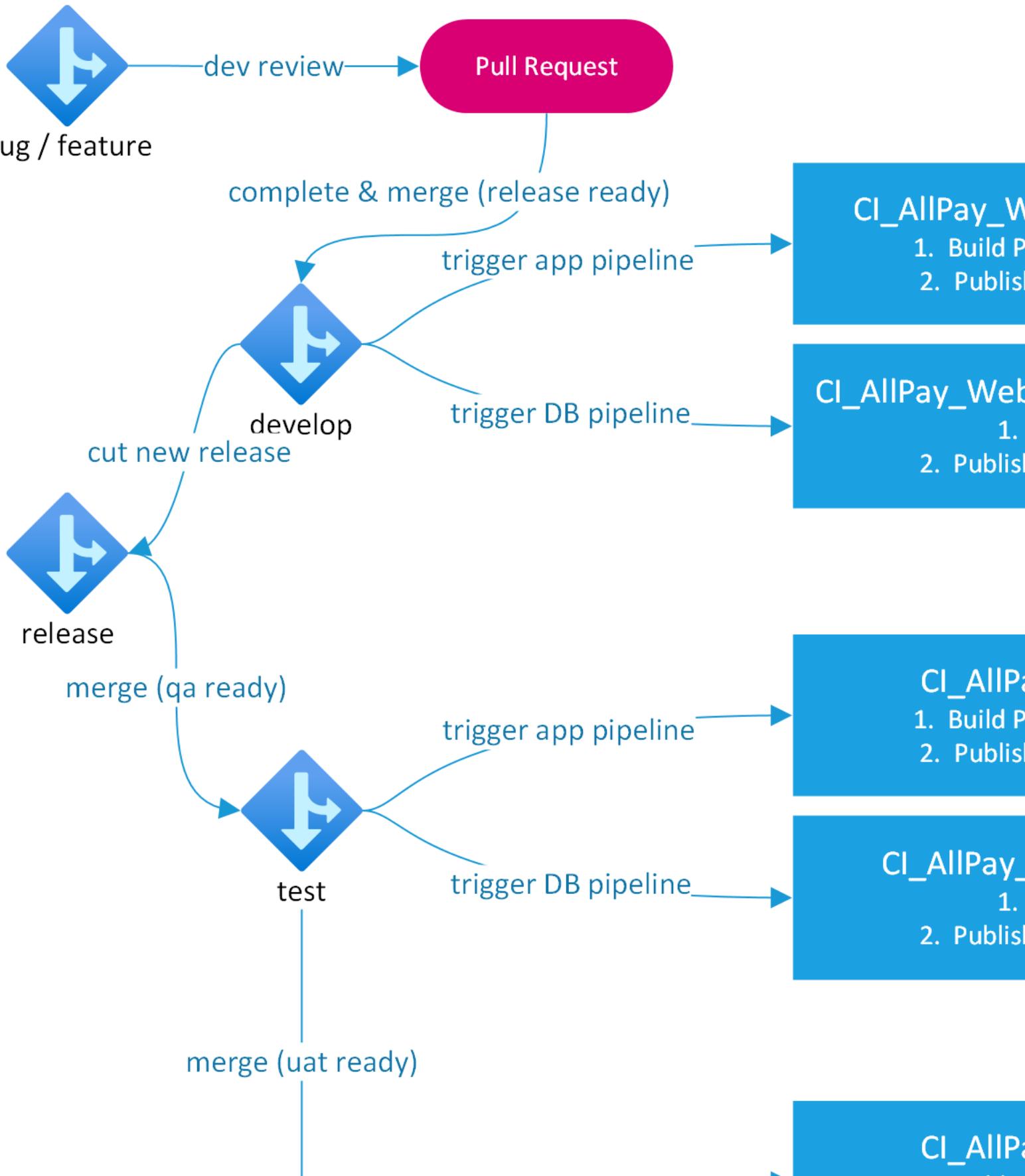
1. When the need for a feature flag is determined to be needed, its sunsetting plan is discussed and documented in the user story and [https://dev.azure.com/LithiaMotors/Advanced%20Incentive%20Program/\\_wiki/wikis/Advanced-Incentive-Program.wiki/2006/Feature-Flags](https://dev.azure.com/LithiaMotors/Advanced%20Incentive%20Program/_wiki/wikis/Advanced-Incentive-Program.wiki/2006/Feature-Flags) table as well as in an ADO item entered into the anticipated target sprint for removal.
2. When the removal date approaches

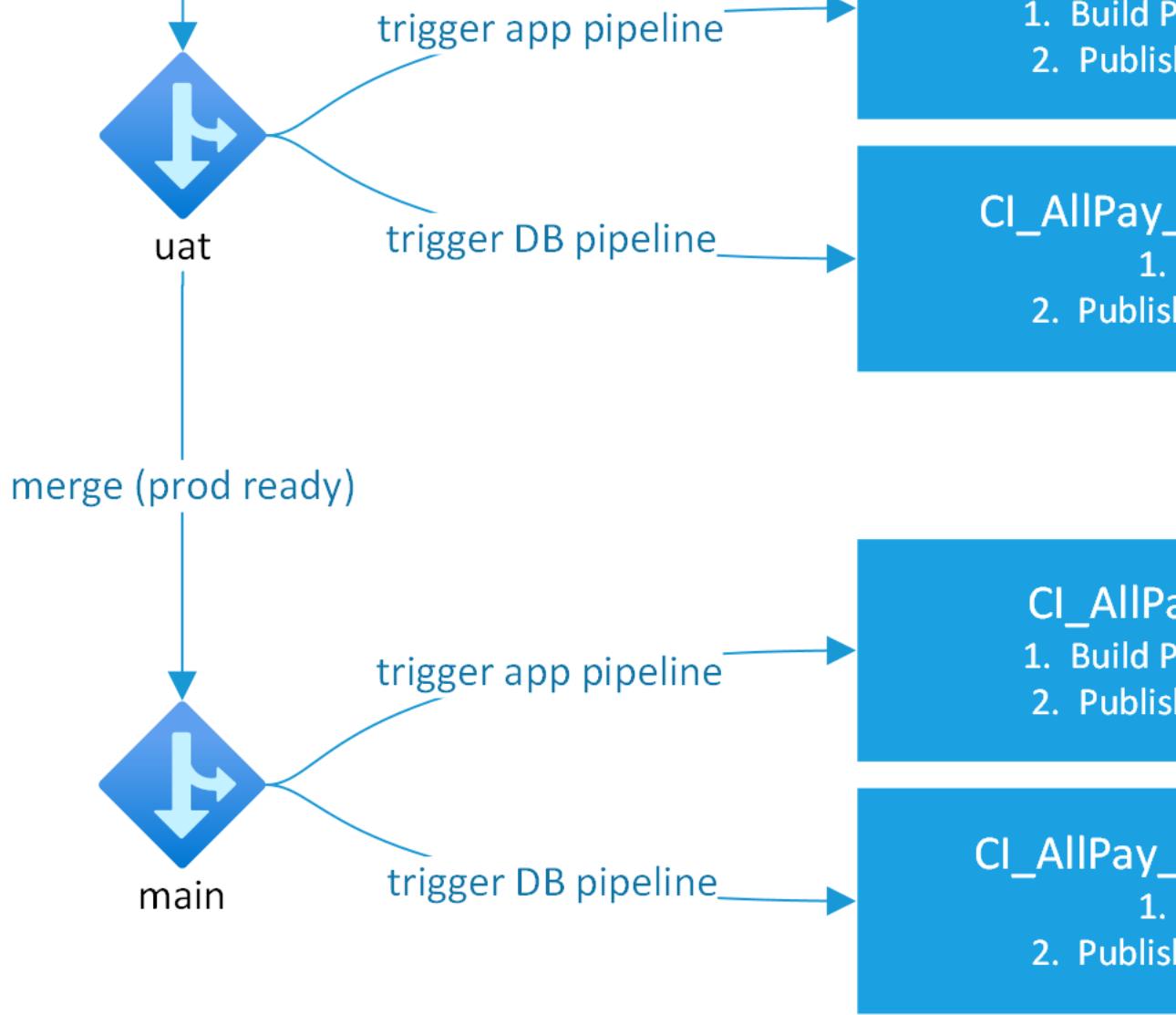
- a. ENG team will review documentation regarding impacts of the feature flag and documents steps to remove.
- b. BA/TPM will share any concerns that arise from the BFT and ETL/Reporting with the ENG team and document in the removal ticket the concern. ENG team will then respond to the concern and the plan to mitigate risks identified.

3. Feature flag to follow the release workflow [https://dev.azure.com/LithiaMotors/Advanced%20Incentive%20Program/\\_wiki/wikis/Advanced-Incentive-Program.wiki/1349/Release-Workflow](https://dev.azure.com/LithiaMotors/Advanced%20Incentive%20Program/_wiki/wikis/Advanced-Incentive-Program.wiki/1349/Release-Workflow)

## CI/CD Pipelines in ADO

Currently, merging into develop, test, uat, and main branches triggers pipeline deployments for both the application and database into the corresponding environment.





## Pipeline Details

- [Web Application CI Build Pipelines](#)
  - [CI\\_AllPay\\_Web\\_App\\_Development](#)
  - [CI\\_AllPay\\_Web\\_App\\_Test](#)
  - [CI\\_AllPay\\_Web\\_App\\_UAT](#)
  - [CI\\_AllPay\\_Web\\_App\\_Prod](#)

## Web App CI Build Pipelines

The Web Application build pipelines are defined via YAML files for each environment:

| Env  | YAML File                | CI Pipeline                                   |
|------|--------------------------|---|
| Dev  | azure-pipelines.yml      | <a href="#">CI_AllPay_Web_App_Development</a> |
| Test | azure-pipelines-test.yml | <a href="#">CI_AllPay_Web_App_Test</a>        |
| UAT  | azure-pipelines-uat.yml  | <a href="#">CI_AllPay_Web_App_UAT</a>         |
| Prod | azure-pipelines-prod.yml | <a href="#">CI_AllPay_Web_App_Prod</a>        |

## Variables

Each pipeline contains a variable **PayrollDbContext** with a secret value. This is where our connection strings for each environment are secured:



## PayrollDbContext

\*\*\*\*\*

**fx** system.debug  
= true

In addition, develop has system.debug = true to allow debugging of pipeline builds.

## YAML Configuration

All YAML files possess the same configuration:

### trigger

```
trigger:  
- develop|test|uat|main
```

Defines the branch that automatically triggers the build for the pipeline on check-in.

### pool:vmImage

```
pool:  
  vmImage: 'windows-2019'
```

Defines the virtual machine image to be used by the build agent. Note: On 3/30/2022 the 'windows-latest' vmImage was updated by Microsoft and the .Net Framework 4.6.1 was deprecated (no longer included in the image). Changing the vmImage to 'windows-2019' allowed the builds to continue without errors.

### variables

```
variables:  
  solution: '**/Payroll.Web.sln'  
  buildPlatform: 'Any CPU'  
  buildConfiguration: 'Release'
```

Defines variables used by the build.

## YAML Steps

### NuGetToolInstaller/NuGetCommand

```
- task: NuGetToolInstaller@1  
- task: NuGetCommand@2  
  inputs:  
    command: 'restore'  
    restoreSolution: '$(solution)'  
    feedsToUse: 'config'  
    nugetConfigPath: '$(build.sourcesDirectory)/Payroll.Web/NuGet.config'  
    externalFeedCredentials: 'Telerik NuGet connection'
```

Installs the NuGet Tool and restores all packages for the solution from three sources:

- [AdvancedIncentiveFeed](#) (artifacts repo in this ADO project)
- NuGet (<https://api.nuget.org/v3/index.json>)
- Telerik (<https://nuget.telerik.com/nuget>)

Configuration for these sources can be managed in the NuGet.config file in the root of Payroll.Web.

### FileTransform (x2)

```
- task: FileTransform@1  
  inputs:  
    folderPath: '$(build.sourcesDirectory)/Payroll.Web'  
    fileType: 'xml'  
    targetFiles: '**\App.config'  
  
- task: FileTransform@1  
  inputs:  
    folderPath: '$(build.sourcesDirectory)/Payroll.Dal'  
    fileType: 'xml'  
    targetFiles: '**\App.config'
```

Finds the App.config file in both Payroll.Web and Payroll.Dal and replaces any connection strings with a matching variable name.

Since we have a variable named **PayrollDbContext** it will search for and replace that connection string with our secret value.

This is how we secured our PayRoll database password as a secret for the higher environments. It's a work around for the lack of Azure Key Vault support in Entity Framework v4.6.

## VSBuild

```
- task: VSBuild@1  
  inputs:  
    solution: '$(solution)'  
    msbuildArgs: '/p:DeployOnBuild=true /p:WebPublishMethod=Package /p:PackageAsSingleFile=true /p:SkipInvalidConfigurations=true /p:DesktopBuildPackageLoca  
    platform: '$(buildPlatform)'
```

```
configuration: '${buildConfiguration}'  
clean: true
```

Definition to run Visual Studio Build step. Produces a build artifact for the solution that includes both Payroll.Web and Payroll.Dal projects.

## VSTest

```
- task: VSTest@2  
inputs:  
  platform: '${buildPlatform}'  
  configuration: '${buildConfiguration}'
```

Placeholder task for unit test. This task searches for unit tests within the solution and runs them. The pipeline will only progress past this step if all tests succeed. Currently no tests exist as of 11/6/2020.

## WhiteSource Dependency Analysis

```
- task: WhiteSource@21  
inputs:  
  cwd: '$(System.DefaultWorkingDirectory)'  
  projectName: 'ALLPAY'
```

Develop branch only. This task analyzes the source code for dependencies with known security vulnerabilities.

## PublishBuildArtifacts

```
- task: PublishBuildArtifacts@1  
inputs:  
  PathtoPublish: '$(Build.ArtifactStagingDirectory)'  
  ArtifactName: 'drop'  
  publishLocation: 'Container'
```

This task publishes the artifact from the Visual Studio Build step and moves it into an artifact staging directory within a 'drop' folder for use by the CD Deployment pipeline.

## Database CI Build Pipelines

The PayRoll database project also uses build pipelines, however these are defined via the classic pipeline editor and do not make use of YAML files.

### Env CI Pipeline

Dev [CI\\_AllPay\\_Web\\_Database\\_Development](#)

Test [CI\\_AllPay\\_Web\\_Database\\_Test](#)

UAT [CI\\_AllPay\\_Web\\_Database\\_UAT](#)

Prod [CI\\_AllPay\\_Web\\_Database\\_Prod](#)

These database pipelines all have the same tasks with similar configuration:

## Tasks

The pipeline steps are executed synchronously by design. If one task fails, the pipeline does not proceed.

## Pipeline

**Pipeline**

Build pipeline

...

**Get sources**

AllPayETLDB

development

**Build\_AllPay\_ETL\_DB**

Run on agent

**Build solution \*\*\\*.sln**

Visual Studio build

**Copy Files to: \$(Build.Artifac...**

Copy files

**Publish Artifact: drop**

Publish build artifacts

**Name \***

CI\_AllPay\_ETL\_Database\_Development

**Agent pool \***

| Pool information

Azure Pipelines

**Agent Specification \***

windows-2019

**Parameters** ⓘ

This pipeline doesn't have any pipeline parameters. Create them to share the most important variables between tasks and change them in one place.

[Learn more ↗](#)

Defines the Agent Pool and Specification for the pipeline to be used as parameters in later tasks.

The current pool is utilizing the Hosted Azure Pipelines pool. We have the option of switching to the Private Default pool (our on-prem pool) to use the NVLASAZAGENTPOO agent. Issues with upgrading the agents prevented us from doing this originally.

The current Agent Specification is set to "windows-2019", however "vs2017-win2016" is a common spec that will also work here if needed.

To increase timeout of SQL commands in Entity Framework beyond 30 seconds, the line

```
this.Database.CommandTimeout = 180;
```

must be included in the PayrollModel.Context.cs constructor.

```
public PayrollDbContext()
    : base("name=PayrollDbContext")
{
    this.Database.CommandTimeout = 180;
}
```

Since this file is 'generated' file (lives underneath the PayrollModel.Context.tt template folder) the `CommandTimeout` line in the object constructor will be 'lost' each time the file is regenerated. The file is regenerated each time a change is made to the EF .edmx file (for example, table and column changes or new sprocs added, etc.)

Each time a developer changes the .edmx file it will be necessary to manually re-insert this timeout line.

In the Payroll.db project, there are two folders which contain SQL scripts to be executed during an Azure pipeline build, "postDeployment" and "preDeployment". They are not part of the actual db schema, so it is important that the "Build Action" property of these scripts be set to "None" or the CI pipeline can generate errors such as:

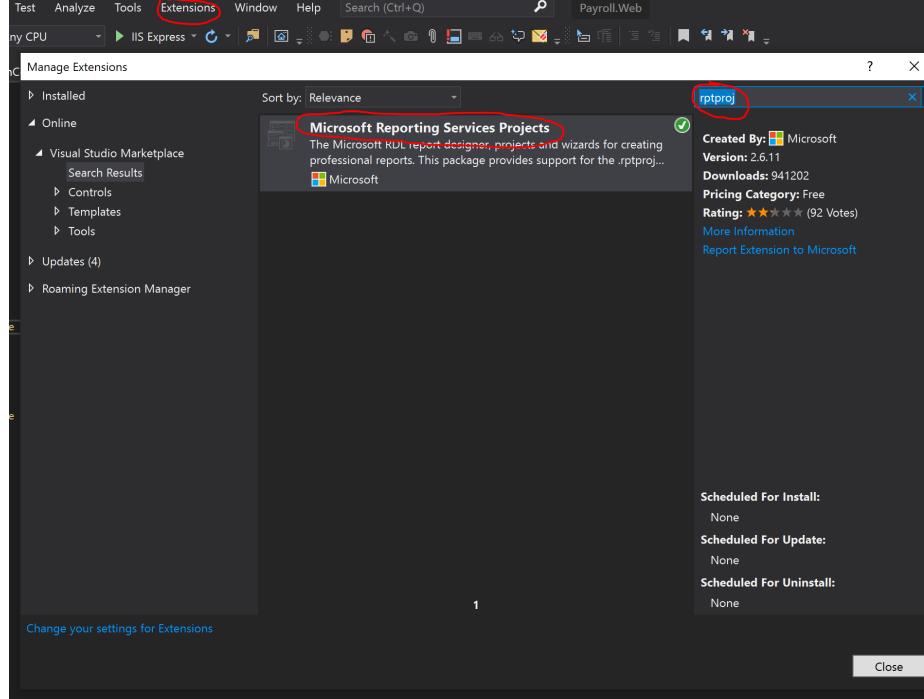
```
##[error]Payroll.DB\postDeployment\84907-insert.sql(1,1): Error SQL70001: This statement is not recognized in this context.
```

```
##[error]Payroll.DB\postDeployment\84907-insert.sql(1,1): Error SQL71006: Only one statement is allowed per batch. A batch separator, such as 'GO', might be required between statements.
```

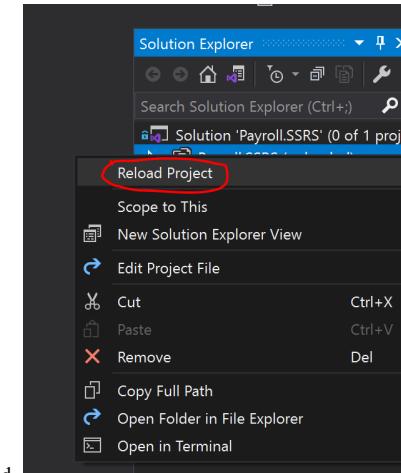
One exception is the script that calls these other objects, "Script.PostDeployment1.sql" - its Build Action is set to "PostDeploy" which is a special action during CI/CD.

\*Scripts that *are* part of the schema, such as tables and stored procedures, must be set to "Build".

## 1. Search for "rptproj" in extensions and install Microsoft Reporting Service Project plugin.

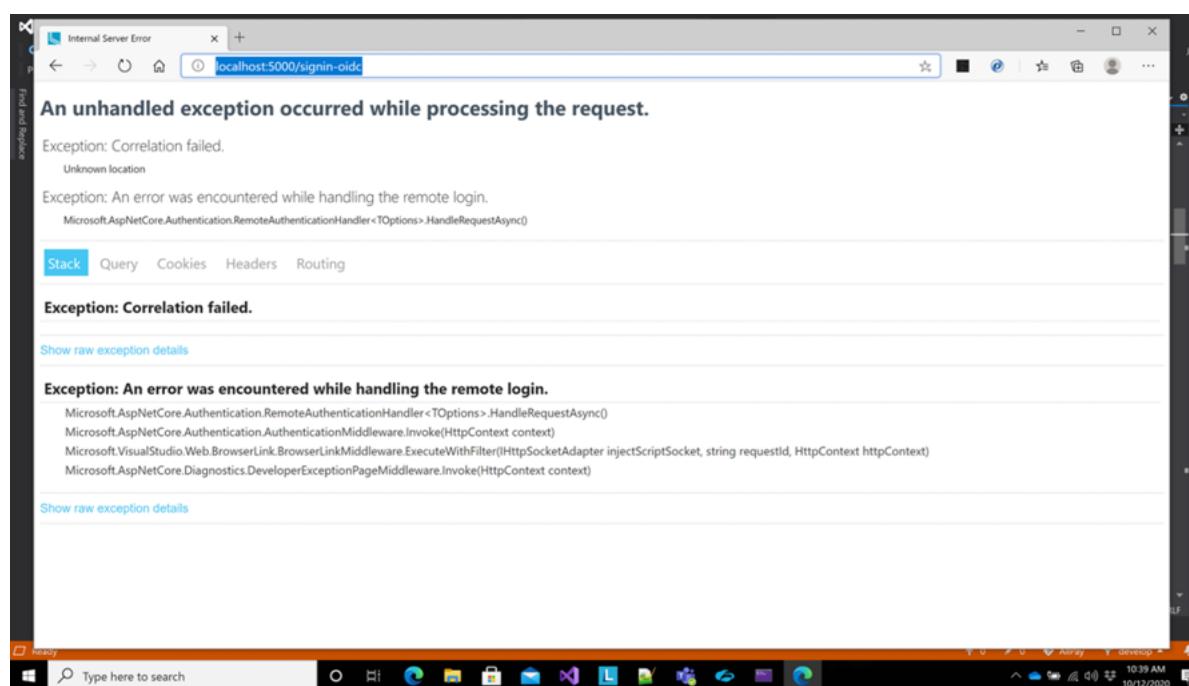


2. You will need to restart Visual Studio to complete the installation.



3. Open Payroll.SSRS.sln and reload the project in Solution Explorer if needed.

When trying to run (debug) the Payroll.Web solution you may encounter this error....



Researching this online, people seem to be reporting different causes and fixes for this. I was seeing this in first in Chrome then a few weeks later Edge after no apparent code or environment changes.

## How to Fix:

This may be a fix for only a single or limited set of conditions that lead to the arising of this error, but it worked for my issues.

The basic fix is to disable the 'SameSite' cookies flag.

Chrome:

1. Enter this in chrome browser address bar chrome://flags/#same-site-by-default-cookies
2. disable 'Samesite by default cookies'

Edge:

1. Enter this in Edge browser address bar edge://flags/#same-site-by-default-cookies
2. disable 'Samesite by default cookies'

## ##Technology Stack

- Web app
  - ASP.NET Core 3.1.3 MVC (Recently updated from 2.1)
  - .NET Framework 4.6.1
  - Entity Framework 6.4
  - Kendo UI for ASP.NET MVC
- Security
  - Roles in app are mapped to groups in Azure AD
- Data
  - SQL Azure Server, single database
- Reporting
  - SQL Server Reporting Services

## Problem

Running [tSQLt tests](#) is done by using one of the tSQLt "run" stored procedures - usually [tSQLt.Run](#) or [tSQLt.RunAll](#). Tests run this way are run within a transaction that is always rolled back at the end of the test. However, when developing tSQLt tests, it is common to execute part of the test code outside of that protective transaction, and sometimes those executions get committed.

"FakeTable" is a tSQLt tool that creates an empty version of a table by renaming the original and creating an empty copy. This is undone when the "ROLLBACK" is executed after the test execution. In the case where a call to [tSQLt.FakeTable](#) is committed, we'll need a means of restoring the renamed table.

## Solution

This script will create a script to run against the database to rename the original tables back to their former selves. As written, it will print that script to the output window. However, to have this script perform the execution on that created script, uncomment the line which reads, "EXEC (@cmd);".

Also note that this script assumes all renamed objects are tables. (See comment in the middle about a CASE statement for other types.) If you find that the generated script contains any procedures or functions (the results of a committed [SpyProcedure](#) or [FakeFunction](#) call), you will want to change "DROP TABLE objectName" to "DROP PROCEDURE objectName" or "DROP FUNCTION objectName" in the generated script as appropriate.

```
DECLARE @cmd nvarchar(MAX) = '';

WITH x AS (
    SELECT TOP 10000
        PL.Id                               AS Id
       ,PARSENAME(PL.OriginalName,1)          AS OriginalName
       ,ISNULL(SO.name,'')                   AS name
       ,QUOTENAME(SCHEMA_NAME(ISNULL(SO.schema_id,1))) AS SchemaName
       ,ISNULL(SEP.major_id,-1)              AS major_id
    FROM tSQLt.Private_RenamedObjectLog PL
    LEFT JOIN sys.objects SO ON ObjectId = object_id
    LEFT JOIN sys.extended_properties SEP ON SEP.major_id = SO.object_id AND SEP.name = 'tSQLt.FakeTable_OrgTableName'
    ORDER BY SO.create_date DESC
)
SELECT @cmd = @cmd
    + CASE WHEN x.name = '' OR OriginalName = x.name
        THEN N'DELETE tSQLt.Private_RenamedObjectLog WHERE Id = ' + CAST(x.Id AS nvarchar) + N';'
        ELSE N'DROP '
            + N'TABLE' --Replace this with a CASE statement to deal with other object types
            + N' ' + SchemaName + '.' + QUOTENAME(x.OriginalName) + ';'
            + NCHAR(13) + NCHAR(10) + N'EXEC sp_rename ''' + SchemaName + N'.'
                + QUOTENAME(x.name) + N'''','' + OriginalName + N'''';
            + NCHAR(13) + NCHAR(10) + N'IF OBJECT_ID('''+SchemaName + N'. '+ QUOTENAME(x.name)+N''') IS NULL'
            + NCHAR(13) + NCHAR(10) + N'BEGIN'
            + CASE WHEN x.major_id != -1
                THEN NCHAR(13) + NCHAR(10) + N' EXEC sp_droptextendedproperty ''tSQLt.FakeTable_OrgTableName'', ''SCHEMA'', '''
                    + PARSENAME(SchemaName,1) + N'''',''TABLE'', ''' + OriginalName + N'''';
                ELSE ''
            END
            + NCHAR(13) + NCHAR(10) + N'    DELETE tSQLt.Private_RenamedObjectLog WHERE Id = ' + CAST(x.Id AS nvarchar) + N';'
            + NCHAR(13) + NCHAR(10) + N'END'
        END
    + NCHAR(13) + NCHAR(10)
    + NCHAR(13) + NCHAR(10)
)
FROM x;
--/* <-Remove leading dashes to execute
PRINT @cmd;
```

```
--*/EXEC (@cmd);
-- TODO: In the case of a procedure, we'll also need to drop the SpyProcedureLog table. Otherwise we get the following error when trying to run the test:
/*
(1 row affected)
Msg 2714, Level 16, State 6, Line 1
There is already an object named 'p_Run_PayrollManual_SpyProcedureLog' in the database.

Completion time: 2022-09-22T14:22:34.8722193-07:00
*/
```

## #Getting Started (Web Application)

1. Clone repo from ADO to your local drive: [https://dev.azure.com/LithiaMotors/Advanced%20Incentive%20Program/\\_git/AllPay](https://dev.azure.com/LithiaMotors/Advanced%20Incentive%20Program/_git/AllPay)

2. Find and open Payroll.Web.sln in your newly cloned local repo.

### ⚠ You may encounter an error for missing nuget packages in Visual Studio:

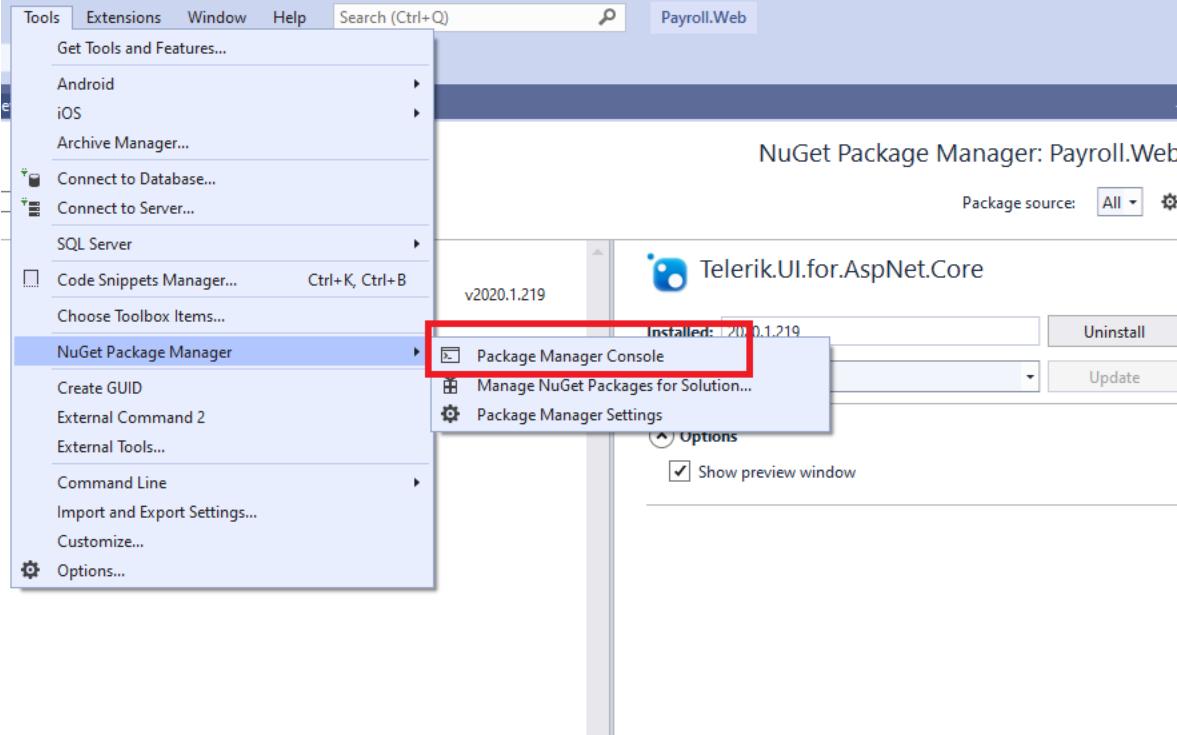
```
Target ResolvePackageAssets:
 /Users/.../Payroll/Payroll.Web/Payroll.Web.csproj : error NU1102: Unable to find package Telerik.UI.for.AspNet.Core with version (>= 2020.1.219)
 /Users/.../Payroll/Payroll.Web/Payroll.Web.csproj : error NU1102:   - Found 1 version(s) in nuget.org [ Nearest version: 2016.3.914 ]
Done building target "ResolvePackageAssets" in project "Payroll.Web.csproj" -- FAILED.
```

3. To get the Telerik.UI.for.AspNet.Core package you can download and install it from <https://www.telerik.com/account/product-download?product=UIASPCORE>.

- If you do not have an account, you will need to create one and obtain a license. Contact the license holder to have one assigned.
- Be sure to get version 2020.1.219, not the latest version.

The screenshot shows the 'Downloads for Progress® Telerik® UI for ASP.NET Core' page. It features two main download options: 'Latest public version' (Version 2020.3.915, msi 131 MB) and 'Latest internal build' (Version 2020.3.1007, 7z 30 MB). Below these are tabs for 'Versions' and 'Betas'. A dropdown menu under 'Version:' is open, showing options: 2020.3.915, 2020.2.617, 2020.2.513, 2020.1.406, 2020.1.219 (which is highlighted with a red box and has a red arrow pointing to it), and 2020.1.114. Other sections include 'Installation' with links to setup files like 'telerik.ui.for.aspnet.core.2020.1.219.msi' and 'Other Setup Files' with links to 'Telerik.UI.for.AspNet.Core.2020.1.219.nupkg' and 'telerik.ui.for.aspnet.core.2020.1.219.commercial.7z'.

- Once installed, run this command in the Package Manager Console (replace -Source path with your path):



```
Install-Package Telerik.UI.for.AspNet.Core -Source 'C:\Program Files (x86)\Progress\Telerik UI for ASP.NET Core R1 2020\wrappers\aspnetcore\Binaries\AspNet.Core'
```

- A successful result should look like:

```
PM> Install-Package Telerik.UI.for.AspNet.Core -Source 'C:\Program Files (x86)\Progress\Telerik UI for ASP.NET Core R1 2020\wrappers\aspnetcore\Binaries\AspNet.Core'
The 'Source' parameter is not respected for the transitive package management based project(s) Payroll.Web. The enabled sources in your NuGet configuration will be used.
Restoring packages for C:\Users\PaulMaltar\Source\Repos\AllPay\Payroll.Web\Payroll.Web.csproj...
Installing Telerik.UI.for.AspNet.Core 2020.1.219.
Installing NuGet package Telerik.UI.for.AspNet.Core 2020.1.219.
Committing restore...
Generating MSBuild file C:\Users\PaulMaltar\Source\Repos\AllPay\Payroll.Web\obj\Payroll.Web.csproj.nuget.g.props.
Writing assets file to disk. Path: C:\Users\PaulMaltar\Source\Repos\AllPay\Payroll.Web\obj\project.assets.json
Restored C:\Users\PaulMaltar\Source\Repos\AllPay\Payroll.Web\Payroll.Web.csproj (in 892 ms).
Successfully uninstalled 'Microsoft.CodeAnalysis.Analyzers 2.9.3' from Payroll.Web
Successfully uninstalled 'Microsoft.CodeAnalysis.Common 3.3.0' from Payroll.Web
Successfully uninstalled 'Microsoft.CodeAnalysis.CSharp 3.3.0' from Payroll.Web
Successfully installed 'Microsoft.CodeAnalysis 3.3.1' to Payroll.Web
Successfully installed 'Microsoft.CodeAnalysis.Analyzers 2.9.4' to Payroll.Web
Successfully installed 'Microsoft.CodeAnalysis.Common 3.3.1' to Payroll.Web
Successfully installed 'Microsoft.CodeAnalysis.CSharp 3.3.1' to Payroll.Web
Successfully installed 'Microsoft.CodeAnalysis.CSharp.Workspaces 3.3.1' to Payroll.Web
Successfully installed 'Microsoft.CodeAnalysis.VisualBasic 3.3.1' to Payroll.Web
Successfully installed 'Microsoft.CodeAnalysis.VisualBasic.Workspaces 3.3.1' to Payroll.Web
Successfully installed 'Microsoft.CodeAnalysis.Workspaces.Common 3.3.1' to Payroll.Web
Successfully installed 'Microsoft.DotNet.InternalAbstractions 1.0.0' to Payroll.Web
Successfully installed 'System.Composition 1.0.31' to Payroll.Web
Successfully installed 'System.Composition.AttributedModel 1.0.31' to Payroll.Web
Successfully installed 'System.Composition.Convention 1.0.31' to Payroll.Web
Successfully installed 'System.Composition.Hosting 1.0.31' to Payroll.Web
Successfully installed 'System.Composition.Runtime 1.0.31' to Payroll.Web
Successfully installed 'System.Composition.TypedParts 1.0.31' to Payroll.Web
Successfully installed 'System.Linq.Queryable 4.0.1' to Payroll.Web
Successfully installed 'Telerik.UI.for.AspNet.Core 2020.1.219' to Payroll.Web
Executing nuget actions took 5.62 sec
Time Elapsed: 00:00:09.9525038
PM>
```

o If Install-Package fails

```
Package Manager Console
Package source: All Default project: Payroll.Web
PM> Install-Package Telerik.UI.for.AspNet.Core -Source 'C:\Program Files (x86)\Progress\Telerik UI for ASP.NET Core R3 2020\wrappers\aspnetcore\Binaries\AspNet.Core'
The 'Source' parameter is not respected for the transitive package management based project(s) Payroll.Web. The enabled sources in your NuGet configuration will be used.
Restoring packages for C:\Users\PaulMaltair\Source\Repos\AllPay\Payroll.Web\Payroll.Web.csproj...
GET https://api.nuget.org/v3-flatcontainer/telerik.ui.for.aspnet.core/index.json
OK https://api.nuget.org/v3-flatcontainer/telerik.ui.for.aspnet.core/index.json 677ms
Install-Package : NU1102: Unable to find package Telerik.UI.for.AspNet.Core with version (>= 2020.3.915)
- Found 1 version(s) in nuget.org [ Nearest version: 2016.3.914 ]
- Found 0 version(s) in Microsoft Visual Studio Offline Packages
At line:1 char:1
+ Install-Package Telerik.UI.for.AspNet.Core -Source 'C:\Program Files ...
+ ~~~~~
+ CategoryInfo          : NotSpecified: () [Install-Package], Exception
+ FullyQualifiedErrorId : NuGetCmdletUnhandledException,NuGet.PackageManagement.PowerShellCmdlets.InstallPackageCommand
+
Install-Package : Package restore failed. Rolling back package changes for 'Payroll.Web'.
At line:1 char:1
+ Install-Package Telerik.UI.for.AspNet.Core -Source 'C:\Program Files ...
+ ~~~~~
+ CategoryInfo          : NotSpecified: () [Install-Package], Exception
+ FullyQualifiedErrorId : NuGetCmdletUnhandledException,NuGet.PackageManagement.PowerShellCmdlets.InstallPackageCommand
+
Time Elapsed: 00:00:01.3809708
```

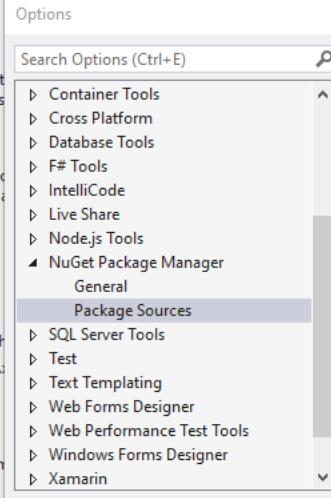
double check the version you downloaded and make sure you have version 2020.1.219

to manually install package source in NuGet Package Manager: - Open package manager at Tools >> NuGet Package Manager >> Manage NuGet Packages for Solution.

### Manage Packages for Solution

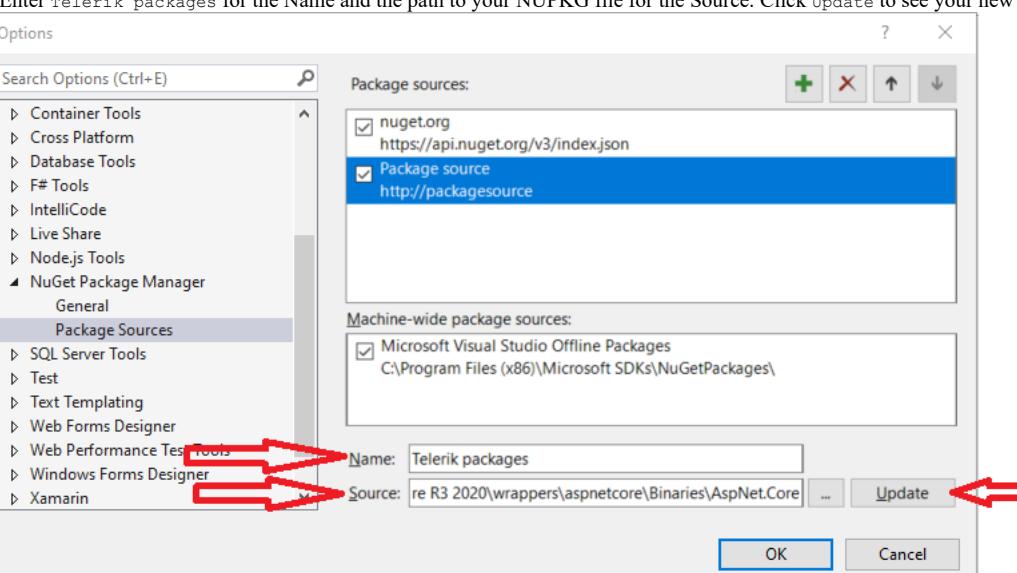
Package source: nuget.org 



- Click the top-right gear icon to open the Options window then click the plus button to add a new package source.

- Enter Telerik packages for the Name and the path to your NUPKG file for the Source. Click Update to see your new source added to available package sources.



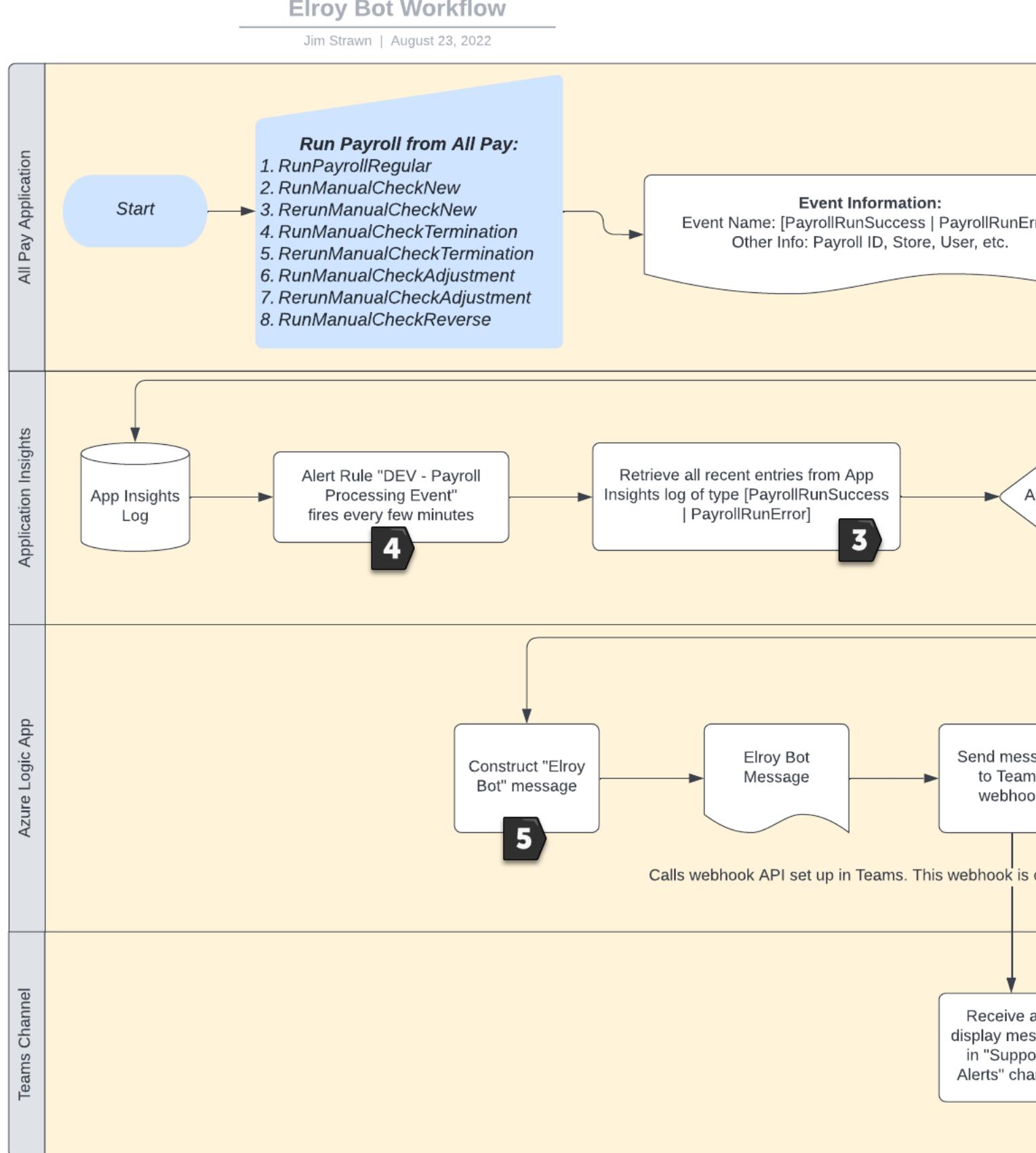
- Click OK. The Telerik.UI.for.AspNet.Core package will be installed on next project build.

You should now be able to build and run the web application locally.

If you see a warning in the build output log window like this: warning NU1603: Payroll.Web depends on Telerik.UI.for.AspNet.Core (>= 2020.1.219) but Telerik.UI.for.AspNet.Core 2020.1.219 was not found. An approximate best match of Telerik.UI.for.AspNet.Core 2020.3.915 was resolved.

You probably update to the wrong version.

(draft)



### [Elroy Bot Workflow.pdf 10-minute overview](#)

#Code samples for working with various Kendo UI Widgets...

```
##Get grid data item by row closest to 'target' let dataItem = $(e.target).closest("tr").find('.unique-id-hidden').first().val();
```

```
##Get grid row by 'business id'
```

- The return value 'gridDataItem' will contain the JSON data representation of the grid row including the unique ROW ID guid as an object property.
- The 'myrowid' parameter is the assigned 'business id' of that row object, such as the PayPlanId in a Payplan grid or a Block id in a Block grid, etc.
- The following MVC sample is also required for the 'get' function below to work.

```
let gridDataItem = $("#MyGrid").data("kendoGrid").dataSource.get(myrowid);
```

##Make grid rows searchable by 'id' (MVC Helper setup) (*you must add the 'Model' line below to the grid DataSource declaration in the MVC helper setup. This will enable the above sample to work.*)

```
.DataSource(dataSource => dataSource
  .Ajax()
  .Events(events => events
    .Error("ajaxErrorHandlerForGrid('PayPlanGrid')")
  )
  .Model(model => model.Id(p => p.Id)) //for using .get(Id)
  .Read(read => read.Action("PayPlan_Read", "PayPlan", new { payPlanUsage = Model.PayPlanUsage }))
)
```

##Get row by uid (row GUID). return value 'row' is a blob of html with tr and td elements

```
let row = $("#PayPlanGrid")
  .data("kendoGrid")
```

```
.tbody  
.find("tr[data-uid='" + uid + "']");  
  
##Get combo box text and value $('#MyComboBox').data('kendoComboBox').text() $('#MyComboBox').data('kendoComboBox').value()  
  
#Code samples for working with the Kendo UI Window Widget...
```

## Redraw a single Kendo grid row.

- see <https://stackoverflow.com/questions/13613098/refresh-a-single-kendo-grid-row/23959005#23959005>
- The redrawKendoGridRow is an implementation of the above in the ModalFunctionsJS file.
- Once the underlying Data Item for a row has been changed (on the client side), this function can be called to redraw a single row ('row') of a particular grid ('grid') WITHOUT a grid refresh.
- The 'row' parameter below is the actual grid row object and not the underlying row data item.

```
KendoHelperJS.redrawKendoGridRow = function (grid, row)
```

## Active Monitoring

### Metrics

### Passive Monitoring

### Metrics

[Setup Logic Apps](#)

## Minimum Monitoring Coverage

- Send an alert if the application is reported "Unhealthy" - DEV, TEST, UAT, PROD
  - Simple message
  - Report this into a teams channel
- Send an alert if Payroll was unable to process - PROD
  - Send error log details
  - Report this into a teams channel
- Send an alert if a network request throws an exception - PROD
  - Send error log details
  - Report this into a teams channel
- Send an alert if the Application VM CPU usage is above 75% for more than 5 minutes UAT, PROD
  - Simple Message with some data
  - Report this into a teams channel

#Access locations (Dev) To access App Insights in the Dev environment and for local development:

1. Go to the AllPay resource group for the Dev environment in the Azure portal (AZWU2-DIG-AP-RG)
2. Select the dev App Insights (AZWU2APTEST-DEV)
3. View logs and metrics by selecting options on the left toolbar (ex: Live Metrics)

Running the project locally will connect to App Insights in the Dev environment. To verify the connection, check the servers section of Live Metrics in Azure. Local development can also be monitored in Visual Studio by running the project and selecting "Application Insights" in the toolbar. #General querying For general querying refer to <https://docs.microsoft.com/en-us/azure/azure-monitor/log-query/log-query-overview> #Steps to setup in other environments (test & prod) To set up App Insights in other environments:

1. Enable App Insights in the Azure portal
2. Add the Instrumentation Key to the correct appsettings file. <https://docs.microsoft.com/en-us/azure/azure-monitor/app/asp-net-core>

[7005\\_PayPlan\\_Migration.pdf](#)

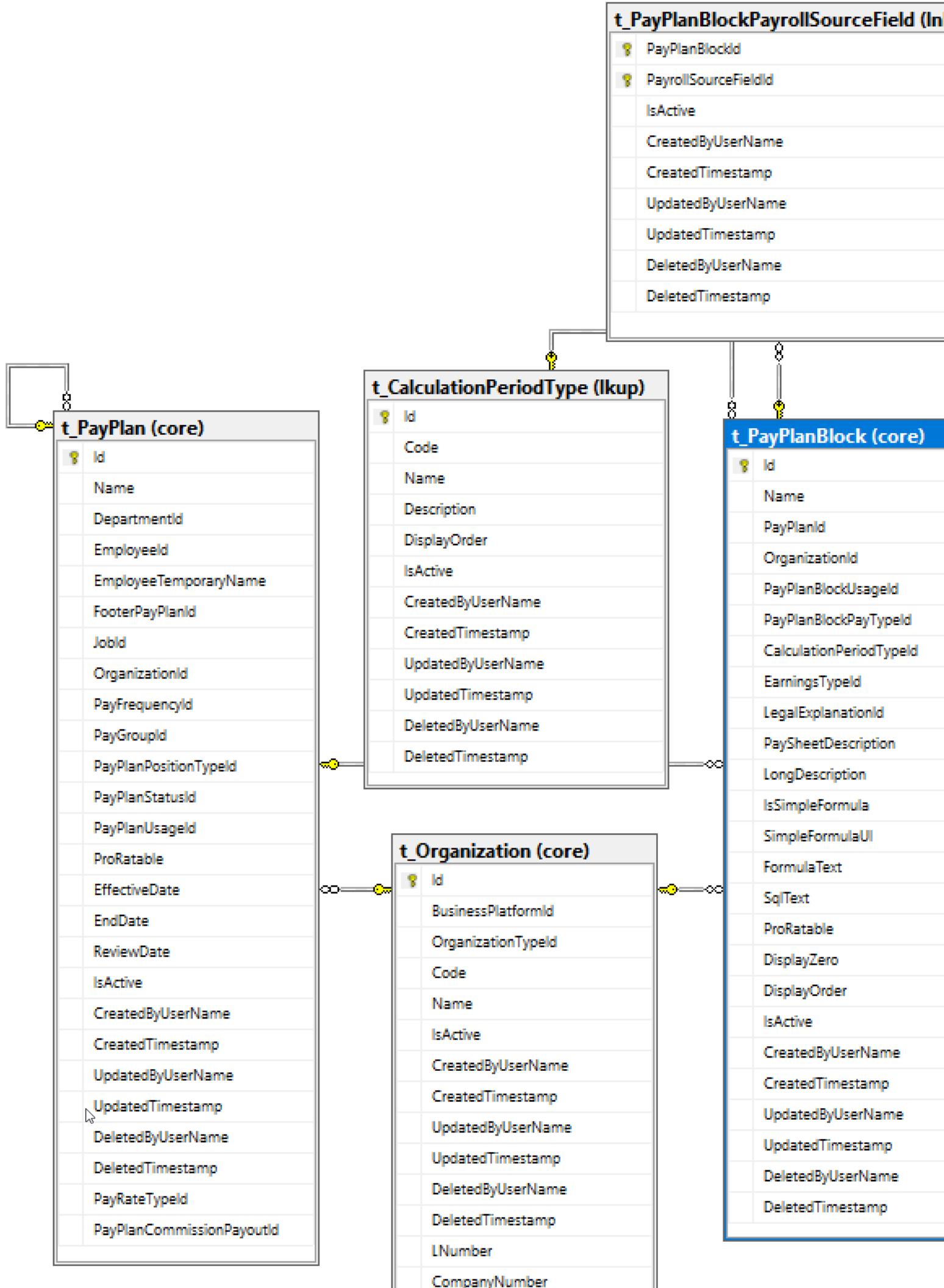
[7005\\_PayPlan\\_Tables.pdf](#)

[PayPlan\\_And\\_Related\\_Tables\\_Diagram](#)

- Tables involved in building a pay plan block:

- [core].[t\_PayPlanBlock]
- [lnkr].[t\_PayPlanBlockPayrollSourceField] (Connects a record in [core].[t\_PayPlanBlock] with a record in [ref].[t\_PayrollSourceField])
- [lnkr].[t\_PayPlanBlockSourceSystemField] (Connects a record in [core].[t\_PayPlanBlock] with a record in [ref].[t\_SourceSystemField])
- Formula building columns in [core].[t\_PayPlanBlock]
  - [IsSimpleFormula]
  - [SimpleFormulaUI]
  - [FormulaText]
  - [SqlText]

- Diagram of table structure



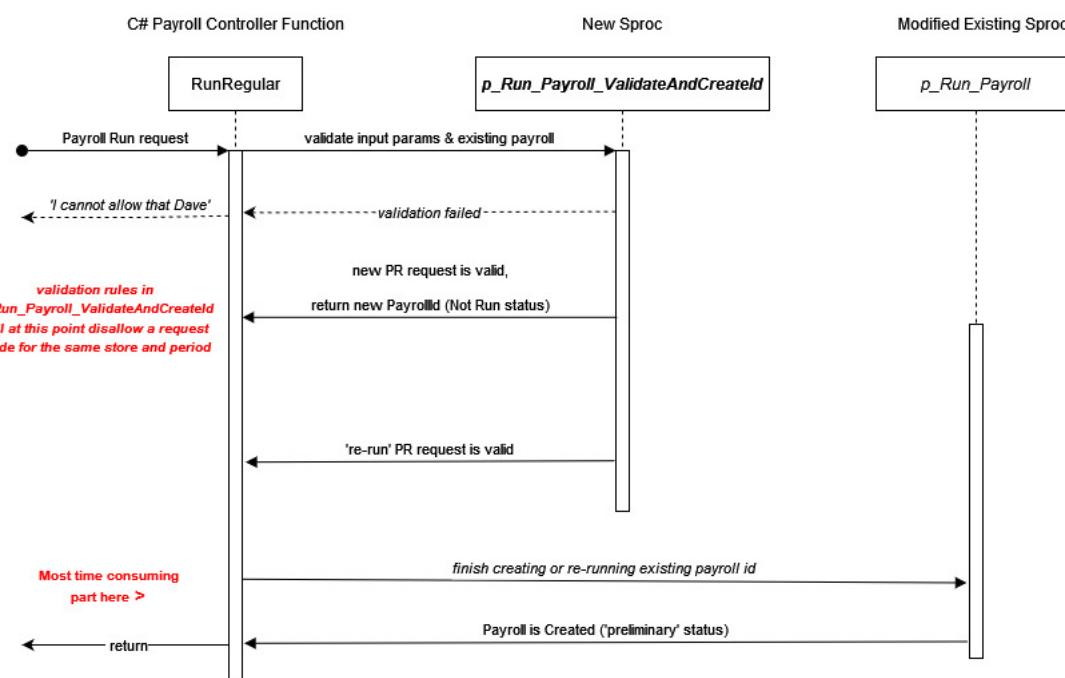
- The Simple Formula Editor is generally only used for Employee Pay Plans because it exposes only the most-used features available in the Advanced Formula Editor. The Advanced Formula Editor is for Footer Pay Plans because they are too complicated for the Simple Formula Editor.
- The Simple Formula Editor is used a lot more often than the Advanced Formula editor, so the radio button when creating a new pay plan block should default to Simple Formula instead of Advanced Formula.
- The formula associated with a Simple Formula ([SimpleFormulaUI]) and an Advanced Formula ([FormulaText]) are stored in completely different formats and there is no way to convert one to the other.
- It was demonstrated that you can copy the resulting formula from the Simple Formula UI and then paste it into the Advanced Formula UI and it will work. It surprised me that it would work and I cannot vouch the the validity of doing that.
- When you save a pay plan block, the C# converts the formula (both simple and advanced) into SQL that will be executed when payroll runs ([SqlText]).
- This is a one way trip from [SimpleFormulaUI] to [SqlText] or from [FormulaText] to [SqlText].
- The codes in the default formulas are documented here: [AllPay Markup Codes.xlsx](#) (a.k.a. **Brian Markup Language**)
- Validate button ~ Logic validates BML by making sure braces are in the correct position in FormulaText.
- Video stream of Formula Builder KT meeting can be found here: <https://web.microsoftstream.com/video/26fdda95-becb-4f98-a17a-5a993384a424>

## ADO Story:

[https://dev.azure.com/LithiaMotors/Advanced%20Incentive%20Program/\\_workitems/edit/113894](https://dev.azure.com/LithiaMotors/Advanced%20Incentive%20Program/_workitems/edit/113894)

## Implementation Notes:

- New stored procedure created (*p\_Run\_Payroll\_ValidateAndCreateId*).
- Old parameters removed from p\_Run\_Payroll.** Business rule validation and ID creation logic removed and moved into new sproc mentioned above. Code and parameters related to 'Accrual' payroll types was removed.
- Changes to RunRegular controller function to first validate and create the id, then 'finish' the payroll run using an existing id.
- Both procedures (*p\_Run\_Payroll* and *p\_Run\_Payroll\_ValidateAndCreateId*) are meant to work for both 'new' regular payroll runs as well as regular payroll 're-runs'.
- No changes to UI or UX. User will still see a single Regular payroll run process and same validation failure messaging will be used.
- No new PR status have been added but the **Payroll Process now explicitly uses the 'Not Run' status.** I.E. when the payroll id is first created during the validation phase, it will be created with a PayrollStatusId of 1 (which is 'Not Run'). Previously this status was not persisted with the PR record and was only displayed in the 'virtual rows' in the home PR listing screen (for showing 'future' PRs that have not yet been run).
- Any errors that might happen between the id creation and the finishing of the payroll seem easily recoverable. I.e. 'errored' payroll runs in a state of 'Not Run' will appear in the regular payroll listing screen with the Not Run status AND a Payroll run date (not likely). These can be re-run (completed) without issue.



##Overview The 'Offcycle' Payroll processes include...

- 'Replacement' ('manual') payroll runs
- 'Adjustment' payroll runs
- 'Reversal' payroll runs
- 'Termination' payroll runs (another kind of 'manual' PR).

##Terminology 'New' check = 'Manual Check' = 'Replacement Check'

Similar to the regular Payroll run process, all of the Offcycle PRs are represented by a single Payroll Id. Unlike the regular Payroll runs, OC payroll runs will only generate a single new PaySHEET id.

The lnkr.t\_PayrollManualEvent (WIP) table tracks the relationships between Payroll runs.

##Stored Proc Notes ####p\_Run\_PayrollManual VS p\_Run\_PayrollManualNew

- p\_Run\_PayrollManualNew calls p\_Run\_PayrollManual but then adds a row to t\_PayrollManualPayroll (to be changed to PayrollManualEvent)
- p\_Run\_PayrollManualNew is the one used by the web app.
- p\_Run\_Payroll is only used in the regular payroll runs not Offcycle processes.

####All 'Run\_Payroll' Sprocs called from the web app:

- p\_Run\_Payroll (Reg Payroll)
- p\_Run\_PayrollManualReverse (Offcycle Payroll)
- p\_Run\_PayrollManualAdjustment (Offcycle Payroll)
- p\_Run\_PayrollManualNew (Offcycle Payroll)

####All 'Run\_Payroll' Sprocs that UPDATE or INSERT into t\_PayrollManualPayroll

- p\_Run\_PayrollManualNew ('Replacement' check)
- p\_Run\_PayrollManualReverse ('Reversal')
- p\_Run\_PayrollManualAdjustment ('Payroll Adjustment')

##Linkage table: t\_PayrollManualPayroll (to be changed to 't\_PayrollManualEvent' ####All Views that query t\_PayrollManualPayroll:

- v\_Payroll (left joined to pull in the ManualAdjustmentReasonId to the results)
- v\_PayrollManualPayroll

####All Sprocs that touch v\_PayrollManualPayroll

- p\_Get\_PayrollManualCheckStatistics (query only...called for dashboard calcs)
- p\_Get\_PaysheetHeader (query only...DIPs report 'Header.rdl' file)
- p\_Delete\_Payroll (query, update & delete)

####All Views that query v\_PayrollManualPayroll

- v\_PayrollOffCycleEarnings (view for the Offcycle earnings UI grid)

####Things that INSERT into t\_PayrollManualPayroll

- p\_Run\_PayrollManualNew
- p\_Run\_PayrollManualReverse

####Things that UPDATE t\_PayrollManualPayroll

- p\_Run\_PayrollManualNew
- p\_Run\_PayrollManualReverse
- p\_Run\_PayrollManualAdjustment
- p\_Delete\_Payroll

####Things that DELETE t\_PayrollManualPayroll

- p\_Delete\_Payroll

##Validation rules around the PR linkage table

- Adjustments:
  - p\_Run\_PayrollManualAdjustment (checks to see if there's no reversal prior to adj.)
- Replacement (Manual) Checks:
  - p\_Run\_PayrollManualNew (checks to update or insert to PRM of termination date)
- Reverse:
  - p\_Run\_PayrollManualReverse (checks to see if the payroll is already reversed & checks to update or insert to PRM of Reversal Id)
- Unreverse:
  - p\_Delete\_Payroll...TODO

##Termination Date:

- Stored in t\_PayrollManualPayroll for Termination checks. Queried in other areas (views).

##Sprocs that call other sprocs:

- p\_Run\_Payroll (for reg. Payroll, NOT calling other PR sprocs)
- p\_Run\_PayrollManual (Core Offcycle sproc, NOT calling other PR sprocs)
- **p\_Run\_PayrollManualNew > p\_Run\_PayrollManual (New Manual Checks "Replacement checks". Web sproc. it adds a row to t\_PayrollManualPayroll)**
- **p\_Run\_PayrollManualAdjustment > p\_Run\_PayrollManualReverse AND p\_Run\_PayrollManual (Adjustment checks)**
- p\_Run\_PayrollManualReverse (Reversals, NOT calling any other PR sprocs. Manipulates t\_Payroll & t\_Paysheet and child tables directly.)

##Re-Runs

####Things that can be 'Re Run':

- Replacement ('Manual') Checks
- Termination Checks
- Adjustment Checks

All 're-run' payrolls execute the p\_Run\_PayrollManual with a non-null PayrollId.

This will basically cause an UPDATE of t\_Payroll and a DELETE / INSERT to occur on all child tables including t\_Paysheet (let's keep the same PR id, but completely regenerate the data.)

## Off-Cycle Earnings

Company: Boise Ford Lincoln (L0072) | Pay Frequency: -- Select One -- | Job Title: -- Select One --

Employee: Aaron Wagner (210615) | Pay Period End Date: -- Select One -- | Cost Center (Department): -- Select One --

Specify an Employee to create an off-cycle check

| ID   | Pay Plan | Employee     | Company                    | Job         | Pay Period End Date | Run Date/Tim |
|------|----------|--------------|----------------------------|-------------|---------------------|--------------|
| 4102 | 12344    | Aaron Wagner | Boise Ford Lincoln (L0072) | F&I Manager | 03/15/2022          | 03/24/2022 1 |
| 3557 | 12344    | Aaron Wagner | Boise Ford Lincoln (L0072) | F&I Manager | 02/28/2022          | 03/03/2022 4 |
| 3235 | 12344    | Aaron Wagner | Boise Ford Lincoln (L0072) | F&I Manager | 02/15/2022          | 02/21/2022 4 |
| 2563 | 12344    | Aaron Wagner | Boise Ford Lincoln (L0072) | F&I Manager | 01/31/2022          | 02/03/2022 4 |
| 2252 | 12344    | Aaron Wagner | Boise Ford Lincoln (L0072) | F&I Manager | 01/15/2022          | 01/20/2022 1 |
| 1814 | 12344    | Aaron Wagner | Boise Ford Lincoln (L0072) | F&I Manager | 12/31/2021          | 01/07/2022 1 |
| 1707 | 12344    | Aaron Wagner | Boise Ford Lincoln (L0072) | F&I Manager | 12/15/2021          | 12/20/2021 5 |
| 1548 | 12344    | Aaron Wagner | Boise Ford Lincoln (L0072) | F&I Manager | 11/30/2021          | 12/03/2021 7 |
| 1470 | 12344    | Aaron Wagner | Boise Ford Lincoln (L0072) | F&I Manager | 11/15/2021          | 11/22/2021 7 |
| 1235 | 12344    | Aaron Wagner | Boise Ford Lincoln (L0072) | F&I Manager | 10/31/2021          | 11/04/2021 1 |

Page: 2 of 2 | items per page: 10

The following describes some of the changes done for story 77951.

[https://dev.azure.com/LithiaMotors/Advanced%20Incentive%20Program/\\_workitems/edit/77951](https://dev.azure.com/LithiaMotors/Advanced%20Incentive%20Program/_workitems/edit/77951)

Basic Functionality: Prior to creating a new 'Offcycle' payroll, provide the user a way to 'override' the t\_sourcedata values of the various Source System Fields that are present in active employee/footer plan blocks for that period.

The following diagram shows the major functions and procedures in play.

### Key Features:

This grid is meant to pull in the relevant fields and make them available to the user to override at the time of check creation OR check re-run.

In addition to Source System fields, this grid also can contain 'PayrollSetup' fields.

PayrollSetup field is a kind of 'virtual field' that won't have an original value in the t\_SourceData table. Both regular Source System fields and Payroll Setup fields must work identically for the purposes of fetching and saving out of the grid.

The grid is meant to 'collapse' (group by) all fields according to Employee/CalculationPeriodType uniqueness.

This means that any single grid view can show values pulled from more than one pay calendar period id (e.g. Prior Month Total calculation period type).

This 'abstracting out' on the FETCH of the specific plan/pep of the field value creates a complication because the 'original' and 'adjusted' values both need to be stored into the t\_SourceData table with a specific PayCalendarPeriodId.

In the case of PMT for example, the 'Original' value shown in this override grid will be associated with a different PayCalendarPeriodId than the one the check is being run for (the one selected by the user at the top of the page at the time of Check creation).

The 'Adjusted' value will also be stored into the t\_SourceData table and will now be associated with the Offcycle PayrollId one of possibly a few PCP Ids.

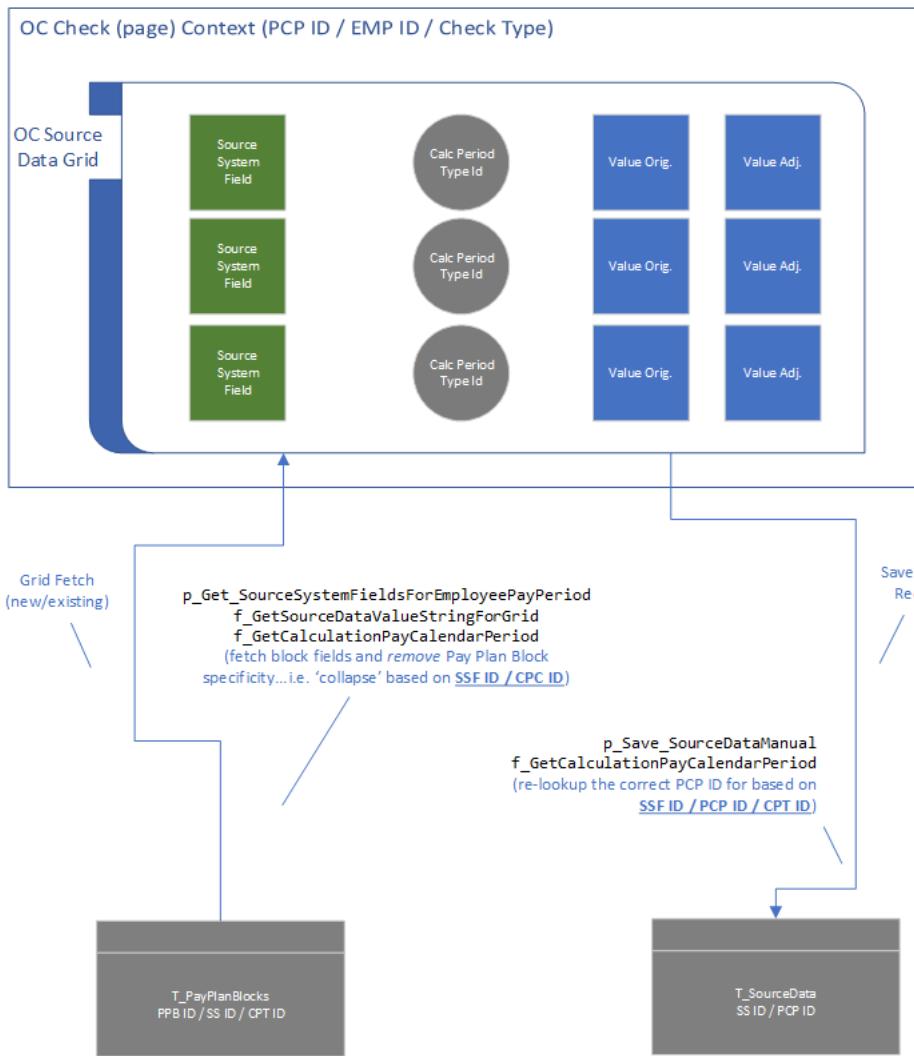
The f\_GetCalculationPayCalendarPeriod function plays a key role in both the fetch and save operations of the grid.

On the FETCH, this function helps the (new) f\_GetSourceDataValueStringForGrid function pull out the correct Original value using the correct PCP id relative to the OC payroll target date.

On the SAVE this function also is used to 'calculate' the correct PCP Id to insert or update back into the t\_SourceData table.

The new f\_GetSourceDataValueStringForGrid function is only for this grid. It's encapsulating the older f\_GetSourceDataValue and f\_GetSourceDataValueString into a single function call. This helps reduce the overall complexity of everything else that's going on with the grid fetch.

## Field Data Flow For Offcycle Source Data Grid Fetch and Save



For feature 92219, the Offcycle Adjustment process was 'adjusted' so that an adjustment check can be (actually always will be) associated with and run 'against' a *single* pay plan (id).

The scope of these feature changes is limited to adjustment check types.

Adjacent Pay Plans: [https://dev.azure.com/LithiaMotors/Advanced%20Incentive%20Program/\\_wiki/wikis/Advanced-Incentive-Program.wiki/2492/Glossary?anchor=a](https://dev.azure.com/LithiaMotors/Advanced%20Incentive%20Program/_wiki/wikis/Advanced-Incentive-Program.wiki/2492/Glossary?anchor=a)

When a single employee has 2 'adjacent' pay plans, the OC listing screen will show 2 rows instead of the normal single row for a regular (or replacement or term) payroll run that is done during the month or period in which both plans will participate in the payroll calculations.

On the front end, these changes manifest as a few UI change to the existing OC listing and detail views.

Here's an example of adjacent pay plans showing up as 2 rows for the regular payroll id 853...

## Off-Cycle Earnings

|  |   |  |
|--|---|--|
| Company<br>Medford Toyota (L0006)                | Pay Frequency<br>-- Select One --       | Job Title<br>-- Select One --                |
| Employee<br>Stephen Philips (569)                | Pay Period End Date<br>-- Select One -- | Cost Center (Department)<br>-- Select One -- |
| Specify an Employee to create an off-cycle check |   |  |

| ID ↓ | Pay Plan | Employee        | Company                | Job             | Pay Period End Date | Run Date/Time          |
|------|----------|-----------------|------------------------|-----------------|---------------------|------------------------|
| 856  | 11182    | Stephen Philips | Medford Toyota (L0006) | General Manager | 07/15/2022          | 07/14/2022 6:09:01 PM  |
| 856  | 11182    | Stephen Philips | Medford Toyota (L0006) | General Manager | 07/15/2022          | 07/14/2022 6:09:01 PM  |
| 855  | 11180    | Stephen Philips | Medford Toyota (L0006) | General Manager | 07/15/2022          | 07/13/2022 9:56:47 PM  |
| 855  | 11180    | Stephen Philips | Medford Toyota (L0006) | General Manager | 07/15/2022          | 07/13/2022 9:56:47 PM  |
| 853  | 11180    | Stephen Philips | Medford Toyota (L0006) | General Manager | 07/15/2022          | 07/13/2022 12:42:35 PM |
| 853  | 11182    | Stephen Philips | Medford Toyota (L0006) | General Manager | 07/15/2022          | 07/13/2022 12:42:35 PM |
| 800  | 11180    | Stephen Philips | Medford Toyota (L0006) | General Manager | 04/15/2022          | 04/20/2022 8:23:42 PM  |
| 800  | 11180    | Stephen Philips | Medford Toyota (L0006) | General Manager | 04/15/2022          | 04/20/2022 8:23:42 PM  |
| 800  | 11182    | Stephen Philips | Medford Toyota (L0006) | General Manager | 04/15/2022          | 04/20/2022 8:23:42 PM  |
| 800  | 11182    | Stephen Philips | Medford Toyota (L0006) | General Manager | 04/15/2022          | 04/20/2022 8:23:42 PM  |

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Version: 1.21.0

When choosing the 'Adjustment' option from the ellipsis menu of one of these 2 rows for 853, the Adjustment payroll which will be created 'against' the regular payroll will now be explicitly associated with the PayPlanId of the selected row (11180 or 11182 in this example).

More importantly, in the case of adjacent pay plans, only the selected plan will take part in the calculations for that payroll run (change to p\_Run\_PayrollManualAdjustment). Prior to this change, both plans would have been 'brought into' the payroll run calculations.

Even in the case of no adjacent pay plans, ALL Adjustment checks created will now be explicitly associated with and run against only the Plan Id of the selected row.

This PayPlanId which is passed into the payroll process from the front end grid will be stored in the ref.t\_PayrollManualEvent table along with the ReferencePayrollId which is the Payroll that is being 'adjusted'.

OC Detail Page:

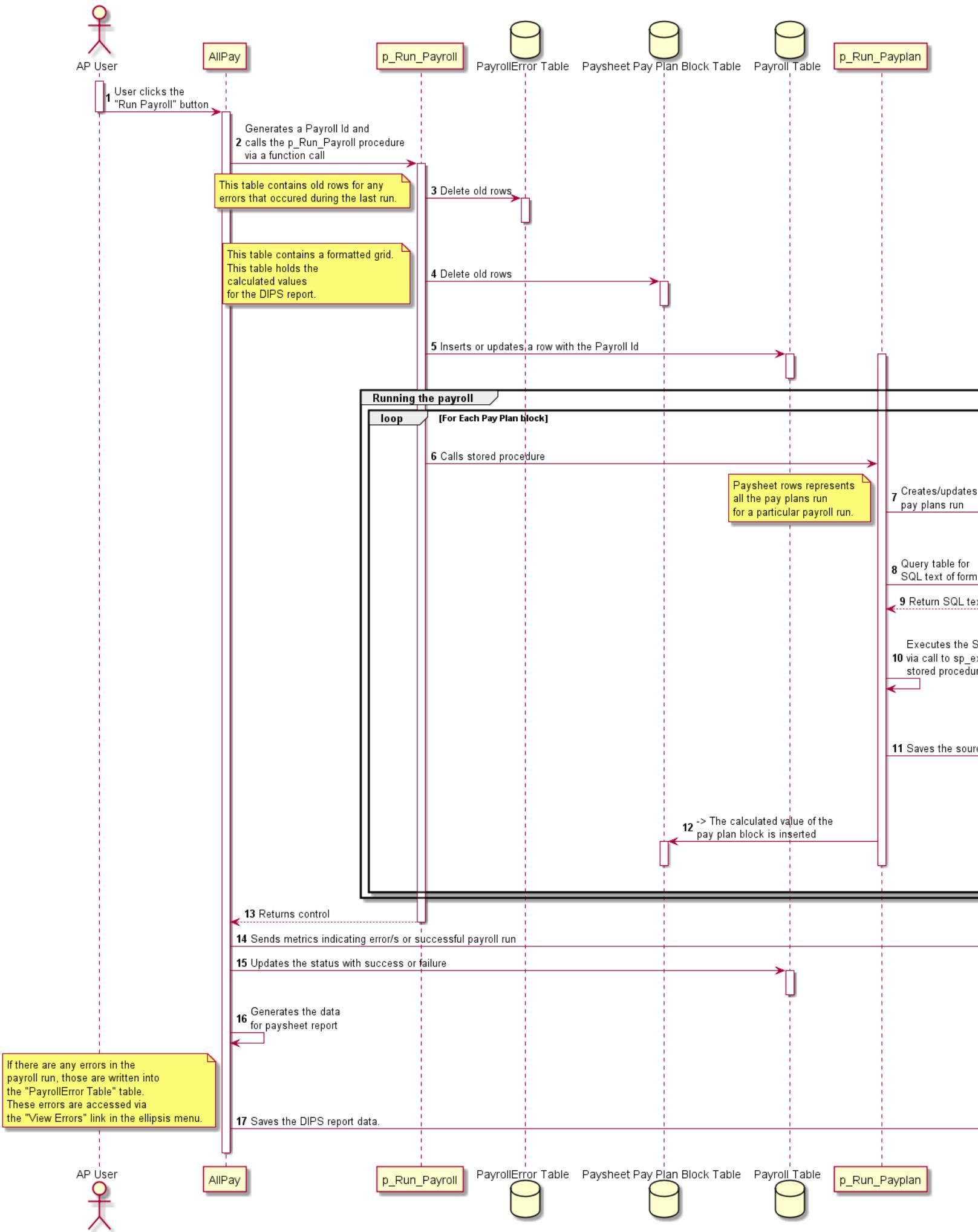
For Adjustment checks only, a new 'Pay Plan' header field will now appear at the top of the page to indicate which Plan this adjustment check was or will be run 'against'.

# Recalc Adjustment Check

| Employee        | Pay Plan              | Company        | Job             | Applies To                | Pay Period End Date | Reason                   |
|-----------------|-----------------------|----------------|-----------------|---------------------------|---------------------|--------------------------|
| Stephen Philips | Stephen Philips (569) | Medford Toyota | General Manager | 872 (Manual - Adjustment) | 7/15/2022           | Payroll - Template Error |

## Source Data

| Source System Field            | Calculation Period Type | Company        | Emp  |
|--------------------------------|-------------------------|----------------|------|
| Employee.MinimumWage           | Prior Month Total       | Medford Toyota | Step |
| PayrollSetup.CommMonthBegDate  | Prior Month Total       | Medford Toyota | Step |
| PayrollSetup.CommMonthEndDate  | Prior Month Total       | Medford Toyota | Step |
| PayrollSetup.PayBeginDate      | Always                  | Medford Toyota | Step |
| PayrollSetup.PayEndDate        | Always                  | Medford Toyota | Step |
| PayrollSetup.PayEndDate        | Current Mid             | Medford Toyota | Step |
| TimetrackingDaysCurrPeriod.LV2 | Always                  | Medford Toyota | Step |
| TimetrackingDaysCurrPeriod.UNP | Always                  | Medford Toyota | Step |
| TimetrackingDaysPriorMoTot.LV2 | Prior Month Total       | Medford Toyota | Step |
| TimetrackingDaysPriorMoTot.UNP | Prior Month Total       | Medford Toyota | Step |
| TimetrackingPriorMoTot.DT      | Prior Month Total       | Medford Toyota | Step |
| TimetrackingPriorMoTot.OT      | Prior Month Total       | Medford Toyota | Step |



ManualCheck.html

'Run' button



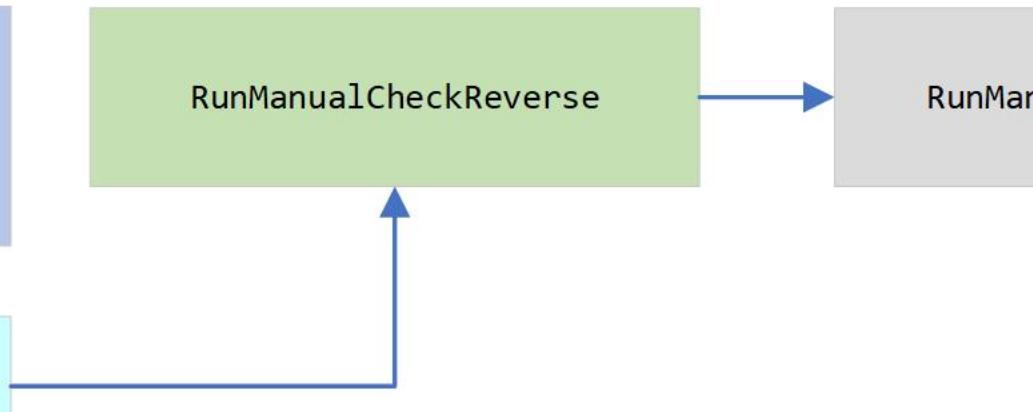
```
ManualCheckJS.runReverseCheck()
```

PayrollController.cs

RunManualCheckReverse

Payroll

RunMan



## *Test Pay Plan Process: the flow of SourceSystem*

PayPlanSheet.cshtml

PayPlanController.cs

PayPlanBlockS

SourceDataGrid

SheetSourceData\_Read()

GetPayPlanB  
ieldsForPa

*the user performs sourcefield value edits and clicks Calculate*

Calculate Button Click

PayPlanSheet.js.testPayPlan()  
)

TestPayPlan()

PayP

T

PayPlanBl

Get

Payroll

TestP

PayPlanB

SaveWh

UdtPayPlan

F

*Traces the flow of SourceData values from the UI controls to the database.*

ManualCheck.ctl

SourceSystemFieldsForEmployee  
ePayPeriodGrid

PayrollController.cs

SourceSystemFieldsForEmployee  
ePayPeriod\_Read()

Payroll

GetSourceSys  
oyeePay

ManualCheckJS.runCheck()

ManualCheckJS.runManualCheck  
( )

RunManualCheckNew()

RunManual

ReRunManualCheckNew()

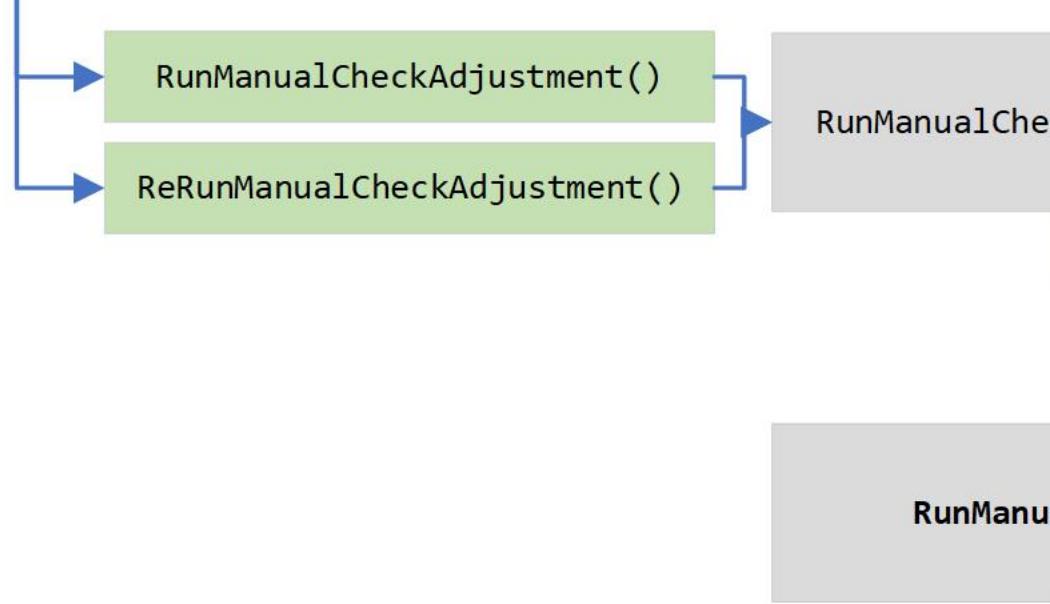
RunManual

RunManualCheckTermination()

RunManualChe

ReRunManualCheckTermination()

Source Data Overrides



## PayRoll Process

### C# code

**PayrollController.cs.RunPayrollRegular()**

```

payrollRepo.RunRegular()
  (orm.p_Run_Payroll)

PostProcessPayroll(PayrollEntity)

paysheethelper.GeneratePaysheetDataForPayroll(payroll.id)

  // Get all      employee blocks for this payroll run
  // Get all the source system field values used by all the blocks
  // Get list of distince paysheets
  // Process the blocks (in order) for each paysheet (SEE STEP 3)
  paysheethelper.ProcessPaySheetBlocks(blocks, sourceFieldValues)

  ...loop through blocks & create section rows for simple and advanced formulas...

SaveReportSections()

  _reportSectionRepo.SavePaysheetPayPlanBlockReportSection
    (orm.p_Save_PaysheetPayPlanBlockReportSection)
    INSERT [lnkr].[t_PaysheetPayPlanBlockReportSection]

payrollRepo.UpdatePayrollStatus(payroll.id)

```

### SQL

**orm. p\_Run\_Payroll**

```

-- check for valid input sheet
[core].[t_InputSheet]

-- check for data load
[ref].[t_PayGroupDataLoad]

```

```

--New payroll run?
    INSERT INTO [core].[t_Payroll]

--Re-running payroll
    UPDATE [core].[t_Payroll]

--for payroll re-runs, delete rows from lnkr tables
    DELETE FROM [core].[t_PayrollError]
    DELETE FROM [lnkr].[t_PaysheetPayPlanBlockReportSection]
    etc..

-- set up (drop and create) temp tables..
    #CalculationPeriodDateRanges
    #PayPlanIds
    etc...

-- Build table of all calendar periods that will be used based on the Calculation Period type of the current period
-- Determine the earliest period start and the latest period end.

-- Determine set of employees with ACTIVE pay plans for this pay group in this calendar period

-- Now find ALL pay plans for this set of Active Employees in the pay group
-- Note this may return past pay plans for OTHER pay groups and earlier calendar periods

-- Now join the list of selected pay plans to the appropriate calculation period types.
-- This will define which blocks should be processed in each of the selected plans.

-- Clear #PayPlanIds and reuse for distinct set of planIds from #PayPlans

-- set up cursor loop (#PayPlanIds).. 

-- Run the PayPlan
    EXEC [orm].[p_Run_PayPlan]

-- Check for status of all Paysheets in this payroll run. If any have errors then Payroll status is Error, otherwise status is Finished
    UPDATE [core].[t_Payroll]
        SET PayrollStatusId = @PayrollStatusId,
            UpdatedByUserName = @UserName,
            UpdatedTimestamp = @ts

```

### **orm.p\_Run\_Payplan**

```

-- Get the EmployeeId, OrganizationID and PayGroupId for this PayPlan
-- Get the payroll type
-- Get pay period end date
-- Set PaySheetStatusId to 1 (Processing)
-- Create Paysheet record
    INSERT INTO [core].[t_PaySheet]

-- Set PaySheetStatusId to 3 (Finished). If an error occurs the catch block will set to 2 (Error)

--Begin: REGULAR PAY PLAN BLOCKS -----
-- decide on organization id to be used

-- Execute the block formula (found in core.t_PayPlanBlock)
    EXEC sp_executesql @t_SqlText,,

-- Insert row into lnkr.t_PaySheetPayPlanBlock
    INSERT INTO [lnkr].[t_PaySheetPayPlanBlock] @t_BlockCalculatedValue

-- Begin: MANUAL STORE INPUT VALUES -----
-- Add manually added InputSheetData records to [lnkr].[t_PaySheetInputSheetData]
    IF EXISTS( SELECT 1 FROM [orm].[v_InputSheetData] )

        INSERT INTO [lnkr].[t_PaySheetInputSheetData]

-- Begin: FOOTER PAY PLAN BLOCKS ----
-- decide on organization id to be used
-- Execute the block formula (found in core.t_PayPlanBlock)
    EXEC sp_executesql @t_SqlText,,

-- Insert row into lnkr.t_PaySheetPayPlanBlock
    INSERT INTO [lnkr].[t_PaySheetPayPlanBlock] @t_BlockCalculatedValue

    UPDATE [core].[t_PaySheet]
        SET PaySheetStatusId = @PaySheetStatusId, UpdatedByUserName = @UserName, UpdatedTimestamp = @TimeStamp

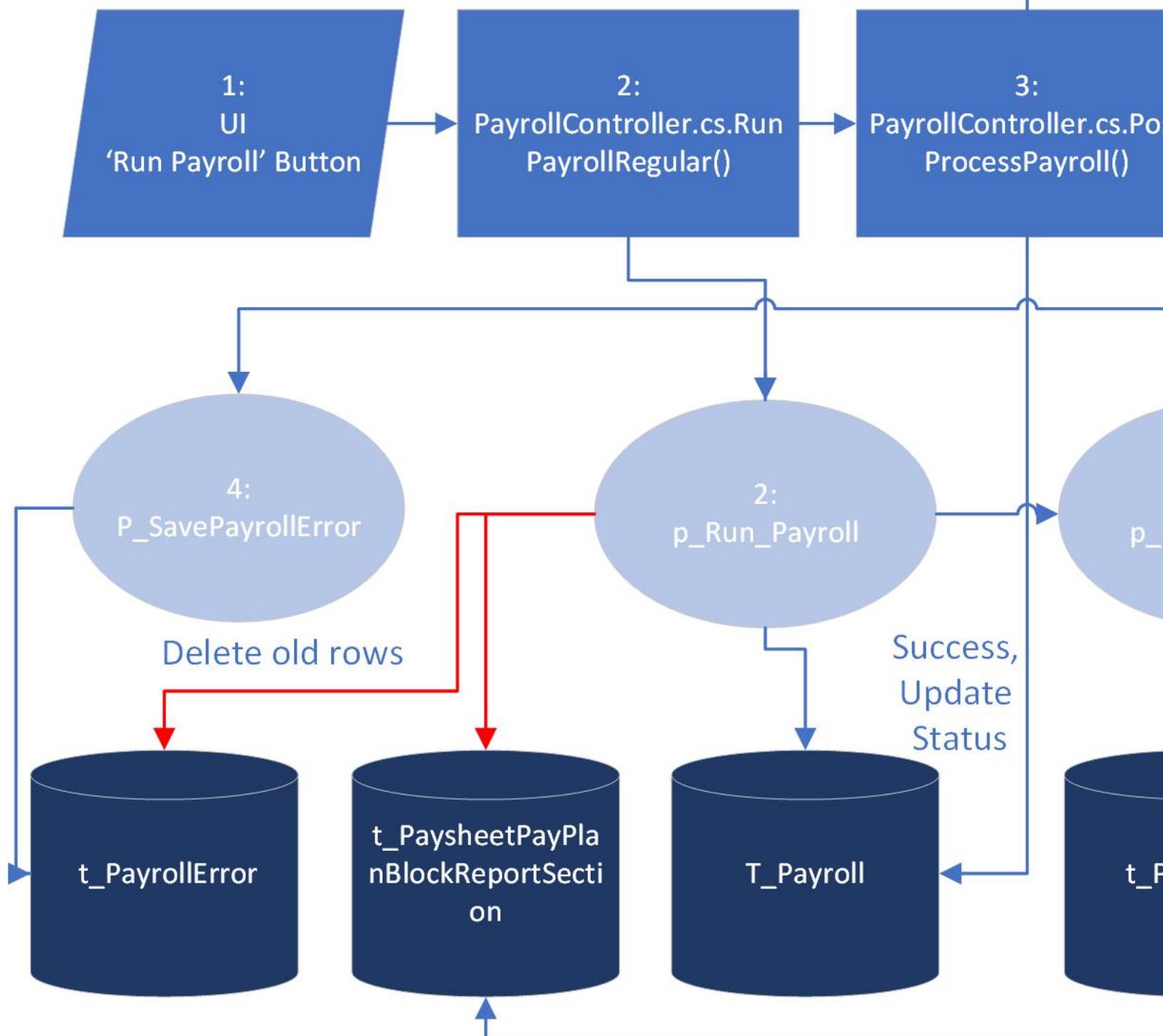
```

# Payroll Run Process (regular)



Application  
Insights

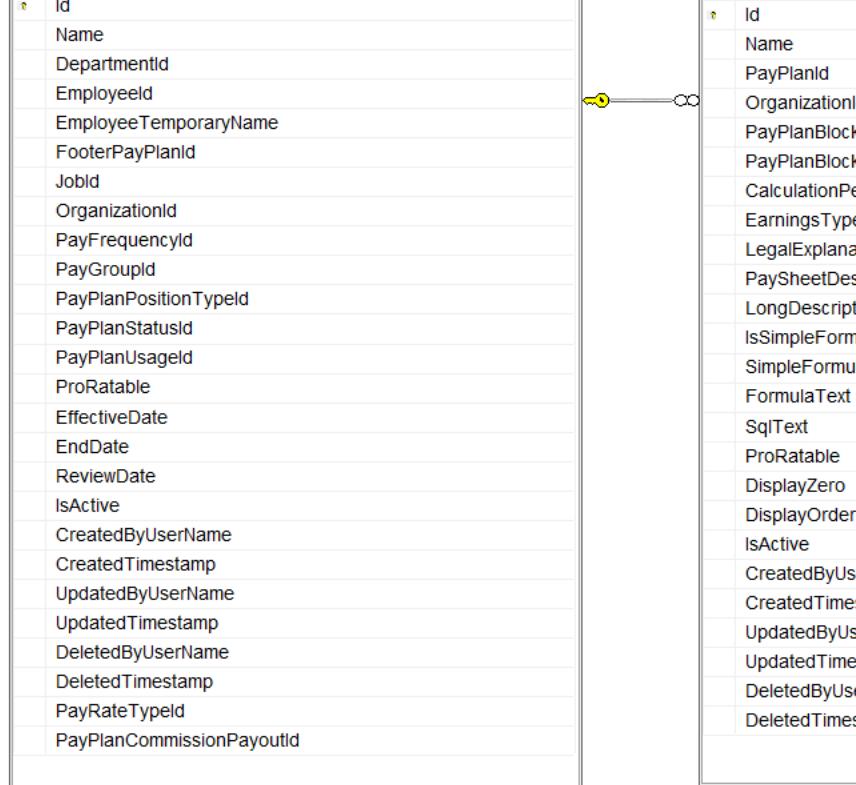
Write Error or Success  
Message



## BASIC PAYROLL RUN SEQUENCE

1. Run Data Extractor to upload schedules. (first checkbox turns green)
2. 'Load' the input sheet (via the Input Sheet page for the Store/Period). Add any rows to the input sheet as needed (optional).
3. Run payroll ('Run' button).
4. Download a DIPS sheet copy for the Payroll run. Send to the stores for review.
5. Review comes back from the stores with adjustments or errors (or not). Create adjustments and fix errors as needed (re run payroll?).
6. EIB report copy is generated and uploaded to Workday (register is updated).
7. BT team member reviews register and DIPS sheet and if they line up, checks the first checkbox.
8. The store manager reviews the Workday register and sends back an approval.
9. A BT Team member checks the second checkbox upon an approval. (In the future the second checkbox may be made available online for the stores to update themselves?)
10. 'Complete' button is clicked and the Payroll run status is changed to 'completed'.





This page outlines the capabilities assigned to each persona type within All Pay. A user's access to specific functions within All Pay is managed by the following roles in Azure AD.

- AllPay\_Compensation\_
- AllPay\_Compensation\_Senior\_
- AllPay\_Payroll\_
- AllPay\_Store\_
- AllPay\_Superuser\_

The following table outlines the actions each of the persona types has access to within All Pay.

| Action   | Superuser | Compensation Senior | Compensation Payroll | Payroll Senior | Payroll Store |
|--|-----------|---------------------|----------------------|----------------|---------------|
| <b>Payroll Menu</b>                                  | ✓         | ✓                   | ✓                    | ✓              | ✓             |
| View payroll   | ✓         | ✓                   | ✓                    | ✓              | ✓             |
| View payroll errors                                  | ✓         | ✓                   | ✓                    | ✓              | ✓             |
| View payroll notes                                   | ✓         | ✓                   | ✓                    | ✓              | ✓             |
| Add payroll notes                                    | ✓         |                     |                      | ✓              | ✓             |
| Review register for payroll                          | ✓         |                     | ✓                    | ✓              |               |
| Review register for store                            | ✓         |                     | ✓                    |                | ✓             |
| Complete a payroll                                   | ✓         |                     |                      | ✓              |               |
| Run a payroll  | ✓         |                     |                      | ✓              | ✓             |
| View store input sheet                               | ✓         | ✓                   | ✓                    | ✓              | ✓             |
| Edit store input sheet (load, delete, submit, print) | ✓         |                     |                      | ✓              | ✓             |
| Edit store input sheet (unlock)                      | ✓         |                     |                      | ✓              | ✓             |
| View adjustments                                     | ✓         | ✓                   | ✓                    | ✓              | ✓             |
| Edit adjustments (add, update)                       | ✓         |                     |                      | ✓              | ✓             |
| View payroll accruals                                | ✓         | ✓                   | ✓                    | ✓              | ✓             |
| Run payroll accruals                                 | ✓         | ✓                   | ✓                    | ✓              | ✓             |
| View payroll audits                                  | ✓         | ✓                   | ✓                    | ✓              | ✓             |
| Run payroll audits                                   | ✓         | ✓                   | ✓                    | ✓              | ✓             |
| <b>Pay Plan Menu</b>                                 | ✓         | ✓                   | ✓                    | ✓              | ✓             |
| View pay plans                                       | ✓         | ✓                   | ✓                    | ✓              | ✓             |
| Manage Employee Pay Plans (View/Edit)                | ✓         | ✓                   | ✓                    |                |               |
| Manage Employee Pay Plans (Delete)                   | ✓         |                     | ✓                    |                |               |
| Activate pending pay plans                           |           |                     |                      |                |               |
| View pay plan templates                              | ✓         | ✓                   | ✓                    | ✓              | ✓             |
| Edit pay plan templates (add edit)                   | ✓         |                     | ✓                    |                |               |
| View pay plan footers                                | ✓         | ✓                   | ✓                    | ✓              | ✓             |
| Edit pay plan footers (add, edit)                    | ✓         |                     | ✓                    |                |               |
| View formulas  | ✓         | ✓                   | ✓                    | ✓              | ✓             |
| Edit formulas (add, edit, delete)                    | ✓         | ✓                   | ✓                    |                |               |

| Action                                    | Superuser | Compensation | Senior Compensation | Payroll | Payroll | Senior Store |
|---|-----------|--------------|---------------------|---------|---------|--------------|
| View grids                                | ✓         | ✓            | ✓                   | ✓       | ✓       |              |
| Edit grids (add, edit, select)            | ✓         | ✓            | ✓                   | ✓       | ✓       |              |
| <i>View Impact Builder</i>                |           |              |                     |         |         |              |
| <i>Create Impact Analysis</i>             |           |              |                     |         |         |              |
| <i>Edit Impact Analysis</i>               |           |              |                     |         |         |              |
| <i>Delete Impact Analysis</i>             |           |              |                     |         |         |              |
| <b>Admin Menu</b>                         | ✓         | ✓            | ✓                   | ✓       | ✓       | ✓            |
| View legal explanations                   | ✓         | ✓            | ✓                   | ✓       | ✓       |              |
| Edit legal explanations (add, edit, copy) | ✓         |              | ✓                   |         |         |              |
| View pay groups                           | ✓         | ✓            | ✓                   | ✓       | ✓       |              |
| Edit pay groups (add, edit, delete)       | ✓         |              |                     |         |         |              |
| View pay calendars                        | ✓         | ✓            | ✓                   | ✓       | ✓       | ✓            |
| Edit pay calendars (add, edit, delete)    | ✓         |              | ✓                   |         |         |              |
| View employee details                     | ✓         | ✓            | ✓                   | ✓       | ✓       |              |
| View security roles                       | ✓         | ✓            | ✓                   | ✓       | ✓       |              |
| Upload Files                              | ✓         |              |                     |         |         |              |
| View Reports Index Page                   | ✓         |              | ✓                   | ✓       | ✓       |              |
| View Cash Spiff JV                        | ✓         | ✓            | ✓                   | ✓       | ✓       |              |
| View Vacation Temp Rates                  | ✓         | ✓            | ✓                   | ✓       | ✓       |              |
| Download Reports                          | ✓         |              | ✓                   | ✓       | ✓       |              |

We have test accounts for different user rolls in all environments. If an account become deactivated, send an email to AllPayTestUserActivation@lithia.com with subject and body as seen below. You must send a separate email for each account to be activated. You will receive a response when the account has been enabled.

Send

|         |   |
|---------|---|
| To      | <input type="text" value="AllPayTestUserActivation"/> |
| Cc      | <input type="text"/>                                  |
| Bcc     | <input type="text"/>                                  |
| Subject | Enable user   |

Enable: u\_AP\_Payroll\_Dev

Notes: Needed for testing Payroll persona

...

The group of users who can use this process is maintained in the AD group "AllPay\_TestUserRequestors".

| ID                                   | DisplayName                     | GroupType | MembershipType | Source            | Mail securityEnabled | mailEnabled | isAssignableToRole | onPremisesSyncEnabled |
|--------------------------------------|---------------------------------|-----------|----------------|-------------------|----------------------|-------------|--------------------|-----------------------|
| ce86a448-e328-463d-939f-75a7f34e32aa | AllPay_Payroll_Senior_Dev       | Security  | Assigned       | Windows server AD | TRUE                 | FALSE       | FALSE              | TRUE                  |
| e89a6e78-3133-4b1b-b81d-df8ac07dc497 | AllPay_Compensation_Dev         | Security  | Assigned       | Windows server AD | TRUE                 | FALSE       | FALSE              | TRUE                  |
| 108b4dd3-38d1-4419-bab9-4a66b8ad6031 | AllPay_Compensation_Senior_Dev  | Security  | Assigned       | Windows server AD | TRUE                 | FALSE       | FALSE              | TRUE                  |
| fb0de33e-d394-422b-a4be-89d993f50ae1 | AllPay_Superuser_Dev            | Security  | Assigned       | Windows server AD | TRUE                 | FALSE       | FALSE              | TRUE                  |
| Test Groups                          | I                               |           |                |                   |                      |             |                    |                       |
| 05c6ce18-8ed7-4b68-a835-84b021a5962b | AllPay_Store_Test               | Security  | Assigned       | Windows server AD | TRUE                 | FALSE       | FALSE              | TRUE                  |
| bebf32ce-be5a-4d59-b00e-9c89ff391323 | AllPay_Payroll_Test             | Security  | Assigned       | Windows server AD | TRUE                 | FALSE       | FALSE              | TRUE                  |
| 159bb7ba-b496-4d83-a429-fc5e8772841a | AllPay_Payroll_Senior_Test      | Security  | Assigned       | Windows server AD | TRUE                 | FALSE       | FALSE              | TRUE                  |
| 457aa668-a219-424d-8a22-94c6026ef8cc | AllPay_Compensation_Test        | Security  | Assigned       | Windows server AD | TRUE                 | FALSE       | FALSE              | TRUE                  |
| 8fbec11e-72b0-4d68-858c-7220bd35bb64 | AllPay_Compensation_Senior_Test | Security  | Assigned       | Windows server AD | TRUE                 | FALSE       | FALSE              | TRUE                  |

| ID                                   | DisplayName                     | GroupType | MembershipType | Source            | Mail securityEnabled | mailEnabled | isAssignableToRole | onPremisesSyncEnabled |
|--------------------------------------|---------------------------------|-----------|----------------|-------------------|----------------------|-------------|--------------------|-----------------------|
| 5c0fca2a-3317-416f-969b-2e0d5ea50120 | AllPay_Superuser_Test           | Security  | Assigned       | Windows server AD | TRUE                 | FALSE       | FALSE              | TRUE                  |
| UAT Groups                           | I                               |           |                |                   |                      |             |                    |                       |
| 664345e2-f018-430f-a241-ebe8ba0d8f54 | Allpay_Store_UAT                | Security  | Assigned       | Windows server AD | TRUE                 | FALSE       | FALSE              | TRUE                  |
| 08c18655-c5aa-41d1-9e64-f615e340440c | Allpay_Payroll_UAT              | Security  | Assigned       | Windows server AD | TRUE                 | FALSE       | FALSE              | TRUE                  |
| c4f2c8cf-b2a6-4baf-9be1-545d60dae90a | AllPay_Payroll_Senior_UAT       | Security  | Assigned       | Windows server AD | TRUE                 | FALSE       | FALSE              | TRUE                  |
| 633e3389-198f-4773-9820-0fdaf1dec158 | Allpay_Compensation_UAT         | Security  | Assigned       | Windows server AD | TRUE                 | FALSE       | FALSE              | TRUE                  |
| 93edb376-8732-4f47-a343-6ecafe24f32a | Allpay_Compensation_Senior_UAT  | Security  | Assigned       | Windows server AD | TRUE                 | FALSE       | FALSE              | TRUE                  |
| 4da4e6bf-ea98-4815-905f-10904c8bfe38 | Allpay_Superuser_UAT            | Security  | Assigned       | Windows server AD | TRUE                 | FALSE       | FALSE              | TRUE                  |
| Prod Groups                          | I                               |           |                |                   |                      |             |                    |                       |
| 4b308eb2-569e-4475-bd6f-e7f08e61a27c | AllPay_Store_Prod               | Security  | Assigned       | Windows server AD | TRUE                 | FALSE       | FALSE              | TRUE                  |
| 8ae0ff96-1a9e-4427-a2ae-75af85df3982 | AllPay_Payroll_Prod             | Security  | Assigned       | Windows server AD | TRUE                 | FALSE       | FALSE              | TRUE                  |
| 11c7ce7e-9a98-43d4-8297-5372306b27de | AllPay_Payroll_Senior_Prod      | Security  | Assigned       | Windows server AD | TRUE                 | FALSE       | FALSE              | TRUE                  |
| 4edc50c8-0309-42bd-b28b-0186ee1e2906 | AllPay_Compensation_Prod        | Security  | Assigned       | Windows server AD | TRUE                 | FALSE       | FALSE              | TRUE                  |
| bb3016e2-388c-48d8-a707-da07f078326d | AllPay_Compensation_Senior_Prod | Security  | Assigned       | Windows server AD | TRUE                 | FALSE       | FALSE              | TRUE                  |
| 7b5af26b-c0c0-4786-963b-1e68c4044500 | AllPay_Superuser_Prod           | Security  | Assigned       | Windows server AD | TRUE                 | FALSE       | FALSE              | TRUE                  |

#Adding support for a new authorization handler

| Personas (previously Roles) |              |                     |         |       |  |
|-----------------------------|--------------|---------------------|---------|-------|--|
| Authorization               | Compensation | Compensation Senior | Payroll | Store |  |
| PayrollView                 | X            | X                   | X       | X     |  |
| PayrollReview               |              |                     | X       | X     |  |
| PayrollStoreReview          |              |                     |         | X     |  |
| PayrollAdmin                |              |                     | X       |       |  |
| RegisterReviewPayroll       |              | X                   | X       |       |  |
| RegisterReviewStore         |              | X                   | X       | X     |  |
| CompensationView            | X            | X                   | X       |       |  |
| CompensationEdit            | X            | X                   |         |       |  |
| CompensationAdmin           |              | X                   |         |       |  |

Determine the required persona combination for the authorization handler.

```
public static class PolicyConstants
{
    public const string PayrollView = "PayrollView";
    public const string PayrollReview = "PayrollReview";
    public const string PayrollStoreReview = "PayrollStoreReview";
    public const string PayrollAdmin = "PayrollAdmin";
    public const string RegisterReviewPayroll = "RegisterReviewPayroll";
    public const string RegisterReviewStore = "RegisterReviewStore";
    public const string CompensationView = "CompensationView";
    public const string CompensationEdit = "CompensationEdit";
    public const string CompensationAdmin = "CompensationAdmin";
}
```

In Helpers\Constants.cs, add a constant to the PolicyConstants class.

```
namespace Payroll.Web.Security
{
    // This file is used to link requirements with AuthorizationHandlers (by having them
    // separated we can use Dependency Injection on the Authorization Handlers)
    public class PayrollViewRequirement : IAuthorizationRequirement { }
    public class PayrollReviewRequirement : IAuthorizationRequirement { }
    public class PayrollStoreReviewRequirement : IAuthorizationRequirement { }
    public class PayrollAdminRequirement : IAuthorizationRequirement { }
    public class RegisterReviewPayrollRequirement : IAuthorizationRequirement { }
    public class RegisterReviewStoreRequirement : IAuthorizationRequirement { }
    public class CompensationViewRequirement : IAuthorizationRequirement { }
    public class CompensationEditRequirement : IAuthorizationRequirement { }
    public class CompensationAdminRequirement : IAuthorizationRequirement { }
}
```

In Security\Requirements.cs, add a new requirement class.

| Security |                                 |
|----------|---------------------------------|
| ▷        | CompensationAdminHandler.cs     |
| ▷        | CompensationEditHandler.cs      |
| ▷        | CompensationViewHandler.cs      |
| ▷        | PayrollAdminHandler.cs          |
| ▷        | PayrollReviewHandler.cs         |
| ▷        | PayrollStoreReviewHandler.cs    |
| ▷        | PayrollViewHandler.cs           |
| ▷ +      | RegisterReviewPayrollHandler.cs |
| ▷ +      | RegisterReviewStoreHandler.cs   |
| ▷ ✓      | Requirements.cs                 |

In the Security folder, add a new authorization handler file dedicated to the policy. Use another one as a model and update as needed.

```
public class RegisterReviewPayrollHandler : AuthorizationHandler<RegisterReviewPayrollRequirement>
{
    private readonly Helpers.GraphHelper _graphHelper;

    public RegisterReviewPayrollHandler(Helpers.GraphHelper graphHelper)
    {
        _graphHelper = graphHelper;
    }

    protected override Task HandleRequirementAsync(
        AuthorizationHandlerContext context,
        RegisterReviewPayrollRequirement requirement)
    {
        if (context.User.Identity.IsAuthenticated)
        {
            if (_graphHelper.IsAnyGroup(
                context.User,
                new List<string>
                {
                    _graphHelper.CompensationSeniorGroup,
                    _graphHelper.PayrollGroup
                }))
            {
                context.Succeed(requirement);
            }
        }
        return Task.FromResult(0);
    }
}
```

In Startup.cs, add the policy requirement and the authorization handler.

```
services.AddAuthorizationCore(options =>
{
    options.AddPolicy(PolicyConstants.PayrollView, policy => policy.Requirements.Add(new PayrollViewRequirement()));
    options.AddPolicy(PolicyConstants.PayrollReview, policy => policy.Requirements.Add(new PayrollReviewRequirement()));
    options.AddPolicy(PolicyConstants.PayrollStoreReview, policy => policy.Requirements.Add(new PayrollStoreReviewRequirement()));
    options.AddPolicy(PolicyConstants.PayrollAdmin, policy => policy.Requirements.Add(new PayrollAdminRequirement()));
    options.AddPolicy(PolicyConstants.RegisterReviewPayroll, policy => policy.Requirements.Add(new RegisterReviewPayrollRequirement()));
    options.AddPolicy(PolicyConstants.RegisterReviewStore, policy => policy.Requirements.Add(new RegisterReviewStoreRequirement()));
    options.AddPolicy(PolicyConstants.CompensationView, policy => policy.Requirements.Add(new CompensationViewRequirement()));
    options.AddPolicy(PolicyConstants.CompensationEdit, policy => policy.Requirements.Add(new CompensationEditRequirement()));
    options.AddPolicy(PolicyConstants.CompensationAdmin, policy => policy.Requirements.Add(new CompensationAdminRequirement()));

    // Authorization Handlers.
    services.AddSingleton<IAuthorizationHandler, PayrollViewHandler>();
    services.AddSingleton<IAuthorizationHandler, PayrollReviewHandler>();
    services.AddSingleton<IAuthorizationHandler, PayrollStoreReviewHandler>();
    services.AddSingleton<IAuthorizationHandler, PayrollAdminHandler>();
    services.AddSingleton<IAuthorizationHandler, RegisterReviewPayrollHandler>();
    services.AddSingleton<IAuthorizationHandler, RegisterReviewStoreHandler>();
    services.AddSingleton<IAuthorizationHandler, CompensationViewHandler>();
    services.AddSingleton<IAuthorizationHandler, CompensationEditHandler>();
    services.AddSingleton<IAuthorizationHandler, CompensationAdminHandler>();
});
```

#Adding authorization handler to controllers

Each controller has an authorization decoration at the class level. This means that calls to each action in the controller must satisfy that authorization requirement, unless overridden at the

```
[Authorize(PolicyConstants.PayrollView)]
public class PayrollController : Controller
{
```

action level.

If an action needs to have an authorization applied to it different from the class level authorization, a decoration at the action level may be applied.

```
[Authorize(PolicyConstants.PayrollReview)]
public void StoreInput_Load(long payGroupId, long payCalendarPeriodId)
{
```

#Adding authorization handler to views

User server side logic to create a C# variable representing the authorization status in question.

```
@{
    ViewData["Title"] = "Payroll Home";
    bool canReview = AuthorizationService.AuthorizeAsync(User, Model, PolicyConstants.PayrollReview).Result.Succeeded;
    bool canRegisterReviewPayroll = AuthorizationService.AuthorizeAsync(User, Model, PolicyConstants.RegisterReviewPayroll).Result.Succeeded;
    bool canRegisterReviewStore = AuthorizationService.AuthorizeAsync(User, Model, PolicyConstants.RegisterReviewStore).Result.Succeeded;
    bool canAdmin = AuthorizationService.AuthorizeAsync(User, Model, PolicyConstants.PayrollAdmin).Result.Succeeded;
}
```

```

        columns.Command(command =>
    {
        command.Edit();
    })
    .Visible(canReview);
}
.ToolBar(toolbar =>
{
    if (canReview)
    {
        toolbar.Create()
            .Text("Add Note");
    }
})

```

Show or hide columns objects via Razor.

Mix in with JavaScript and HTML to differentially update the UI.

```

columns.Bound(c => c.RegisterReviewByPayrollComplete)
    .Title("Register<br />Review Payroll")
    .ClientTemplate(
        $"# if ({canRegisterReviewPayroll.ToString().ToLower()} != null) { #
        <img style='cursor:pointer' onclick='RegularJS.savePayroll(#= Id #, #= PayGroupId #, #= Pay#
        src='# if (RegisterReviewByPayrollComplete) { #/images/ic_check_box_checked.png# } else { #
        # } else { #
        <img class='img-disabled' src='# if (RegisterReviewByLocationComplete) { #/images/ic_check_#
        # } #'"
    )

```

You should be able to login to these SSRS servers with your corporate login, but you'll need to use the 'lithiainc.com' domain for some reason.

e.g.

seymour.skinner@lithiaINC.com

**Main Paysheet Report (has filter controls)** //main payroll report urls <http://azwu2apssrs-dev.lithiainc.com/reports/report/PayrollReports/Payroll> <http://AZWU2APSSRS-TST.lithiainc.com/reports/report/PayrollReports/Payroll>

**Same as above but only for a single PaysheetId (payplan)** //individual paysheet report urls (Paysheet2) <http://azwu2apssrs-dev.lithiainc.com/reports/report/PayrollReports/Paysheet2> <http://AZWU2APSSRS-TST.lithiainc.com/reports/report/PayrollReports/Paysheet2>

Follow the steps bellow to create a new database alert (e.g. data used over 70%)

1. Open the SQL database resource page on Azure (e.g. Payroll-DEV).
2. From the left menu select **Alerts**.
3. Add a **New alert rule**

The screenshot shows the Microsoft Azure portal interface for a SQL database named 'PayRoll-DEV'. The top navigation bar includes 'Microsoft Azure', 'Home > AZWU2-DIG-AP-RG > PayRoll-DEV (azwu2aptest-sqls/PayRoll-DEV)'. The main content area displays various database management options like 'Data Discovery & Classification', 'Dynamic Data Masking', 'Microsoft Defender for Cloud', and 'Transparent data encryption'. On the left, there are sections for 'Intelligent Performance' (Performance overview, Performance recommendations, Query Performance Insight, Automatic tuning) and 'Monitoring' (Alerts). The 'Alerts' tab is highlighted with a red box. At the top right, there is a '+ New alert rule' button, also highlighted with a red box. The status bar at the bottom indicates 'Subscription : Enterprise Dev'.

4. On Create alert rule page click on **Add condition**.
5. Select **Data space used percent** from the list and set the following values and click **Done**:
  - Operator: Greater than
  - Aggregation type: Average
  - Threshold value: 70%

![5.PNG](./attachments/5-41e4cc69-45a3-4263-aa10-438ce576dad2.PNG)=600x)

6. In the **Actions** section click on **Add action groups** and select the group from the list.
7. In the **Alert rule details** section fill the **Alert rule name** and select **Warning** for **Severity**.

## Create alert rule ...

## Actions

Send notifications or invoke actions when the alert rule triggers, by selecting or creating a new action group. [Learn more](#)

| Action group name | Contains actions |
|-------------------|------------------|
| all pay app team  | 5 Emails         |

[Manage action groups](#)

## Alert rule details

Provide details on your alert rule so that you can identify and manage it later.

|                                 |                                     |
|---------------------------------|-------------------------------------|
| Alert rule name *               | Data space used over 70 percent     |
| Description                     | Specify the alert rule description  |
| Subscription                    | Enterprise Dev/Test                 |
| Resource group *                | AZWU2-DIG-AP-RG                     |
| Severity *                      | 2 - Warning                         |
| Enable alert rule upon creation | <input checked="" type="checkbox"/> |
| Automatically resolve alerts    | <input checked="" type="checkbox"/> |

[Create alert rule](#)

#UNDER CONSTRUCTION

## Build Pipeline

- Web application: [AllPay\\_ImpactBuilder](#)
- API: [AllPay\\_ImpactBuilder\\_API](#)

## Deployment (Release Pipeline)

- Web application: [ImpactBuilder\\_Web](#)
- API: [ImpactBuilder\\_API](#)

## Environment-specific Resources

## Development

- Resource Group: [RG-ALLPAYDEV](#)
- Container registry: [ACRWU2ALLPAYDEV](#)
- App Service - API: [APP-ALLPAYDEV-WU2-API](#)
- App Service - Web: [APP-ALLPAYDEV-WU2-WEB](#)
- Application Insights - [APPI-ALLPAYDEV](#)
- App Service plan - [PLAN-WU2-ALLPAYDEV](#)
- Container registry webhook: [vsts495928lithiamotors \(ACRWU2ALLPAYDEV/vsts495928lithiamotors\)](#)

## RBAC

The Impact Builder web application uses the All Pay Enterprise Applications per environment so that the roles in All Pay can be used in Impact Builder. Roles are *defined* in the Azure AD App Registration "[AllPay\\_dev](#)". Roles are *assigned* in the Azure AD Enterprise Application "[AllPay\\_dev](#)"

## Test

- Resource group: [RG-ALLPAYTEST](#)
- Container registry: [ACRWU2ALLPAYTEST](#)
- App Service: [APP-ALLPAYTEST-WU2-API](#)
- App Service: [APP-ALLPAYTEST-WU2-WEB](#)
- Application Insights: [APPI-ALLPAYTEST](#)
- App Service plan: [PLAN-WU2-ALLPAYTEST](#)
- Container registry webhook: [vsts605664lithiamotors \(ACRWU2ALLPAYTEST/vsts605664lithiamotors\)](#)

## RBAC

## UAT

- Resource Group: [RG-ALLPAYUAT](#)
- Container registry: [ACRWU2ALLPAYUAT](#)
- App Service: [APP-ALLPAYUAT-WU2-API](#)
- App Service: [APP-ALLPAYUAT-WU2-WEB](#)
- Application Insights: [APPI-ALLPAYUAT](#)
- App Service plan: [PLAN-WU2-ALLPAYUAT](#)
- Container registry webhook: [vsts123782lithiamotors \(ACRWU2ALLPAYUAT/vsts123782lithiamotors\)](#)

## RBAC

App Registration: [AllPay uat](#) Enterprise Application: [AllPay uat](#)

## Production

- Resource group: [RG-ALLPAYPROD](#)
- Container registry: [ACRWCUALLPAYPROD](#)
- Container registry: [ACRWU2ALLPAYPROD](#)
- App Service: [APP-ALLPAYPROD-WCU-API](#)
- App Service: [APP-ALLPAYPROD-WCU-WEB](#)
- App Service: [app-allpayprod-wu2-api](#)
- App Service: [APP-ALLPAYPROD-WU2-WEB](#)
- Application Insights: [APPI-ALLPAYPROD](#)

## RBAC

*unknown* (no access)

## #Impact Builder Release History

Note, the [Dev environment](#) will always have the latest updates from develop branch.

[[TOSP]]

###Deployments

| Release                    | Test       | UAT        | Prod       |
|----------------------------|------------|------------|------------|
| <a href="#">API v0.2.2</a> | 03/23/2023 | 03/31/2023 | 04/06/2023 |
| <a href="#">Web v0.2.2</a> | 03/23/2023 | 03/31/2023 | 04/06/2023 |
| <a href="#">API v0.2.1</a> | 02/14/2023 | 02/17/2023 | 02/17/2023 |
| <a href="#">Web v0.2.1</a> | 02/14/2023 | 02/17/2023 | 02/17/2023 |
| <a href="#">API v0.1.2</a> | 01/30/2023 | 02/01/2023 | 02/01/2023 |
| <a href="#">Web v0.1.1</a> | 01/30/2023 | 02/01/2023 | 02/01/2023 |

**Note to release engineer:** After first production release, add "Health & Days" and "Size" columns.

###Source of truth for deployments:

[https://dev.azure.com/LithiaMotors/Advanced%20Incentive%20Program/\\_release?view=all&path=%5CImpactBuilder&a=releases](https://dev.azure.com/LithiaMotors/Advanced%20Incentive%20Program/_release?view=all&path=%5CImpactBuilder&a=releases)

#Included ADO Work Items

#Bugs from testing #125651 #125654

#Deployments [https://dev.azure.com/LithiaMotors/Advanced%20Incentive%20Program/\\_releaseProgress?a=release-pipeline-progress&releaseId=3928](https://dev.azure.com/LithiaMotors/Advanced%20Incentive%20Program/_releaseProgress?a=release-pipeline-progress&releaseId=3928)

#Release Notes

- Note to release engineer: After first production release, add CAB and Release Health sections.

#Included ADO Work Items

#Bugs from testing #125835 #125858 #125900

#Deployments [https://dev.azure.com/LithiaMotors/Advanced%20Incentive%20Program/\\_releaseProgress?a=release-pipeline-progress&releaseId=3927](https://dev.azure.com/LithiaMotors/Advanced%20Incentive%20Program/_releaseProgress?a=release-pipeline-progress&releaseId=3927)

#Release Notes

- Note to release engineer: After first production release, add CAB and Release Health sections.

#Included ADO Work Items

#QA/UAT: | ITEM | QA | UAT | -----|-----|-----| #112597 |PASS||| #113901 |PASS||| #114160 |PASS||| #114582 |PASS||| #114586 |PASS||| #115164 |PASS||| #120439 |PASS||

#### #Release Notes

- Note to release engineer: After first production release, add CAB and Release Health sections.

#### #Included ADO Work Items

#QA | ITEM | QA | -----|-----| #112825 |NA| #114082 |NA| #114576 |NA| #114581 |NA| #114585 |NA| #119792 |NA|

#### #Release Notes

- The API has no UAT testing requirement. Instead, "user acceptance" is completed using the Web application.
- Note to release engineer: After first production release, add CAB and Release Health sections.

#### #Included ADO Work Items

#QA | ITEM | QA | -----|-----| #109029 ||| #114562 ||

#### #Release Notes

- The API has no UAT testing requirement. Instead, "user acceptance" is completed using the Web application.
- Note to release engineer: After first production release, add CAB and Release Health sections.

#### #Included ADO Work Items

#QA/UAT: | ITEM | QA | UAT | -----|-----|-----| #110761 ||| #111205 ||| #111209 ||| #112567 ||| #112569 ||| #113467 ||| #119261 ||| #119263 ||| #119267 ||| #119542 ||| #119554 |||

#### #Release Notes

- Note to release engineer: After first production release, add CAB and Release Health sections.

HONDO is our internal name for the "House Next Door" - the application we are building to house new and migrated All Pay features.

As of September 2022, the plan is for Impact Builder to be the first occupant of HONDO.

The following is a list of components:

- [Web application](#) - React app
- [API](#) - NodeJS app

Also of particular note is that the Rubicon team has produced a good "starter kit" - Denali - which we will reference for some basic features - like Azure AD authentication. Those repositories are here:

- [https://dev.azure.com/LithiaMotors/Lithia%20Automation%20Enhancement%20Requests/\\_git/Denali-Portal-Web](https://dev.azure.com/LithiaMotors/Lithia%20Automation%20Enhancement%20Requests/_git/Denali-Portal-Web)
- [https://dev.azure.com/LithiaMotors/Lithia%20Automation%20Enhancement%20Requests/\\_git/Denali-Portal-API](https://dev.azure.com/LithiaMotors/Lithia%20Automation%20Enhancement%20Requests/_git/Denali-Portal-API)

The version of NodeJS we're using to build both the API and the Web app is v14.20.1. The corresponding version of npm is v6.14.17.

Installing NodeJS also installs a version of npm. To install this version, head to <https://nodejs.org/download/release/v14.20.1/> and download the appropriate archive for your computer.

Optionally, you can install NVM (Node Version Manager) which will allow you to download specific NodeJS versions from the command line, then use whichever one is appropriate for your code base. (Again, we're using the same versions for both Web and API projects for Impact Builder to reduce complexity.)

## Attendance:

Rick McClure Mike Nario Jim Strawn

## Outcomes

We reviewed the 7/29/2022 version of the "ImpactBuilder Mocks" PDF and came up with a first pass at a list of API endpoints.

? PAYPLAN ID = 238105

③ GET /MEASURES  
(RETURNS ALL MEASURES WE CAN USE)

PAYPLANS/238105  
② GET (CNAME) =>  
PAYPLAN  
OBJ

"IMPACT ANALYSIS" =  
"REPORT" =  
"PLAN REPORT"

/238105/ Report  
IMP. ANS  
④ GET (Q)  
POST  
PUT  
PATCH  
DELETE  
NOTE:  
NO RESULTS YET  
CMD  
NOTE:  
CONTAINS  
RESULTS

/238105/ HEADER GET (CNAME)

## Actions

- Mike to create a Swagger doc with our first pass results.
- Jim to create stories for each of the API endpoints and coordinate with Zoey and Diane for epic/feature hierarchy.

# Nest JS

Daylon has learned a little Nest JS during last sprint break

- likes
  - typescript
  - folder structure
  - dependency injection
- easy to set up with Cosmos DB

Link to tutorial that Daylon started: <https://www.udemy.com/course/nestjs-the-complete-developers-guide/?src=sac&kw=nestjs> Mike posted a good tutorial as well: [https://www.youtube.com/watch?v=F\\_oOtaxb0L8](https://www.youtube.com/watch?v=F_oOtaxb0L8)

Jim: Would like to have a little more due diligence done (spike?) before we decide to implement. Would like to KNOW whether it would save us time or not. (We need to get IB to market.)

## Actions

Jim: Do said due diligence (probably with Mike's help).

## Cosmos DB

Daylon likes it, especially for Javascript apps. Easy to set up and use.

Daylon and Ajay are both experienced in SQL and Cosmos DB. If they had to make this call, they both said they'd lean toward Cosmos DB for IB's config and reports.

Scott asked how complex it would be to use both an Azure SQL Database AND a Cosmos DB datasource. Daylon said it would definitely be possible, but obviously extra work to reference the right datasource, etc.

Jim found a PluralSight course here: <https://app.pluralsight.com/library/courses/azure-cosmos-db/table-of-contents?aid=701j0000001heIoAAI>

## Actions

We have a [spike](#) in the backlog - Sprint 2, I believe - to do a time boxed POC for Cosmos DB so that we can make a good decision.

## Attendance

- Scott Faulkner
- Miles Green
- Mike Nario
- Jim Strawn
- Sean Goiburn
- Diane Allerdice
- Rick McClure

## Definitions:

"Report" == "Impact Analysis" "Impact Builder" == application used to create an Impact Analysis

## API Architecture:

- Implement Clean Architecture for Node.js (Clean Node.js Architecture —With NestJS and TypeScript | by Royi Benita | Better Programming)
  - At the API level, ensure good separation of concerns by putting business logic inside domain objects - not in controller functions
  - Ensure all objects implement interfaces (Dependency Inversion Principle)
- Encapsulate all business logic in the API
- Instead of creating a single endpoint to handle all report sections based on input, we want to create one endpoint per section.

Need new API endpoints for the following:

```
/configuration/reasonTypes:  
/configuration/monthAverageOptions:  
/configuration/expenseGuideOptions: - separate endpoint or something that the departmentImpact api looks up?  
/configuration/lastClosedMonth: - Calculated or looked up? Either way, we'll do this at the API level since it's a biz rule  
  
/payplans/{payPlanId}/report/departmentImpact  
/payplans/{payPlanId}/report/performanceImpact  
/payplans/{payPlanId}/report/commissionImpact  
/payplans/{payPlanId}/report/bonusImpact  
/payplans/{payPlanId}/report/payoutImpact  
/payplans/{payPlanId}/report/employeeEarnings
```

## Persistence Layer

Though not fully decided, we're leaning toward using a Cosmos DB for storing IB configuration and report information.

- Pro: Positions the application well as a boilerplate app for future projects.
- Pro: Make CRUD operations on config elements much less complex. (Configuration management UI requirements are coming down the pike.)
- Pro: Other teams have already blazed this trail (known quantity).
- Pro: Better suited to json objects than SQL Server.
- Con: Very little experience on the team with Cosmos DB.
- Pro: Cosmos DB is less expensive than SQL Server byte for byte (less than \$100 per environment, and about \$0.25 if we use serverless).
  - Here's a good read: Azure Cosmos DB vs Azure SQL Server: Which one should you choose for Long run? (techfalcon.ae)

## Actions

- Jim to create a spike for a Cosmos DB POC. Time boxed for two days.

To get the Impact Builder API up and running locally:

- Be sure NodeJS is installed.
- Clone the repository:
  - [https://LithiaMotors@dev.azure.com/LithiaMotors/Advanced%20Incentive%20Program/\\_git/AllPay\\_ImpactBuilder\\_API](https://LithiaMotors@dev.azure.com/LithiaMotors/Advanced%20Incentive%20Program/_git/AllPay_ImpactBuilder_API)
- Open a terminal in the folder where the package.json file is and run "npm install" to install all the necessary packages.
- Since the API uses the "[dotenv](#)" library for configuring each environment, you must create a ".env" file in the project root. This file should have values for each environment variable expected in the code. At the time of this writing, the variables that the API expects are all populated into a config object like so:

```
const config = {
  user: process.env.DB_USER,
  password: process.env.DB_PASSWORD,
  server: process.env.DB_SERVER_NAME,
  database: process.env.DB_NAME,
  options: {
    enableArithAbort: true, // silences tedious deprecation warning
  },
};
```

Therefore, the corresponding .env file would look like this (with your own values replacing the placeholders):

```
ENVIRONMENT = LOCAL
DB_NAME = PayRoll-DEV
DB_SERVER_NAME = azwu2apttest-sqls.database.windows.net
DB_USER = UsernamePlaceholder
DB_PASSWORD = 'pass#word%place#holder'
```

Notes on the .env file:

- We do *not* commit it to source control, since it contains environment-specific secrets.
- Adding single quotes around values is optional, but it is required for the password if it contains special characters.
- If you were to use double-quotes, they would be added to the values and would cause the mssql npm module to fail to connect.

- To run API locally, use one of the scripts found in the "scripts" section of the package.json file. For example:

```
npm run start:dev
```

## Links

- API Build Pipeline: [TUNDRA-API](#)

```
###Impact Builder Report Data Table ib.t_Report
```

```
###corresponding view orm.v_ImpactBuilderReport
```

###Validation Rules: The API persistence endpoint (POST /secured/payplans//report/) will validate Impact Builder persistence actions thusly...

1. First validate PayPlanId (for existence...failures return 404 Not Found)
2. Then validate report parameters (for existence and validity...failures return 400 Bad Parameters)
3. Finally validate report 'body' content (deep-ish scan of section data, overrides, etc...failures return 418).

## Performance Impact Section Test Queries

Use these queries to pull back a sets of plans to test with.

*QUERY FOR TEAM PLANS (COM Blocks):*

```
SELECT
  PP.NAME
, PP.Id "Pay Plan ID"
, JB.Code AS [JobCode]
, JB.Name AS [JobName]
, PPBPT.Code AS 'PayPlanBlockPayTypeCode'
, PPPT.Code AS PostionTypeCode
, PPPT.Name AS PostionTypeName
, DEPT.Code AS DeptCode
, DEPT.Name AS DeptName
, PP.OrganizationId
, PPB.ID "PayPlan Formula Block"
, PPB.Name
--, PPB.CalculationPeriodTypeId 'Pay Frequency'
, CPT.[Name] AS 'CalculationPeriodTypeName'
, SourceSystemFieldId
, SourceSystemId
, PPB.SimpleFormulaUI
, PPB.FormulaText
, PPB.SqlText
, PP.IsActive
FROM [core].[t_payplan] PP
JOIN lkup.t_PayPlanPositionType PPPT ON PPPT.id = PP.PayPlanPositionTypeId
JOIN lkup.t_Department DEPT ON DEPT.Id = PP.DepartmentId
JOIN lkup.t_Job JB ON JB.Id = PP.JobId
JOIN [core].[t_PayPlanBlock] PPB ON PP.Id = PPB.PayPlanId
JOIN [lnkr].[t_PayPlanBlockSourceSystemField] PPBSF ON PPBSF.PayPlanBlockId = PPB.Id
JOIN [ref].[t_SourceSystemField] SSF ON SSF.ID = PPBSF.SourceSystemFieldId
JOIN [lkup].[t_PayPlanBlockPayType] PPBPT ON PPBPT.Id = PPB.PayPlanBlockPayType
JOIN [lkup].[t_CalculationPeriodType] CPT ON CPT.Id = PPB.CalculationPeriodTypeId
WHERE PP.ID = PPB.PayPlanId
AND PPB.PayPlanBlockPayType IN (2)  --(FILTER FOR COM BLOCKS) ... (1=BNS,2= COM)
AND PP.PayPlanUsageId <> 4
AND IsSimpleFormula = 1
```

```

AND (JB.[Name] = 'Service Advisor' OR JB.[Name] = 'F&I Manager') --(FILTER BY THESE FOR TEAM PLANS)
AND (PPPT.Name like '%Team%') --(TEAM PLANS)
AND PP.IsActive = 1
order by PP.Name, JB.Name, PPPT.Name

```

**QUERY FOR INDIVIDUAL PLANS (COM Blocks):**

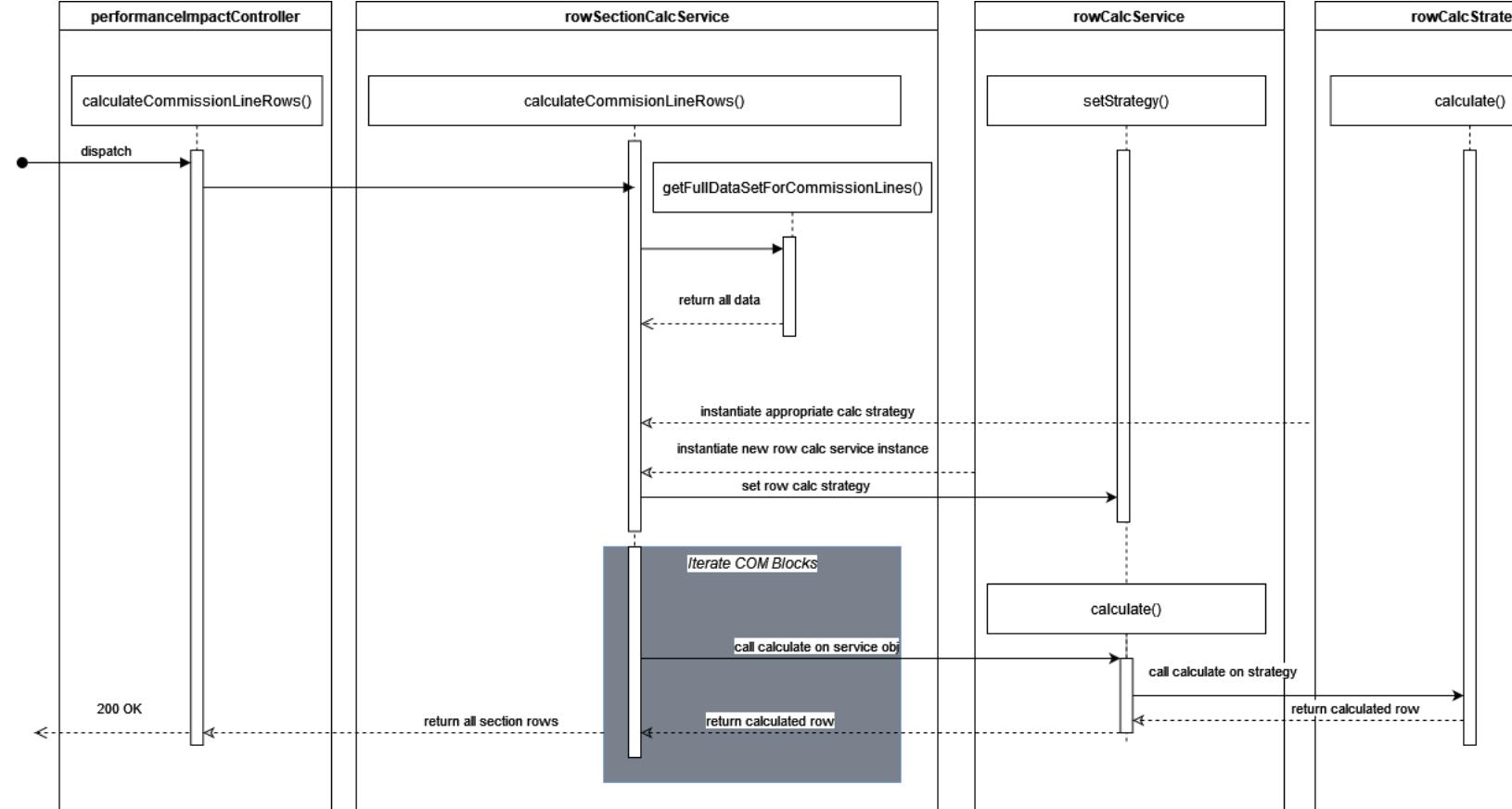
```

SELECT
    PP.NAME
    , PP.Id "Pay Plan ID"
    , JB.Code AS [JobCode]
    , JB.Name AS [JobName]
    , PPBPT.Code AS 'PayPlanBlockPayTypeCode'
    , PPPT.Code AS PostionTypeCode
    , PPPT.Name AS PostionTypeName
    , DEPT.Code AS DeptCode
    , DEPT.Name AS DeptName
    , PP.OrganizationId
    , PPB.ID "PayPlan Formula Block"
    , PPB.Name
    --, PPB.CalculationPeriodTypeId 'Pay Frequency'
    , CPT.[Name] AS 'CalculationPeriodTypeName'
    , SourceSystemFieldId
    , SourceSystemId
    , PPB.SimpleFormulaUI
    , PPB.FormulaText
    , PPB.SqlText
    , PP.IsActive
FROM [core].[t_payplan] PP
JOIN lkup.t_PayPlanPositionType PPPT ON PPPT.id = PP.PayPlanPositionTypeID
JOIN lkup.t_Department DEPT ON DEPT.Id = PP.DepartmentId
JOIN lkup.t_Job JB ON JB.Id = PP.JobId
JOIN [core].[t_PayPlanBlock] PPB ON PP.Id = PPB.PayPlanId
JOIN [lnkr].[t_PayPlanBlockSourceSystemField] PPBSF ON PPBSF.PayPlanBlockId = PPB.Id
JOIN [ref].[t_SourceSystemField] SSF ON SSF.ID = PPBSF.SourceSystemFieldId
JOIN [lkup].[t_PayPlanBlockPayType] PPBPT ON PPBPT.Id = PPB.PayPlanBlockPayTypeId
JOIN [lkup].[t_CalculationPeriodType] CPT ON CPT.Id = PPB.CalculationPeriodTypeId
WHERE PP.ID = PPB.PayPlanId
AND PPB.PayPlanBlockPayTypeId IN (2) -- (1=BNS,2= COM)
AND PP.PayPlanUsageId <> 4
AND PP.IsActive = 1
AND (PPPT.Name like '%Individual%')
AND JB.Id IN ('15', '117', '13', '28', '11', '7', '9', '61', '76', '84', '26', '3', '4', '36', '125', '2'
    , '6', '117', '93', '14', '97', '8', '70', '70', '70', '16', '62', '5') -- (FILTER BY THESE FOR INDVIDUAL PLANS)
AND PP.IsActive = 1
order by PP.Name, JB.Name, PPPT.Name

```

This illustrates the current basic approach for the various 'calculate section' controller functions. The only one that currently exists is the one for the Performance Impact Section 'Commission Line' rows (initial calculations).

The (re)calculations for any Productivity Measures will also need to be folded into this process (for the 'Add Prod Measures' stories).



## What?

TypeORM is an Object Relational Mapper for NodeJS. It's currently being used as the major data access methodology in Lithia APIs such as 'Escalade' and 'LOF' as well as Tundra-api (impact builder). TypeORM works with TypeScript, plain Javascript and also plays well with other backend api frameworks (NestJS).

## Why?

Although NodeJs can query sql data directly using the ms-sql driver, TypeORM gives us the benefit of a more structured approach to our data access logic along with various tools and helpers for implementing CRUD operations in NodeJs. TypeORM data fetch logic is more easily and directly unit-testable than either direct ms-sql data operations or sql server stored procedures.

## How?

Each data table that you need to access will need to be set up in your node api project for use with TypeORM. This involves creating entity and repo objects for each table (or view) as well as other necessary configurations (see below). Once this plumbing is set up, repo objects can be queried using 'default' methods or custom 'query builder' methods.

### Set Up Steps:

**DataSource module** if it doesn't already exist, you will need to create a 'datasources' file (node module).

This module establishes the main data connection that TypeOrm will use in your NodeJs application. UserName and Password are mapped here as well as which specific table entities will be available to the app.

### Initialize Data Source tbd

### 'Entity' and 'Repo' Objects

For each data table you will need to create an entity object and a repository object. It seems to be convention to put these files in similarly named folders under the main /src folder.

example:

```
/src/repos/vSourceDataRepo.js  
/src/entities/sourceDataViewEntity.js
```

## Querying Data:

### Default Methods

tbd

### Query Builder

<https://typeorm.io/select-query-builder> In your repository objects, use the TypeOrm Querybuilder methods to create custom parameterized sql queries against your entities.

Sql text can be enclosed by back ticks to add line breaks and tabs for better formatting.

Parameters are specified in the body of the sql text with a colon character immediately followed by the parameter name.

A parameter object (plain old json object) is supplied as the second parameter to the typeorm 'createQueryBuilder' function. Typeorm will create the final sql statement (where clause) by looking for the parameters within the parameter object ('inputParamObj') and merging those with the sql text.

The sourceSystemFieldIds input parameter in the example below is an array of INTs.

Typeorm will automatically add enclosing single quotes to date and string parameters.

example:

```
const sourceDataRepo = AppDataSource.getRepository(  
  'vSourceDataEntity'  
) .extend({  
  
  findBySourceSystemFieldIdList(inputParamObj) {  
  
    return this.createQueryBuilder('tbl')  
      .where('tbl.SourceSystemFieldId IN (:...sourceSystemFieldIds)  
        AND OrganizationCode = :orgCode  
        AND AccountingMonthDate BETWEEN :accountingMonthStartDate AND :accountingMonthEndDate  
        AND EmployeeNumber IS NOT NULL`  
      , inputParamObj)  
      .getMany();  
  
  }  
  
};  
);
```

## DEVUrls

### Base path for IB Analysis Report calculation endpoints (w. payplan id)

```
### Base path for IB lookup data endpoints  
```https://app-allpaydev-wu2-api.azurewebsites.net/secured/lookupdata/```  
## (examples with parameters)
```

```

### Header
https://app-allpaydev-wu2-api.azurewebsites.net/secured/payplans/11542/report/header

### CalculatePerformanceImpactRows
https://app-allpaydev-wu2-api.azurewebsites.net/secured/payplans/11542/calculatePerformanceImpactRows?monthlyAverageType=1&closingMonthDate=2022-05-31&reasonTypeCategoryName=Replace

### GetFullDataSetForCommissionLines (test support)
https://app-allpaydev-wu2-api.azurewebsites.net/secured/payplans/11542/getFullDataSetForCommissionLines?monthlyAverageType=1&closingMonthDate=2022-05-31&reasonTypeCategoryName=Replace

### CalculationMessages (test support)
https://app-allpaydev-wu2-api.azurewebsites.net/secured/lookupdata/calculationMessages

### ReasonTypes
https://app-allpaydev-wu2-api.azurewebsites.net/secured/lookupdata/reasontypes

### ReasonTypesNotFormatted (test support)
https://app-allpaydev-wu2-api.azurewebsites.net/secured/lookupdata/reasontypesnotformatted

##TEST Urls

### Header
https://app-allpaytest-wu2-api.azurewebsites.net/secured/payplans/11542/report/header

###CalculatePerformanceImpactRows
https://app-allpaytest-wu2-api.azurewebsites.net/secured/payplans/31266/calculatePerformanceImpactRows?monthlyAverageType=6&closingMonthDate=2022-05-31&reasonTypeCategoryName=Replace

###GetFullDataSetForCommissionLines
https://app-allpaytest-wu2-api.azurewebsites.net/secured/payplans/31266/getFullDataSetForCommissionLines?monthlyAverageType=1&closingMonthDate=2022-05-31&reasonTypeCategoryName=Replace

### CalculationMessages (test support)
https://app-allpaytest-wu2-api.azurewebsites.net/secured/lookupdata/calculationMessages

## LOCAL Testing Base Paths

SECTIONAL 'GET' EXAMPLE URLs...
(these section fetch endpoints will return EITHER the saved report section or the calculated section data)
Postman Header Section GET Url...
localhost:5000/secured/payplans/3903/report/header

Postman Performance Impact Section GET Url...
localhost:5000/secured/payplans/3903/calculatePerformanceImpactRows?monthlyAverageType=6&closingMonthDate=2022-05-31&reasonTypeCategoryName=Replace

Postman Department Impact Section GET Url...
localhost:5000/secured/payplans/3903/calculateDepartmentImpactRows?monthlyAverageType=6&closingMonthDate=2022-05-31&reasonTypeCategoryName=Replace

Postman Bonus Impact Section GET Url...
localhost:5000/secured/payplans/3903/calculateBonusImpactRows?monthlyAverageType=6&closingMonthDate=2022-05-31&reasonTypeCategoryName=Replace

Postman Full Report 'POST' Url...
localhost:5000/secured/payplans/3903/report?monthlyAverageType=1&closingMonthDate=2022-05-31&payPeriodEndDate=2001-01-01&reasonType>NewEmployee&userName=micah

###Report
``localhost:5000/secured/payplans/{payPlanId}```

###Lookup Data
``localhost:5000/secured/lookupdata```

```

## Swagger IO...

[https://app.swaggerhub.com/apis/mikesorg/IB111/1.0.0#/default/get\\_secured\\_lookup\\_calculationMessages](https://app.swaggerhub.com/apis/mikesorg/IB111/1.0.0#/default/get_secured_lookup_calculationMessages)

## Raw Text

```

openapi: 3.0.0
servers:
  # Added by API Auto Mocking Plugin
  - description: SwaggerHub API Auto Mocking
    url: https://virtserver.swaggerhub.com/mikesorg/tttt/1.0.0
  - description: Dev
    url: https://app-allpaydev-wu2-api.azurewebsites.net/api/info
  - description: Test
    url: https://app-allpaytest-wu2-api.azurewebsites.net/api/info
  - description: UAT
    url: https://app-allpayuat-wu2-api.azurewebsites.net/api/info
info:
  description: This is a simple API blueprint for Impact Builder (validated at https://editor.swagger.io/)
  version: "1.0.0"
  title: Payplan Impact Builder API
  ##contact:
    ## email: you@your-company.com
  license:
    name: Apache 2.0
    url: "http://www.apache.org/licenses/LICENSE-2.0.html"
tags:
  - name: admins
    description: Secured Admin-only calls
  - name: developers
    description: Operations available to regular developers
paths:
  /secured/payplans/{payPlanId}/report:
    get:
      summary: fetch the details of a plan analysis report
      description: returned json will NOT contain the associated report 'inputs' node
      parameters:

```

```

- in: path
  name: payPlanId
  description: AllPay PayPlan Id
  required: true
  schema:
    type: integer
    format: int64
responses:
  "200":
    description: Payplan Report Details
    content:
      application/json:
        schema:
          $ref: "#/components/schemas/Report"
  "404":
    description: Bad Input Parameter (pay plan not found)
  "500":
    description: Internal Server Error
post:
  summary: create a new report for a payplan
  parameters:
    - name: payPlanId
      in: path
      description: ID of the pay plan
      required: true
      schema:
        type: integer
        format: int64
    - name: monthlyAverageType
      in: query
      description: Selected Monthly Average Type
      required: true
      schema:
        type: integer
        format: int64
      example: 6
    - name: closingMonthDate
      in: query
      description: Selected Closing Month Date
      required: true
      schema:
        type: string
        format: date
      example: '05-01-2023'
    - name: payPeriodEndDate
      in: query
      description: Pay Period End Date
      required: true
      schema:
        type: string
        format: date
      example: '05-31-2023'
    - name: userName
      in: query
      description: User Name (Lithia email address)
      required: true
      schema:
        type: string
        format: email
      example: michaelnario@lithia.com
  responses:
    "201":
      description: Created Ok
      content:
        application/json:
          schema:
            $ref: '#/components/schemas/ReportSaveResponseOk'
    "400":
      description: Bad Parameter(s)
      content:
        application/json:
          schema:
            $ref: '#/components/schemas/ReportSaveValidationFailed400'
    "404":
      description: PayPlanId Not Found
      content:
        application/json:
          schema:
            $ref: '#/components/schemas/ReportSaveValidationFailed404'
    "418":
      description: PayPlanId Not Found
      content:
        application/json:
          schema:
            $ref: '#/components/schemas/ReportSaveValidationFailed418'
    "500":
      description: Internal Server Error
  requestBody:
    content:
      application/x-www-form-urlencoded:
        schema:
          $ref: "#/components/schemas/Report"
/secured/lookup/productivityMeasures:
get:
  summary: productivity measures list
  description: returns list of productivity measures
  responses:
    "200":
      description: List returned
      content:
        application/json:
          schema:

```

```

$ref: "#/components/schemas/ProductivityMeasures"
"400":
  description: Bad Input Parameter (pay plan not found)
"500":
  description: Internal Server Error

/secured/lookup/calculationMessages:
get:
  summary: returns list of calculation messages
  description: returns list of calculation messages
  responses:
    "200":
      description: List returned
      content:
        application/json:
          schema:
            $ref: "#/components/schemas/CalculationMessages"

    "500":
      description: Internal Server Error

/secured/payplans/{payPlanId}/calculateDepartmentImpactRows:
get:
  summary: calculate department impacts
  description: calculate and return the json row set data for the Department Impact grid
  parameters:
    - in: path
      name: payPlanId
      description: AllPay PayPlan Id
      required: true
      schema:
        type: integer
        format: int64
    - in: query
      name: monthlyAverage
      description: Monthly Average Selection
      required: true
      schema:
        type: integer
        format: int64
    - in: query
      name: closingMonth
      description: Closing Month Selection
      required: true
      schema:
        type: integer
        format: int64
  responses:
    "200":
      description: Calculated Department Impacts Data Set for Plan
      content:
        application/json:
          schema:
            $ref: "#/components/schemas/DepartmentImpacts"
    "400":
      description: Bad Input Parameter (pay plan not found)
    "500":
      description: Internal Server Error

/secured/payplans/{payPlanId}/calculatePerformanceImpactRows:
get:
  summary: calculate perf impacts
  description: calculate and return the json row set data for the Performance Impact grid
  parameters:
    - in: path
      name: payPlanId
      description: AllPay PayPlan Id
      required: true
      schema:
        type: integer
        format: int64
    - in: query
      name: prodMeasureName
      description: name of measure ('New Retail Units')
      required: true
      schema:
        type: string
    - in: query
      name: monthlyAverage
      description: Monthly Average Selection
      required: true
      schema:
        type: integer
        format: int64
    - in: query
      name: closingMonth
      description: Closing Month Selection
      required: true
      schema:
        type: integer
        format: int64
  responses:
    "200":
      description: Calculated Perf Impacts Data Set for Plan
      content:
        application/json:
          schema:
            $ref: "#/components/schemas/PerformanceImpacts"
    "400":
      description: Bad Input Parameter (pay plan not found)
    "500":
      description: Internal Server Error

/secured/payplans/{payPlanId}/calculatePerformanceImpactRow:

```

```

get:
  summary: calculate perf impacts
  description: calculate and return the json row set data for the Performance Impact grid
  parameters:
    - in: path
      name: payPlanId
      description: AllPay PayPlan Id
      required: true
      schema:
        type: integer
        format: int64
    - in: query
      name: prodMeasureName
      description: name of measure ('New Retail Units')
      required: true
      schema:
        type: string
    - in: query
      name: monthlyAverage
      description: Monthly Average Selection
      required: true
      schema:
        type: integer
        format: int64
    - in: query
      name: closingMonth
      description: Closing Month Selection
      required: true
      schema:
        type: integer
        format: int64
  responses:
    "200":
      description: Calculated Perf Impacts Data Set for Plan
      content:
        application/json:
          schema:
            $ref: "#/components/schemas/PerformanceImpacts"
    "400":
      description: Bad Input Parameter (pay plan not found)
    "500":
      description: Internal Server Error

```

```

/secured/payplans/{payPlanId}/calculateCommissionImpactRows:
get:
  summary: calculate commission impacts
  description: calculate and return the json row set data for the Commission Impact grid
  parameters:
    - in: path
      name: payPlanId
      description: AllPay PayPlan Id
      required: true
      schema:
        type: integer
        format: int64
    - in: query
      name: monthlyAverage
      description: Monthly Average Selection
      required: true
      schema:
        type: integer
        format: int64
    - in: query
      name: closingMonth
      description: Closing Month Selection
      required: true
      schema:
        type: integer
        format: int64
  responses:
    "200":
      description: Calculated Commission Impacts Data Set for Plan
      content:
        application/json:
          schema:
            $ref: "#/components/schemas/CommissionImpacts"
    "400":
      description: Bad Input Parameter (pay plan not found)
    "500":
      description: Internal Server Error

```

```

/secured/payplans/{payPlanId}/calculateBonusImpactRows:
get:
  summary: calculate bonus impacts
  description: calculate and return the json row set data for the Bonus Impact grid
  parameters:
    - in: path
      name: payPlanId
      description: AllPay PayPlan Id
      required: true
      schema:
        type: integer
        format: int64
    - in: query
      name: monthlyAverage
      description: Monthly Average Selection
      required: true
      schema:
        type: integer
        format: int64
    - in: query
      name: closingMonth
      description: Closing Month Selection
      required: true
      schema:
        type: integer
        format: int64

```

```

schema:
  type: integer
  format: int64
responses:
  "200":
    description: Calculated Commission Impacts Data Set for Plan
    content:
      application/json:
        schema:
          $ref: "#/components/schemas/BonusImpacts"
  "400":
    description: Bad Input Parameter (pay plan not found)
  "500":
    description: Internal Server Error

/secured/payplans/{payPlanId}/calculatePayoutImpactRows:
get:
  summary: calculate payout impacts
  description: calculate and return the json row set data for the Payout Impact grid
  parameters:
    - in: path
      name: payPlanId
      description: AllPay PayPlan Id
      required: true
      schema:
        type: integer
        format: int64
    - in: query
      name: monthlyAverage
      description: Monthly Average Selection
      required: true
      schema:
        type: integer
        format: int64
    - in: query
      name: closingMonth
      description: Closing Month Selection
      required: true
      schema:
        type: integer
        format: int64
  responses:
    "200":
      description: Calculated Payout Impacts Data Set for Plan
      content:
        application/json:
          schema:
            $ref: "#/components/schemas/PayoutImpacts"
    "400":
      description: Bad Input Parameter (pay plan not found)
    "500":
      description: Internal Server Error

components:
schemas:

ReportSaveResponseOk:
properties:
  httpResponseCode:
    type: number
    format: integer
    example: 201
  serviceResponse:
    type: string
    example: 'Created Ok'

ReportSaveValidationFailed404:
properties:
  httpResponseCode:
    type: number
    format: integer
    example: 404
  validationFailures:
    type: array
    example: ['PayPlanId Not found.']
  serviceResponse:
    type: string
    example: 'PayPlanId Not Found'

ReportSaveValidationFailed400:
properties:
  httpResponseCode:
    type: number
    format: integer
    example: 400
  validationFailures:
    type: array
    example: ['UserName is required']
  serviceResponse:
    type: string
    example: 'Bad Parameter(s)'

ReportSaveValidationFailed418:
properties:
  httpResponseCode:
    type: number
    format: integer
    example: 418
  validationFailures:
    type: array
    example: ['Invalid Report Data - header missing']
  serviceResponse:
    type: string
    example: 'Invalid Body Data. teapot yadda yadda'

```

```

CalculationMessages:
properties:
  messageList:
    type: array
    items:
      $ref: "#/components/schemas/CalculationMessage"

CalculationMessage:
properties:
  name:
    type: string
    example: "Source Data Incomplete"
  index:
    type: number
    example: 1
  description:
    type: string
    example: "Cannot calculate because there isn't any data for these fields."

ProductivityMeasures:
properties:
  measureList:
    type: array
    items:
      type: string

PayoutImpacts:
properties:
  rows:
    type: array
    items:
      $ref: "#/components/schemas/PayoutImpact"

PayoutImpact:
properties:
  displayName:
    type: string
    example: "Vehicle Allowance"
  avg12Months:
    type: number
    format: double
    example: 100
  avg3Months:
    type: number
    format: double
    example: 100
  performanceObjective:
    type: number
    format: double
    example: 100
  weight:
    type: number
    format: integer
    example: 0

BonusImpacts:
properties:
  rows:
    type: array
    items:
      $ref: "#/components/schemas/BonusImpact"

BonusImpact:
properties:
  displayName:
    type: string
    example: "F & I Commissions"
  avg12Months:
    type: number
    format: double
    example: 8963
  avg3Months:
    type: number
    format: double
    example: 12335
  performanceObjective:
    type: number
    format: double
    example: 14186
  weight:
    type: number
    format: integer
    example: 28

SectionRow:
properties:
  fieldName:
    type: string
    example: 'com_Yr_Avg'
  calculatedValue:
    type: number
    example: 12345.67
  format:
    type: string
    example: 'currency'
  message:
    type: string
    example: 'calcedOk'

DepartmentImpacts:
properties:
  rows:

```

```

type: array
items:
$ref: "#/components/schemas/DepartmentImpact"

DepartmentImpact:
properties:
  displayName:
    type: string
    example: Personnel Expense
  avg3Months:
    type: number
    format: double
  withChange:
    type: number
    format: double

CommissionImpacts:
properties:
  rows:
    type: array
    items:
      $ref: "#/components/schemas/CommissionImpact"

CommissionImpact:
properties:
  displayName:
    type: string
    example: "Personnel Expense"
  avg12Months:
    type: number
    format: double
    example: 122.12
  avg3Months:
    type: number
    format: double
    example: 133.13
  performanceObjective:
    type: number
    format: double
    example: 144.14

PerformanceImpacts:
properties:
  rows:
    type: array
    items:
      $ref: "#/components/schemas/PerformanceImpact"

PerformanceImpact:
properties:
  displayName:
    type: string
    example: "New Retail Units"
  fieldNames:
    type: array
    example: ['MIS Standard.LM56140-CMTDamt']
    items:
      type: string
      description: the array of source fields used in this block row calculation.
  columns:
    type: array
    items:
      $ref: "#/components/schemas/SectionRow"
  message:
    type: string
    example: 'OK - 2 COMM block(s) processed'

Report:
properties:
  id:
    type: integer
    format: int64
    example: 1234567
  header:
    $ref: "#/components/schemas/PayPlanReportHeader"
  departmentImpacts:
    $ref: "#/components/schemas/DepartmentImpacts"
  performanceImpacts:
    $ref: "#/components/schemas/PerformanceImpacts"
  commissionImpacts:
    $ref: "#/components/schemas/CommissionImpacts"
  bonusImpacts:
    $ref: "#/components/schemas/BonusImpacts"
  payoutImpacts:
    $ref: "#/components/schemas/PayoutImpacts"
  savedUserSelections:
    $ref: "#/components/schemas/UserSelections"
  savedFieldValueOverrides:
    type: array
    items:
      $ref: "#/components/schemas/FieldValueOverride"

```

```

PayPlanReportHeader:
properties:
  Id:
    type: integer
    format: int64
    example: 1111111
  Name:
    type: string
    example: Bob Dobbs (111111)
  StateCode:
    type: string
    example: ID
  PayPlanTypes:
    type: string
    example: #Base#
  PayPlanStatus:
    type: string
    example: Active
  StoreNumber:
    type: string
    example: xxxxxxxx
  StoreName:
    type: string
    example: 'Pocatello CJD'
  LNumber:
    type: string
    example: 'L0123'
  EmployeeFirstName:
    type: string
    example: Bob
  EmployeeLastName:
    type: string
    example: Bob
  EmployeeNumber:
    type: string
    example: 22233444
  JobCode:
    type: integer
    example: 20003
  JobName:
    type: string
    example: Sales Representative
  DepartmentCode:
    type: string
    example: ORRHED
  DepartmentName:
    type: string
    example: Overhead
  CompanyNumber:
    type: string
    example: L0099

FieldValueOverride:
properties:
  fieldName:
    type: string
    example: somefield
  section:
    type: string
    example: PerformanceImpacts
  value:
    type: number
    example: 202.22

UserSelections:
properties:
  monthAverageType:
    type: number
    format: integer
    example: 6
  closingMonthDate:
    type: string
    format: date
    example: '05-01-2023'
  payPeriodEndDate:
    type: string
    format: date
    example: '05-31-2023'
  reasonType:
    type: string
    example: "NewEmployee"
  userName:
    type: string
    format: email
    example: michaelnario@lithia.com

```

To get the Web App up and running locally:

- Be sure NodeJS is installed.
- Clone the repository:
  - [https://LithiaMotors@dev.azure.com/LithiaMotors/Advanced%20Incentive%20Program/\\_git/AllPay\\_ImpactBuilder](https://LithiaMotors@dev.azure.com/LithiaMotors/Advanced%20Incentive%20Program/_git/AllPay_ImpactBuilder)
- Open a terminal in the folder where the package.json file is and run "npm install" to install all the necessary packages.
  - We ran into an issue doing this for the Denali web application. We got 404 errors during the package installation process because it references packages in the @lithiamotors scope, which we did not have access to. To resolve, we did the following:
    - @<1752BCB4-48D0-6598-B642-94704460300A> added us to the scope and we each received an invitation email from notifications@npmjs.com with a link to click. (Andy is the administrator for the "@lithiamotors" scope at npmjs.org. Cory Morrissey is his backup.)
    - We clicked the link and logged in to the npmjs web site using multi-factor authentication (email).
    - We then did an "npm login" from a terminal and followed the same process.
    - Afterwards we have not been prompted again to log in.

- For environment variables, we'll need to create a .env file. However, we don't use the "dotenv" library like the API does because the "react-scripts" library already uses it for other things. We take advantage of its functionality by prefixing our variables with "REACT\_APP\_", such as "REACT\_APP\_TUNDRA\_API\_BASE\_URI".

- Here's a useful excerpt from [create-react-app.dev](#):

These environment variables will be defined for you on process.env. For example, having an environment variable named REACT\_APP\_NOT\_SECRET\_CODE will be exposed in your JS as process.env.REACT\_APP\_NOT\_SECRET\_CODE.

There is also a built-in environment variable called NODE\_ENV. You can read it from process.env.NODE\_ENV. When you run npm start, it is always equal to 'development', when you run npm test it is always equal to 'test', and when you run npm run build to make a production bundle, it is always equal to 'production'. You cannot override NODE\_ENV manually. This prevents developers from accidentally deploying a slow development build to production.

- **Remember not to put any secrets into this .env file.** For a React application, this file gets packaged up in plain text with the bundle sent to the client and is executed on the user's browser.

- The following is a good starter .env file, though I'm sure it will be quickly outdated:

```
# NO SECRETS HERE!
# These values are bundled at build time and then shipped down to the client with the application.
DISABLE_ESLINT_PLUGIN=true
REACT_APP_TUNDRA_API_BASE_URI='http://localhost:5000'
# REACT_APP_TUNDRA_API_BASE_URI='https://dev.allpay.lithiainc.com/services/api'
```

Notes on the .env file:

- We do *not* commit it to source control. Even though the .env file in the Web project should contain no environment-specific secrets, the variables will get overwritten during the build process. (We don't want dev variables in the pipelines.)
  - Adding single quotes around values is optional, but it is required for anything that contains special characters.

- To run the app locally, use one of the scripts found in the "scripts" section of the package.json file. For example:

```
npm run start
```

or just

```
npm start
```

## Links

- Web App Build Pipeline: [TUNDRA-WEB](#)
- Azure docs, [Quickstart: Sign in and get an access token in a React SPA using the auth code flow](#)