

Automated Application Deployment with Azure Devops



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Presenter



Started my career in 1982 on System/36 - AS/400

Worked in document management and process automation for most of my career

Enjoy helping others learn new automation techniques

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Agenda

- Automating Appian Application Deployment
- Appian Deployment REST API
- Using Deployment APIs with Azure DevOps
- Example Automated Deployment Walkthrough
- Q&A

Traditional Appian App Deployment



Package

Packaging Applications
Create application packages or packages that contain specific objects you want to deploy to a Test or Production environment



Export

Export Applications
Once packages are created they can be inspected for accuracy and then exported directly to an upstream environment or downloaded as a zip file for manual deployment



Deploy

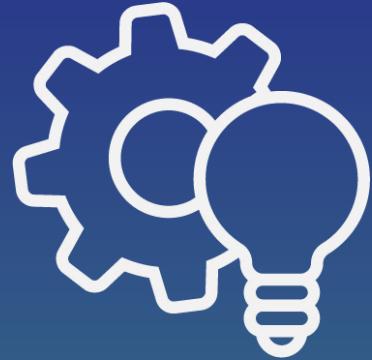
Deploy Applications
Application packages can be deployed directly to an upstream Test or Production environment. Or an application package can be manually imported, inspected and deployed

Methods of Deployment



- Direct deployment (Compare and Deploy)
- Manual export and import
- External Deployment (REST API)
- Trigger post-deployment processes

Why Automate Appian Deployment



- Support continuous delivery
- Frequent and reliable package deployment
- Eliminates manual effort
- Reduces errors
- Minimal setup effort

Appian Deployment REST API



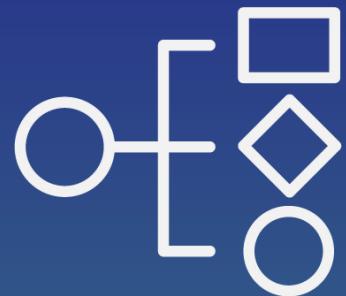
- API Allows deployment automation
- When you need custom deployment processes
- Introduced in Appian V21.2
- Feature complete since Appian V23.3
- Can cover entire compare and deploy spectrum
- Can be scripted with Python, PowerShell, C#,etc.

Appian Deployment REST API



- Trigger external deployments programmatically.
- Integrate your Appian releases into an **automated pipeline**.
- **Coordinate** with your other software releases and business processes.
- **Set up your pipeline once** and run it the exact same way for all future deployments, saving time and avoiding manual errors.

Deployment API Categories

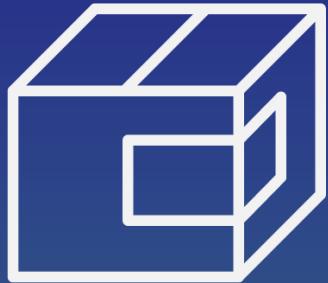


- Export apps and packages
- Inspect apps and packages
- Get inspection results
- Import apps and packages
- Get deployment results
- Get deployment log

Deployment REST API Workflow



Create Packages for Release



- Determine application UUID from application properties
- Create package in Appian application
- Associate DevOps/HelpDesk ticket with package
- Link to Epics or User Stories in Azure DevOps, Jira, etc.

Sample Appian Application

<  Deployment sample app 1

 Search objects    appian

All Application Objects  CREATE PACKAGE EXPORT APP IMPORT PACKAGE VIEW PACKAGES COMPARE AND DEPLOY

 ALL OBJECTS  PLUG-INS  UNREFERENCED OBJECTS

Name or description  NEW ADD EXISTING 

<input type="checkbox"/>	Name	Description	Last Modified
<input type="checkbox"/>	 DSA1 Main Site	This is the main site	3/24/2024 4:12 PM by Richard Schoen
<input type="checkbox"/>	 DSA1_SampleList1	Sample Constant List 1	3/24/2024 4:10 PM by Richard Schoen
<input type="checkbox"/>	 DSA1_Sample_Form1 	Sample Form 1	3/24/2024 4:09 PM by Richard Schoen
<input type="checkbox"/>	 DSA1_Demo1_EXPR	Sample expression rule	2/28/2024 9:38 AM by DsaAdmin Service...
<input type="checkbox"/>	 DSA1 Process Models	Stores process models for the application	2/27/2024 4:14 PM by DsaAdmin Service...
<input type="checkbox"/>	 DSA1 Artifacts	Stores application artifacts such as icons and logos	2/27/2024 4:14 PM by DsaAdmin Service...
<input type="checkbox"/>	 DSA1 Application Documentation	Stores documents added as supporting documentation for the applicat...	2/27/2024 4:14 PM by DsaAdmin Service...
<input type="checkbox"/>	 DSA1 Knowledge Center	Stores document folders and files for the application	2/27/2024 4:14 PM by DsaAdmin Service...
<input type="checkbox"/>	 DSA1 Rules & Constants	Stores expression rules, interfaces, and constants for the application	2/27/2024 4:14 PM by DsaAdmin Service...
<input type="checkbox"/>	 DSA1 Users	Assigns Viewer permissions to users for objects in the application	2/27/2024 4:14 PM by DsaAdmin Service...
<input type="checkbox"/>	 DSA1 Administrators	Assigns Administrator permissions to users for objects in the application	2/27/2024 4:14 PM by DsaAdmin Service...

11 items  

OBJECT TYPE

- AI Skill
- Connected System
- Constant
- Data Store
- Data Type
- Decision
- Document
- Expression Rule
- Feed
- Folder
- Group
- Integration
- Interface
- Portal
- Process Model
- Query Rule
- Record Type

Export Application

<  Deployment sample app 1

Search objects ⚙️ grid  

All Application Objects CREATE PACKAGE EXPORT APP IMPORT PACKAGE VIEW PACKAGES COMPARE AND DEPLOY

ALL OBJECTS PLUG-INS UNREFERENCED OBJECTS

Name or description 🔍 refresh

NEW ADD EXISTING refresh

<input type="checkbox"/>	Name	Description	Last Modified
<input type="checkbox"/>	 DSA1 Main Site	This is the main site	3/24/2024 4:12 PM by Richard Schoen
<input type="checkbox"/>	 DSA1_SampleList1	Sample Constant List 1	3/24/2024 4:10 PM by Richard Schoen
<input type="checkbox"/>	 DSA1_Sample_Form1 🔍	Sample Form 1	3/24/2024 4:09 PM by Richard Schoen
<input type="checkbox"/>	 DSA1_Demo1_EXPR	Sample expression rule	2/28/2024 9:38 AM by DsaAdmin Service...
<input type="checkbox"/>	 DSA1 Process Models	Stores process models for the application	2/27/2024 4:14 PM by DsaAdmin Service...
<input type="checkbox"/>	 DSA1 Artifacts	Stores application artifacts such as icons and logos	2/27/2024 4:14 PM by DsaAdmin Service...
<input type="checkbox"/>	 DSA1 Application Documentation	Stores documents added as supporting documentation for the applicat...	2/27/2024 4:14 PM by DsaAdmin Service...
<input type="checkbox"/>	 DSA1 Knowledge Center	Stores document folders and files for the application	2/27/2024 4:14 PM by DsaAdmin Service...
<input type="checkbox"/>	 DSA1 Rules & Constants	Stores expression rules, interfaces, and constants for the application	2/27/2024 4:14 PM by DsaAdmin Service...
<input type="checkbox"/>	 DSA1 Users	Assigns Viewer permissions to users for objects in the application	2/27/2024 4:14 PM by DsaAdmin Service...
<input type="checkbox"/>	 DSA1 Administrators	Assigns Administrator permissions to users for objects in the application	2/27/2024 4:14 PM by DsaAdmin Service...

11 items

Application Properties

Deployment sample app 1

All Application Objects

CREATE PACKAGE

EXPORT APP IMPORT PACKA

Application Properties

Application Security

Application Documentation

Application Actions

Missing Precedents

Security Summary

Manage Test Cases

Name Description

DSA1 Main Site This is the main site

DSA1_SampleList1 Sample Constant List 1

DSA1_Sample_Form1 Sample Form 1

DSA1_Demo1_EXPR Sample expression rule

DSA1 Process Models Stores process models for the application

DSA1 Artifacts Stores application artifacts such as icons and logos

DSA1 Application Documentation Stores documents added as supporting documentation for the applicat...

DSA1 Knowledge Center Stores document folders and files for the application

DSA1 Rules & Constants Stores expression rules, interfaces, and constants for the application

DSA1 Users Assigns Viewer permissions to users for objects in the application

DSA1 Administrators Assigns Administrator permissions to users for objects in the application

11 items

Application UUID Used by Rest API

The screenshot shows the 'Deployment sample app 1' application properties page. A modal window displays detailed information about the application, with the 'UUID' field highlighted by an orange border. The modal content includes:

UUID	3c6beb94-d7aa-41f2-a180-f3f96d842573
ID	18489
Created	2/27/2024 4:14 PM by DsaAdmin ServiceAccount
Last Modified	3/24/2024 4:11 PM by Richard Schoen

The main application properties page shows the following details:

- Name***: Deployment sample app 1
- Description**: Sample app to test deployment
- Prefix**: DSA1
- Users Group**: DSA1 Users
- Administrators Group**: DSA1 Administrators
- CANCEL** and **SAVE CHANGES** buttons

Below the properties table, there is a list of application components:

Component	Description	Created
DSA1 Knowledge Center	Stores document folders and files for the application	2/27/2024 4:14 PM by DsaAdmin Service...
DSA1 Rules & Constants	Stores expression rules, interfaces, and constants for the application	2/27/2024 4:14 PM by DsaAdmin Service...
DSA1 Users	Assigns Viewer permissions to users for objects in the application	2/27/2024 4:14 PM by DsaAdmin Service...
DSA1 Administrators	Assigns Administrator permissions to users for objects in the application	2/27/2024 4:14 PM by DsaAdmin Service...

Total items: 11

View Packages

The screenshot shows the Appian application management interface. The title bar displays "Deployment sample app 1". The top navigation bar includes a search bar ("Search objects"), settings icon, user profile, and the "appian" logo. Below the navigation is a toolbar with buttons for "EXPORT APP", "IMPORT PACKAGE", "VIEW PACKAGES" (which is highlighted with a red box), and "COMPARE AND DEPLOY". On the left, there's a sidebar with icons for deployment, monitoring, and support, followed by a list of "OBJECT TYPE" filters: AI Skill, Connected System, Constant, Data Store, Data Type, Decision, Document, Expression Rule, Feed, Folder, Group, Integration, Interface, Portal, Process Model, Query Rule, and Record Type. The main content area shows a table of application objects:

	Name	Description	Last Modified
<input type="checkbox"/>	DSA1 Main Site	This is the main site	3/24/2024 4:12 PM by Richard Schoen
<input type="checkbox"/>	DSA1_SampleList1	Sample Constant List 1	3/24/2024 4:10 PM by Richard Schoen
<input type="checkbox"/>	DSA1_Sample_Form1	Sample Form 1	3/24/2024 4:09 PM by Richard Schoen
<input type="checkbox"/>	DSA1_Demo1_EXPR	Sample expression rule	2/28/2024 9:38 AM by DsaAdmin Service...
<input type="checkbox"/>	DSA1 Process Models	Stores process models for the application	2/27/2024 4:14 PM by DsaAdmin Service...
<input type="checkbox"/>	DSA1 Artifacts	Stores application artifacts such as icons and logos	2/27/2024 4:14 PM by DsaAdmin Service...
<input type="checkbox"/>	DSA1 Application Documentation	Stores documents added as supporting documentation for the applicat...	2/27/2024 4:14 PM by DsaAdmin Service...
<input type="checkbox"/>	DSA1 Knowledge Center	Stores document folders and files for the application	2/27/2024 4:14 PM by DsaAdmin Service...
<input type="checkbox"/>	DSA1 Rules & Constants	Stores expression rules, interfaces, and constants for the application	2/27/2024 4:14 PM by DsaAdmin Service...
<input type="checkbox"/>	DSA1 Users	Assigns Viewer permissions to users for objects in the application	2/27/2024 4:14 PM by DsaAdmin Service...
<input type="checkbox"/>	DSA1 Administrators	Assigns Administrator permissions to users for objects in the application	2/27/2024 4:14 PM by DsaAdmin Service...

At the bottom right of the table, it says "11 items".

View Packages

The screenshot shows the 'Deployment sample app 1' interface with the 'Packages' list view. The top navigation bar includes a back arrow, a deployment icon, the application name, a search bar, and various system icons. The main title 'Packages' is displayed prominently. Below the title is a search bar with fields for 'Enter name or description', date ranges for 'Created On' and 'Last Modified On', and dropdowns for 'Created By' and 'Last Modified By'. There are also 'CREATE' and refresh buttons. The main content area displays a table with three rows of package data:

Name	Description	Created	Last Modified
App Package 3/24/2024	App Package 3/24/2024	3/25/2024 3:19 AM by Richard Schoen	3/28/2024 10:29 PM by Richard Schoen
App Release 2 EPIC Ticket	This is our Appian Release 2.0 EPIC	3/25/2024 1:51 AM by Richard Schoen	3/25/2024 1:52 AM by Richard Schoen

A 'CLOSE' button is located in the bottom right corner of the modal window.

Package UUID currently not visible from this form

View Packages

Deployment sample app 1

Search objects

EXPORT PACKAGE | VIEW PACKAGES | COMPARE AND DEPLOY

App Release 2 EPIC

ALL OBJECTS | PLUG-INS | UNREFERENCED OBJECTS

Name or description

Last Modified By

LAST MODIFIED ON | Any - Any

CLEAR FILTERS

NEW | ADD EXISTING | REVIEW MODIFIED OBJECTS

	Name	Description	Last Modified
<input type="checkbox"/>	DSA1 Main Site	This is the main site	3/25/2024 1:38 AM by deployas.admin S...
<input type="checkbox"/>	DSA1_SampleList1	Sample Constant List 1	3/25/2024 1:38 AM by deployas.admin S...
<input type="checkbox"/>	DSA1_Sample_Form1	Sample Form 1	3/25/2024 1:38 AM by deployas.admin S...
<input type="checkbox"/>	DSA1_Demo1_EXPR	Sample expression rule	2/28/2024 3:37 PM by Richard Schoen
<input type="checkbox"/>	DSA1 Administrators	Assigns Administrator permissions to us...	2/27/2024 10:00 PM by Richard Schoen
<input type="checkbox"/>	DSA1 Users	Assigns Viewer permissions to users for ...	2/27/2024 10:00 PM by Richard Schoen
<input type="checkbox"/>	DSA1 Process Models	Stores process models for the application	2/27/2024 10:00 PM by Richard Schoen
<input type="checkbox"/>	DSA1 Artifacts	Stores application artifacts such as icons ...	2/27/2024 10:00 PM by Richard Schoen

PACKAGE DETAILS

App Release 2 EPIC
This is our Appian Release 2.0 EPIC

Ticket

Copy Package Link

Created by Richard Schoen
3/25/2024 1:51 AM

Last Modified by Richard Schoen
3/25/2024 1:52 AM

APP CONFIGURATIONS

Not in package
Learn more about app configurations

IMPORT CUSTOMIZATION FILE

UPLOAD | Drop file here

Package UUID currently not visible from this form

Sample Appian User Interface to List Packages via API

The screenshot shows a sample Appian user interface for listing packages via API. The interface includes a header with the Appian logo and a navigation bar with icons for grid, search, and refresh. The main content area has two sections: 'Application UUID' and 'Package List'.

Application UUID (with a question mark icon):
3c6beb94-d7aa-41f2-a180-f3f96d842573
Look in application properties to determine the application UUID

Package List

Name	Desc	UUID	Ticket Link
App Package 3/24/2024	App Package 3/24/2024	b03a078e-dcc7-4e25-9940-a8fdbf8e9b51	https://dev.azure.com/appianrichardschoen/_/Appian%20Demo%20Project%201/_workitems/edit/4/
App Release 2 EPIC	This is our Appian Release 2.0 EPIC	654ebfc4-0bc2-4952-a6a1-e3684a83c2c8	

Associate DevOps Ticket with Package

Deployment sample app 1

Search objects

EXPORT PACKAGE | VIEW PACKAGES | COMPARE AND DEPLOY

App Release 2 EPIC

ALL OBJECTS | PLUG-INS | UNREFERENCED OBJECTS

Name or description

Last Modified By

LAST MODIFIED ON | Any - Any

CLEAR FILTERS

NEW | ADD EXISTING | REVIEW MODIFIED OBJECTS

	Name	Description	Last Modified
<input type="checkbox"/>	DSA1 Main Site	This is the main site	3/25/2024 1:38 AM by deployas.admin S...
<input type="checkbox"/>	DSA1_SampleList1	Sample Constant List 1	3/25/2024 1:38 AM by deployas.admin S...
<input type="checkbox"/>	DSA1_Sample_Form1	Sample Form 1	3/25/2024 1:38 AM by deployas.admin S...
<input type="checkbox"/>	DSA1_Demo1_EXPR	Sample expression rule	2/28/2024 3:37 PM by Richard Schoen
<input type="checkbox"/>	DSA1 Administrators	Assigns Administrator permissions to us...	2/27/2024 10:00 PM by Richard Schoen
<input type="checkbox"/>	DSA1 Users	Assigns Viewer permissions to users for ...	2/27/2024 10:00 PM by Richard Schoen
<input type="checkbox"/>	DSA1 Process Models	Stores process models for the application	2/27/2024 10:00 PM by Richard Schoen
<input type="checkbox"/>	DSA1 Artifacts	Stores application artifacts such as icons ...	2/27/2024 10:00 PM by Richard Schoen

PACKAGE DETAILS

App Release 2 EPIC

Edit Package

This is our Appian Release 2.0 EPIC

Ticket

Copy Package Link

Created by Richard Schoen
3/25/2024 1:51 AM

Last Modified by Richard Schoen
3/25/2024 1:52 AM

APP CONFIGURATIONS

Not in package

Learn more about app configurations

IMPORT CUSTOMIZATION FILE

UPLOAD Drop file here

Associate DevOps Ticket with Package

The screenshot shows the Appian Platform interface for managing packages. A modal dialog titled "Edit Package" is open in the center, overlaid on a list of packages on the left.

Edit Package Dialog:

- Name***: App Release 2 EPIC
- Link to Ticket**: https://dev.azure.com/appianrichardschoen11/Appian%20Demo%20Project%201/_workitems/edit/4/
- Description**: This is our Appian Release 2.0 EPIC

Buttons: CANCEL (left) and SAVE (right).

Background (List of Packages):

- App Release 2 EPIC
- DSA1 Main Site
- DSA1_SampleList1
- DSA1_Sample_Form1
- DSA1_Demo1_EXPR
- DSA1 Administrators
- DSA1 Users
- DSA1 Process Models
- DSA1 Artifacts

Right Panel (Package Details):

- PACKAGE DETAILS**
 - App Release 2 EPIC
 - This is our Appian Release 2.0 EPIC
 - Ticket
 - Copy Package Link
- APP CONFIGURATIONS**
 - Not in package
 - Learn more about app configurations
- IMPORT CUSTOMIZATION FILE**
 - UPLOAD
 - Drop file here

https://dev.azure.com/appianrichardschoen11/Appian%20Demo%20Project%201/_workitems/edit/4/

Package Details API



- Retrieve list of available packages for an application
- Uses the **/applications/<uuid>** endpoint
- Mainly an information API about packages

Connected System for Deployment REST API

Connected System Properties

HTTP
Integrate with other systems using HTTP to securely store/share authentication information and a base URL across integrations.

Name *
DA Appian Deployment API

Description
Appian Deployment API Connected System

System Logo ?
Select a PNG image

Base URL ?
https://myinstance.appiancloud.com

Authentication
API Key

Credentials are encrypted and will not be included when this object is exported. Be sure to set environment-specific values by using an import customization file when importing into other Appian environments. [Learn more](#)

Send As *
 Header Parameter

Header Name *

CANCEL **USE IN NEW INTEGRATION** **SAVE**

List Packages Integration

DA_DeploymentPackages

Connection

Enter connection details below Use a connected system
Connected System DA Appian Deployment API

Build URL from Scratch Inherit Base URL
Base URL https://myinstance.appiancloud.com
Relative Path concat("/suite/deployment-management/v2/applications/",r,appid, "/packages")
URL Preview https://myinstance.appiancloud.com/test.appiancloud.com/suite/deployment-management/v2/applications/3c6beb94-d7aa-41f2-a180-f3f96d842573/packages
Method GET
Timeout (sec) 10
Usage Queries data Modifies data
Indicate how this integration interacts with the external system

Querying Data: Integrations that query data can be used in any expression. Do not use them to modify data in the external system or duplicate updates may occur. [Learn more](#)

Query Parameters

Headers

Response

Response Body Parsing

SAVE CHANGES appian

Rule Input Name Expression Value

appid (Text) <input type="button" value="?"/>	1 aa-41f2-a180-f3f96d842573"	"3c6beb94-d7aa-41f2-a180-f3f96d842573"
---	------------------------------	--

Set as default test values

Rule Inputs

Name	Description	Type	Array
appid	Appian app...	<input style="color: red; font-weight: bold; font-size: small; margin-right: 10px;" type="button" value="Text"/>	<input type="checkbox"/>

packages List of Dictionary - 2 items

Dictionary

datasourceUuid "" (Text)
hasCustomizationFile false (Boolean)
objectCount 11 (Number (Integer))
databaseScriptCount 0 (Number (Integer))
createdTimestamp 3/25/2024 3:19 AM GMT+00:00 (Date and Time)
name "App Package 3/24/2024" (Text)
description "App Package 3/24/2024" (Text)
uuid "b03a078e-dcc7-4e25-9940-a8fdbf8e9b51" (Text)
pluginCount 0 (Number (Integer))
ticketLink "" (Text)
lastModifiedTimestamp 3/28/2024 10:29 PM GMT+00:00 (Date and Time)

Dictionary

datasourceUuid "" (Text)
hasCustomizationFile false (Boolean)
objectCount 11 (Number (Integer))
databaseScriptCount 0 (Number (Integer))
createdTimestamp 3/25/2024 1:51 AM GMT+00:00 (Date and Time)
name "App Release 2 EPIC" (Text)
description "This is our Appian Release 2.0 EPIC" (Text)
uuid "654ebfc4-0bc2-4952-a6a1-e3684a83c2c8" (Text)
pluginCount 0 (Number (Integer))
ticketLink "https://dev.azure.com/appianrichardschoen/_/Appian%20Demo"
lastModifiedTimestamp 3/25/2024 1:52 AM GMT+00:00 (Date and Time)
totalPackageCount 2 (Number (Integer))
error null (Null)
connectedSystem null (Connected System)
binaryDoc75MbLimitExceeded false (Boolean)

List Packages Integration

 DA_DeploymentPackages

Connection

Enter connection details below Use a connected system

* **Connected System**  DA Appian Deployment API [X](#)

Build URL from Scratch
 Inherit Base URL

Base URL [?](#) http://myinstance.appiancloud.com

Relative Path [?](#) concat("/suite/deployment-management/v2/applications/",\${r:app:id,"/packages"})

URL Preview [?](#) https://myinstance.test.appiancloud.com/suite/deployment-management/v2/applications/3c6beb94-d7aa-41f2-a180-f3f96d842573/packages

* **Method**

Timeout (sec) [?](#) 10

* **Usage** Queries data Modifies data

Indicate how this integration interacts with the external system

Querying Data: Integrations that query data can be used in any expression. Do not use them to modify data in the external system or duplicate updates may occur. [Learn more](#)

> **Query Parameters**

> **Headers**

Expression Rule to Query Packages via Integration

The screenshot shows the Appian integration test interface. On the left, a code editor displays an expression rule named "DA_GetDeploymentPackages". The code is as follows:

```
/* Run Getpackages and return resulting package data */
rule!DA_DeploymentPackages(ri!appid).result.body.packages
```

Below the code editor, a message says "Place cursor on function, rule, or constant to display help".

The main area of the interface is titled "Test Inputs" and contains a table:

Rule Input Name	Expression	Value
appid (Text)	1 "3c6beb94-d7aa-41f2-a180-f3f96d842573"	"3c6beb94-d7aa-41f2-a180-f3f96d842573"

Below the table is a "Save as Test Case" button and a "TEST RULE" button.

The "Test Output" section shows the results of the rule execution. It includes performance metrics (Time: 133 ms), the type of data (Any Type (List of Dictionary)), and the value of the rule input. The value is shown as a list of two items, each being a dictionary. The first item has fields like datasourceUuid, hasCustomizationFile (false), objectCount (11), databaseScriptCount (0), createdTimestamp (3/25/2024 3:19 AM GMT+00:00), name ("App Package 3/24/2024"), description ("App Package 3/24/2024"), uuid ("b03a078e-dcc7-4e25-9940-a8fdbf8e9b51"), pluginCount (0), ticketLink, and lastModifiedTimestamp (3/28/2024 10:29 PM GMT+00:00). The second item has similar fields but with different values, such as a different creation timestamp and a different name.

/* Run Getpackages and return resulting package data */
rule!DA_DeploymentPackages(ri!appid).result.body.packages

Python Script to List Packages for Application

```
python3 appian_packagedetails.py  
--appid=3c6beb94-d7aa-41f2-a180-f3f96d842573
```

Uses pycurl and curl to exercise the endpoint
**/suite/deployment-management/v2/applications/{paramappid}/pac
kages**

List Packages for Application Formatted JSON Results

Package name: App Package 3/24/2024

Package desc: App Package 3/24/2024

Package uuid: b03a078e-dcc7-4e25-9940-a8fdbf8e9b51

Created:2024-03-25T03:19:23.446Z

Updated:2024-03-28T22:29:03.578Z

Ticket link:

Package name: App Release 2 EPIC

Package desc: This is our Appian Release 2.0 EPIC

Package uuid: 654ebfc4-0bc2-4952-a6a1-e3684a83c2c8

Created:2024-03-25T01:51:36.499Z

Updated:2024-03-25T01:52:11.235Z

Ticket link:https://dev.azure.com/appianrichards/Appian%20Demo%20Project%201/_workitems/edit/4/

ExitCode:0

ExitMessage:Application Package Details completed successfully.

End of Main Processing - 04:20:47

Exporting Your Applications and Packages



Application Export Flow



Appian Dev
Environment



Package 1 - pkg001

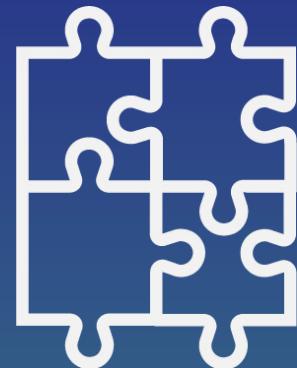


Package 2 - pkg002



Deployment Logs

Determine Application or Package UUID to Deploy



- Determine application UUID from application properties
- Use the application UUID to deploy entire application
- Determine specific package UUID
- Pass app UUID to Application Package Details API
- Use the package UUID to deploy selected package

Application Export Flow



Appian Dev
Environment



Trigger Selected Package Export



Package 1 - pkg001



Package 2 - pkg002



Deployment Logs

Export Your Deployment Package



- Deploy your package, customization file, and database scripts
- Uses the **/deployments** endpoint
- The endpoint's response provides the UUID of the deployment, which you can use in the next step
- Endpoint used for **export and import** of packages

Application Export Flow



Appian Dev
Environment



Package 1 - pkg001



Package 2 - pkg002



Deployment Logs



Trigger Selected Package Export



Loop to Check Deployment Status
every 20 Seconds



Retrieve and Check Export Deployment Status



- Retrieve the status and results of your deployment
- Uses the **/deployments/<uuid>** endpoint.
- Similar to Get Inspection Results, the deployment time will vary with the size of your package.
- We recommend hitting this endpoint on a regular interval until the deployment is completed and results are available, which is indicated by the status response.
- Response provides downloadable URL links to package, db scripts, plugins, customizations and log info

Retrieve and Check Export Deployment Status

```
{  
  "packageZip": "https://mysite.appiancloud.com/suite/deployment-management/v2/deployments/d243b14c-3b0f-43d0-83e0-1a2a2a2a2a2a",  
  "dataSource": "jdbc/AppianAnywhere",  
  "databaseScripts": [  
    {  
      "fileName": "Create Tables.sql",  
      "orderId": 1,  
      "url": "https://mysite.appiancloud.com/suite/deployment-management/v2/deployments/d243b14c-3b0f-43d0-83e0-1a2a2a2a2a2a",  
    },  
    {  
      "fileName": "Update Reference Data.sql",  
      "orderId": 2,  
      "url": "https://mysite.appiancloud.com/suite/deployment-management/v2/deployments/d243b14c-3b0f-43d0-83e0-1a2a2a2a2a2a",  
    }  
  ],  
  "pluginsZip": "https://mysite.appiancloud.com/suite/deployment-management/v2/deployments/d243b14c-3b0f-43d0-83e0-1a2a2a2a2a2a",  
  "customizationFile": "https://mysite.appiancloud.com/suite/deployment-management/v2/deployments/d243b14c-3b0f-43d0-83e0-1a2a2a2a2a2a",  
  "customizationFileTemplate": "https://mysite.appiancloud.com/suite/deployment-management/v2/deployments/d243b14c-3b0f-43d0-83e0-1a2a2a2a2a2a",  
  "deploymentLogUrl": "https://mysite.appiancloud.com/suite/deployment-management/v2/deployments/d243b14c-3b0f-43d0-83e0-1a2a2a2a2a2a",  
  "status": "COMPLETED"  
}
```

Retrieve and Review Export Deployment Log



- If necessary, retrieve the deployment log for more detailed results.
- Use the `/deployments/<uuid>/log` endpoint.
- Deployment log returned in **text format**

Application Export Flow



Appian Dev
Environment



Package 1 - pkg001



Package 2 - pkg002



Deployment Logs



Trigger Selected Package Export



Loop to Check Deployment Status
every 20 Seconds



Review Export Deployment Log



Application Export Flow



Appian Dev
Environment



Package 1 - pkg001



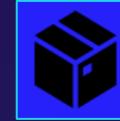
Package 2 - pkg002



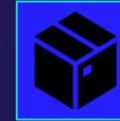
Deployment Logs



Trigger Selected Package Export



Loop to Check Deployment Status
every 20 Seconds



Review Export Deployment Log



Download Exported Assets



Store in Azure Git Repos



Azure Repos

Importing and Deploying Your Applications and Packages



Application Import and Deploy Flow



Inspect and Upload Package Assets



appian

Appian Test
Environment



Deployment Logs

appian

Appian Prod
Environment



Deployment Logs

Inspect Your Packages



- Inspect your package and import customization file
- Uses the **/inspections** endpoint
- The endpoint response provides the UUID of the inspection
- UUID can be used in the next step
- URL to retrieve inspections details is also generated
- Key value pairs, packages and files can be uploaded

Application Import and Deploy Flow



Inspect and Upload Package Assets



Loop and Review Inspection Log



appian

Appian Test
Environment



Deployment Logs

appian

Appian Prod
Environment



Deployment Logs

Get Inspection Results



- Retrieve the status and results of your inspection
- Uses the **/inspections/<uuid> endpoint**
- The inspection may take longer depending on the size of your package.
- We recommend hitting this endpoint on a regular interval until the inspection is complete and results are available, which is indicated by the status response.

Application Import and Deploy Flow



Inspect and Upload Package Assets



Loop and Review Inspection Log



Trigger Selected Package Upload and Deploy



Appian Test Environment



Deployment Logs



Appian Prod Environment



Deployment Logs

Import and Deploy Your Package



- Deploy your package, customization file, and database scripts
- Uses the **/deployments** endpoint
- The endpoint's response provides the UUID of the deployment, which you can use in the next step
- Endpoint used for **export and import** of packages
- Key value pairs, packages and files can be uploaded

Application Import and Deploy Flow



Inspect and Upload Package Assets



Loop and Review Inspection Log



Trigger Selected Package Upload and Deploy



Loop to Check Deployment Status every 20 Seconds



Appian Test Environment



Deployment Logs



Appian Prod Environment



Deployment Logs

Retrieve and Check Deployment Status



- Retrieve the status and results of your deployment
- Uses the **/deployments/<uuid>** endpoint.
- Similar to Get Inspection Results, the deployment time will vary with the size of your package.
- We recommend hitting this endpoint on a regular interval until the deployment is completed and results are available, which is indicated by the status response.

Application Import and Deploy Flow



Inspect and Upload Package Assets



Loop and Review Inspection Log



Trigger Selected Package Upload and Deploy



Loop to Check Deployment Status every 20 Seconds



Review Deployment Log



Appian Test Environment



Deployment Logs



Appian Prod Environment



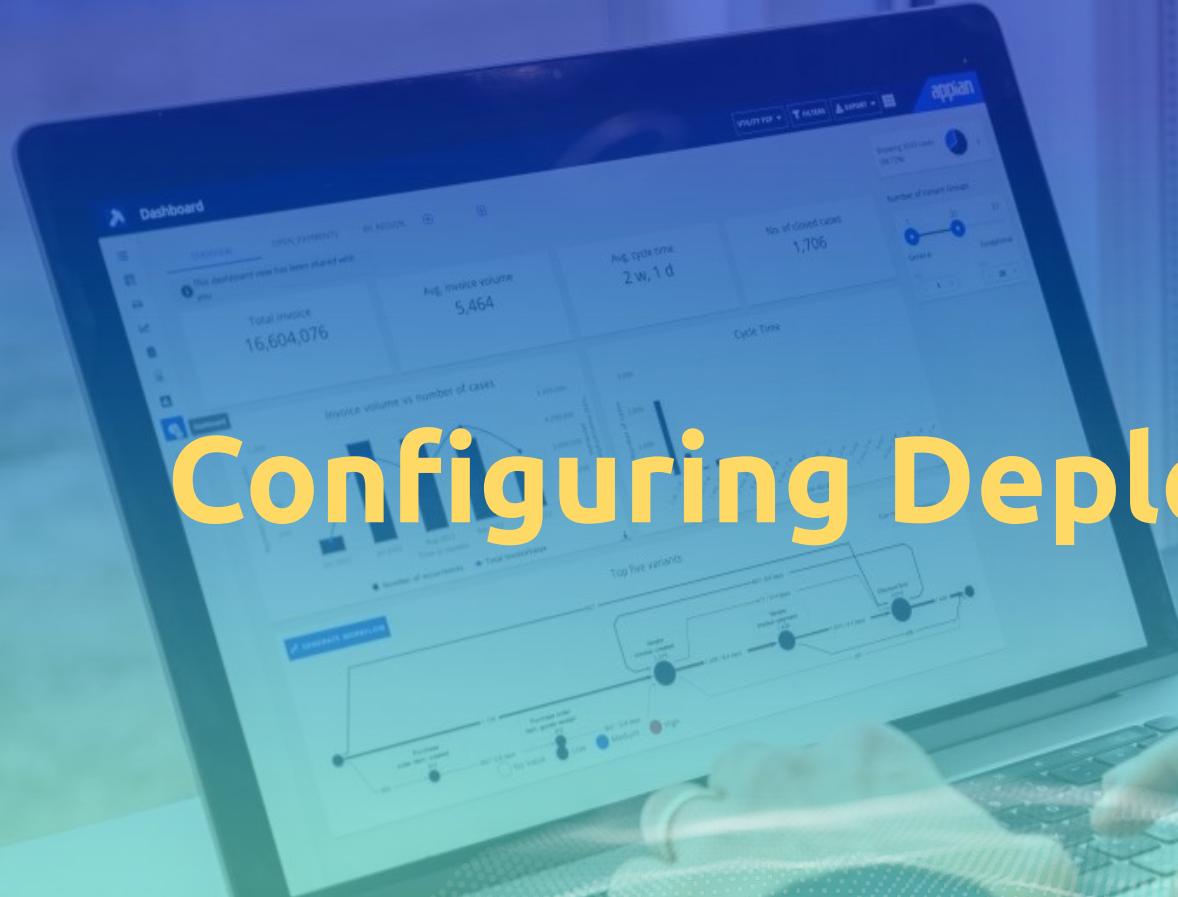
Deployment Logs

Retrieve and Review Deployment Log

- If necessary, retrieve the deployment log for more detailed results.
- Use the `/deployments/<uuid>/log` endpoint.
- Deployment log returned in **text format**



Configuring Deployment REST API



Enable Application Deployment with REST API

Appian Administration Console

EXPORT IMPORT RS appian

Portals
Sign-in Page Links
Typefaces
User Start Pages

AUTHENTICATION
Appian
LDAP
Maintenance Window
OpenID Connect
PIEE
SAML
Users
Web API Authentication

DEVOPS
Deployment
Health Check
Infrastructure >

INTEGRATION
AI Services
Certificates
Data Sources
Email

Appian
https://myinstance.appiancloud.com Enabled

External Deployments

Enable incoming
 Enable outgoing

These options enable the environment to accept deployments from or send deployments to external systems via a built-in web API. All deployments are tracked in the Deploy view in Appian Designer. [Learn more](#)

Authenticate As ?* deploy.admin Service Account

Admin Console Changes ? Allow deployments with admin console settings

Deployment Settings

A deployment can include object, database, and plug-in changes, which will be tracked in the deployments view in Appian Designer. These settings will apply to incoming direct and external deployments.

Deploy As ?* deployas.admin Service ... Account must be a system administrator

Plug-in Changes ? Allow deployments with plug-ins

Database Changes ? Allow deployments with database scripts

Governance ? Require Review

SAVE CHANGES

Create Web API Authentication Key

Appian Administration Console

AUTHENTICATION

- Appian
- LDAP
- Maintenance Window
- OpenID Connect
- PIEE
- SAML
- Users
- Web API Authentication >**

DEVOPS

- Deployment
- Health Check
- Infrastructure

INTEGRATION

- AI Services
- Certificates
- Data Sources
- Email
- Embedded Interfaces
- HTTP Proxy

EXPORT IMPORT RS appian

Web API Authentication

API Keys Appian OAuth 2.0 Clients Third-Party OAuth 2.0 Clients

Create API keys and pass them in an Appian-API-Key HTTP header to authenticate web APIs. These keys can be activated/deactivated. Web APIs authenticated by an API key will run as the associated service account.

Active Inactive All

CREATE **DEACTIVATE**

<input type="checkbox"/>	Description	↑ Service Account	Created By	Created On	Last Used	
<input type="checkbox"/>	Appian API Key	deploy.admin Service Account	Richard Schoen	2/28/2024	03/25/2024 4:46:34 AM	
<input type="checkbox"/>	Web Authentication	deploy.admin Service Account	Dylan Freadhoff	11/28/2023	Unused	

Create Web API Authentication Key

Web API Authentication Keys

Create New API Key

Description *

Describe what this key will be used for. This should be unique across your API keys.

Service Account *

 deploy.admin Service Account X +

All API keys must be associated with a user in the Service Accounts group. These users are prevented from logging into Appian.

[View Service Accounts group](#)

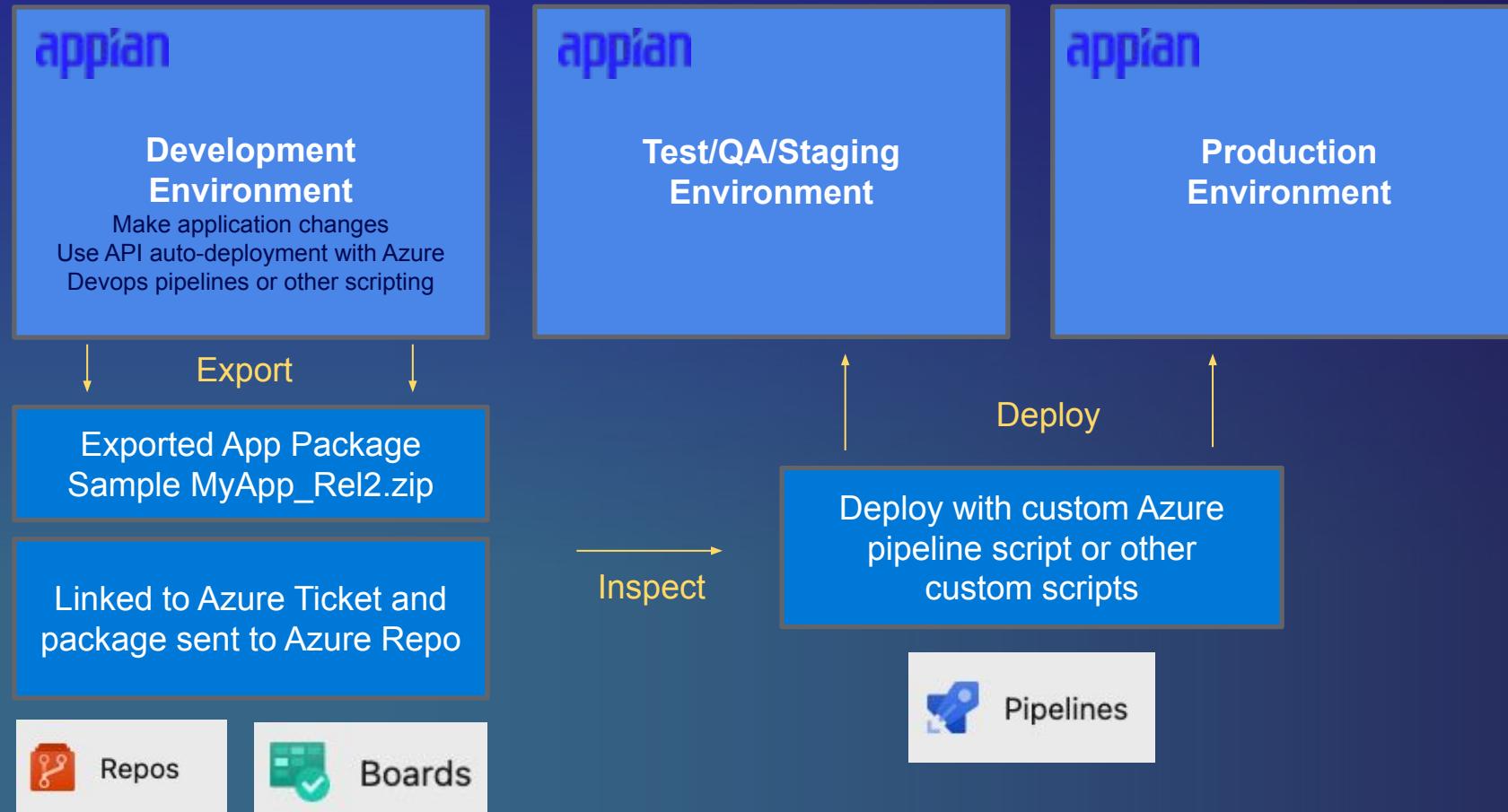
CANCEL CREATE

Deployment and Azure Devops



- Associate Azure tickets with deployment packages
- Script deployments with Python, PowerShell, C#,etc.
- Use Azure Pipelines to run scripts
- Store package ZIP and other files in Git repositories
- Extract and store XML object definitions in Git

Potential Appian and Azure Devops Deployment Sequence



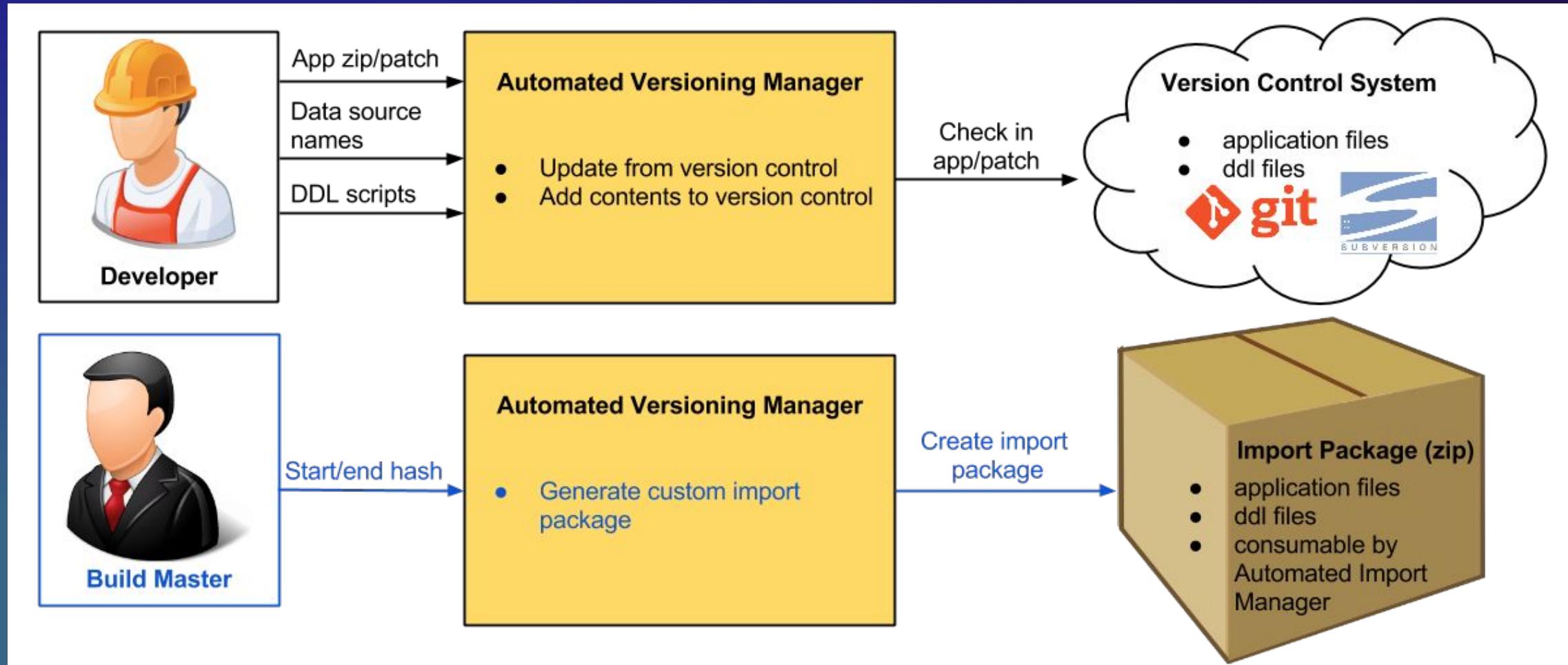
Community Resources and Links



Automated Versioning Manager

- **Automated Versioning Manager Plugin (AVM)**
<https://community.appian.com/b/appmarket/posts/automated-versioning-manager-avm>
- It unzips the application and organizes the artifact XML files in the repository.
- It automates the check-in and checkout operations with the version control system.
- It generates application packages for import in Appian based on the contents of the repository and a range of changes to include.

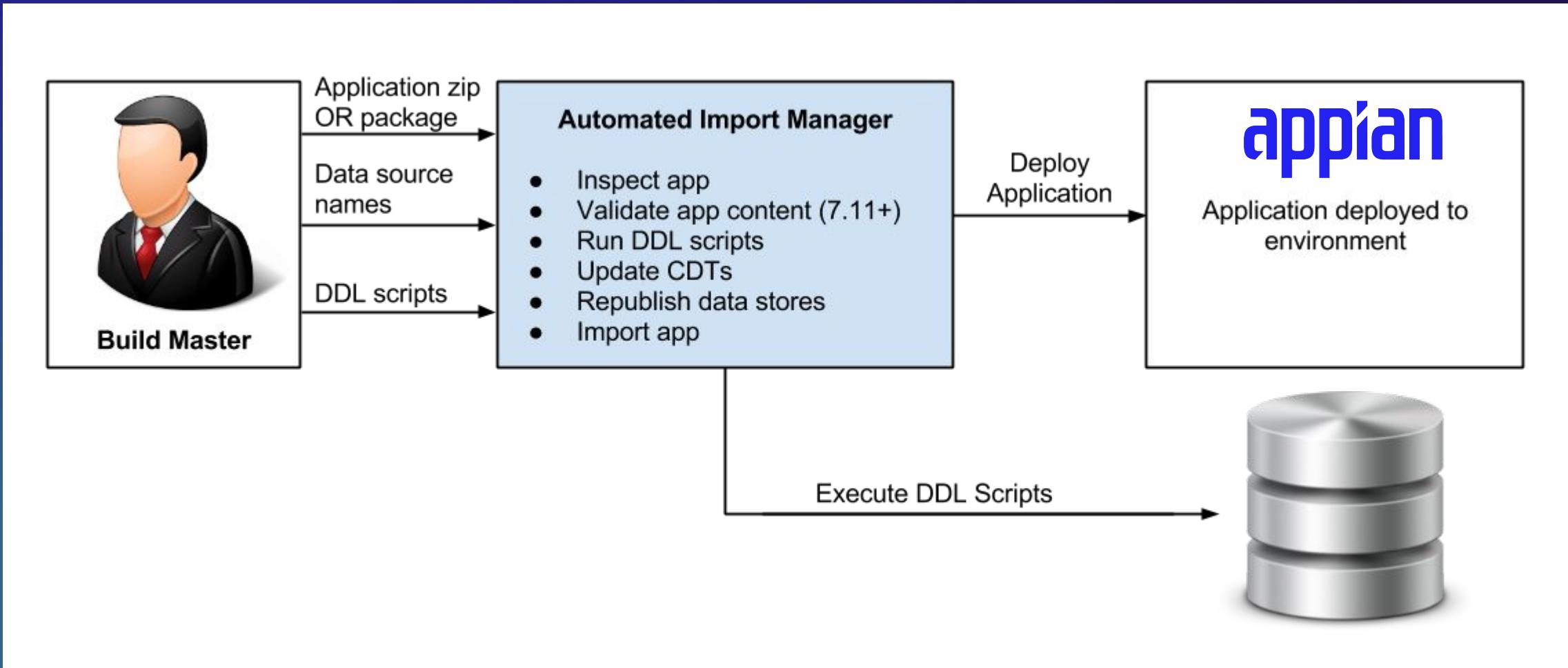
Automated Versioning Manager



Automated Import Manager Plug-In and Client

- This AppMarket utility automates the process of inspecting the application, executing DDL scripts, updating CDTs, republishing the appropriate datastores, and importing the application
- **Deployment Automation Overview**
<https://community.appian.com/success/w/guide/3328/deployment-automation>
- **Automated Import Manager Plug-In**
<https://community.appian.com/b/appmarket/posts/automated-import-manager-aim-plugin>
- **Automated Import Manager (AIM) Client**
<https://community.appian.com/b/appmarket/posts/-automated-import-manager>

Automated Import Manager Plug-In and Client



Deployment Content Links



- **Appian CI/CD in Combination with Microsoft Azure DevOps**
<https://youtu.be/T8gNIKixpZw>
- **Links to Appian Deployment API documentation**
https://docs.appian.com/suite/help/24.1/Deployment_Rest_API.html
- **Community Application Deployment Guide**
<https://community.appian.com/success/w/guide/3062>
- **Community Article on Deployment Automation**
<https://community.appian.com/success/w/guide/3328/deployment-automation>
- **Samples for Scripting Appian Deployment REST API**
<https://github.com/richardschoen/appiandeploymentapi>

Q&A and Summary



- Deployment can be fully automated with Deployment API
- Can be scripted and used with Azure Devops
- Can be used with Jira, GitHub, GitLab and other CI/CD tools
- I provided some Python/Bash deployment code templates
- Get started with automating Appian deployment

Contact Info

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Thank You



 **Appian**
Academy

community.appian.com/learn



Survey
