**Document Attributes**

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| Application ID /  Application Name | 295674 - |
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**Revision History**

The following table lists the revision history of this document:

| **Author** | **Date** | **Version #** | **Revision Description** |
| --- | --- | --- | --- |
| Yun Wan | 06/16/17 | 0.01 | Initial draft for 295674 |
| Yun Wan | 06/28/17 | 0.02 | Initial draft for 295674 Cont’d |
| Yun Wan | 07/01/17 | 0.03 | Initial draft for 295674 Cont’d, added one time processing for correlated site, and customer sites |
| Yun Wan | 07/12/17 | 0.04 | 295674: added a GLID address sync-up requirement |
| Yun Wan | 08/02/17 | 0.05 | 295674: added UIS.site as a new source of address as per requested by Ralph and Fathima. All changes are tagged with <295674-1> for differentiation. |

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**Overview**

In order to provide a complete view of a customer/account from pre-sale to delivery, Customer’s order/project detail data need to be added into customer database and integrated with GDB. Customer Database should be accessed by APIs with a Microservice oriented GUI for data updates and retrieval.

**Problem Statement**

This HLD is about everything that is needed to implement microservice ManageCINR.

**Design Decisions**

### Database

#### HLD-296357a-CINR-Customer-DBA-010 [ Schema ]

Ensure setting up a new schema to store data for Core Customer and related information.

Suggested Schema Name : cinr\_customer

Any database objects referenced in this document should be under this new scheam unless it is explicitly specified otherwise.

#### HLD-296357a-CINR-Customer-DBA-020 [ Tables ]

Ensure the following tables are created under the schema specified in *HLD-296357a-CINR-Customer-DBA-010 [ Schema ]* .

##### CUSTOMER

|  |  |  |  |
| --- | --- | --- | --- |
| **CUSTOMER** | | | |
| **Name** | **Data Type** | **Nullable** | **Comments** |
| ID\_ORGANIZATION | NUMBER(20) | N | PK |
| SAART\_ID | VARCHAR2(6) | Y |  |
| GPS\_ID | NUMBER(15, 5) | Y |  |
| GEMS\_COMPANY\_ID | VARCHAR2(33) | Y |  |
| GEMS\_ORG\_ID | VARCHAR2(90) | Y |  |
| CUSTOMER\_NAME | VARCHAR2(100) | N |  |
| CUSTOMER\_DESC | VARCHAR2(300) | Y |  |
| CUSTOMER\_ALIAS | VARCHAR2(500) | Y |  |
| ID\_INDUSTRY\_VERTICAL | NUMBER(10) | Y | FK |
| ~~ID\_TRANSITION\_STATUS~~ | ~~NUMBER(10)~~ | ~~Y~~ | ~~FK~~ |
| MSA\_START\_DATE | DATE | Y |  |
| MSA\_END\_DATE | DATE | Y |  |
| ID\_ACCOUNT\_CATEGORY | NUMBER(10) | Y | FK |
| ID\_ACCOUNT\_SEGMENT | NUMBER(10) | Y | FK |
| RYG\_STATUS | VARCHAR2(10) | Y |  |
| RYG\_RED\_COMMENTS | VARCHAR2(200) | Y |  |
| ID\_ACCOUNT\_SUPPORT\_MODEL | NUMBER(10) | Y | FK |
| DATA\_PRIVACY | VARCHAR2(3) | Y | YES, NO |
| DATA\_PRIVACY\_COMMENTS | VARCHAR2(200) | Y |  |
| NUMBER\_OF\_DEVICES | NUMBER(10) | Y |  |
| NUMBER\_OF\_SITES | NUMBER(10) | Y |  |
| GENERAL\_COMMENTS | VARCHAR2(2000) | Y |  |
| ID\_REGION | NUMBER(10) | Y | FK |
| ID\_SUB\_REGION | NUMBER(10) | Y | FK |
| ID\_COUNTRY | NUMBER(10) | Y | FK |
| GR\_RESTRICTIONS | VARCHAR2(3) | Y |  |
| GR\_RESTRICTIONS\_COMMENT | VARCHAR2(200) | Y |  |
| CSS\_TD\_AVAILABLE | VARCHAR2(3) | Y |  |
| ID\_ACCOUNT\_STEWARDSHIP | NUMBER(10) | Y | FK |
| ID\_CUSTOMER\_STATUS | NUMBER(10) | Y | FK |

##### INDUSTRY\_VERTICAL

|  |  |  |  |
| --- | --- | --- | --- |
| **INDUSTRY\_VERTICAL** | | | |
| **Name** | **Data Type** | **Nullable** | **Comments** |
| ID | NUMBER(10) | N | PK |
| NAME | VARCHAR2(100) | N | Pharmaceuticals, BFI, Telecom, etc.  Unique Index |
| SORT\_INDEX | NUMBER(10) | Y |  |

##### ~~TRANSITION\_STATUS~~

|  |  |  |  |
| --- | --- | --- | --- |
| **~~TRANSITION\_STATUS~~** | | | |
| **~~Name~~** | **~~Data Type~~** | **~~Nullable~~** | **~~Comments~~** |
| ~~ID~~ | ~~NUMBER(10)~~ | ~~N~~ | ~~PK~~ |
| ~~STATUS~~ | ~~VARCHAR2(20)~~ | ~~N~~ |  |
| ~~SORT\_INDEX~~ | ~~NUMBER(10)~~ | ~~Y~~ |  |

##### ACCOUNT\_CATEGORY

|  |  |  |  |
| --- | --- | --- | --- |
| **ACCOUNT\_CATEGORY** | | | |
| **Name** | **Data Type** | **Nullable** | **Comments** |
| ID | NUMBER(10) | N | PK |
| NAME | VARCHAR2(20) | N | IBM Commercial, IBM Shared, IBM ENI, IBM IGA, CSC, HPE, RETAIL, and etc.  Unique Index |
| SORT\_INDEX | NUMBER(10) | Y |  |

##### ACCOUNT\_SEGMENT

|  |  |  |  |
| --- | --- | --- | --- |
| **ACCOUNT\_SEGMENT** | | | |
| **Name** | **Data Type** | **Nullable** | **Comments** |
| ID | NUMBER(10) | N | PK |
| NAME | VARCHAR2(20) | N | Tier1, Tier 2, Tier 3, Critical, Key, Pending, Shared Infrastructure, ENI, etc.  Unique Index |
| SORT\_INDEX | NUMBER(10) | Y |  |

##### ACCOUNT\_SUPPORT\_MODEL

|  |  |  |  |
| --- | --- | --- | --- |
| **ACCOUNT\_SUPPORT\_MODEL** | | | |
| **Name** | **Data Type** | **Nullable** | **Comments** |
| ID | NUMBER(10) | N | PK |
| NAME | VARCHAR2(20) | N | GTM, INTERNAL, HYBRID, and etc.  Unique Index |
| SORT\_INDEX | NUMBER(10) | Y |  |

##### REGION

|  |  |  |  |
| --- | --- | --- | --- |
| **REGION** | | | |
| **Name** | **Data Type** | **Nullable** | **Comments** |
| ID | NUMBER(10) | N | PK |
| NAME | VARCHAR2(20) | N | EMEA, NA, LA, AP, Americas, and etc.  Unique Index |
| SORT\_INDEX | NUMBER(10) | Y |  |

##### SUB\_REGION

|  |  |  |  |
| --- | --- | --- | --- |
| **SUB\_REGION** | | | |
| **Name** | **Data Type** | **Nullable** | **Comments** |
| ID | NUMBER(10) | N | PK |
| NAME | VARCHAR2(20) | N | Unique Index |
| ID\_REGION | NUMBER(10) | Y | FK |
| ID\_ACCOUNT\_CATEGORY | NUMBER(10) | Y | FK |
| SORT\_INDEX | NUMBER(10) | Y |  |

##### COUNTRY

|  |  |  |  |
| --- | --- | --- | --- |
| **COUNTRY** | | | |
| **Name** | **Data Type** | **Nullable** | **Comments** |
| ID | NUMBER(10) | N | PK |
| NAME | VARCHAR2(20) | N | Unique Index |
| ISO\_ALPHA2\_CODE | CHAR(2) | Y |  |
| ISO\_ALPHA3\_CODE | CHAR(3) | Y |  |
| ISO\_NUMERIC\_CODE | NUMBER(5) | Y |  |
| SORT\_INDEX | NUMBER(10) | Y |  |

##### SECURITY\_POLICY

|  |  |  |  |
| --- | --- | --- | --- |
| **SECURITY\_POLICY** | | | |
| **Name** | **Data Type** | **Nullable** | **Comments** |
| ID | NUMBER(10) | N | PK |
| NAME | VARCHAR2(20) | N | ASPR, ISEC, EBHS, GSD331, ITCS104, and etc.  Unique Index |
| SORT\_INDEX | NUMBER(10) | Y |  |

##### VENDOR

|  |  |  |  |
| --- | --- | --- | --- |
| **VENDOR** | | | |
| **Name** | **Data Type** | **Nullable** | **Comments** |
| ID | NUMBER(10) | N | PK |
| NAME | VARCHAR2(20) | N | ATT, GVM, Customer, and etc.  Unique Index |
| SORT\_INDEX | NUMBER(10) | Y |  |

##### SERVICE

|  |  |  |  |
| --- | --- | --- | --- |
| **VENDOR** | | | |
| **Name** | **Data Type** | **Nullable** | **Comments** |
| ID | NUMBER(10) | N | PK |
| NAME | VARCHAR2(80) | N | Unique Index |
| SORT\_INDEX | NUMBER(10) | Y |  |

##### ACCOUNT\_STEWARDSHIP

|  |  |  |  |
| --- | --- | --- | --- |
| **ACCOUNT\_STEWARDSHIP** | | | |
| **Name** | **Data Type** | **Nullable** | **Comments** |
| ID | NUMBER(10) | N | PK |
| NAME | VARCHAR2(20) | N | ATT, GVM, Customer |
| SORT\_INDEX | NUMBER(10) | Y | None, Monthly, Quarterly, Bi-Annually, Yearly, and etc.  Unique Index |

##### CUSTOMER\_STATUS

|  |  |  |  |
| --- | --- | --- | --- |
| **CUSTOMER\_STATUS** | | | |
| **Name** | **Data Type** | **Nullable** | **Comments** |
| ID | NUMBER(10) | N | PK |
| STATUS | VARCHAR2(20) | N | Transition, Production, De-Boarding, Terminated, Boarding, and etc.  Unique Index |
| SORT\_INDEX | NUMBER(10) | Y |  |

##### CUSTOMER\_SECURITY\_POLICY

|  |  |  |  |
| --- | --- | --- | --- |
| **CUSTOMER\_SECURITY\_POLICY** | | | |
| **Name** | **Data Type** | **Nullable** | **Comments** |
| ID\_ORGANIZATION | NUMBER(20) | N | PK |
| ID\_SECURITY\_POLICY | NUMBER(10) | N | PK |
| ID\_COUNTRY | NUMBER(10) | Y |  |

##### CUSTOMER\_VENDOR

|  |  |  |  |
| --- | --- | --- | --- |
| **CUSTOMER\_VENDOR** | | | |
| **Name** | **Data Type** | **Nullable** | **Comments** |
| ID\_ORGANIZATION | NUMBER(20) | N | PK |
| ID\_VENDOR | NUMBER(10) | N | PK |
| MISSING\_VENDOR | VARCHAR2(100) | Y |  |

##### CUSTOMER\_ALIAS

|  |  |  |  |
| --- | --- | --- | --- |
| **CUSTOMER\_VENDOR** | | | |
| **Name** | **Data Type** | **Nullable** | **Comments** |
| ID\_ORGANIZATION | NUMBER(20) | N | PK |
| ALIAS | VARCHAR2(20) | N | PK |

##### CUSTOMER\_SERVICE

|  |  |  |  |
| --- | --- | --- | --- |
| **CUSTOMER\_VENDOR** | | | |
| **Name** | **Data Type** | **Nullable** | **Comments** |
| ID\_ORGANIZATION | NUMBER(20) | N | PK |
| ID\_SERVICE | NUMBER(10) | N | PK |

#### HLD-296357a-CINR-Customer-DBA-030 [ Sequences ]

Ensure the following sequences are created under the schema specified in *HLD-296357a-CINR-Customer-DBA-010 [ Schema ]* for the primary keys defined above.

|  |  |  |  |
| --- | --- | --- | --- |
| **SEQUENCES** | | | |
| **Name** | **Start Value** | **Increment By** | **Comments** |
| ID\_INDUSTRY\_VERTICAL\_SEQ | 1 | 1 |  |
| ID\_ACCOUNT\_CATEGORY\_SEQ | 1 | 1 |  |
| ID\_ACCOUNT\_SEGMENT\_SEQ | 1 | 1 |  |
| ID\_ACCOUNT\_SUPPORT\_MODEL\_SEQ | 1 | 1 |  |
| ID\_ACCOUNT\_STEWARDSHIP\_SEQ | 1 | 1 |  |
| ID\_REGION\_SEQ | 1 | 1 |  |
| ID\_SUB\_REGION\_SEQ | 1 | 1 |  |
| ID\_COUNTRY\_SEQ | 1 | 1 |  |
| ID\_SECURITY\_POLICY\_SEQ | 1 | 1 |  |
| ID\_VENDOR\_SEQ | 1 | 1 |  |
| ID\_SERVICE\_SEQ | 1 | 1 |  |
| ID\_RESULT\_SET\_SEQ | 1 | 1 | For result sets of database Queries. |

### Result Set Cache

This section describes the process to cache the result set from a query, or a microservice call for various purposes, for example, session/user data, sorting/re-sorting, pagination, avoiding from repeated queries.

The implementation of caches could be determined to facilitate fast access, sorting and pagination.

#### HLD-296357a-Cinr-Customer-Cache-010 [ Organization ]

This section describes the process to retrieve the customers/organizations assigned to the user (attuid) for the session id.

Retrieve the attuid from request, and use it along with the CINRHeader to call ManageUserProfile microservice’s UserOrganization API to get a list of orgIds from the response, and cache the list.

In case that ManageUserProfile doesn’t return any orgId, throw exception with error “Invalid User”.

This cache process should only happen once for each session id.

#### HLD-296357a-Cinr-Customer-Cache-020 [ Customer List ]

For any new search/query of Customer List API, a result set ID will be generated from ID\_RESULT\_SET\_SEQ sequence for the result set. The result set should be cached for the following purposes:

1. Pagination of the result set.
2. Sorting/re-sorting from the result set
3. Avoid from repeated queries with the same result set against database.

### Customer List – GET

#### HLD-296357a-Cinr-Customer-List-GET-010 [ Process ]

This section describes the process to provide response based on Customer List API request. The response has dependency on different requests as below:

1. If userCustomerIndicator is true, a UserCustomer structure should be provided in response.
2. If userCustomerIndicator is false, a Customer structure should be provided in response.
3. If UserSelection.WildcardSearch is present, a UserCustomer structure should be provided in response.
4. If resultSetId is populated, request is asking for next page’s data, or re-sorting the result set. UserSelection will be ignored and response structure (UserCustomer structure or Customer structure) should be determined based on the structure in *HLD-296357a-Cinr-Customer-Cache-020 [ Customer List ]* . If there is no cached result set, throw an “Invalid Input” exception.
5. If the attuid and sessionId are not in the cache yet with orgId list, follow to *HLD-296357a-Cinr-Customer-Cache-010 [ Organization ]* retrieve them. This step is only needed for userCustomerIndicator with true, or WildcardSearch is populated in the request.
6. If UserSelection.WildcardSearch is present and resultSetId is not populated in request, follow the sections to query the database to prepare the result set for response :
7. *HLD-296357a-Cinr-Customer-List-GET-050 [ Customer Name ]* if searchField is ‘Name’.
8. *HLD-296357a-Cinr-Customer-List-GET-060 [ Customer Alias ]* if searchField is ‘Alias’.
9. *HLD-296357a-Cinr-Customer-List-GET-070 [ Organization ID ]* if searchField is ‘Customer ID’.
10. Result sets from above could have overlapping and duplicated records should be removed to have a unique list of records.
11. If UserSelection.FilterCombination is present and resultSetId is not populated in request, follow *HLD-296357a-Cinr-Customer-List-GET-040 [ FilterCombination ]* to query database to prepare the result for for response.
12. The result set from above should be cached as described in *HLD-296357a-Cinr-Customer-Cache-020 [ Customer List ]* for further processing and subsequent requests.
13. In case that result set is empty, a “No Data Found” exception should be thrown.
14. If RecordSorting is present in request, sort the cached result set as described in *HLD-296357a-Cinr-Customer-Cache-020 [ Customer List ]* .
15. Follow *HLD-296357a-Cinr-Customer-List-GET-030 [ Record Range ]* to select requested record in the range for response.
16. Follow the following data mapping and AID for response construction:

|  |  |  |
| --- | --- | --- |
| **Data Element in Microservice** | **Database Table and Column** | **Comments** |
| sessionId | - | Echo from request |
| transactionId | - | Echo from request |
| idOrganization | CUSTOMER.id\_organization |  |
| customerName | CUSTOMER.customer\_name |  |
| customerAlias | CUSTOMER.customer\_alias | Only when userCustomerIndicator is true |
| idCustomerStatus | CUSTOMER.id\_customer\_status | Only when userCustomerIndicator is true |
| idAccountCategory | CUSTOMER.id\_account\_category | Only when userCustomerIndicator is true |
| idRegion | CUSTOMER.id\_region | Only when userCustomerIndicator is true |
| siteCount | CUSTOMER.number\_of\_sites | Only when userCustomerIndicator is true |
| deviceCount | CUSTOMER.number\_of\_devices | Only when userCustomerIndicator is true |
| resultSetId | - | From *HLD-296357a-Cinr-Customer-Cache-020 [ Customer List ]* |
| startRecord | - | Echo from request |
| endRecord | - | Echo from request |
| totalRecord | - | Count total number of records in *HLD-296357a-Cinr-Customer-Cache-020 [ Customer List ]* |
| code | - | Reference to AID |
| description | - | Reference to AID |

#### HLD-296357a-Cinr-Customer-List-GET-020 [ Record Sorting ]

This section describes the data sorting based on RecordSorting structure in request. The data sorting should be executed on the result set for the resultSetId (from RecordRange structure) cached in *HLD-296357a-Cinr-Customer-Cache-020 [ Customer List ].*

|  |  |  |
| --- | --- | --- |
| **sortColumn Value in RecordSorting** | **Database Table and Column Sort On** | **Comments** |
| ‘Customer ID’ | CUSTOMER.id\_organization |  |
| ‘Customer Name’ | CUSTOMER.customer\_name |  |
| ‘Alias’ | CUSTOMER.customer\_alias |  |
| ‘Account Category’ | CUSTOMER.id\_account\_category |  |
| ‘Region’ | CUSTOMER.id\_region |  |
| ‘Site Count’ | CUSTOMER.number\_of\_sites |  |
| ‘Device Count’ | CUSTOMER.number\_of\_devices |  |

Note: when userCustomerIndicator is false, only sorting on ‘Customer ID’, ‘Customer Name’ are supported.

#### HLD-296357a-Cinr-Customer-List-GET-030 [ Record Range ]

This section describes the data pagination based on RecordRange structure in request. The data pagination should be executed on the result set for the resultSetId cached in *HLD-296357a-Cinr-Customer-Cache-020 [ Customer List ].*

Data pagination process should be executed after Record Sorting process if RecordSorting is specified in the request.

A record number should be generated for each record, for example, first record has record number 1, second record has 2, and so on. Based on RecordRange.startRecord and Record.Range.endRecord, only the records with record number in between should be returned in response.

#### HLD-296357a-Cinr-Customer-List-GET-040 [ FilterCombination ]

This section describes the query construction based on FilterCombination from request. The query should select out records from CUSTOMER table.

Fields selected out from the table has dependency on userCustomerIndicator value, if it is true, all the fields defined in userCustomer structure in response (refer to AID for details) should be selected. Otherwise, all the field defined in Customer structure in response should be selected.

CUSTOMER records should be filtered based on the fields sent in FilterCombination. For example, if idOrganization is populated in FilterCombination, the filter defined for idOrganization defined in the following table should be applied. Otherwise (if idOrganizaiton is not populated in FilterCombination), this filter shouldn’t be applied.

In the case that only userCustomerIndicator is populated, and no other field is populated, an “Invalid Input” exception should be thrown.

|  |  |  |
| --- | --- | --- |
| **Data Element in FilterCombination** | **Database Table and Column** | **Comments** |
| idOrganization | CUSTOMER.id\_organization | Ensure id\_organization equals to idOrganization value from request |
| customerName | CUSTOMER.customer\_name | Ensure customer\_name equals to customerName value from request |
| customerAlias | CUSTOMER.customer\_alias | Ensure customer\_alias equals to customerAlias value from request |
| idCustomerStatus | CUSTOMER.id\_customer\_status | Ensure id\_customer\_status equals to idCustomerStatus value from request |
| idAccountCategory | CUSTOMER.id\_account\_category | Ensure id\_account\_category equals to idAccountCategory value from request |
| idRegion | CUSTOMER.id\_region | Ensure id\_region equals to idRegion value from request |
| siteCount | CUSTOMER.number\_of\_sites | Ensure number\_of\_sites equals to, less than, or greater than the value based on the operaor from request. |
| deviceCount | CUSTOMER.number\_of\_devices | Ensure number\_of\_devices equals to, less than, or greater than the value based on the operaor from request. |
| userCustomerIndicator | - | If userCustomerIndicator is true, ensure customer.id\_organization is in the orgId cached in *HLD-296357a-Cinr-Customer-Cache-010 [ Organization ]* |
| idIndustryVertical | CUSTOMER.id\_industry\_vertical | Ensure id\_industry\_vertical equals to idIndustryVertical value from request |
| idAccountSegment | CUSTOMER.id\_account\_segment | Ensure id\_account\_segment equals to idAccountSegment value from request |
| idAccountSupportModel | CUSTOMER.id\_account\_support\_model | Ensure id\_account\_support\_model equals to idAccountSupportModel value from request |
| idSubRegion | CUSTOMER.id\_sub\_region | Ensure id\_sub\_region equals to idSubRegion value from request |
| idCountry | CUSTOMER.id\_country | Ensure id\_country equals to idCountry value from request |
| idSecurityPolicy | CUSTOMER\_SECURITY\_POLICY.id\_security\_policy | Ensure CUSTOMER.id\_organization has a CUSTOMER\_SECURITY\_POLICY record with the same id\_organization and id\_security\_policy equals to idSecurityPolicy value from request. |
| idVendor | CUSTOMER\_VENDOR.id\_vendor | Ensure CUSTOMER.id\_organization has a CUSTOMER\_VENDOR record with the same id\_organization and id\_vendor equals to idVendor value from request. |
| idService | CUSTOMER\_SERVICE.id\_service | Ensure CUSTOMER.id\_organization has a CUSTOMER\_SERVICE record with the same id\_organization and id\_service equals to idService value from request. |
| idAccountStewardship | CUSTOMER.id\_account\_stewardship | Ensure id\_account\_stewardship equals to idAccountStewardship value from request |
| statusRYG | CUSTOMER.ryg\_status | Ensure ryg\_status equals to statusRYG value from request |
| cssTDAvailable | CUSTOMER.css\_td\_available | Ensure css\_td\_available equals to cssTDAvailable value from request |
| restrictionGR | CUSTOMER.gr\_restrictions | Ensure gr\_restrictions equals to restrictionGR value from request |
| contractStartDate | CUSTOMER.msa\_start\_date | Ensure msa\_start\_date equals to, less than, or greater than the value based on the operaor from request. |
| contractEndDate | CUSTOMER.msa\_end\_date | Ensure msa\_end\_date equals to, less than, or greater than the value based on the operaor from request. |

Note: all the comparisons described above should be case insensitive for alphabets.

#### HLD-296357a-Cinr-Customer-List-GET-050 [ Customer Name ]

This section describes the query construction based on searchValue and searchFiled ‘Name’ from request. The query should select out records from CUSTOMER table based on customer\_name field.

All the fields defined in userCustomer structure in response (refer to AID for details) should be selected.

Only the CUSTOMER records with customer\_name matched with searchValue from request will be selected. In addition, partial search should be supported, for example, if searchValue has value ‘ABC’, any CUSTOMER records with customer\_name starting with ‘ABC’ should selected. If searchValue has value ‘%ABC’, any CUSTOMER records with customer name containing ‘ABC’ should be selected.

Ensure customer.id\_organization is in the orgId cached in *HLD-296357a-Cinr-Customer-Cache-010 [ Organization ].*

Note: all the comparisons described above should be case insensitive.

#### HLD-296357a-Cinr-Customer-List-GET-060 [ Customer Alias ]

This section describes the query construction based on searchValue and searchField ‘Alias’ from request. All the fields defined in userCustomer structure in response (refer to AID for details) should be selected.

Only the CUSTOMER records with id\_organization in CUSTOMER\_ALIAS, and its alias matched with searchValue from request will be selected. In addition, partial search should be supported, for example, if searchValue has value ‘ABC’, any CUSTOMER records with CUSTOMER\_ALIAS.alias starting with ‘ABC’ should selected. If searchValue has value ‘%ABC’, any CUSTOMER records with CUSTOMER\_ALIAS.alias containing ‘ABC’ should be selected.

Ensure customer.id\_organization is in the orgId cached in *HLD-296357a-Cinr-Customer-Cache-010 [ Organization ].*

Note: all the comparisons described above should be case insensitive.

#### HLD-296357a-Cinr-Customer-List-GET-070 [ Organization ID ]

This section describes the query construction based on searchValue and searchField ‘Customer ID’ from request. The query should select out records from CUSTOMER table based on id\_organization field.

All the fields defined in userCustomer structure in response (refer to AID for details) should be selected.

Only the CUSTOMER records with id\_organization matched with searchValue from request will be selected. In addition, partial search should be supported, for example, if searchValue has value ‘123’, any CUSTOMER records with id\_organization starting with ‘ABC’ should selected. If searchValue has value ‘%123’, any CUSTOMER records with id\_organization containing ‘123’ should be selected.

Ensure customer.id\_organization is in the orgId cached in *HLD-296357a-Cinr-Customer-Cache-010 [ Organization ].*

### Customer Detail – GET

#### HLD-296357a-Cinr-Customer-Detail-GET-010 [ Process ]

This section describes the process to provide response based on Customer Detail - GET API request. This API is retrieving a detail record for a customer.

Take idOrganization from request and query CUSTOMER table for the corresponding record.

~~If the attuid and sessionId are not in the cache yet with orgId list, follow to~~ *~~HLD-296357a-Cinr-Customer-Cache-010 [ Organization ]~~* ~~retrieve them.~~

~~Ensure idOrganization from request is in the orgId list cached in~~ *~~HLD-296357a-Cinr-Customer-Cache-010 [ Organization ].~~* ~~Otherwise, throw an “Invalid Input” exception.~~

In case that no record is returned from above, a “No Data Found” exception should be thrown.

Construct the response based on the data mapping below and AID:

|  |  |  |
| --- | --- | --- |
| **Data Element in Microservice** | **Database Table and Column** | **Comments** |
| sessionId | - | Echo from request |
| transactionId | - | Echo from request |
| idOrganization | CUSTOMER.id\_organization |  |
| saartIdL3 | CUSTOMER.saart\_id |  |
| customerName | CUSTOMER.customer\_name |  |
| customerAlias | CUSTOMER.customer\_alias |  |
| customerDescription | CUSTOMER.customer\_desc |  |
| idCustomerStatus | CUSTOMER.id\_customer\_status |  |
| idAccountCategory | CUSTOMER.id\_account\_category |  |
| idRegion | CUSTOMER.id\_region |  |
| siteCount | CUSTOMER.number\_of\_sites |  |
| deviceCount | CUSTOMER.number\_of\_devices |  |
| userCustomerIndicator | - |  |
| idIndustryVertical | CUSTOMER.id\_industry\_vertical |  |
| idAccountSegment | CUSTOMER.id\_account\_segment |  |
| idAccountSupportModel | CUSTOMER.id\_account\_support\_model |  |
| idSubRegion | CUSTOMER.id\_sub\_region |  |
| idCountry | CUSTOMER.id\_country |  |
| idSecurityPolicy | CUSTOMER\_SECURITY\_POLICY.id\_security\_policy |  |
| idVendor | CUSTOMER\_VENDOR.id\_vendor |  |
| idService | CUSTOMER\_SERVICE.id\_service |  |
| idAccountStewardship | CUSTOMER.id\_account\_stewardship |  |
| statusRYG | CUSTOMER.ryg\_status |  |
| statusRYGComment | CUSTOMER.ryg\_status\_comments |  |
| cssTDAvailable | CUSTOMER.css\_td\_available |  |
| restrictionGR | CUSTOMER.gr\_restrictions |  |
| restrictionGRComment | CUSTOMER.gr\_restrictions\_comment |  |
| contractStartDate | CUSTOMER.msa\_start\_date |  |
| contractEndDate | CUSTOMER.msa\_end\_date |  |
| generalComment | CUSTOMER.general\_comments |  |
| dataPrivacy | CUSTOMER.data\_privacy |  |
| dataPrivacyComment | CUSTOMER.data\_privacy\_comments |  |
| startRecord | - | Echo from request |
| endRecord | - | Echo from request |
| totalRecord | - | Count total number of records |
| code | - | Reference to AID |
| description | - | Reference to AID |

### Customer Detail – POST

#### HLD-296357a-Cinr-Customer-Detail-POST-010 [ Process ]

This section describes the process to provide response based on Customer Detail - POST API request. This API is updateing a detail record for a customer.

~~If the attuid and sessionId are not in the cache yet with orgId list, follow to~~ *~~HLD-296357a-Cinr-Customer-Cache-010 [ Organization ]~~* ~~retrieve them.~~

~~Ensure idOrganization from request is in the orgId list cached in~~ *~~HLD-296357a-Cinr-Customer-Cache-010 [ Organization ].~~* ~~Otherwise, throw an “Invalid Input” exception.~~

Update database table as the following mapping, and only update the fields which were sent in th request, even if the field has blank/null value. However, if the field is not sent in the request, the corresponding value in the table should not be touched.

|  |  |  |
| --- | --- | --- |
| **Data Element in Microservice** | **Database Table and Column** | **Comments** |
| idOrganization | CUSTOMER.id\_organization | Match with CUSTOMER.id\_organization |
| customerAlias | CUSTOMER.customer\_alias,  CUSTOMER\_ALIAS.alias | Update CUSTOMER’s customer\_alias, tokenize customerAlias with comma, each token from the result should be check with CUSTOMER\_ALIAS, if any token and ig\_organization combination is not in CUSTOMER\_ALIAS table, the combination should be inserted into the table, and any combination in the table, but not in tokenizaed list, should be deleted from the table. |
| customerDescription | CUSTOMER.customer\_desc | Update CUSTOMER’s column |
| idCustomerStatus | CUSTOMER.id\_customer\_status | Update CUSTOMER’s column |
| idAccountCategory | CUSTOMER.id\_account\_category | Update CUSTOMER’s column |
| idRegion | CUSTOMER.id\_region | Update CUSTOMER’s column |
| idIndustryVertical | CUSTOMER.id\_industry\_vertical | Update CUSTOMER’s column |
| idAccountSegment | CUSTOMER.id\_account\_segment | Update CUSTOMER’s column |
| idAccountSupportModel | CUSTOMER.id\_account\_support\_model | Update CUSTOMER’s column |
| idSubRegion | CUSTOMER.id\_sub\_region | Update CUSTOMER’s column |
| idCountry | CUSTOMER.id\_country | Update CUSTOMER’s column |
| idSecurityPolicy | CUSTOMER\_SECURITY\_POLICY.id\_security\_policy | For each idSecurityPolicy, if action is ‘Add’, add the id\_security\_policy and id\_organization combination in CUSTOMER\_SECURITY\_POLICY, if action is ‘Delete’, delete the combination from the table. |
| idVendor | CUSTOMER\_VENDOR.id\_vendor | For each idVendor, if action is ‘Add’, add the id\_vendor and id\_organization combination in CUSTOMER\_VENDOR, if action is ‘Delete’, delete the combination from the table. |
| idService | CUSTOMER\_SERVICE.id\_service | For each idService, if action is ‘Add’, add the id\_service and id\_organization combination in CUSTOMER\_SERVICE, if action is ‘Delete’, delete the combination from the table. |
| idAccountStewardship | CUSTOMER.id\_account\_stewardship | Update CUSTOMER’s column |
| statusRYG | CUSTOMER.ryg\_status | Update CUSTOMER’s column |
| statusRYGComment | CUSTOMER.ryg\_status\_comments | Update CUSTOMER’s column |
| cssTDAvailable | CUSTOMER.css\_td\_available | Update CUSTOMER’s column |
| restrictionGR | CUSTOMER.gr\_restrictions | Update CUSTOMER’s column |
| restrictionGRComment | CUSTOMER.gr\_restrictions\_comment | Update CUSTOMER’s column |
| contractStartDate | CUSTOMER.msa\_start\_date | Update CUSTOMER’s column |
| contractEndDate | CUSTOMER.msa\_end\_date | Update CUSTOMER’s column |
| generalComment | CUSTOMER.general\_comments | Update CUSTOMER’s column |
| dataPrivacy | CUSTOMER.data\_privacy | Update CUSTOMER’s column |
| dataPrivacyComment | CUSTOMER.data\_privacy\_comments | Update CUSTOMER’s column |

Construct the response as the following mapping:

|  |  |  |
| --- | --- | --- |
| **Data Element in Microservice** | **Database Table and Column** | **Comments** |
| sessionId | - | Echo from request |
| transactionId | - | Echo from request |
| code | - | Reference to AID |
| description | - | Reference to AID |

### Value List – GET

#### HLD-296357a-Cinr-Value-List-GET-010 [ Process ]

This section describes the process to provide response based on Value List - GET API request. This API is retrieving a list of values for an object.

First determine the table name to query data from based on objectName value as below. If the objectName is not in the list below, throw an exception “Invalid Input”.

|  |  |  |
| --- | --- | --- |
| **objectName** | **Database Table** | **Comments** |
| ‘Industry Vertical’ | INDUSTRY\_VERTICAL |  |
| ‘Status’ | CUSTOMER\_STATUS |  |
| ‘Account Category’ | ACCOUNT\_CATEGORY |  |
| ‘Account Segment’ | ACCOUNT\_SEGMENT |  |
| ‘Account Support Model’ | ACCOUNT\_SUPPORT\_MODEL |  |
| ‘Region’ | REGION |  |
| ‘Sub Region’ | SUB\_REGION |  |
| ‘Country’ | COUNTRY |  |
| ‘Security Policy’ | SECURITY\_POLICY |  |
| ‘Vendor’ | VENDOR |  |
| ‘Acocunt Stewardship’ | ACCOUNT\_STEWARDSHIP |  |
| ‘Service’ | SERVICE |  |

Construct database query based on the following mapping or filters. If only objectName is populated in request, all records from the table determine above should be selected. If any optionId and optionValue is populated, only records satisfying the values sent in request should be selected. If no records returned from the query, an exception “No Data Found” should be thrown.

|  |  |  |
| --- | --- | --- |
| **Data Element in ValueList Sequence** | **Database Table and Column** | **Comments** |
| objectName | - | Determine the <table> name from above |
| optionId | <table>.id | Ensure <table>.id equals to optionId value from request only if it is populated |
| optionValue | <table>.name or <table>.status for ‘Status’ only | Ensure <table>.name/status equals to optionValue value from request only if it is populated |

Construct the response based on the data mapping below and AID:

|  |  |  |
| --- | --- | --- |
| **Data Element in Microservice** | **Database Table and Column** | **Comments** |
| sessionId | - | Echo from request |
| transactionId | - | Echo from request |
| objectName |  | Echo from request |
| maxSize |  | Return column size of <table>.name or status |
| optionId | <table>.id |  |
| optionValue | <table>.name/status |  |
| optionSeqNo | <table>.sort\_index |  |
| totalRecord | - | Count total number of records |
| code | - | Reference to AID |
| description | - | Reference to AID |

### Value List – POST

#### HLD-296357a-Cinr-Value-List-POST-010 [ Process ]

This section describes the process to provide response based on Value List - POST API request. This API is add/update values into a list of values for an object.

First determine the table name to query data based on objectName value as described in *HLD-296357a-Cinr-Value-List-GET-010 [ Process ]*. If the table name can’t be determined, throw an exception “Invalid Input”.

|  |  |  |
| --- | --- | --- |
| **Data Element in ValueList Sequence** | **Database Table and Column** | **Comments** |
| objectName | - | Determine the <table> name from above |
| action | - | If action = ‘Add’, insert record of each optionId, optionValue, and optionSeqNo into the <table>  If action = ‘Update’, update the record of <table> for optionId. If optionId is not in the <table>, throw an exception of “No Data Found”. |
| optionId | <table>.id | Match with <table>.id for action ‘Update’ |
| optionValue | <table>.name or <table>.status for ‘Status’ only | For action = ‘Update’, update <table>.name/status if it is populated for each optionId |
| optionSeqNo | <table>.sort\_index | For action = ‘Update’, update <table>.sort\_index if it is populated for each optionId. |

Construct the response as the following mapping:

|  |  |  |
| --- | --- | --- |
| **Data Element in Microservice** | **Database Table and Column** | **Comments** |
| sessionId | - | Echo from request |
| transactionId | - | Echo from request |
| code | - | Reference to AID |
| description | - | Reference to AID |

### Value List – DELETE

#### HLD-296357a-Cinr-Value-List-DELETE-010 [ Process ]

This section describes the process to provide response based on Value List - POST API request. This API is to delete values into a list of values for an object.

First determine the table name to query data based on objectName value as described in *HLD-296357a-Cinr-Value-List-GET-010 [ Process ]*. If the table name can’t be determined, throw an exception “Invalid Input”.

|  |  |  |
| --- | --- | --- |
| **Data Element in ValueList Sequence** | **Database Table and Column** | **Comments** |
| objectName | - | Determine the <table> name from above |
| optionId | <table>.id | Delete <table> record base on optionId (<table>.id ) |

Construct the response as the following mapping:

|  |  |  |
| --- | --- | --- |
| **Data Element in Microservice** | **Database Table and Column** | **Comments** |
| sessionId | - | Echo from request |
| transactionId | - | Echo from request |
| code | - | Reference to AID |
| description | - | Reference to AID |

**Alternative Designs**

*Describes alternative designs, evaluation criteria, risks and issues that were considered in choosing the design. If a Solution Approach was developed for this project and the design deviates in its approach from that recommended in the Solution Approach, the HLD should explain the difference in approach and the rationale for the change.*

None Identified.

**Assumptions/Risks**

*Identifies design assumptions, issues, constraints, and risks and mitigation strategies for each.*

*Refer to the Project Workflow Module for Risks/Issues associated with this Project.*

Assumptions

Risk/ Constraints

1. Any scope changes that impact the initial work efforts must be communicated in a timely manner or it may affect meeting project deliverables milestones.

**Solution Design**

*SRT REQPRO NOTE: In order to utilize the auto-tagging feature within SRT ReqPro and enable easier tagging of design elements, please document the design elements in the following table:*

*Note: Req. ID should be used to identify the Design Element ID.*

(Examples in red text)

|  |  |  |
| --- | --- | --- |
| **Req. ID** | **Requirement Description** | **Trace-To** |
| HLD.#.PID. Application Impacted  Example:  HLD.1. 179864.CSI-NM | **InquireCablePairTerminalDetails – New**   1. Component – M2E 2. Description of change:CSI shall create a new InquireCablePairTerminalDetails SPM to provide a list of all the terminals that a particular cable pair appears in, the terminal type, status of the pair in each of the terminals, its binding post/color in each of the terminals, and loop related characteristics of the pair.   The minimal required input is wirecenter, employee identification, cable and pair.  Priority is optional. If it isn’t input by the client it will be populated with “I” for immediate.  Refer to the Application Interface Design for the all request (input data)/response (output data) schemas for the service. The response will have information about the cable pair, and information about the cable pair in each of the terminals in which it appears.  CSI will call the INQ APP (Multiple Appearance Inquiry) transaction in LFACS. | *SR Req. ID* |
| HLD.#.PID. Application Impacted | **InquireFacilityAssignmentDetails – New**   1. Component – M2E 2. Description of change:CSI shall create a new InquireFacilityAssignementDetails SPM to provide the current data for facilities and/or loops and is a good source for obtaining pending service order data associated with a facility. This information may be used for record verification and for obtaining service order data associated with the facility. The Outside Plant Facility Assignment inquiry provides read only access to LFACS inventory data. No updating functionality is provided.   There is different ways to call this transaction to require different information;   * Facility address call provides a current representation of a facility address with its associated loop data.   What is minimal required; Wirecenter, employee identification, house number, street name   * Cable and Pair call provides a current representation of a cable pair with its’ associated loop data.   What is minimal required; Wirecenter, employee identification, cable, pair   * Circuit ID call provides a current representation of a circuit id with its' associated loop data.   What is minimal required; Wirecenter, employee identification, circuit identification.  Refer to the AID for the all request (input data)/response (output data) schemas for the service. The response will have all associated data of the facility as it currently exists in the database.  CSI will be calling LFACS INQ FASG transaction. | *SR Req. ID* |
| HLD.#.PID. Application Impacted | **InquireAffiliateAccountProfile – New**   1. Component - M2E 2. Description of change – The purpose of InquireAffiliateAccountProfile is to provide customer account information from BCAM to CSI-SPM, which will include DTV account association.    * + CSI-Interface      + The input for this new service will be BTN or BAN. CSI-SPM will call BCAM and request the data. Response from BCAM to CSI-SPM will include account data for BTN, BAN, or Telco Pending Order as well as DTV data.      + The communication between Client 🡪 CSI-SPM 🡪 BCAM will all be in the standard schema format.      + If an error is generated from BCAM then CSI-SPM will receive a failed message from the BCAM and return that failed message to the client in standard schema format. Specific details will be apart of the Application Interface design and schemas      + Data Elements/tags/field names      + Request and response elements will be detailed as part of Application Interface design and schemas   Business Rules -   1. This new service InquireAffiliateAccountProfile will call the InquireWirelineRegion service to retrieve the wireline region details. 2. This new service InquireAffiliateAccountProfile will return the Account Information and DTV account data to client. | *SR Req. ID* |
| HLD.#.PID. Application Impacted | **InquireCombinedBillingEligibility – Enhanced**   1. Component – M2E 2. Description of change – InquireCombinedBillingEligibility will verify if the ATT account is eligible for combined billing with DTV via the iCBT (integrated Combined Billing Tool) API based on the customer’s Wireline Telco 13 digit BTN (Billing Telephone Number) and MODE.  * Add a new value for “D” (DirecTV, used to set DTVIndicator) for the MODE. MODE value of “D” is used to determine DTV Indicator. Will pass the DTV Indicator to iCBT, and iCBT will use the indicator in the determination if the account is eligible for combined billing. * WirelineCombinedBilling **-** This structure allows the client to indicate the AT&T Billing Account Number + Customer Code (13 digits). * Mode -A mode for combined bill to denote type of combined bill requests.   Wireless/Wireline, or Both or Wireline only or DTV  For DirecTV the MODE of “D” is required.  If the MODE is equal to a value of “D”, set the DTV Indicator to true.  Otherwise, set the DTV Indicator to false.  Request and response data elements will be detailed as part of Application Interface Design and Schemas.  Business Rules   1. The existing service uses the iCBT API 2. This existing service InquireCombinedBillingEligibliity will return if combined billing eligible to the client |  |
| HLD.#.PID. Application Impacted | **InquireUnifiedCustomerProfileByServiceLocation - Enhanced**     1. Component - M2E 2. Description of change:CSI shall enhance an existing service, *InquireUnifiedCustomerProfileByServiceLocation*, is called by client to retrieve the customer and service profiles based upon a wireless subscriber number or a wireline telephone number or a wireline account number and now for this project, based upon a U-verse BAN as well. This interface will continue to retrieve customer and service profiles from CCR via VRI. 3. Response elements will be detailed as part of Application Interface design and schemas. | *SR Req. ID* |
| HLD.#.PID. Application Impacted  Example:  HLD.1. 179864. CSFOBPM | **InquireUnifiedCustomerServiceProfile - Enhanced**   1. Component - BPM 2. Description of change:CSI shall enhance an existing service, *InquireUnifiedCustomerServiceProfile*, that returns a Customer Profile and Customer Service Profile for a subscriber number or a wireless telephone number or a wireline account number device and now for this project, based upon a U-verse BAN as well. If response has U-verse account only, we will send DTV eligibility as not eligible. 3. Request and response elements will be detailed as part of Application Interface design and schemas. | *SR Req. ID* |
| HLD.#.PID. Application Impacted. AdapterName  Example:  HLD.1. 179864.CSI-Adapter.ACIS | **Adapter Requirements**  The following is an example of how we would capture Adapter requirements.  **ACIS adapter – Enhanced or New**   1. Component – Adapter 2. **Method(s) – Adapter method Name fetchCSRForMidwest The adapter method name is the name of the API, interface, etc that the adapter will use to obtain data from the source system. In the case of multiple handlers in a single adapter, each handler’s information impacted would be listed in the corresponding section.**   This information can be found on existing adapters at the following link  <https://operations.web.att.com/sites/CSD_DC/CSD%20Project%20Tracking%20Tool/Lists/CSD%20Adapters/Default%20View.aspx>  **C.** Description of change:  Description of the change should be inserted here.  The fetchCSRForMidwest method will be enhanced to include credit information.   1. **Connection Details**  * We would work with development in identifying this information. Examples would be EMBUS, MQSERIES or WebService.  1. **Downstream Interface(s)**   XYTACP01  **Processing Rules:**  Any unique processing that the adapter will perform will need to be documented especially where a new adapter is being created which could include a new source system. Again requirements will be working with development for this information. | *SR Req. ID* |
| HLD.#.PID. Application Impacted  Example:  HLD.1. 179864.CSI | **Version Proxy**   * 1. Standard Version Proxy map will be provided for the existing interfaces. | *SR Req. ID* |
| HLD.#.PID. Application Impacted  Example:  HLD.1. 179864. PartnerProfile | **Partner Profile**  *If there are any service policies or partner profile changes necessary to fulfill the business logic for this project, they must be documented in this section. The need to update the Partner Profile, in most cases, comes as a result of needing to define a new Service Policy that would allow dynamic rules to be executed differently for different partners/clients.*  The following is an example of a partner profile change:   1. Component – SPM Product & Offer Management – InquireWirelineRegion 2. Description of change: A new service policy will be created. The service policy will be called ‘IWR-SKIP-BCAM-ZIPCODE-VALIDATION’. This service policy will control the call to skip the AAV/BCAM call when zip code validation is requested and a zip code is not returned from CCR. With this flag set to true, CSI will bypass call to AAV and return the response from CSI. This will be considered as a zip code match. | *SR Req. ID* |
| HLD.#.PID. Application Impacted. AdapterName | **Mapping Upgrades**  If there are request or response schema changes to CSI services that impact the CDM file (for common/shared data elements), the developer assigned to the project needs to run an impact analyzer script (a.k.a. Schema Analyzer tool) to determine the impacted services sharing the common data elements.  This step should happen on or before the CSI HLD internal review with the Design Assurance team.  Any impacted services found, should be added in the HLD as being impacted for mapping upgrades. The owners of the identified impacted services should be informed and engaged by the PM so they can upgrade their data maps.  **InquireAffiliateAccountProfile – Enhanced**   1. Component - SPM 2. Description of change – The **InquireAffiliateAccountProfile** schema request and/or response is impacted by data map upgrades due to shared structure/element definitions in the Cingular Data Model (CDM) file. The common data structure/element being updated is the **StructureName or DataElementFieldName**. The change is being made due to:  * The **StructureName** or **DataElementFieldName** is being changed from Required to Optional (or vice versa) or * The **DataElementFieldName** size is being increased/decreased or * The **DataElementFieldName**’s data type is being changed from Numeric to Alphanumeric , String to Numeric, etc * An optional/required structure/Data element being introduced impacting the private schema invoked by **InquireAffiliateAccountProfile** which needs to be absorbed by the service or * Any other reason for the data map change reason | *SR Req. ID* |

*The* [SRT\_RM\_ReqPro\_Auto\_Tagging](https://cps.web.att.com/CPSWorkplace/getContent?id=current&vsId=%7B67070CE6-CDED-4932-8F1D-F6073BA40DF8%7D&objectStoreName=IT-Architecture.__.Planning.__.and.__.Integration&objectType=document&guestId=servicesguest) *Reference Document provides information on how to use auto-tagging within SRT ReqPro.*

*If the table is not used to capture requirements, please remove it from document.*

**System Agreements <CSI>**

**Note:** Although an attempt was made to capture all changes resulting from this design, unanticipated design changes may occur after this document has been turned over that may affect the impact on systems or applications.

This lists clients that have been identified as having impact.

*Instructions:  Only list the impacted clients within this project that are requesting these enhancements.*

|  |  |  |
| --- | --- | --- |
| **Client** | **Client of which System** | **Interface Name** |
| eElections IVR | CS FOBPM | ProcessSelfServiceCPNIElection |
| OPSS | CS FOBPM | ProcessSelfServiceCPNIElection |
|  |  |  |
| OPUS | CSI-Customer Care | InquireCPNIDetails |
| OPUS-Lite | CSI-Customer Care | InquireCPNIDetails |
| PDC | CSI-Customer Care | InquireCPNIDetails |
| PDC-Lite | CSI-Customer Care | InquireCPNIDetails |
| System Xi | CSI-Customer Care | InquireCPNIDetails |

**Traceability Matrix**

*Insert link or lists each requirement and references how it is addressed by the design. This will provide visibility on how well the design meets requirements. In any cases where some requirements are not addressed in the design, they should be called out in this section to enable the audience to better understand the design's level of traceability.*

*NOTE: The design element identifiers must be transferred over to the Requirements Traceability Matrix in order to complete the High Level Design.*

|  |  |
| --- | --- |
| **Requirement ID** | **Design Element Identifier** |
| *FR-1.1* | *HLD - 1* |

**Pre-Production Disaster Recovery Planning**

*As a reminder, for each new or modified application refer to* [ITSC Integrated Policies and Standards](http://itup.it.att.com/ittools/itmap/resources/cfm/itup/1_ProcessElement.cfm?xPEName=ITSC%20Integrated%20Policies%20and%20Standards). *Review disaster recovery requirements for DR Plans, related documentation, and exercise requirements and ensure all DR requirements are met and reflected in MOTS before an application is entered into production. Refer to* [IT Service Continuity Capability Guidance](http://itsc.web.att.com/itup.htm) *for more detailed instructions. If pre-production Disaster Recovery is not needed for this project, place an NA in this section with a business reason (i.e., OS version upgrade or Database version upgrade).*

*If not applicable for this project:*

N/A – This project does not impact the current Application Impact Analysis or Disaster Recovery Plan for the impacted Common Services (CSI) applications. A Pre-Production Disaster Recovery Exercise is not required for this project.

**Other Plans and References**

*Provide links to other plans at your discretion.*

|  |
| --- |
|  |
| **Reference** | | **Location** |
| Project Plan | | Place project document link here |
| Business Requirements Specifications | | Place project document link here |
| System Requirements | | Place project document link here |
| Application Interface Design | | Place project document link here |
| Uses Case document | | Place document link here |
| Requirements Traceability Guidelines | | <http://itup.it.att.com/ittools/itmap/itup/Method/mth_Requirements%20Traceability%20Guidelines.doc?CFID=190824&CFTOKEN=b5469ca5b19769e3-1AF3D333-D526-555C-731247FCB455064E> |
| Requirements Traceability Matrix | | Place project document link here |
| Any other documents that you see useful... (Example backends HLD and AID, Solution Approach, etc…) | | Place projects document link here |

**Acceptance & Approvals**

**Overview**

*Use this section to capture approvals in the event that electronic approvals via the PRISM Project Workflow Module will not be used.*

The Approvers of this work product agree that this document is acceptable and complete to the best of their knowledge and will be used by the project team as an official deliverable for the project. It is further agreed that this document can now be baselined and any changes to these sections from this point forward must follow the Managing Change in the IT UP.

Embed evidence of approval in the review table below, or use the PRISM Approval Functionality in the Project Workflow Module Workflow Template View.

**Approvers**

**PLEASE NOTE: This does not replace the Review Record. This is simply to gather the email approvals. The original email must be included and include the exact document name, version reviewed and being approved.**

|  |  |  |  |
| --- | --- | --- | --- |
| **ATTUID and Name** | **Role** | **Group/Application** | **Version Approved, Approval Date and Approval Evidence** |
| *attuid – name* | Solution Architect | IT Architecture and Engineering | **Embed the email approval and make sure the exact doc name, version reviewed and approved.** |
| *attuid – name* | Architect | ACSI |  |
| *attuid – name*  *(for each impacted ACSI application)* | Developer | *Group/Application* |  |
| *attuid – name*  *(for Data Layer)* | Development Team Lead | *Group/Application* |  |
| *attuid – name*  *(for each impacted non-ACSI application)* | Developer | *Group/Application* |  |
| *Send to the TA\_TestDesign distribution list.*  *Remove if no CST-Walton application impacts.* | Test Architect | CST - Walton  (Test team for CSI – Customer Care, CSI - Order & Subscription Management, CSI – Product & Offer Management, CAM, ATLAS, SWOT BE, VRI, DITREX (GIS gateway), EAI, Jackcache and Data Layer) |  |
| *Send to the CST-Agarwal Test Architect assigned to the project.*  *Remove if no CST-Agarwal application impacts.* | Test Architect | CST - Agarwal  (Test team for CSI-Network Management, CSI-Workforce Management, CSI-Credit & Validation, CSI-Trouble Management, EBTA, CS FOBPM, CS BOBPM and Remedy Fallout Manager) |  |
| RF9578 - Bob Farmer  *Remove if no CSI or FOBPM impacts.* | Production Support Manager | Production Support | *Bob is only a reviewer (not approver).* |
| BK5747 - Brian Knop  *Remove if no CSI or FOBPM impacts.* | Production Support Manager | Production Support | *Brian is only a reviewer (not approver).* |

**Appendix A: JMS Requirements**

**Public Queues:**

| Unique ID | 1 |
| --- | --- |
| Queue Name | pub.m2e.inquiretelcoloopdetails.request |
| Status (CRUD) | Create |
| Message Size (KB) | 50Kb\* |
| Message Rate (x per y) | 1 Transaction Per Second (TPS)  22,500/day (7,500 x 3 contracts) |
| Message Expiration (sec) | 120 Seconds |
| Requirement Text | Public request queue |

| Unique ID | 2 |
| --- | --- |
| Queue Name | pub.m2e.inquiretelcoloopdetails.response |
| Status (CRUD) | Create |
| Message Size (KB) | 50Kb\* |
| Message Rate (x per y) | 1 Transaction Per Second (TPS)  22,500/day (7,500 x 3 contracts) |
| Message Expiration (sec) | 120 seconds |
| Requirement Text | Public response queue |

*\*The Message Size can be calculated as follows:*

1. *Open the schema in Altova XMLSpy.*
2. *On the menu, select DTD/Schema.*
3. *In the drop-down list, select Generate Sample XML File…*
4. *Select your desired options and select OK.*
5. *Right-click on the tab with the generated XML and select Save As. Save the generated XML file to your C: drive.*
6. *On your C: drive, look at the file properties of the generated XML file. The file size is documented in the properties.*