

MDM using BE BS Model

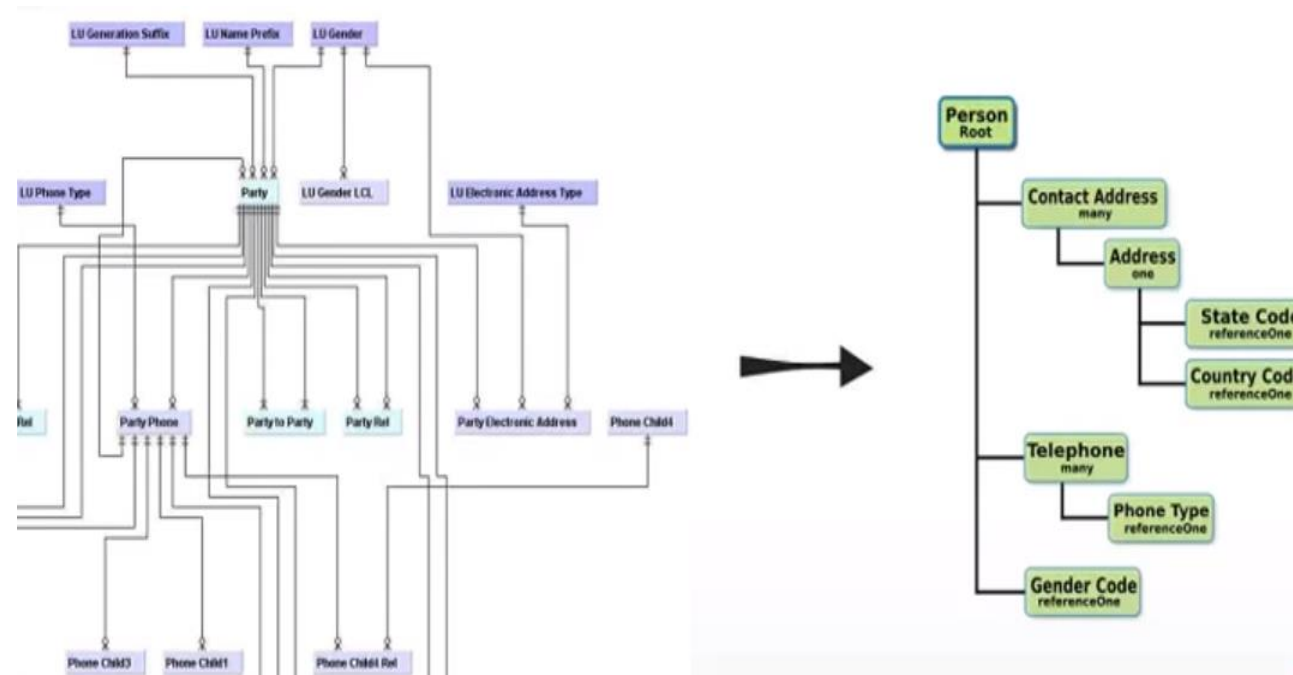
Dhananjay Singh

Agenda

- Overview of Business Entity/Provisioning Tool
- Business Entity Services
- BES Architecture
- Business Entity Views / Transformations
- Tasks & Trigger
- Business Entity APIs - WSDL / WADL
- BE Service extensions - External Calls
- E360 Layouts / Customizations/User Interface
- BE Vs Subject Area's

BE Overview

- Defining object based on business use case
- Logical Grouping of Base Objects into a Business Entity
- Business Entity is a tree structure with unlimited depth and one Root element
- This can be compared to traditional Subject Areas
- Business Entity Services are built on top of Business Entities to Create, Update, Delete an entire entity



BE Overview Contd..

Provisioning tool provides:

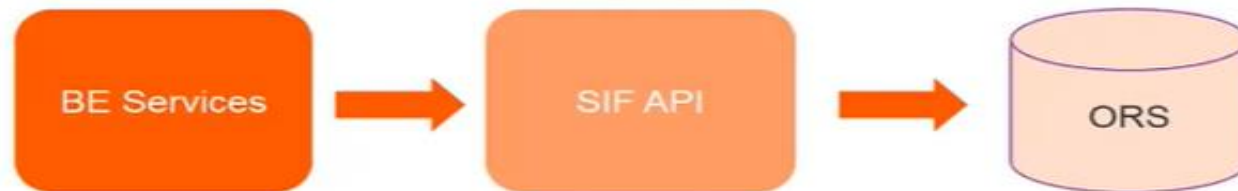
- Provisioning tool is used to create BE definition
- To create specific layouts on business entities for different user's role
- To develop entity 360 user interface

Business Entity Services

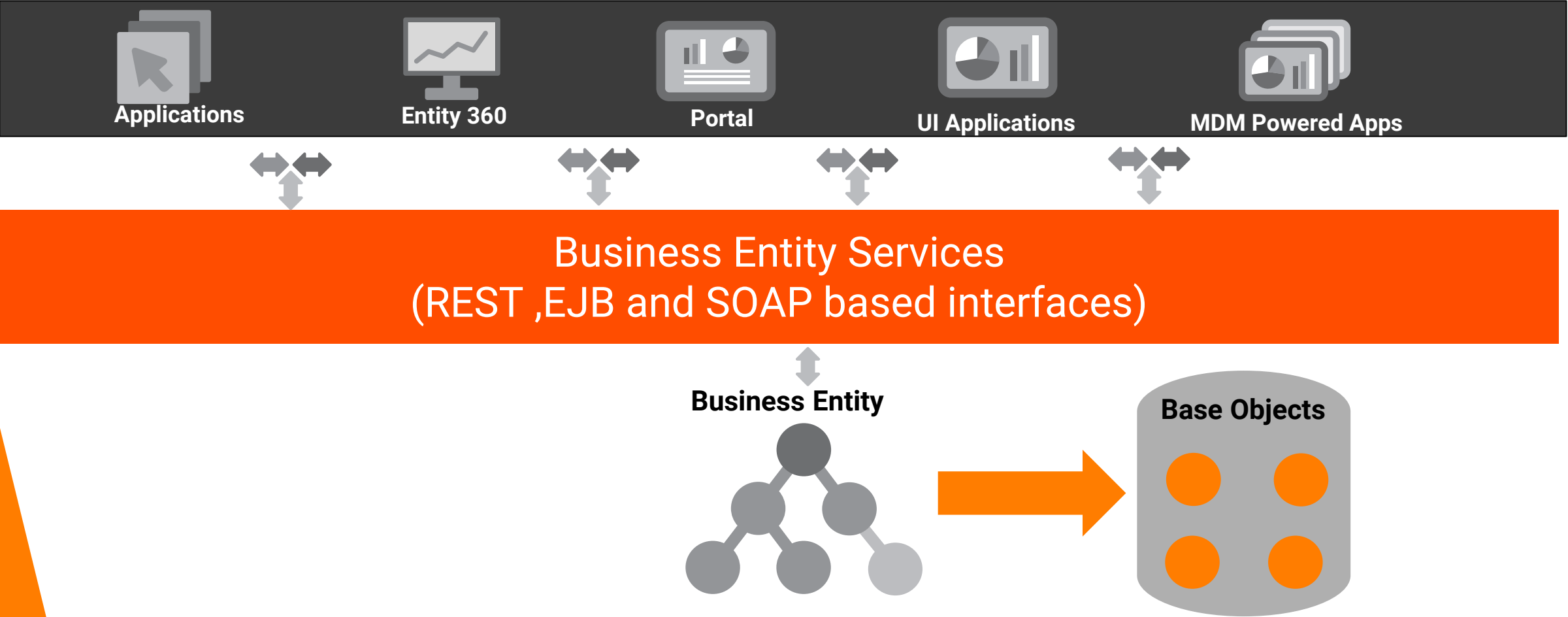
- BE Services manipulate with BE or BE View
- BES is open structure that can be configured on fly
- BES chain of steps, result of each step is passed to a next step as input



- The result of the last step is returned to a caller
- BE Services use SIF calls internally

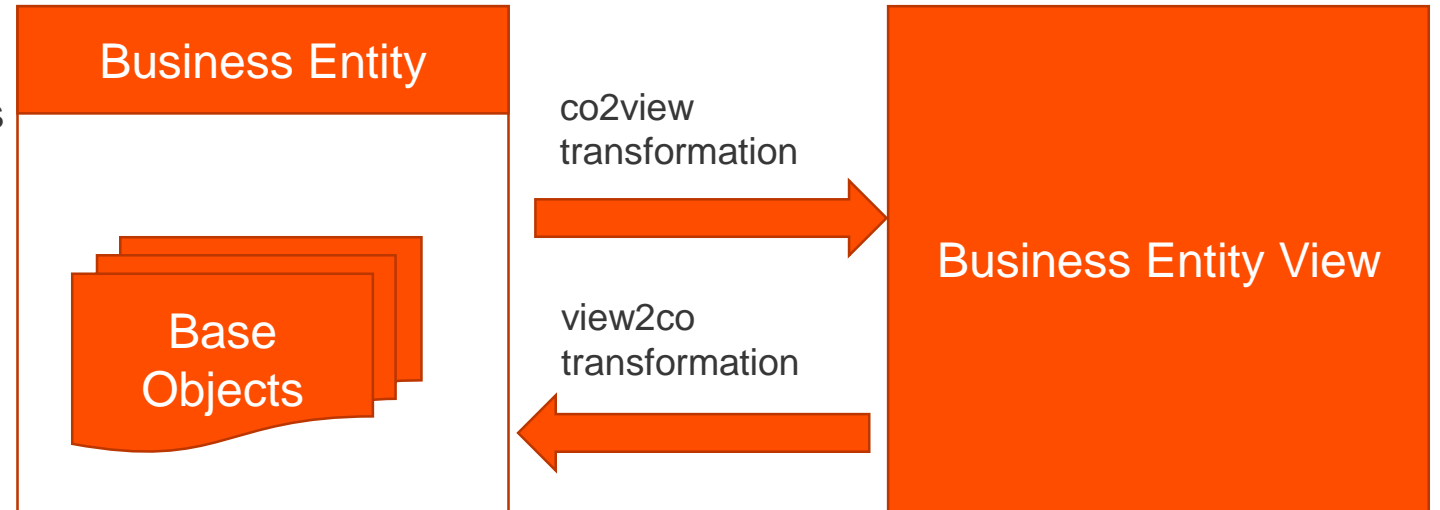


BES Architecture

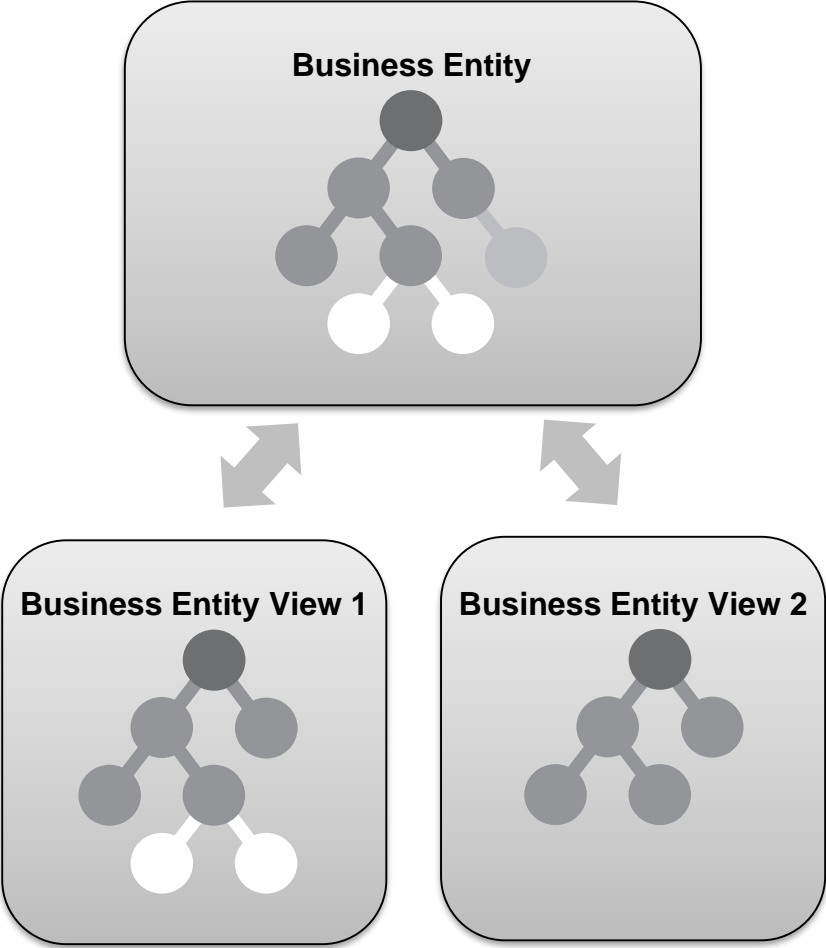
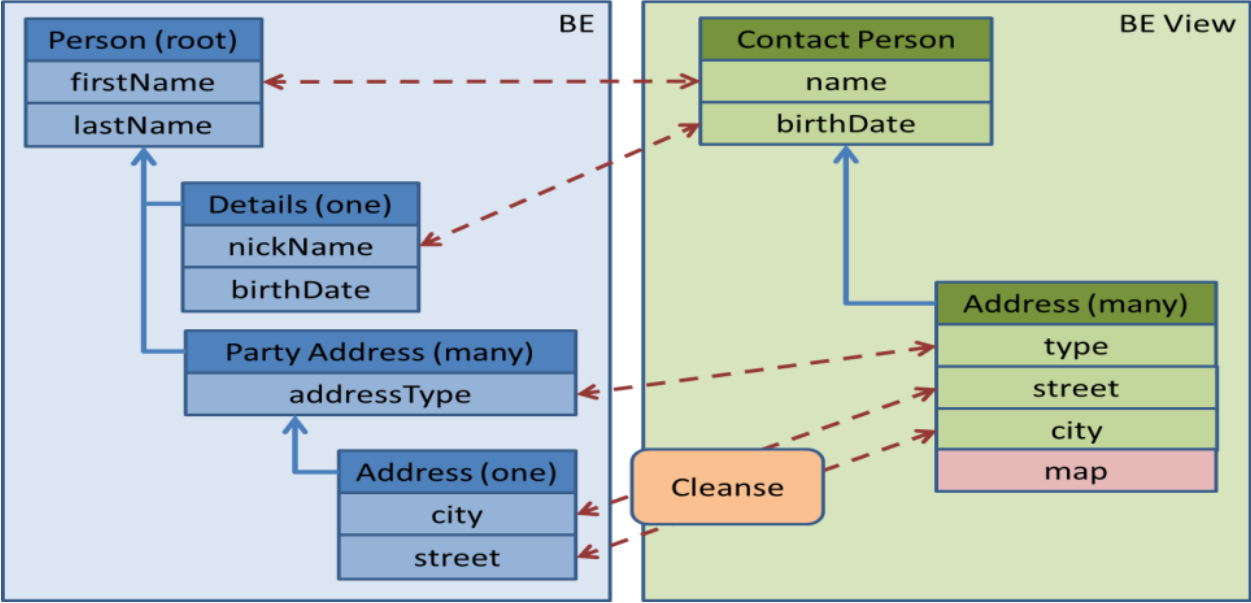


Business Entity Views & Transformations

- Business Entity Views
 - Simplifying high-level concepts to acquire and consume data
 - Exposing only necessary data in business processes
 - Utilization of cleanse and data quality services in data edits
- Transformations Type
 - From Business Entity -> Business Entity View
 - From BE View -> Business Entity
 - BE-> BE
- Purpose of transformation is to define rules to map the fields from one object to another

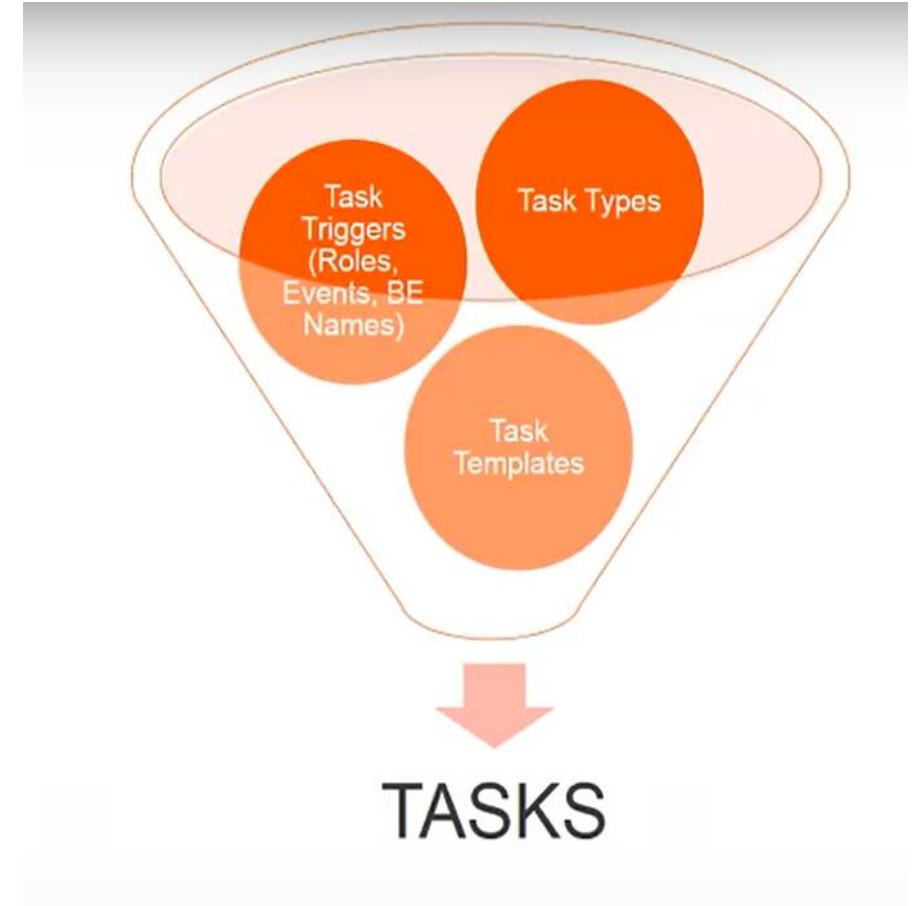


Business Entity View- Example



Tasks & Trigger

- Tasks
 - Ability to customize the task manager by configuring the specific fields that should be displayed and in which order.
 - Ability to create different task inbox instances for customized start pages with the specific filters required and also which columns will be displayed.
- Types of Triggers
 - CreateBE
 - UpdateBE
 - MergeBE
 - MatchedBE
 - UnmergeBE



Business Entity Configuration Table

- C_REPOS_CO_CS_CONFIG

- BE configurations are stored as xml
- Config_type column explains the meaning

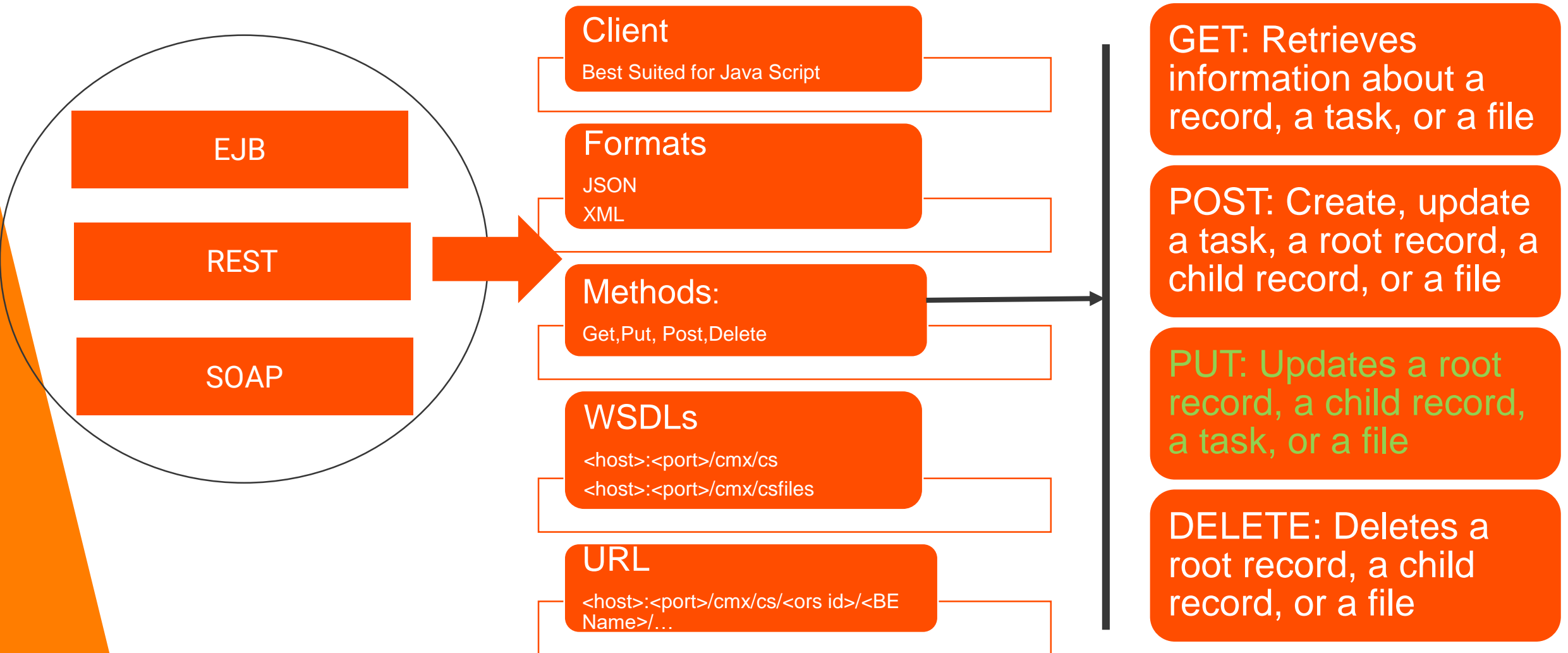
ROWID_CONFIG	CREATE_DATE	CREATOR	LAST_UPDATE_DATE	UPDATED_BY	CONFIG_TYPE	CONFIG_DATA
1 cons.000363219	08-NOV-19 04.21.55.978550000	PM admin	08-NOV-19 04.21.55.979000000	PM admin	BES_METADATA_BUNDLE	(BLOB)
2 cons.000363233	08-NOV-19 04.23.55.677478000	PM admin	04-DEC-19 11.44.12.859000000	AM admin	TASKS	(BLOB)
3 cons.000363229	08-NOV-19 04.23.55.701429000	PM admin	08-NOV-19 04.23.55.702000000	PM admin	REST_SERVICES	(BLOB)
4 cons.000363214	08-NOV-19 04.23.55.751670000	PM admin	08-NOV-19 04.23.55.753000000	PM admin	COMPOSITE_SERVICES	(BLOB)
5 cons.000363246	08-NOV-19 04.23.55.773902000	PM admin	04-DEC-19 11.44.12.884000000	AM admin	COMPOSITE_OBJECTS	(BLOB)
6 SVR1.3XMQ	08-NOV-19 04.23.55.781619000	PM admin	08-NOV-19 04.23.55.783000000	PM admin	DB_RESOURCE_BUNDLES	(BLOB)
7 cons.000363252	08-NOV-19 04.23.55.787384000	PM admin	08-NOV-19 04.23.55.789000000	PM admin	EXTENSTONS	(BLOB)

- C_REPOS_COMPONENT_INSTANCE

- Type_Name column explains the meaning

ROWID_INSTANCE	INSTANCE_NAME	TYPE_NAME	CONFIG_DATA	CREATE_DATE	CREATED_BY
1 cons.000363188	Customer360	Application	(BLOB)	(null)	admin
2 cons.000363189	RelatedOrganization	RootCo	(BLOB)	(null)	admin
3 cons.000363190	OpenTasksByTaskTypeChart	ExternalLink	(BLOB)	(null)	admin
4 cons.000363191	D&B	DaaSProviders	(BLOB)	(null)	admin
5 cons.000363192	B2COverview	ExternalLink	(BLOB)	(null)	admin
6 cons.000363193	Person	RootCo	(BLOB)	(null)	admin

Rest Interface to BE Services



Business Entity API's



localhost-orcl-DS_UI2

[cs-rest.xsd](#)
[cs-base.xsd](#)
[co-base.xsd](#)
[co-types.xsd](#)
[co-ors.xsd](#)
[cs-ors.xsd](#)
[co-meta.xsd](#)
[task-base.xsd](#)

[localhost-orcl-DS_UI2.wadl](#)

[localhost-orcl-DS_UI2.wsdl](#)

localhost-orcl-DS_UI1

[cs-rest.xsd](#)
[cs-base.xsd](#)
[co-base.xsd](#)
[co-types.xsd](#)
[co-ors.xsd](#)
[cs-ors.xsd](#)
[co-meta.xsd](#)
[task-base.xsd](#)

[localhost-orcl-DS_UI1.wadl](#)

[localhost-orcl-DS_UI1.wsdl](#)

-> Following shows a SOAP URL (request in SOAP):

http://localhost:8080/cmx/services/BEServices/localhost-orcl-DS_UI1

-> Following shows a REST URL:

http://localhost:8080/cmx/cs/localhost-orcl-DS_UI1/Person?action=meta

Change Summary

Important element that controls WriteBE behavior in POST

- Delta detection logic not available in Business Entity Service APIs

No need to have change summary for create

```
{  
  "firstName": "tom",  
  "middleName": "thumb"  
}
```

For each modified field Change Summary contain \$original

```
{  
  "firstName": "tom",  
  "middleName": "thumb",  
  "$original": {  
    "middleName": "xyz"  
  }  
}
```

Business Entity – External Call

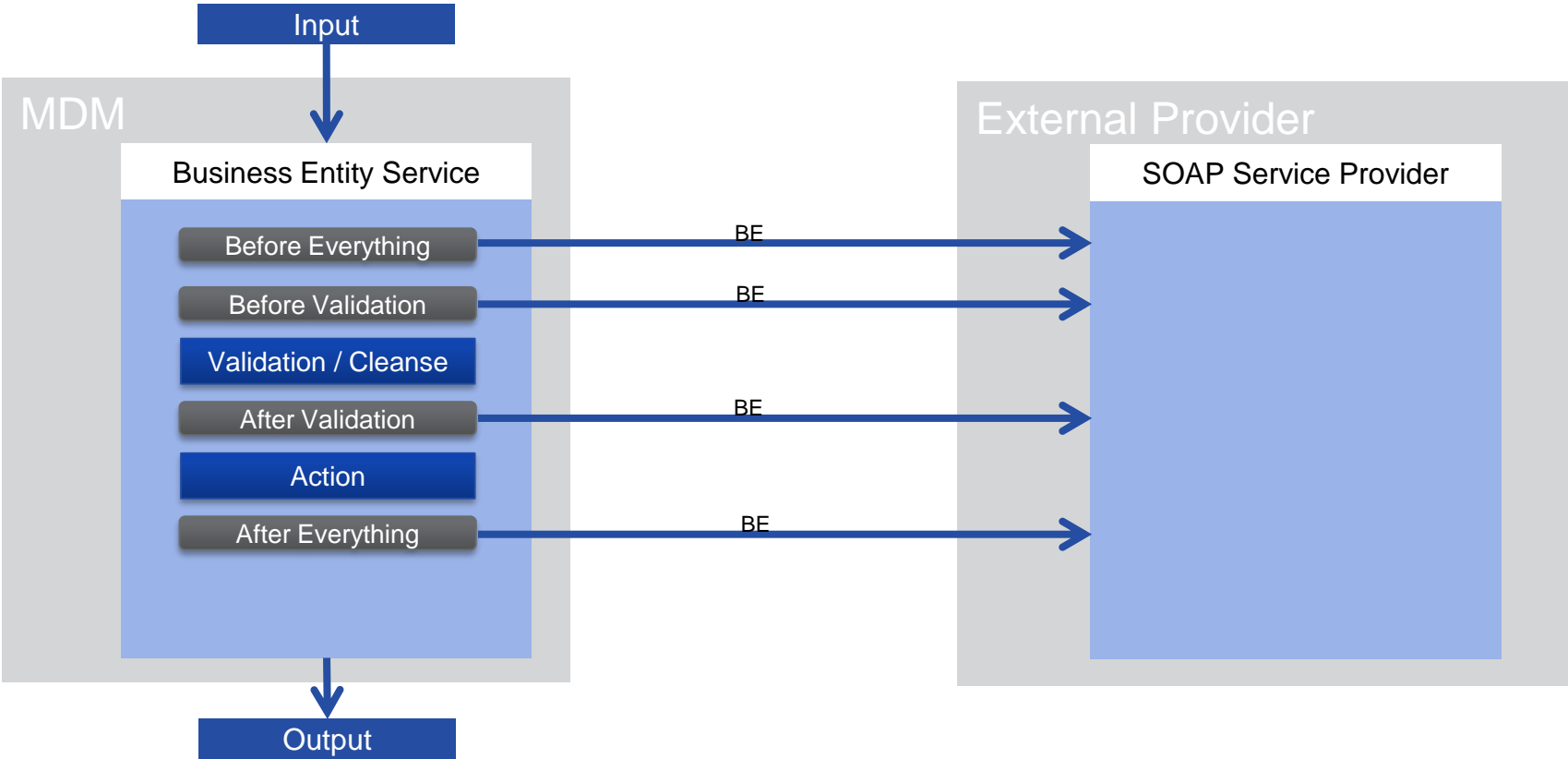
BES External Calls

- Configured for custom validation, custom logic while transforming BE
- Loosely integration with MDM through SOAP services



- Easy configuration through provisioning tool
- To Configure external calls refer to KB ID- 514801

External Call Contd..



Entity 360 – Layout & Customizations

- E360 next gen UI for business users based on BE
- A modular, customizable and rich user interface experience
- This offers different views depending on entity type, user roles
- This can have different layouts for same entity for different user roles
- Default templates will be used in case no layout configured
- Create, Edit layouts are configurable for each role.
- External Components & internal components can be configured. For e.g. Twitter, Similar records etc.
- BE based query search and Smart Search can be configured

Sample Payload reference e360 UI

The screenshot displays the Chrome DevTools Network tab. A network request is selected, and its details are shown in the right-hand pane. The request is a GET request to a Person endpoint. The headers include Authorization: Basic, Connection: keep-alive, Content-Length: 1324, Content-Type: application/json, and several cookies. The request payload is a JSON object representing a Person entity.

Request Headers:

- Authorization: Basic YWRTaW46YWRTaW46=
- Connection: keep-alive
- Content-Length: 1324
- Content-Type: application/json
- Cookie: JSESSIONID=XSR_OYU38ubVIY2NFQxrX1EYzOj45kKmu16osmqE.asmdmf101; LAD=1573753739910; SFP_CONFIG=XCYAUJXQDUCKIYCLCYEM; mdmsess
- Host: localhost:8080
- infaToken: T21dRPDMnoOf1Vj23aEfizrl1PaLQOisXvozXmzQEbm*
- Origin: http://localhost:8080
- Referer: http://localhost:8080/e360/mdm/entity360view/?wstate=(%27\$ws%27:NEWMODAL)
- Sec-Fetch-Mode: cors
- Sec-Fetch-Site: same-origin
- User-Agent: Mozilla/5.0 (Windows NT 6.3; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/78.0.3904.97 Safari/537.36
- X-Requested-With: XMLHttpRequest

Request Payload:

```
{
  "partyType": "Person",
  "genderCd": {
    "genderCode": "M",
    "genderDisp": "MALE",
    "middleName": "vcbvc",
    ...
  },
  "Addresses": {
    "item": [
      {
        "original": {
          "item": [
            {
              "firstName": "bvvcb"
            }
          ]
        }
      }
    ]
  },
  "genderCd": {
    "genderCode": "M",
    "genderDisp": "MALE",
    "middleName": "vcbvc"
  }
}
```

Business Entity Vs Subject Area UI frameworks

	Business Entities	Subject Areas
API that is used	Business Entity Services	Services Integration Framework (SIF)
Modelling	Business Entities allow you to create a model that can be used outside e360, as RESTful APIs	Only used within IDD. Similar to business entities, subject areas are a logical layer on top of the underlying relational base object model, however subject areas cannot be accessed as composite services through an API
Workflow	Workflows can be triggered through any change of Master Data either through Entity360 pages in IDD or directly through services	Workflows are triggered manually only through subject area actions in IDD
Customizations	Use of External calls and Business Entity and Business Entity View transformations and integration of cleanse mappings (e.g. DQ).	Low level control through IDD User Exits

Business Entity Vs Subject Area UI frameworks Contd..

	Business Entities	Subject Areas
Search Options	Smart Search using Elastic Search NAME3 SearchQuery	Search available using NAME3 SearchQuery and exact/db search
Import / Export	Import not supported – part of 10.4 Export not supported (possible to do custom work to support single BE export if required)	Import/ Export capabilities provided
User Interface	More flexible layout options – also, different layouts for different roles for different business entities and for different use cases. No 3-level nesting restriction	More restrictive. Subject areas are limited to 3 level (parent, child, grandchild)
Product Road Map	Entity 360 and Business Entity Services are the building blocks for MDM UIs of the future – this is the area we’re invested in enhancing and developing new features for	Critical bug fixes only; no new features or enhancements are planned