

# **How-To Guide: Mass Import Vendor Characteristics for RFM Solutions by Utopia**

#### Applies to

Prometheus Group Solutions for MDG RFM

#### Summary

MDG for RFM include standard implementations of the Mass Import that reads the data from file which captured from other system. The data in the file can be saved to 'Active Area' directly or 'Staging Area' based on the options chosen in the Import Master Data and Mapping Information screen. The standard implementations support Key Mapping and Value Mapping.

This guide describes the necessary configuration steps for implementing Mass Import. This guide explains the Mass Import for Vendor Characteristics.

You can perform most configuration tasks in Customizing for Master Data Governance under SAP Reference IMG > Cross Application Components à Processes and Tools for Enterprise Applications > Master Data Governance.

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#### Introduction

This reference guide helps you understand the Mass Import of Article Master Vendor Characteristics in Prometheus Group Retail and Fashion Management (RFM) S/4HANA on MDG. This guide also provides the background information about the Data Import Framework (DIF) and describes process of using DIF to upload Article data from an xml file.

## **Target Audience**

The target audience for this guide comprises:

- Technology Consultants
- Security Consultants
- System Administrators

#### **Business Scenario Overview**

Prometheus Group Retail and Fashion Management (RFM) extension for Master Data Governance (MDG) Retail Article (MDG-RFM) provides business processes to find, create and change Material Master data, and to mark it for deletion. It supports the governance of Article Master data on a central hub and the distribution of Article Master data to connected operational and business intelligence systems.

The processes are workflow-driven and can include several approval and revision phases, including collaboration between all users participating in master data maintenance.

You can use the Import Master Data service to import files containing article and Vendor Characteristics data to the Master Data Governance (MDG) system. The data from these files can update existing master data records (Active Area records only), or create new ones using the options available in the Import Master Data service.

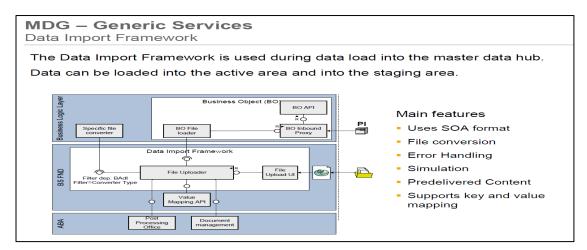
## General Background Information for Data Transfer

Data transfer represents a collection of functions and features that you can use to move master data and map information between the systems and the clients. Examples of the systems include existing ERP systems and your Master Data Governance hub system.

To transfer master data and mapping information, use the following steps:

- 1. Export the master data and mapping information from the source system to an xml file. This file is saved on your application server.
- 2. Copy the xml file from the application server of the source system to the application server of your target system.
- 3. Import the master data and mapping information to the target system using the Data Import Framework (DIF).





## Using DIF for Vendor Characteristics Data Overview

This section provides the background information about using the DIF for Article Vendor Characteristics data.

#### Limitation

It is possible to create Material Master data in the Staging or Active Area. In standard, updating an existing Article Master is currently only possible in the Active Area. However, this was made possible even in staging area for Article Master - Vendor Characteristics as per the customer requirements

## Customizing

## **Define Object Types**

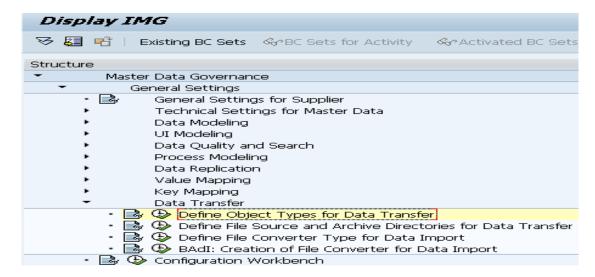
Use the following steps to define Object Types:

- 1. Go to Master Data Governance > General Settings > Data Transfer > Define Object Types and define the following Object Types.
  - Relationship to Business Object Type/Message Data Type
  - Implementing Classes
  - Additional Selection Fields
  - · Sequence of Objects to be processed
  - · Business Activity to be used in import

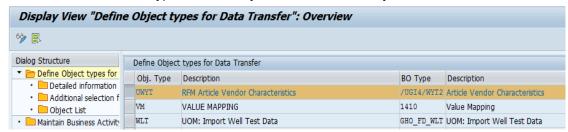
The customizing delivered with the solution enables you to run DIF with the SAP Standard Basic Types for Additional (MMADDI). If you want to use a Custom Basic Type, you need to enhance this customizing activity.

In MDGIMG customizing, Define New Object Types for Data Transfer.
 Note: In this case, a new Object Type for Retail Article is provided as an example.





It is assumed that BO Type is defined earlier and is assigned the same BO Type to the Retail Article Data Model. BO Type is essentially an alias to main entity in the Data Model.



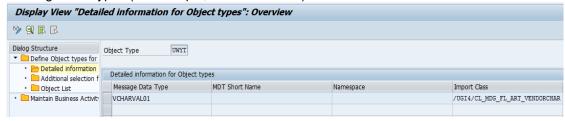
3. Specify the Msg. Data Type.

In Retail Article, it is expected that the VCHARVAL01 IDoc is imported.

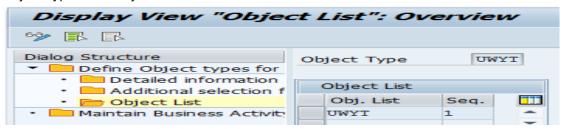
You can define different Msg. Data Type and assign a different Import Class. The import class is the main program that imports of the data.

4. Set the "Active Import" checkbox.

**Note**: If the "Active Import checkbox" is not checked, the Object type is not displayed in the drop-down list of the import application. You can use the same import class for the different message data types (for example, VCHARVAL01.)



You can maintain several and different objects for an Object Type. It is mandatory to have the Object Type in the Object List.





The sequence column determines the position where the objects appear in the popup as displayed in the following screen.

5. Maintain the Business Activity for the Object Type. Select the Mass Change Business Activity.



#### File Source and Archive Directories

While setting up the data import, you should define source and archive logical directories in the MDG Data Transfer Customizing Activity Master Data Governance > General Settings > Data Transfer > Define File Source and Archive Directories for Data Transfer.

For more information on logical directories, see the documents for the Customizing Activity Define File Source and Archive Directories for Data Transfer.

Logical source directories can be defined on the application server, where the files for the import are stored. After import, the system automatically moves the processed files to the defined archive directory for the given object type.

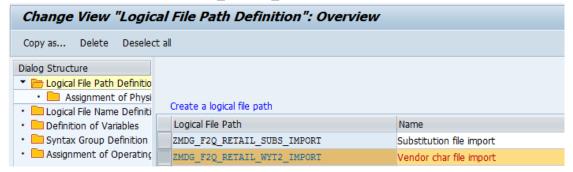
To assign directories as source or archives:

- The physical directory paths must first be created in the file system.
- The SAP transaction code FILE must be used to map them to logical names. You can use these logical names in the above-mentioned Customizing activity.
- Consider creating several object-specific logical directories.
- You can use the SAP t-code CG3Z to upload a file from the local file system to the application server.

## Setup FILE Transaction in MDG-RFM

Use the following steps to set up File transaction in MDG-RFM:

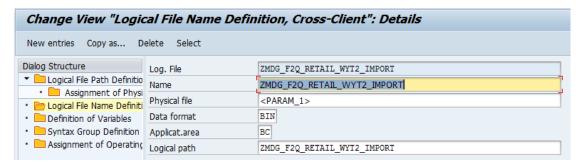
- 1. Set up the following logical paths in the transaction FILE:
  - Path for the import files: ZMDG RETAIL ADDIMPORT
  - Path for the archive folder: ZMDG\_RETAIL\_ARCHIVE





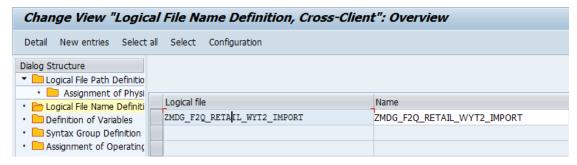


- 2. Set up the Logical File Name Definition.
  - a. Keep <PARAM 1> for the Physical file.
  - b. Point the Logical File Name Definition to the Logical Path defined.

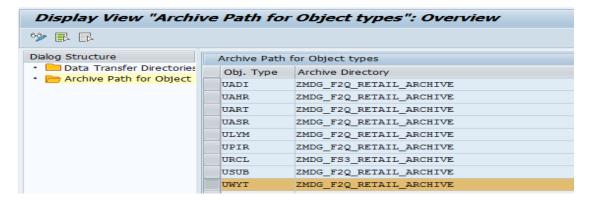


#### Define File Source and Archive Directories for Data Transfer

The logical file path that was created in t-code FILE is used. It is necessary to have an archive path for importing object types.



The Archive Path and the Logical File Path id displayed in the following screen:

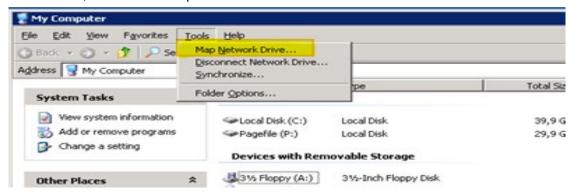




### Set up File Import Folder

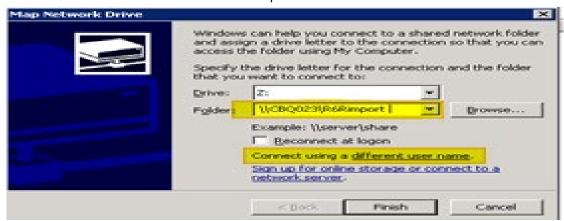
Use the following steps to setup the File Import folder.

1. From toolbar, click Tools > Map Network Drive.



The system displays the Map Network Driver window.

2. Select the relevant folder from the Folder dropdown list.



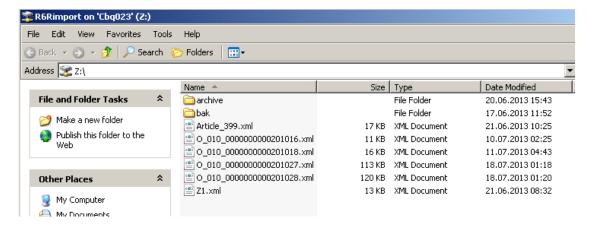
- 3. Click Browse. The system displays the Connect As popup.
- 4. Enter the credentials.



5. Click "OK" button.

The import file folder is created. Import xml files are saved in this folder as displayed in the following screen.





#### **Loader Class**

Class: /UGI4/CL\_MDG\_FL\_ART\_VENDORCHAR

**Note**: /UGI4/CL\_MDG\_FL\_ART\_VENDORCHAR was written with reference from CL\_MDG\_BS\_FL\_MATERIAL.



The importing class needs to inherit from the superclass CL\_MDG\_FILELOADER.

#### **Methods of Loader Class**

The following methods are discussed in this section:

- LOAD Method
- GET INBOUND STRUCTURE
- LOG CREATE
- GET IDoc DATA
- SET PROXY PERSISTANCE
- Register

#### LOAD Method

This is the main method run by the import class to load the IDoc data into Staging or Active Area. One IDoc can contain multiple articles.

Below are the important points of a loader class.

The DTIMPORT framework setting is read using the method "read\_user\_settings".



- One of the import parameters in this method iv\_content brings in business data in xml content that is converted into various IDoc segments using method "get\_idoc\_data" in an external format.
- The external format data from the IDoc segments is segregated into Internal formatted IDoc segments using the methods "convert\_idoc\_ctrl\_records" and "convert\_idoc\_data\_records".
- The IDoc segments are looped for each control segment record nested looped for data segment records on "Docnum" key.
- Vendor Characteristics are imported to Active Area. If Governance process is chosen, and results in error, then only import to Staging Area is possible.
- It is mandatory to fill the Object keys using method call "fill\_objectkeys".

#### GET\_INBOUND\_STRUCTURE

Specific structure "MDG\_IDoc\_DATA" maintained for IDoc is parsed in this method. This method fetches the inbound structure from the parameter ev\_name.

#### LOG CREATE

The method is implemented to create log objects that can be viewed using t-code SLG0.

```
Class Builder Class /UGI4/CL_MDG_FL_ART_VENDORCHAR Display

Comparison of the content of the con
```

#### GET IDoc DATA

This method is used to convert the xml data to IDoc data.

One of the import parameters "iv\_content" in Load method holds business data in xml format which is converted to various IDoc segments using this GET\_IDoc\_DATA method in an external format (RAW).

## SET\_PROXY\_PERSISTANCE

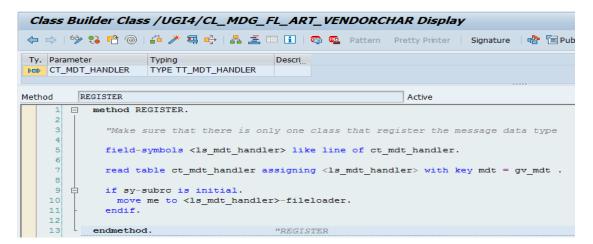
This method writes Proxy Persistence to global data (1: Staging 2: Active, 3: Active with Err) which is used by standard Governance APIs to process the data.

- If user choose Persistence choice = 1 it writes to Staging or if user chooses persistence choice as 3 it writes Active Area with Errors sent to Staging
- Data Import for Vendor Characteristics is possible only to Active Area, for example, Proxy persistence equal to 2.

#### Register

The method REGISTER needs to be re-defined by registering that this class handles the message type.





## **Testing Importing Class**

After creating the class, it is mandatory to test. For testing the import class, we follow below steps.

Note that if the user uses the front-end Web Dynpro application mdg\_bs\_file\_import to import the files, then a job is scheduled in the background. This hinders the user for debugging the import class. For testing the class, the following steps are followed:

1. Set the parameter MDG\_DL\_DEBUG = X in your user parameters tab.



2. This parameter is read in class CL\_MDG\_UPLOAD\_UI\_ASSIST method FILE\_UPLOAD. If the parameter is set, then users can put a remote breakpoint in the /UGI4/CL\_MDG\_FL\_ART\_VENDORCHAR class to debug.

## **Export File for Article using IDoc**

IDoc Name: /UGI4/VENDORCHAR

To export Article Master data, you need to configure a logical system for xml-IDoc extraction to the application server file system (in each client system). To achieve this, use the following:

- 1. Create a Logical System (SALE)
- 2. Add IDoc type VCHARVAL to Distribution Model (BD64)
- 3. Create an Outbound Partner Profile (t-code WE20)
- 4. Create an xml-file port for IDoc processing (t-code WE21)
- 5. Send article data with t-code BD10, including Vendor Characteristics data.



## **Import Options**

It is possible to perform a data import for one or more Vendor Characters (VCHARVAL) IDoc xml files, with one or more IDoc's per xml file, and with each IDoc containing one or more Articles.

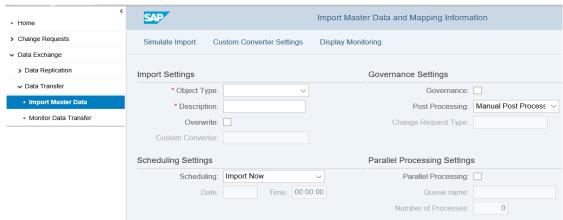
#### Note:

The class to be assigned to Article must have been created in the MDG system before importing the Vendor Characteristics data.

Select options on MDG\_BS\_FILE\_IMPORT (DTIMPORT) is available for Import (Create/Change) article to Active Area with Vendor Characteristics.

Use the following steps to import:

 Go to NWBC > Click on Master Data Governance for RFM > Data Exchange > Data Transfer > Import Master Data.



2. Enter the details for the fields as described in the following table:



| Field  | Description  |  |  |  |  |
|--|--|--|--|--|--|
| Object Type  | Choose Article AR0A  |  |  |  |  |
| Description  | Description that helps identify import processes in the monitoring / logging   |  |  |  |  |
| Overwrite  | <ul> <li>The overwrite option controls whether existing objects in the target system are overwritten.</li> <li>It can only be set if the IDoc will be imported to the Active Area.</li> <li>If you want to overwrite an Article in the Active Area, this indicator must be set. Otherwise, the import to the Active Area for an existing article will fail. If the Overwrite indicator is set, the article in the Active Area will be overwritten.</li> <li>If the Overwrite indicator is not set and the article is already in the Active Area, the article is rejected during import (and not written to the staging area).</li> <li>Custom Converter User defined conversion. Usually there is no additional transformation needed in this step (if the format is a SAP standard format - either IDoc or SOA based).</li> </ul> |  |  |  |  |
| Governance   | If activated, data is loaded into the staging area (a change request will be created).   |  |  |  |  |
| Post Processing  | Post processing for failed objects can be done manually (using "Forward Error Handling" or IDoc Monitoring) or can be supported by a change request process.   |  |  |  |  |
| Change Request<br>Type                                 | You have to select a change request type if "Governance" is set or "Post Processing defined by Change Request" is selected.  |  |  |  |  |
| Scheduling /<br>Date:                                  | <ul> <li>Scheduling: Indicator to determine if import is done immediately or at a scheduled date.</li> <li>Date: scheduling date and time</li> </ul>   |  |  |  |  |
| Parallel Processing / Queue Name / Number of Processes | <ul> <li>Parallel Processing: indicator to determine if the import will be done with parallel processes.</li> <li>Queue Name: qRFC queue name which has been registered in t-code SMQ2</li> <li>Number of Processes: The maximum number of parallel processes used.</li> </ul>   |  |  |  |  |
| Data Sources   | Selection of source directories for the object types. This can be one or many per object type, and depending on the data transfer customizing, there might be main object types (for example Article) and sub object types (for example vendor characteristics, Key Mapping, Value Mapping).   |  |  |  |  |
| Import, Simulate<br>Import                             | Starts the import process or a simulated import  |  |  |  |  |
| Custom<br>Converter<br>Settings                        | A customer-defined converter can be leveraged by the import process. This converter can be defined and integrated in the Customizing Activity Master Data Governance > General Settings > Data Transfer > Define Filter Converter Type/BAdl: Filter dependent BAdl for file converter.   |  |  |  |  |

# Scheduling File Import for MDG-RFM

Use the following steps to schedule file import for MDG-RFM:

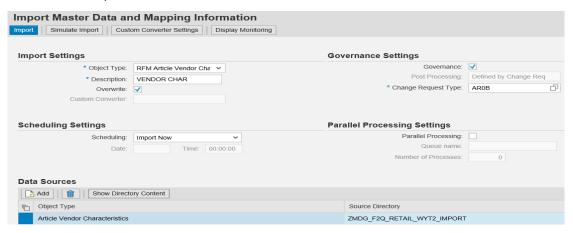
1. Ensure that the MDG\_DL\_DEBUG parameter is absent.



2. Run t-code DTIMPORT and select Scheduling for Future Import (select a future timestamp).



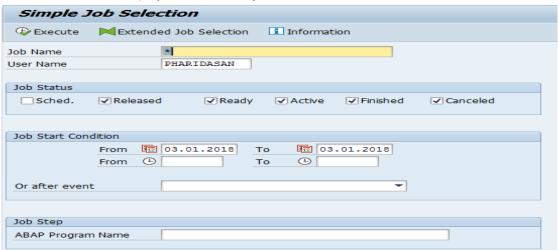
**Note**: You need at least one file in the folder before the user can schedule the import (standard MDG behavior).



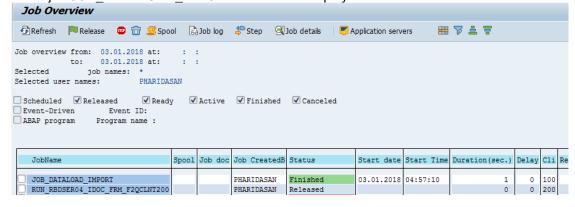
3. Click Import.



4. Run t-code SM37 to display the scheduled job created from DTIMPORT.

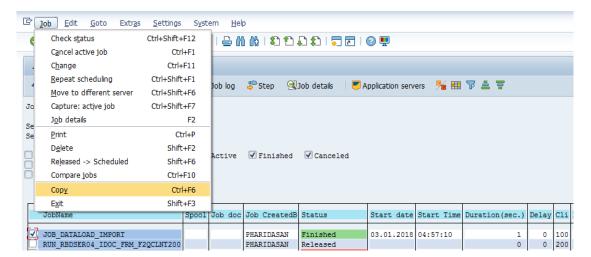


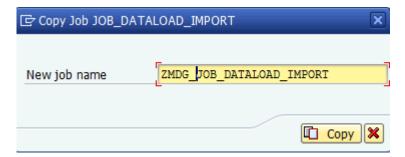
The job JOB\_DATALOAD\_IMPORT released is displayed.

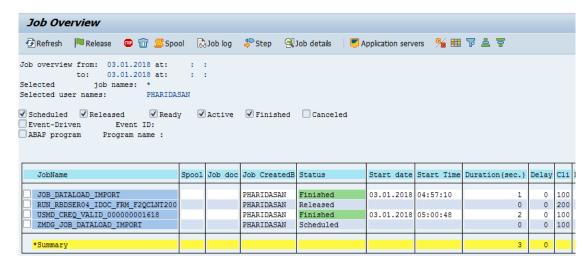


5. Copy the job to a new custom job.



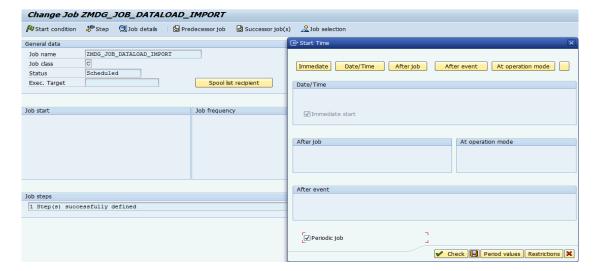




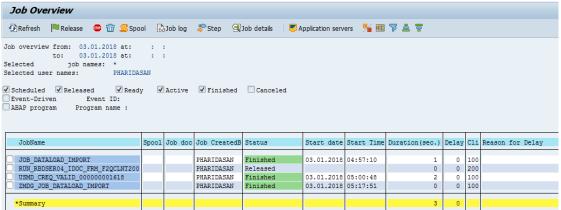


- 6. Once the job has been copied, you can set the periodic value.
- 7. Save and start the job immediately.

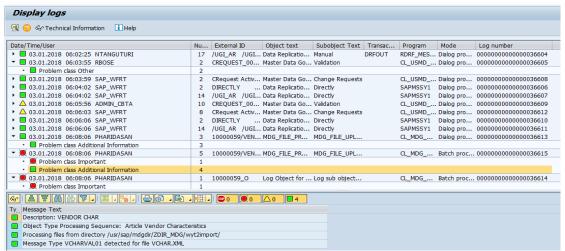




7. The job is displayed with a release status.



8. Run t-code SLG1 for any errors.



## **Error Handling**

It is possible to perform data import for one or more MATMAS IDoc xml files, with one or more IDoc per xml file, and with each IDoc containing one or more materials.



| Scenario                            | No of xml Files       | Import to Active<br>Area   | Import to Active Area, with errors sent to Staging Area   | Import to Staging<br>Area   |
|-------------------------------------|-----------------------|--|---|---|
| 1IDoc, 1<br>article                 | 1 xml                 | If article has invalid data, import for the IDoc fails, with an error message providing what went wrong.   | If article has invalid data, writing to Active Area fails and it is written to the staging area. An error message is displayed in log providing information on what went wrong while saving to the Active Area, along with the created change request number. If article is rejected while writing to staging area, an error message is displayed providing information on what went wrong. | If one article is rejected while writing to the staging area, all additional from the whole IDoc xml are rejected (all or nothing) and an error message is displayed providing information on what went wrong. Article import is rejected; Article & is not in Active Area. |
| 1 IDoc and n article                | 1 xml                 | If one of the IDoc has individual data (e.g. invalid Season), all the article in IDoc are rejected (all or nothing behavior of BAPI_IDoc_INPUT1). For conditions like article already present in Active Area or locked in open CR, specific article objects will be rejected, while other article objects from the IDocs are processed normally.                                     | If one article in IDoc has invalid data (e.g. invalid Season Data), writing to Active Area fails and all article in IDoc are written to the staging area. If article is rejected by staging area, reject all article from the whole IDoc xml that should have been posted to staging area. An error message is placed providing information what went wrong.                                |   |
| N IDocs<br>and 1<br>article<br>each | 1 xml/<br>IDoc        | Same as row 2 – 1<br>IDoc n 1 article  | Same as row 2 – 1 IDoc n 1<br>Material  |   |
| N IDoc and<br>1 article             | 1 xml for<br>all IDoc | Data import fails for<br>the IDoc containing<br>the erroneous article,<br>with error message<br>providing information<br>on what went wrong.<br>Other IDocs are<br>processed manually.   | If one article in IDoc has invalid data (e.g. Season), writing to the Active Area fails and all article in that IDoc are written to the staging area. If materials are rejected by the staging area, reject all articles from the whole IDoc xml that should  |   |
| n IDoc and<br>m article<br>each     | 1 xml for<br>all IDoc | If one article in IDoc has invalid data (e.g Invalid UoM). All article in that IDoc is rejected. (Other IDocs in the same xml without erroneous article will be processed normally). For conditions like article already present in Active Area or locked in other open CR, specific article objects will be rejected while other article objects from IDocs are processed normally. | have been posted to the staging area. An error message is displayed providing information on what went wrong.   |   |
| n IDocs<br>and m<br>article         | 1 xml/<br>IDoc        | Same as row 3 – 1<br>Doc n article   |   |   |



# Glossary

This section provides the list of key terms, abbreviations and acronyms.

| Term/Abbreviations | Description                       |
|--------------------|-----------------------------------|
| BOM                | Bill of Material                  |
| CR                 | Change Request                    |
| DB                 | Database                          |
| EAM                | Enterprise Asset Management       |
| GW                 | Gateway                           |
| ICF                | Internet Communication Framework  |
| IDoc               | Intermediate Document             |
| MRO                | Maintenance, Repair, and Overhaul |
| NW                 | NetWeaver                         |
| OData              | Open Data Protocol                |
| RFM                | Retail and Fashion Management     |
| t-code             | SAP Transaction Code              |
| UI                 | User Interface                    |