

# Standards & Guidelines

-



Oracle Data Integrator  
a product of BI-Quest

Date	June 2017
Status	Definitive
Version	2.0
Author	Frank Kuijpers

**Document history:**

Version	Date	Author	Remarks
1.0	20-11-2016	Frank Kuijpers	First version of the document
1.1	10-2-2017	Frank Kuijpers	Revision after pilot and review
1.2	20-3-2017	Frank Kuijpers	Definitive version of the document
2.0	28-6-2017	Frank Kuijpers	Version 2.0 'Powerpack for ODI'

**Reference documents:**

Name
Reference Guide – Powerpack for ODI
Roadmap – Powerpack for ODI
Overview - Powerpack for ODI
Installation Guide – Powerpack for ODI

## TABLE OF CONTENTS

<b>1</b>	<b>INTRODUCTION .....</b>	<b>5</b>
1.1	Architecture Overview .....	5
1.2	ODI Documentation .....	11
1.3	Examples and references.....	11
<b>2</b>	<b>ODI LOGIN .....</b>	<b>12</b>
<b>3</b>	<b>ODI MASTER AND WORK REPOSITORY.....</b>	<b>13</b>
<b>4</b>	<b>ODI TOPOLOGY.....</b>	<b>14</b>
4.1	Physical Architecture .....	14
4.2	Logical Architecture .....	16
4.3	Context .....	17
4.4	Agents .....	17
4.5	Scheduling .....	18
<b>5</b>	<b>ODI GENERAL OBJECTS .....</b>	<b>20</b>
5.1	Sequences.....	20
5.2	Variables .....	20
5.3	User Functions.....	22
5.4	Description .....	23
5.5	Alias (Short name).....	24
<b>6</b>	<b>ODI MODELS.....</b>	<b>25</b>
6.1	Model Folder .....	25
6.2	Model.....	25
6.3	Source Datastores .....	25
6.4	REF Source Cluster Datastores .....	26
6.5	Staging area Datastores.....	27
6.5.1	Staging area Constraints (Business Rules) .....	28
6.6	History area Datastores .....	32
6.6.1	History area Constraints .....	36
6.6.2	History area Datastore Properties (Datastores with history) .....	37
6.6.3	History area Datastore properties (Datastores without history).....	38
6.7	Target area Datastores .....	40
6.7.1	Dimensions .....	40
6.7.2	Facts.....	43

6.7.3	Target Datastores.....	45
<b>7</b>	<b>KNOWLEDGE MODULES.....</b>	<b>47</b>
7.1	RKM PPK Oracle.....	47
7.2	CKM PPK Oracle.....	47
7.3	IKM PPK SQL Control Append.....	47
7.4	IKM PPK Oracle Incremental Update .....	47
7.5	IKM PPK Oracle History.....	48
7.6	IKM PPK Oracle Incremental Update (MERGE).....	48
7.7	LKM PPK File to Oracle (SQLLDR).....	49
7.8	LKM PPK File to Oracle (EXTERNAL TABLE).....	49
7.9	LKM PPK Oracle to Oracle (DBLINK) .....	49
7.10	JKM PPK Oracle Simple .....	49
7.11	JKM PPK Oracle to Oracle Consistent (OGG) .....	50
<b>8</b>	<b>MAPPINGS .....</b>	<b>51</b>
8.1	Generic Mapping standards .....	51
8.2	Staging area mappings.....	54
8.3	History area mappings .....	58
8.4	Business area mappings.....	61
8.5	Target area Dimension mappings .....	64
8.6	Target area Fact mappings .....	68
<b>9</b>	<b>SCENARIOS &amp; LOAD PLANS .....</b>	<b>72</b>
9.1	Scenarios.....	72
9.2	Load Plans.....	74
<b>10</b>	<b>PROJECT WORKING FILES.....</b>	<b>82</b>
10.1	1-src_work files .....	82
10.2	2-stg_work files .....	82
10.3	3-his_work files .....	83
10.4	4-bus_work files .....	83
10.5	5-trg_work files .....	84

## 1 INTRODUCTION

This document describes the Standards & Guidelines for implementing the ETL of your BI Project with ODI (Oracle Data Integrator).

It describes the assumptions and the areas used as a base for implementing the BI Project DWH and the details for implementing this DWH with ODI.

The purpose of this document is to set up a BI Data Lake which will use many features of ODI in a uniform and consistent way.

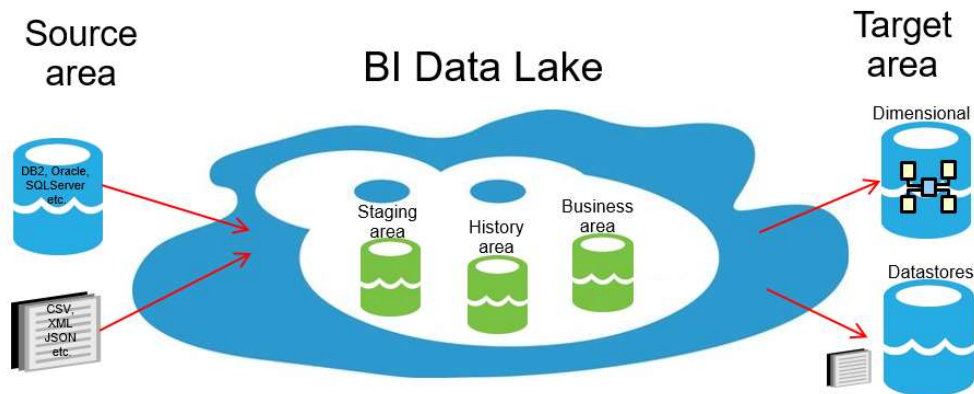
The methods described in this document should be complied during the design and construction of your project. 'Powerpack for ODI' generates database and ODI components which use these Standards & Guidelines for 100%.

Chapter 1 describes the general parts of the implementation and in chapter 2 the technical details are described.

### 1.1 Architecture Overview

The architecture of your BI Project has a very flexible format. You can decide how many layers you want in your BI Project.

You have a Source area and a Target area (Dimensional and/or Datastores) and in between there is a BI Data Lake which can contain 1 (Staging), 2 (Staging and History) or 3 (Staging , History and Business) areas.



**BI Data Lake Overview**

- **Source area (SRC);**

Description of the metadata of the Source areas which are the base of your DWH. These Source areas can be available on different kinds of platforms (Oracle Database, SQLServer Database, CSV flatfiles, fixed length flatfiles, XMLfiles, Excelsheets etc.).

- **Staging area (STG) of the BI Data Lake;**

The first part of the BI Data Lake where the data will be stored on a common platform. The Staging area is a buffer for the data before it will be stored in the central History and Business