

# Prototype for PowerExchange to Essbase Client Java based Designer

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# Contents

- Introduction
- Development Environment
  - Informatica PowerCenter, Powerexchange and APIs
  - Essbase and its various APIs
- Programming Environment
- Project details
- Design
- Working
- Results and Scope for Future Work



# Introduction

- Informatica Corporation

- About
- Software
- Market

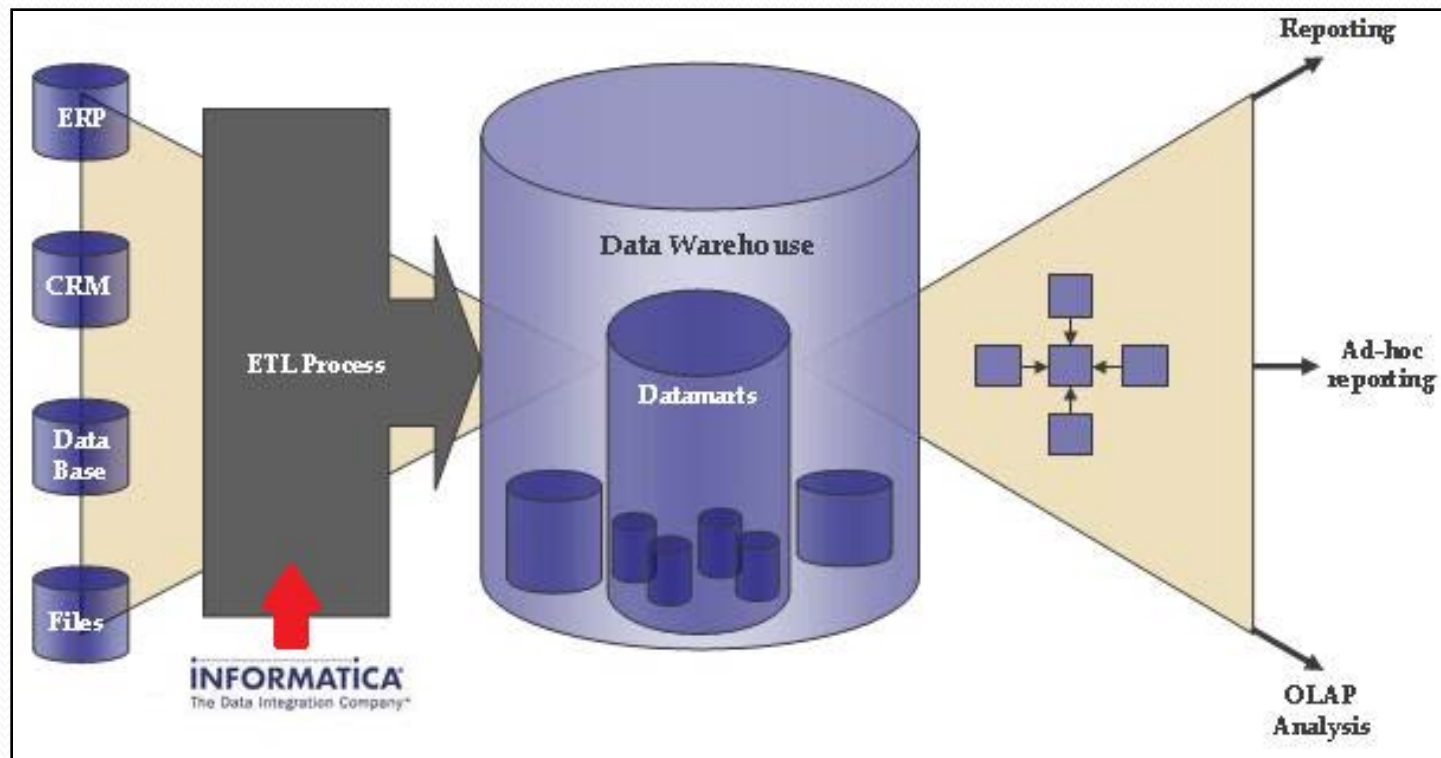
• <b>Founded:</b>	1993
• <b>Headquarters:</b>	Redwood City, CA
• <b>Employees:</b>	1,300+
• <b>Offices:</b>	N. & S. America, Europe, Asia Pacific
• <b>Revenue:</b>	\$391 million (2007)
• <b>3-year Compound Annual Growth Rate:</b>	21% per year
• <b>Market share leader</b>	(Gartner Dataquest)
• <b>Customers:</b>	2,950+
	<ul style="list-style-type: none"><li>• 91 of Fortune 100</li><li>• 80%+ of Dow Jones</li><li>• Government organizations in 20 countries</li></ul>
• <b>Partners:</b>	Over 400 major SI, ISV, OEM and On Demand

**Singular focus on Data Integration  
Products and Services**

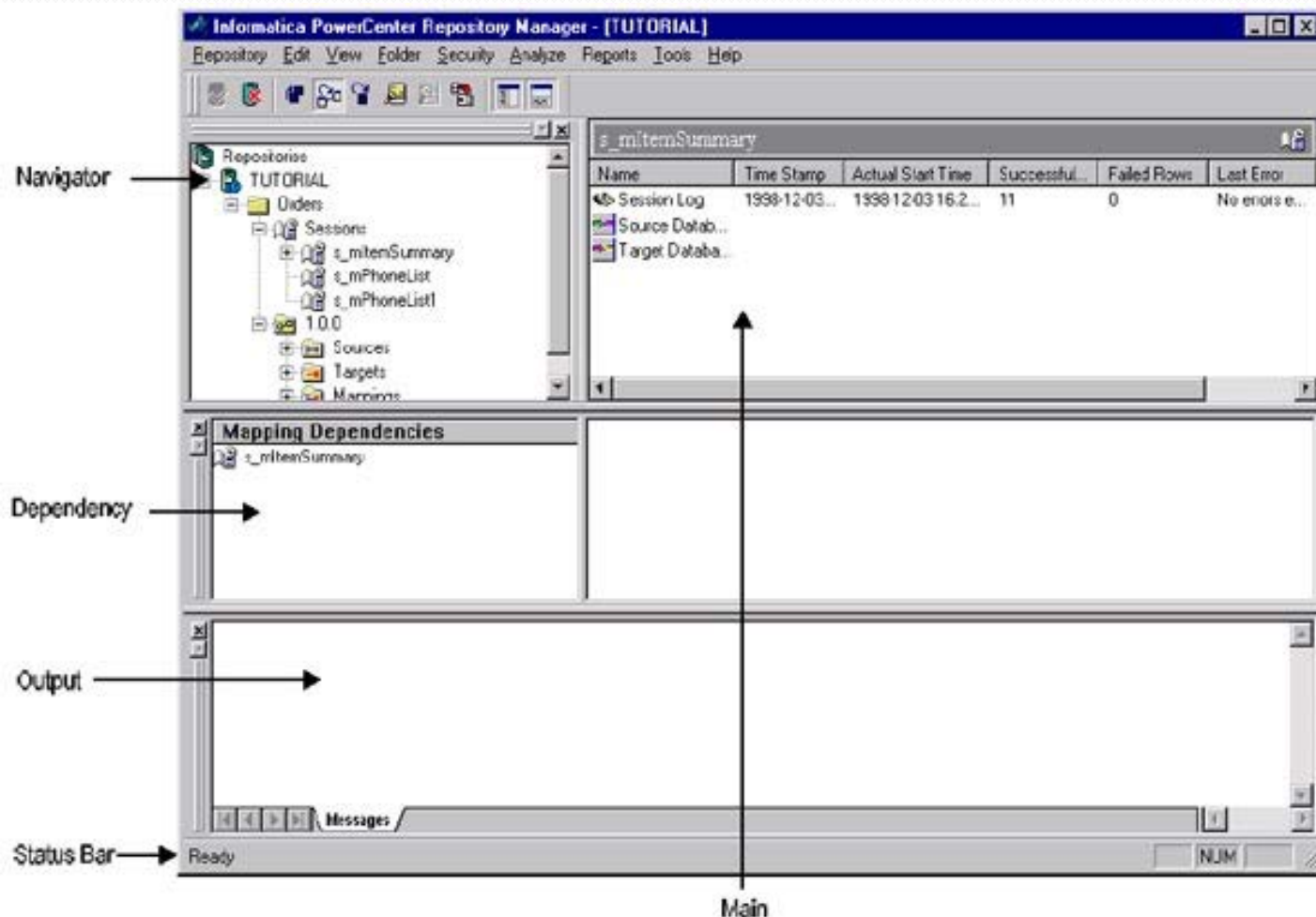


# Development Environment

## Extract-Transform-Load (ETL)

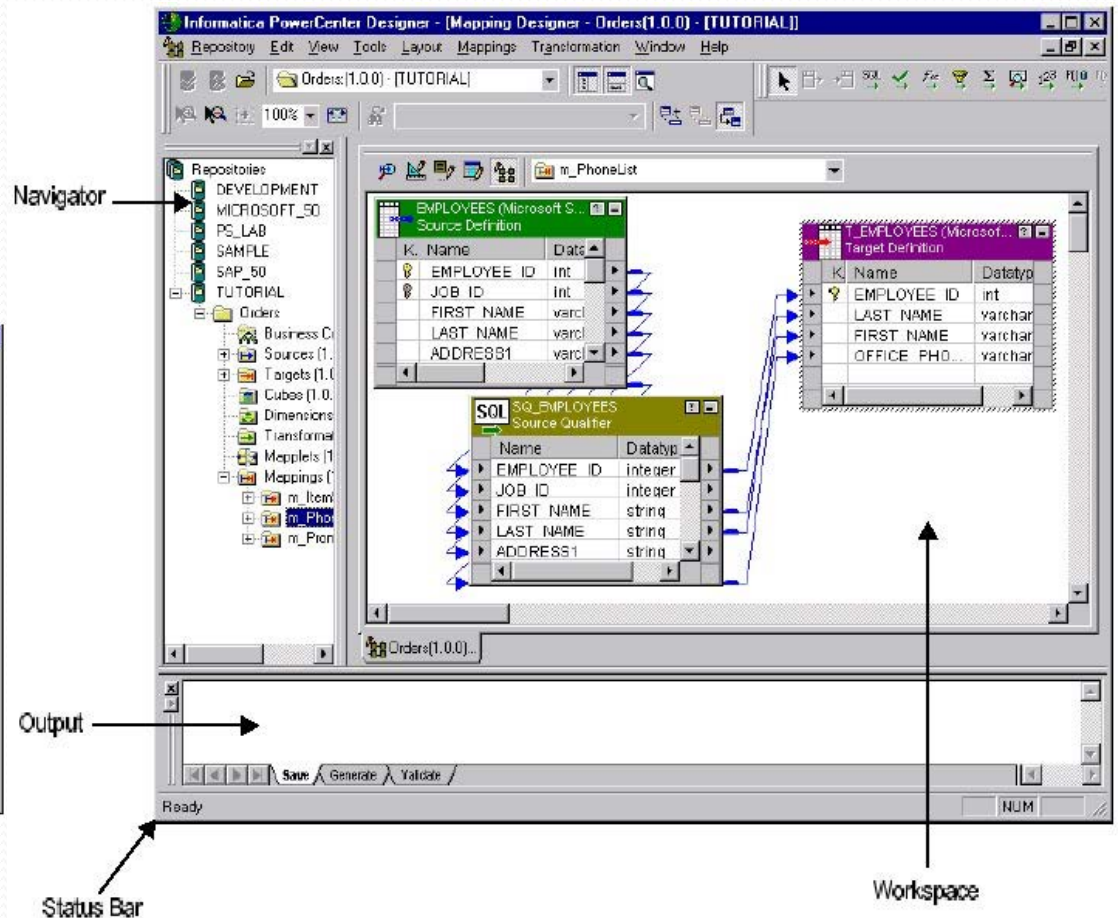
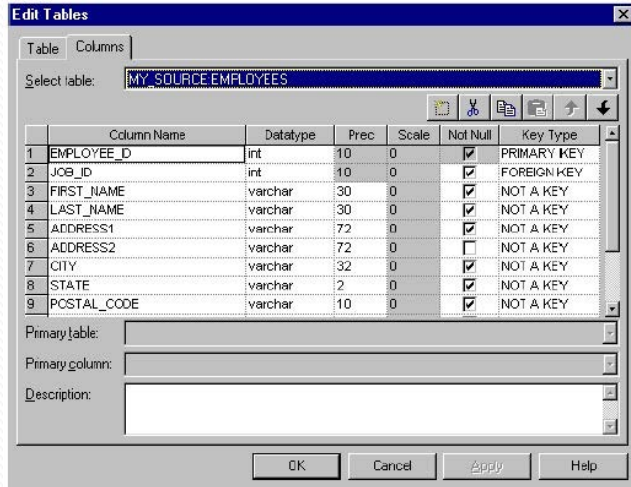
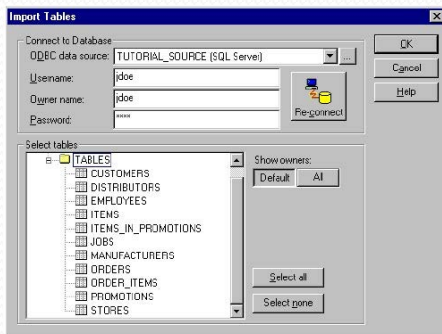


# PowerCenter Repository Manager

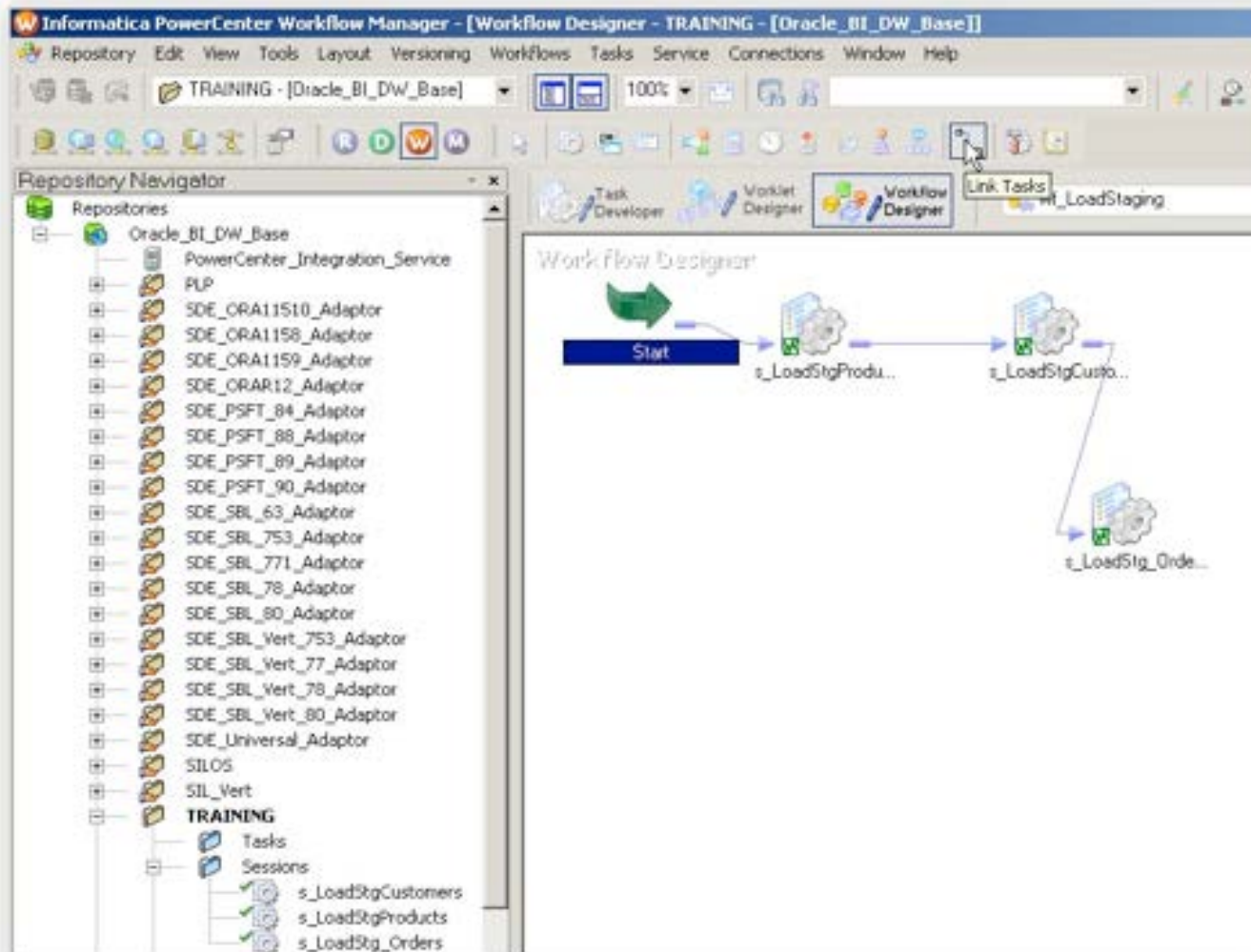




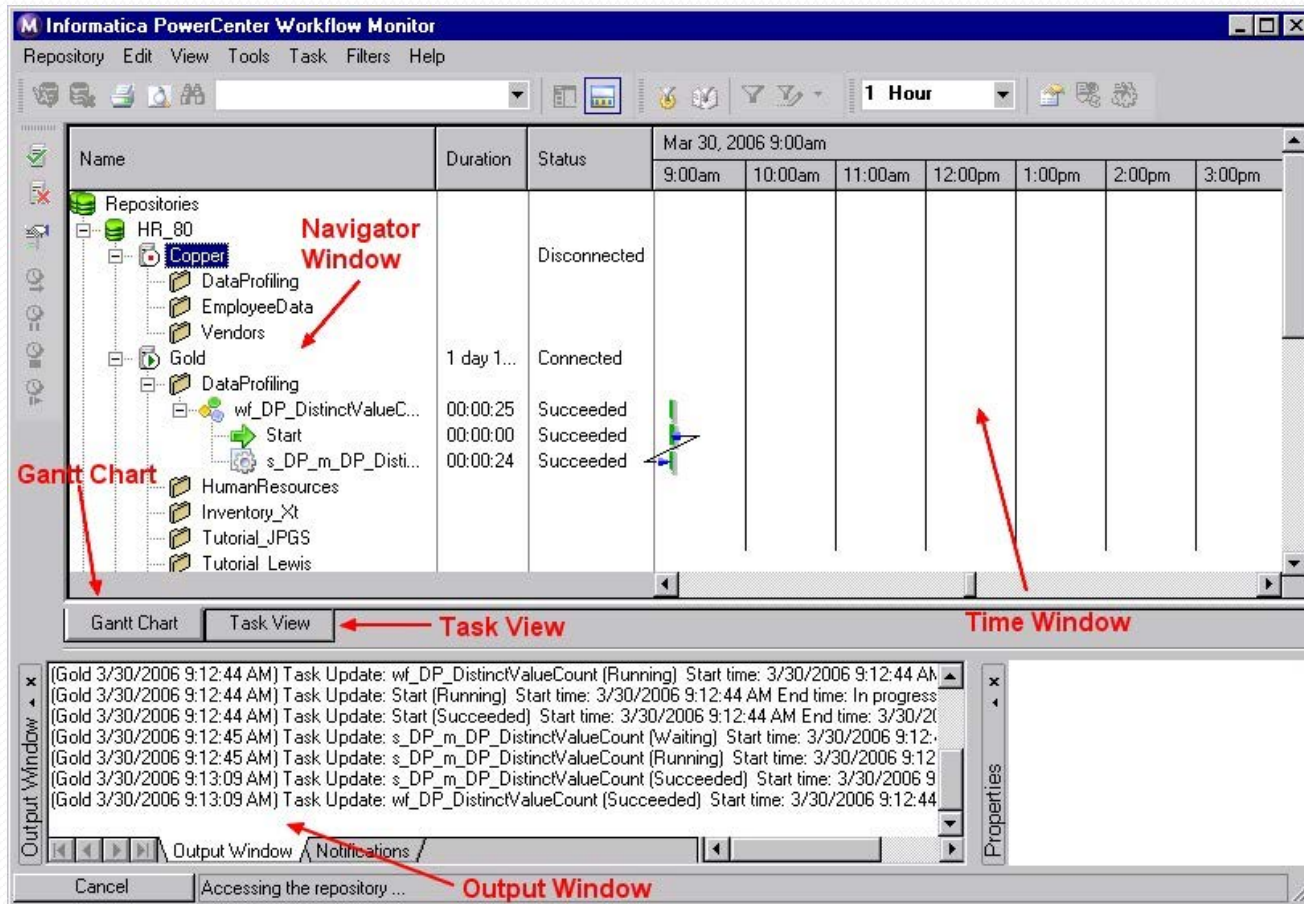
# PowerCenter Designer



# Workflow Manager

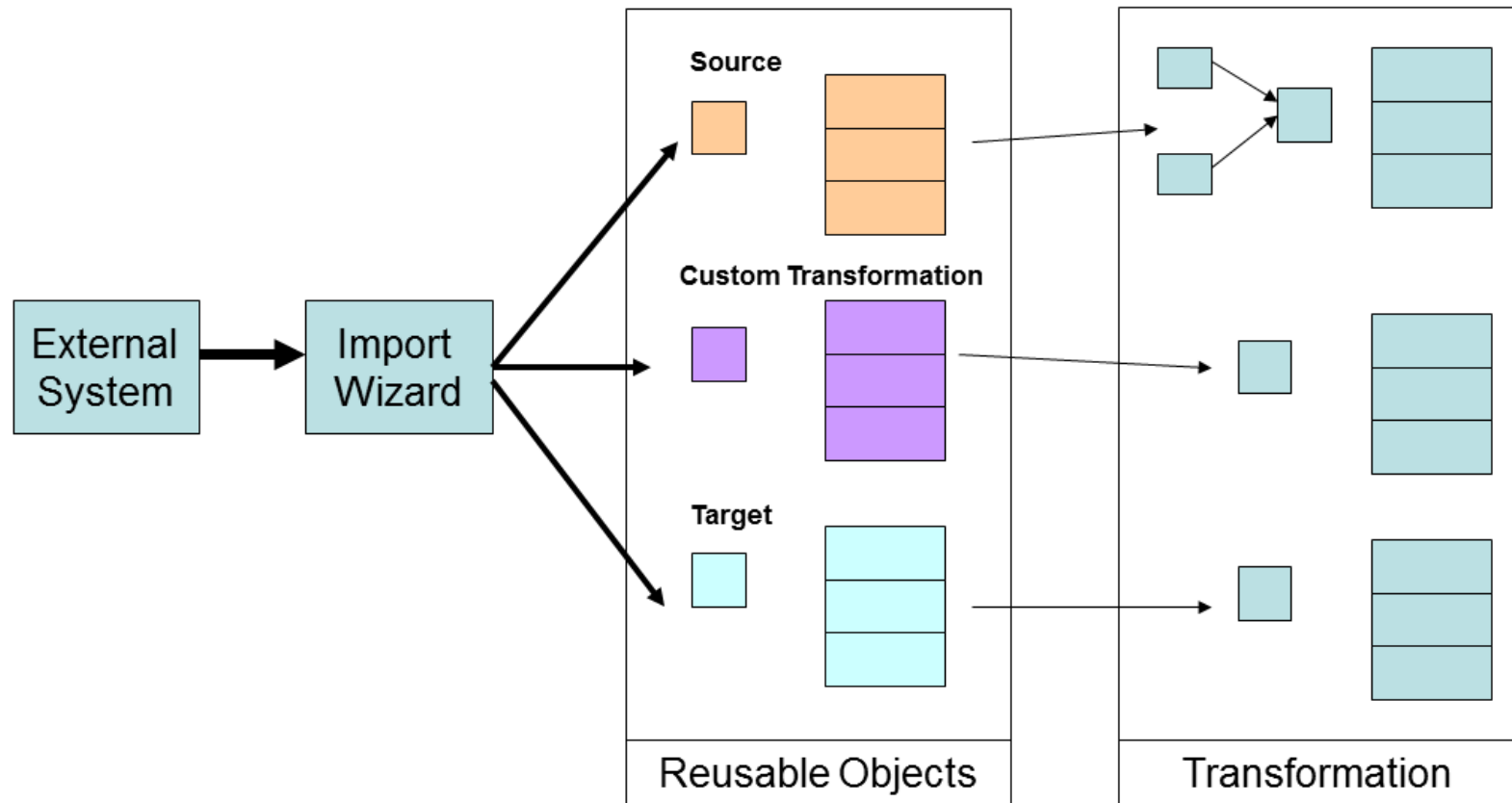


# WorkFlow monitor





# PowerExchange

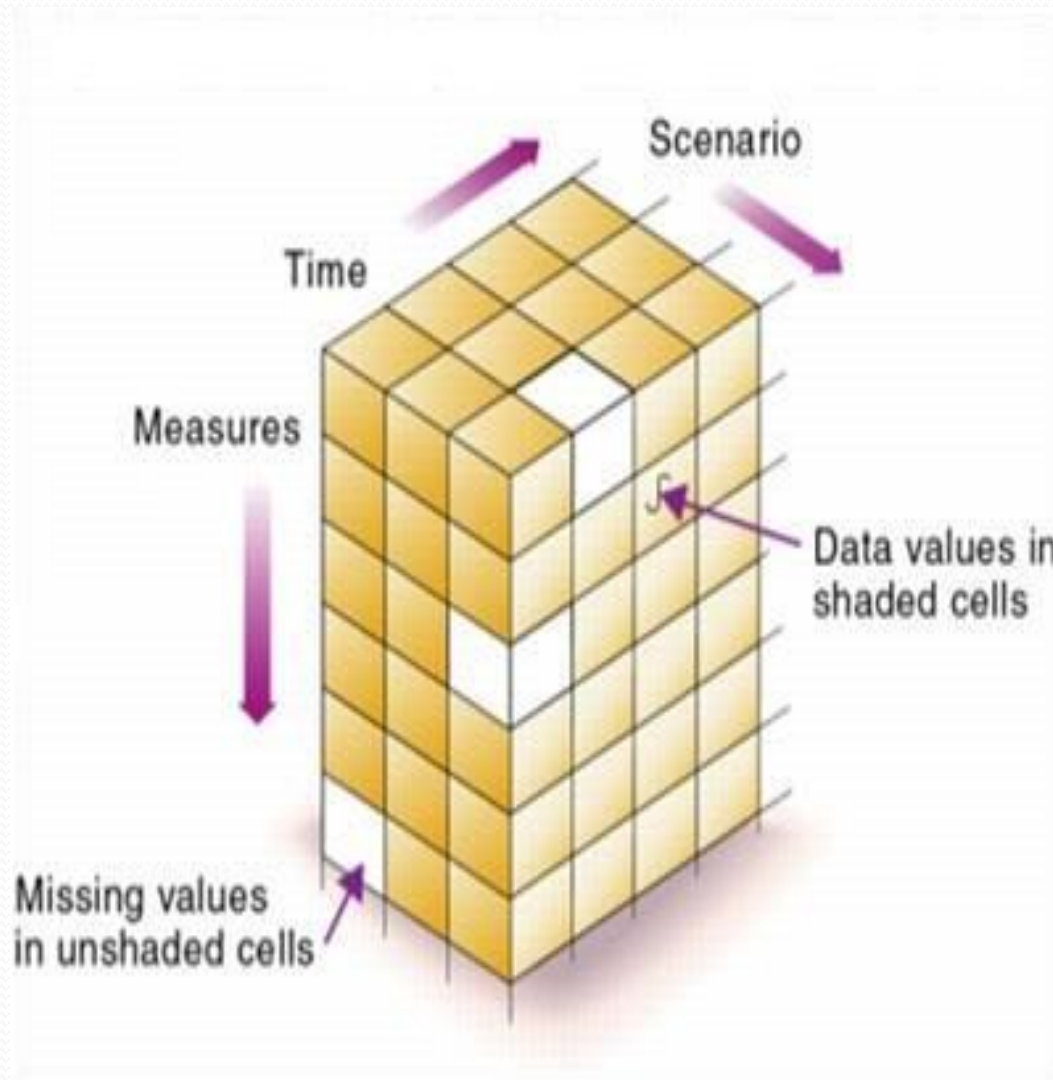


## • **PowerConnect SDK**

- Client API
  - to create plug-ins for the Designer
  - access metadata
- Server API
  - plug-ins for the PowerCenter Server
  - extract data
- RepositoryAPI
  - to access and define the metadata for third-party applications in the PowerCenter repository

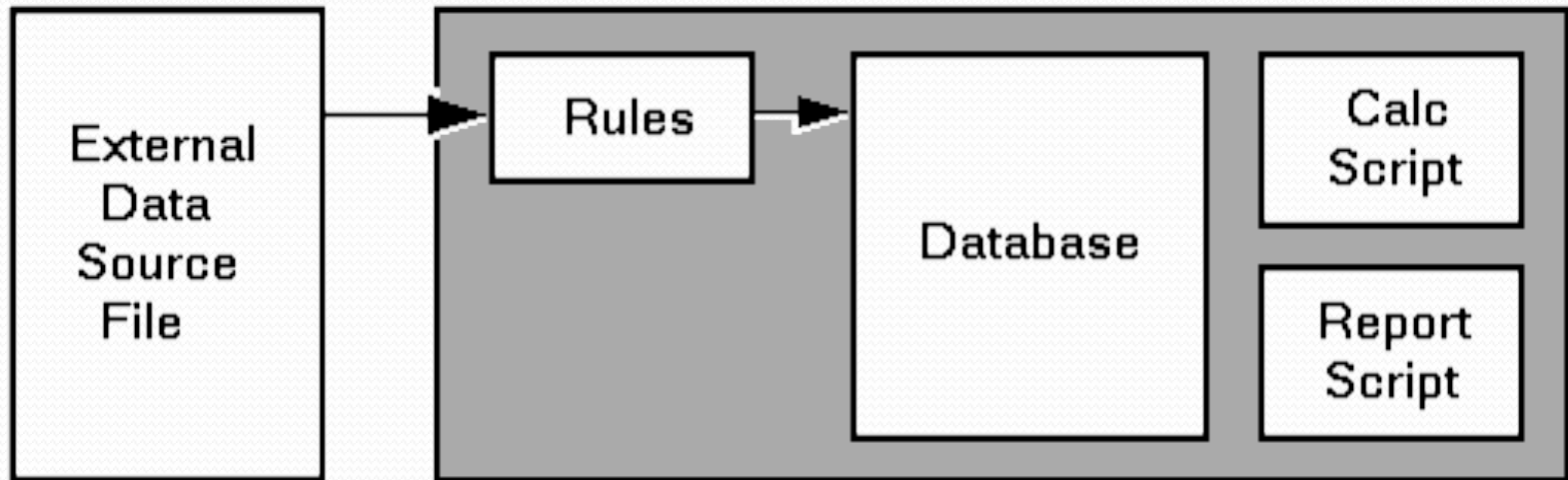


## • Hyperion Essbase

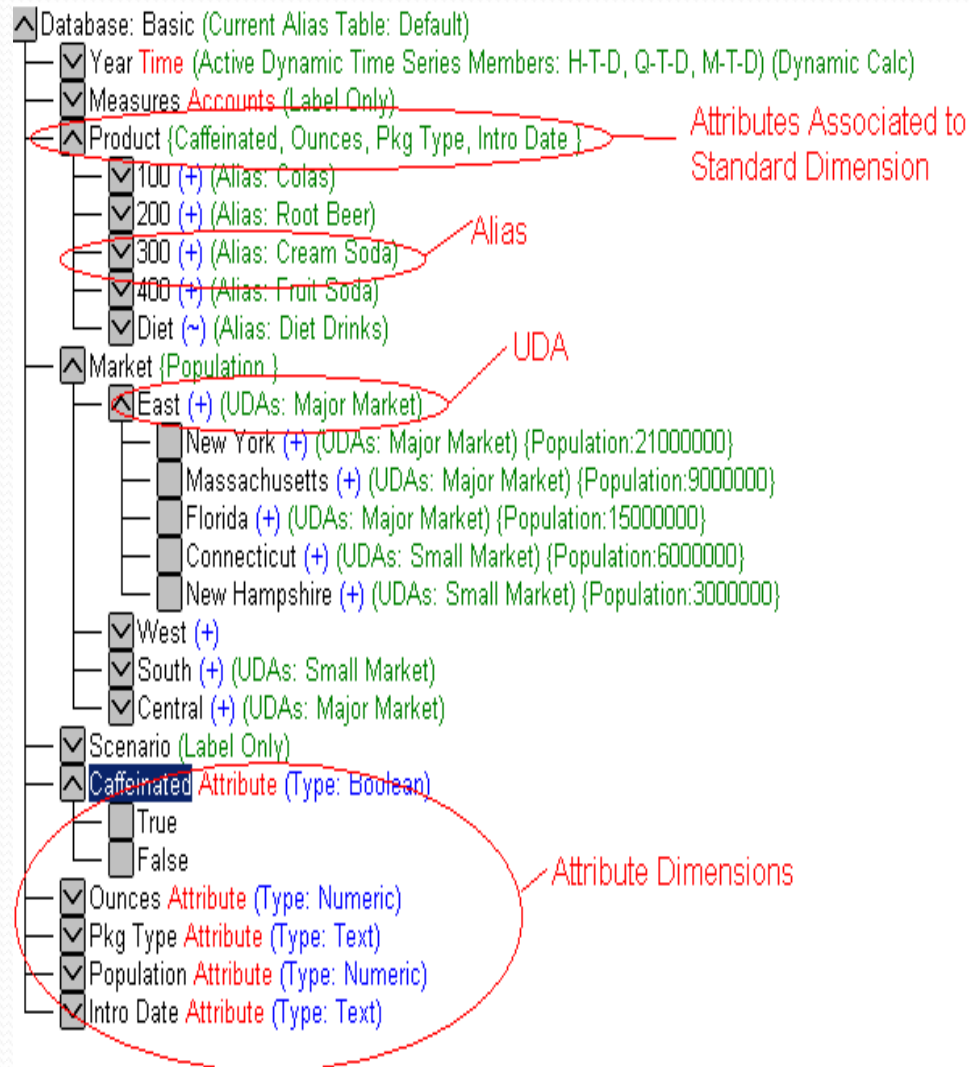


# Essbase Application

## Application

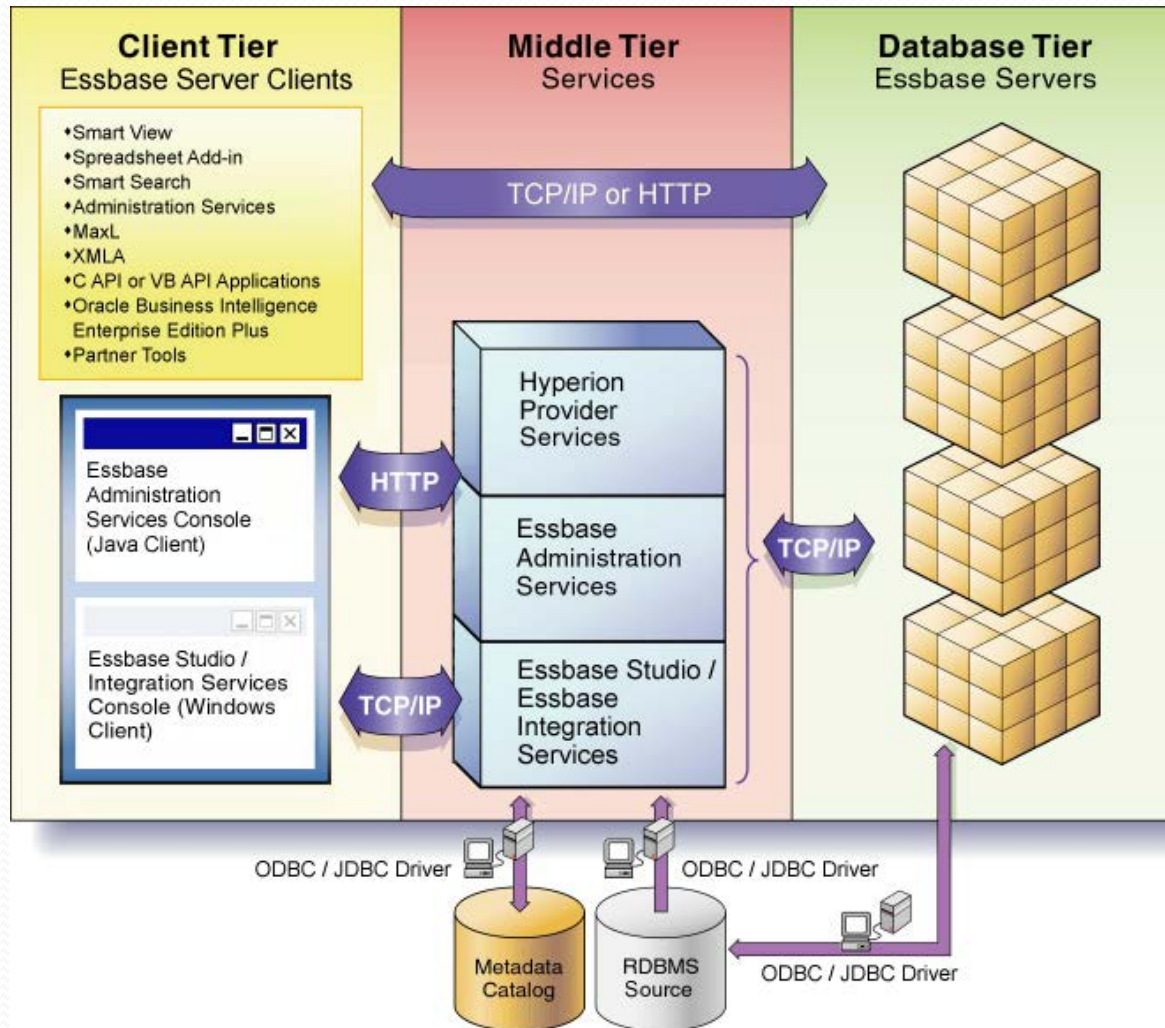


# • Understanding Essbase



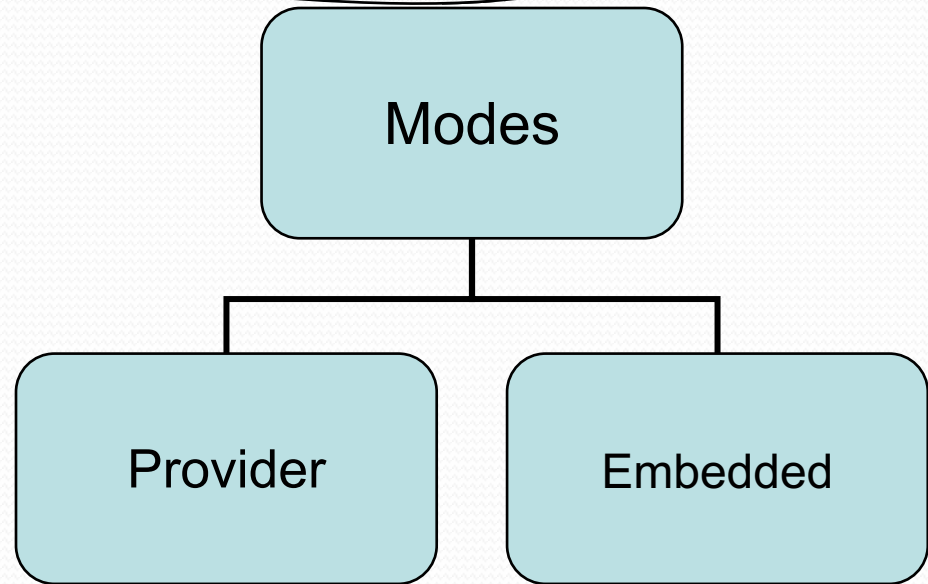


# Essbase architecture



## • **Essbase API**

- C API
- Visual Basic API
- Java API
- XMLA API
- Java API
  - **com.essbase.api.base**
  - **com.essbase.api.dataquery**
  - **com.essbase.api.datasources**
  - **com.essbase.api.domain**
  - **com.essbase.api.metadata**
  - **com.essbase.api.session**



# Programming Environment

- **Java Programming Language**
- **Sun Java J2SE 1.6**
- **Eclipse IDE**
- **SWT Framework**

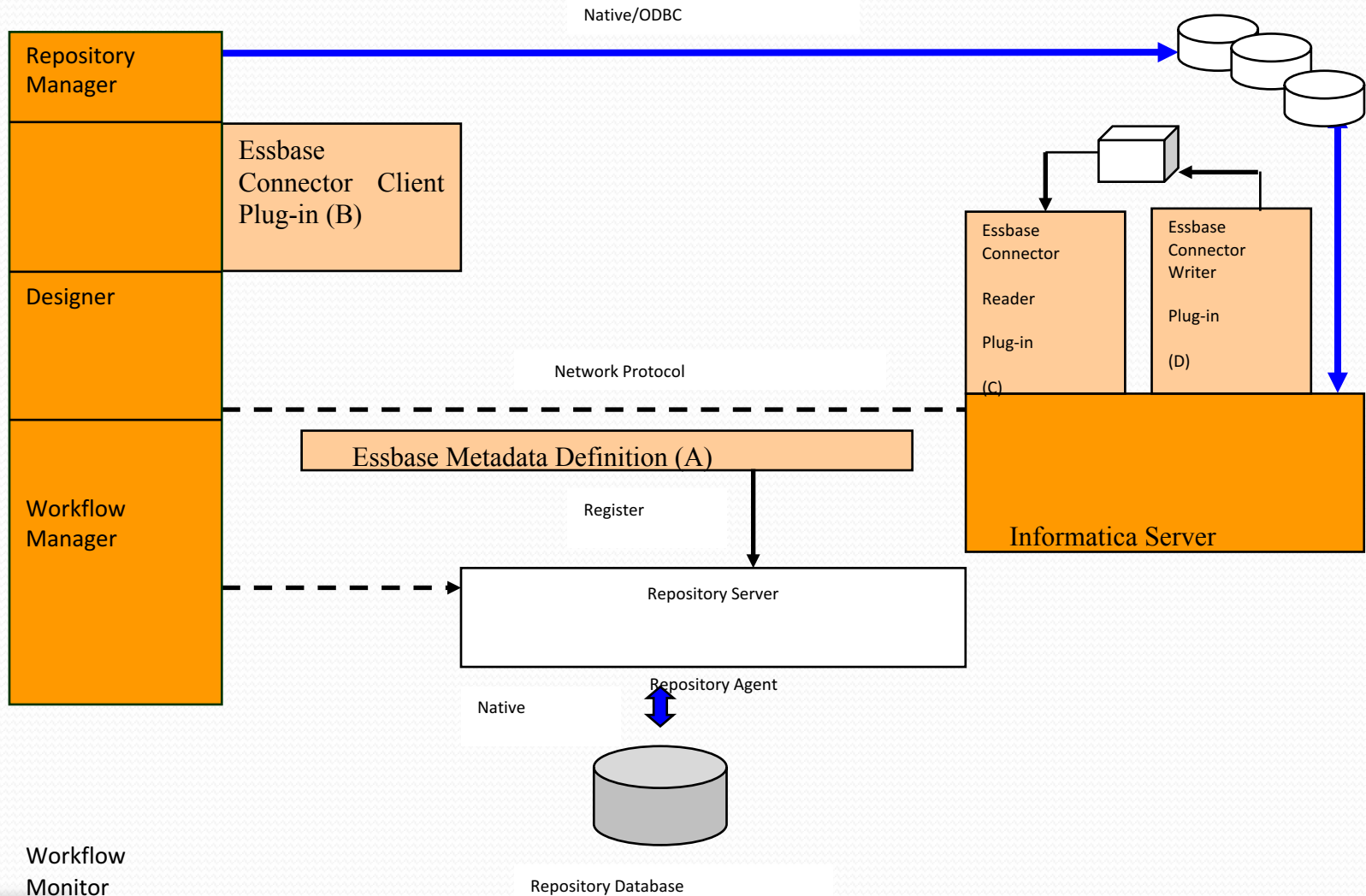


# Project Details

- **Prototype for the Java Version of the PowerExchange for Essbase Client and feature comparison with the Visual Basic APIs for Unicode support**
- **Subproject: Automation of Build Process and understanding make file architecture used in Informatica**
- **Subproject: Compilation of three of the Informatica Adapters on different platforms for version 8.6.1 recertification**



# PowerExchange to essbase

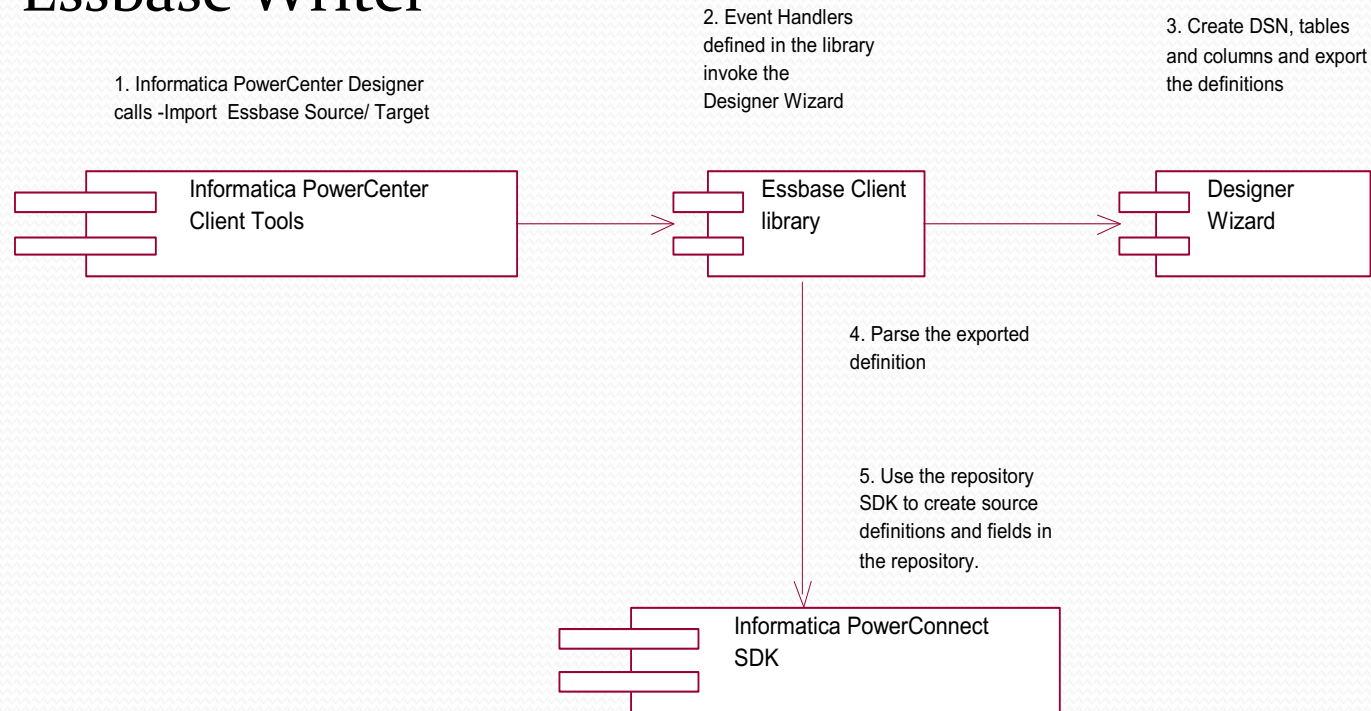


Workflow  
Monitor

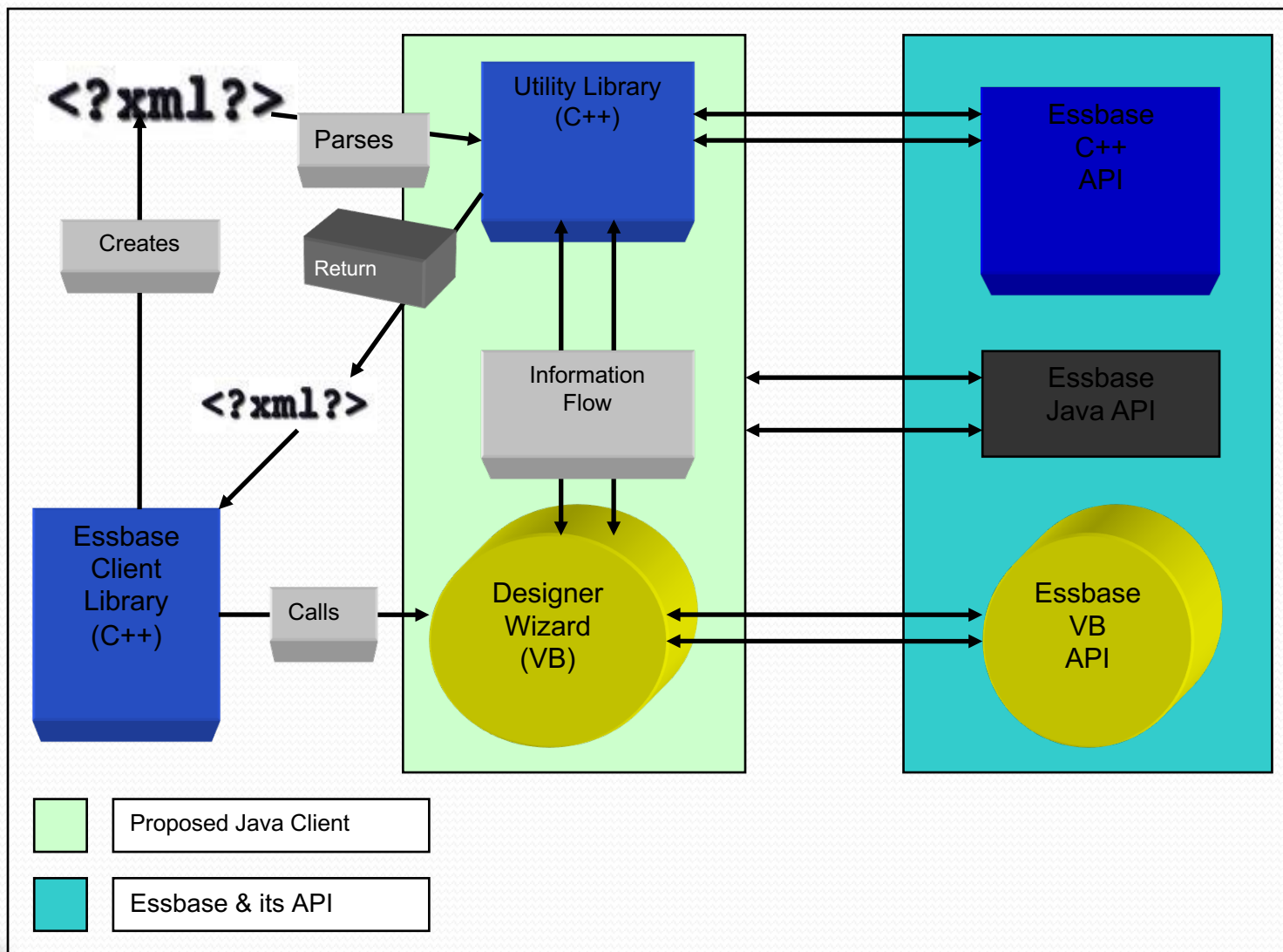


- Essbase Client
  - Client Library
  - Designer Wizard
- Essbase Reader
- Essbase Writer

## PowerExchange to Essbase

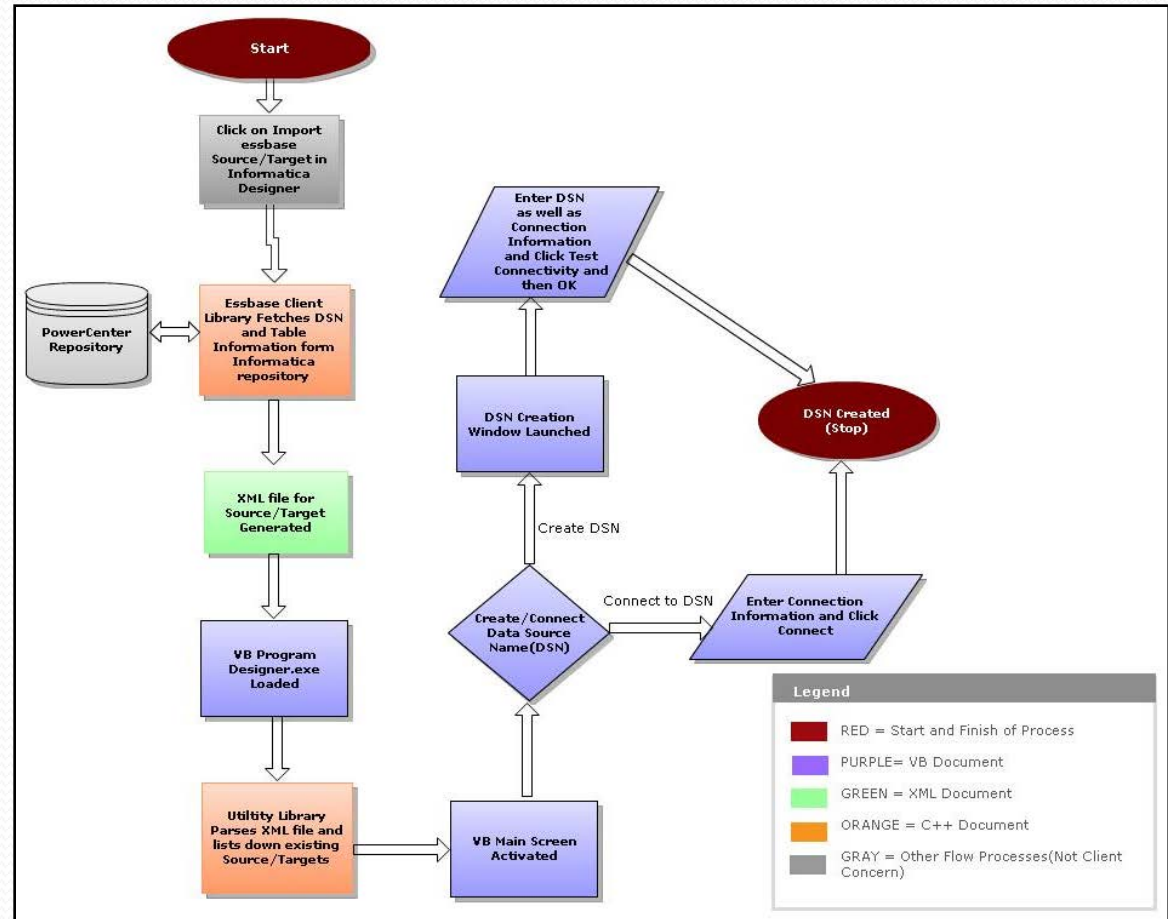


# Project Working

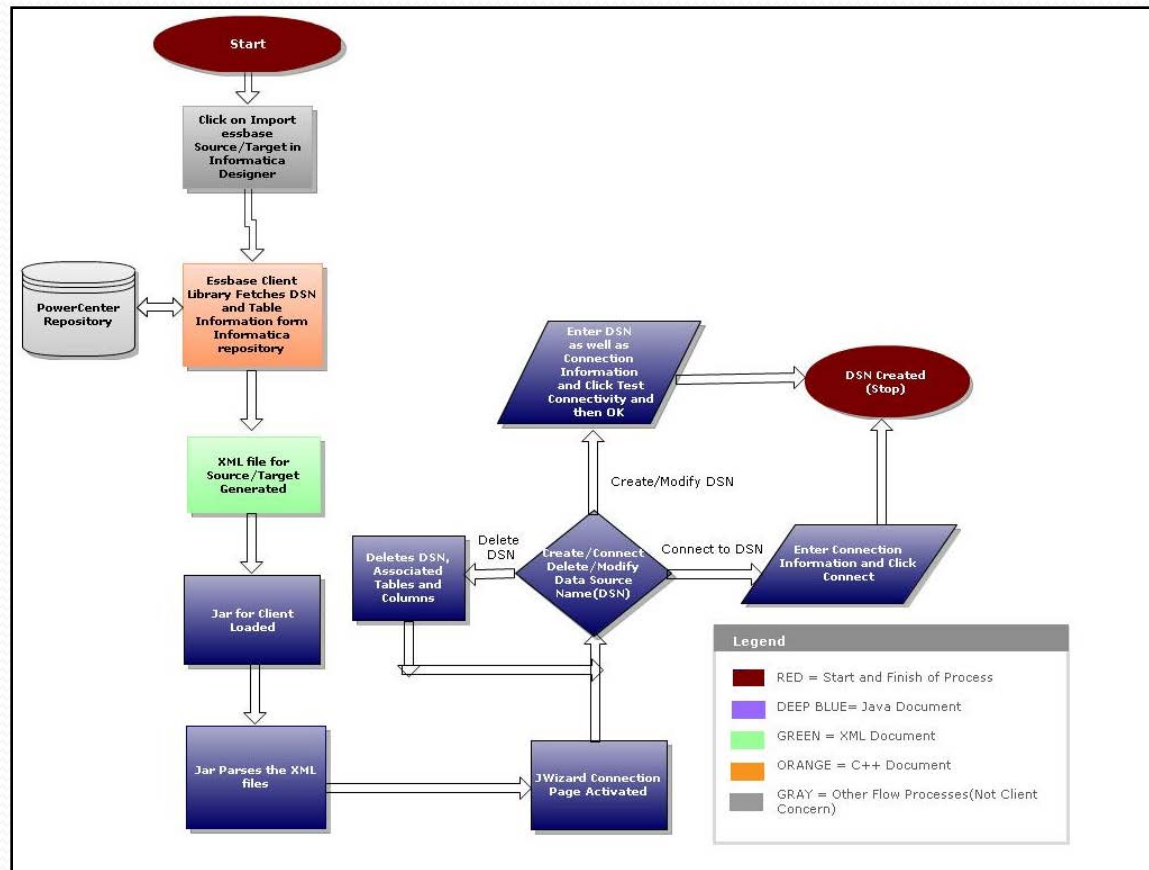


# Design Specifications

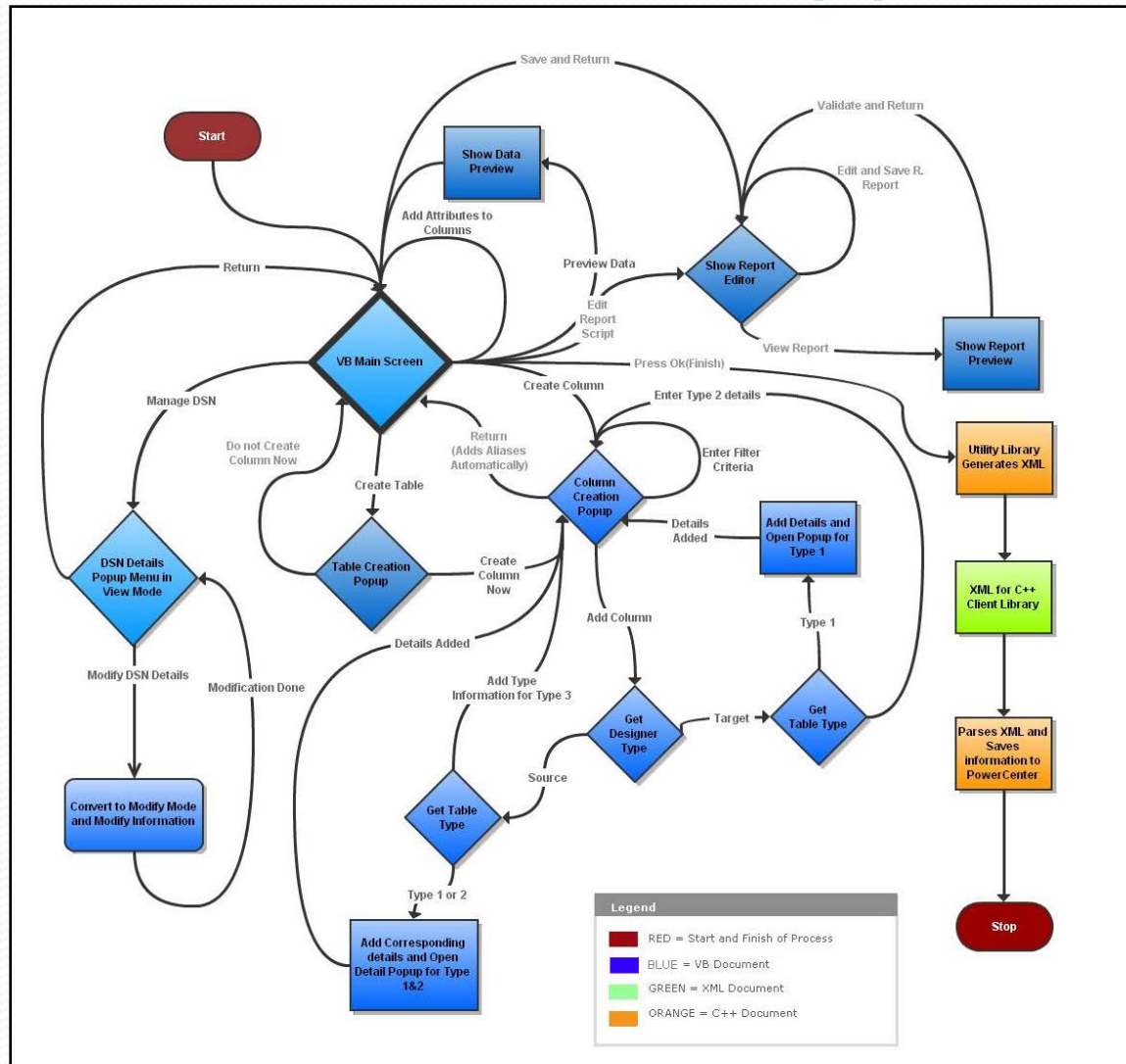
## Old workFlow (1)



# New workFlow(1)

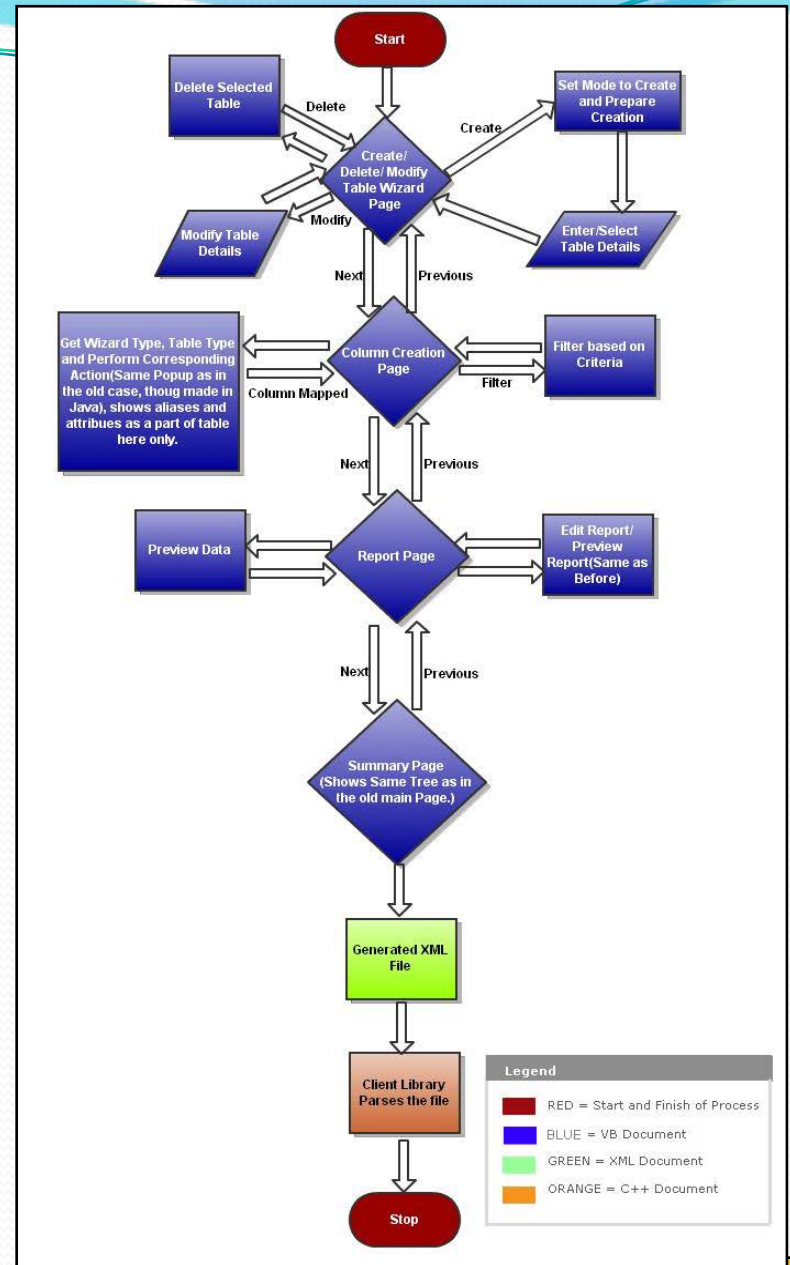


## Old WorkFlow(2)





## New workFlow(2)



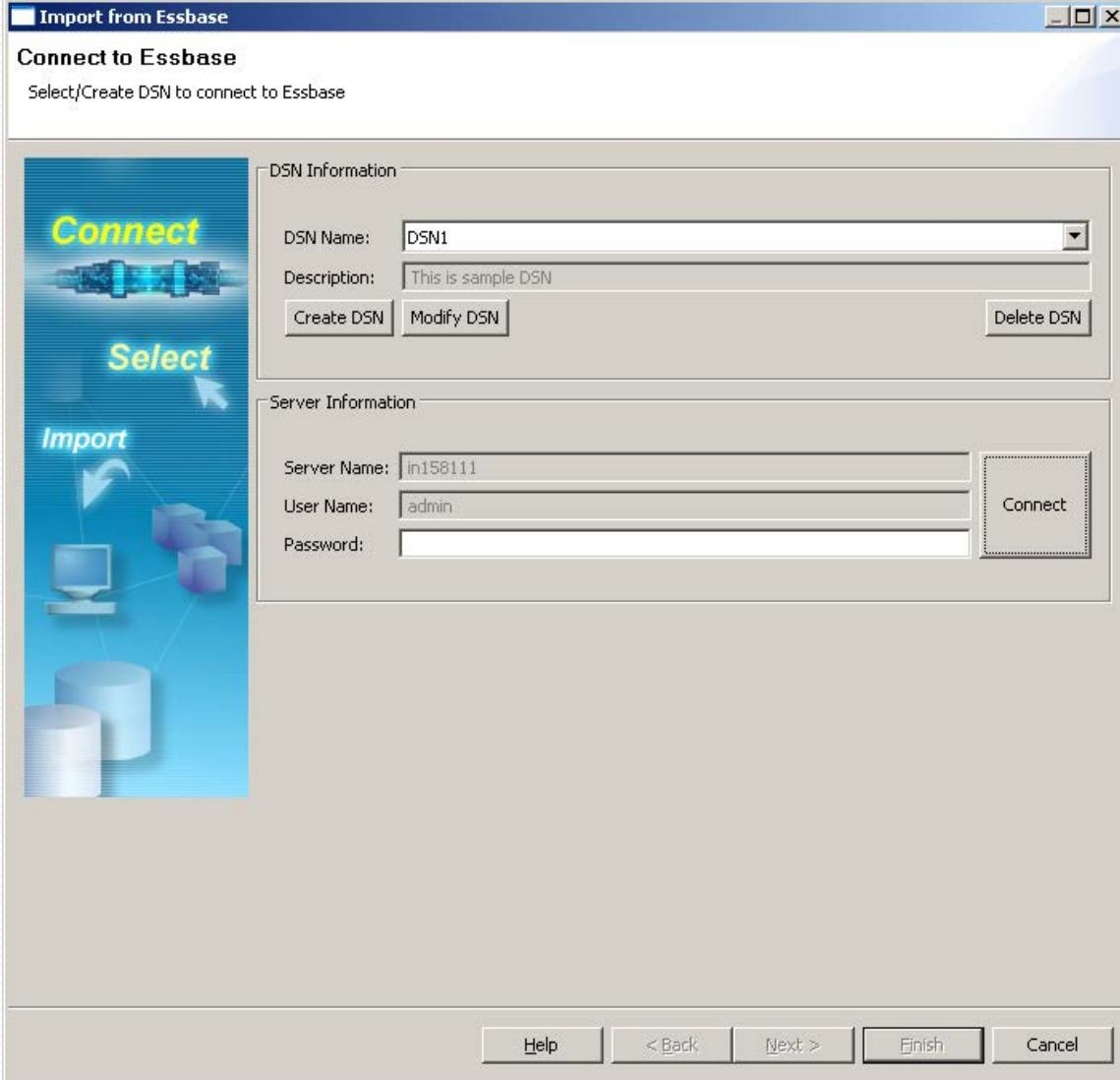
# Project Working

## XML for DSN

```
<?xml version="1.0" encoding="UTF-8" standalone="yes" ?>
- <LIST>
- <DSN Desc="This is sample DSN" Name="DSN1" Pwd="*****" Server="in158111" User="admin">
  --
  --
  Information about the tables goes here
  --
  --
  --
</DSN>
</LIST>
```



# DSN Page



**Import from Essbase**

**Connect to Essbase**  
Select/Create DSN to connect to Essbase

**DSN Information**

DSN Name:

Description:

**Server Information**

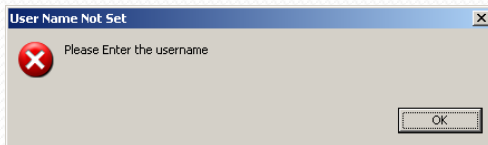
Server Name:

User Name:

Password:



## • DSN Page(Modify Mode)



The main dialog box is titled "Import from Essbase" and "Connect to Essbase". It contains a vertical sidebar on the left with three options: "Connect", "Select", and "Import", each with a corresponding icon. The "Connect" option is highlighted. The main area is divided into two sections: "DSN Information" and "Server Information".

**DSN Information**

DSN Name:

Description:

**Server Information**

Server Name:

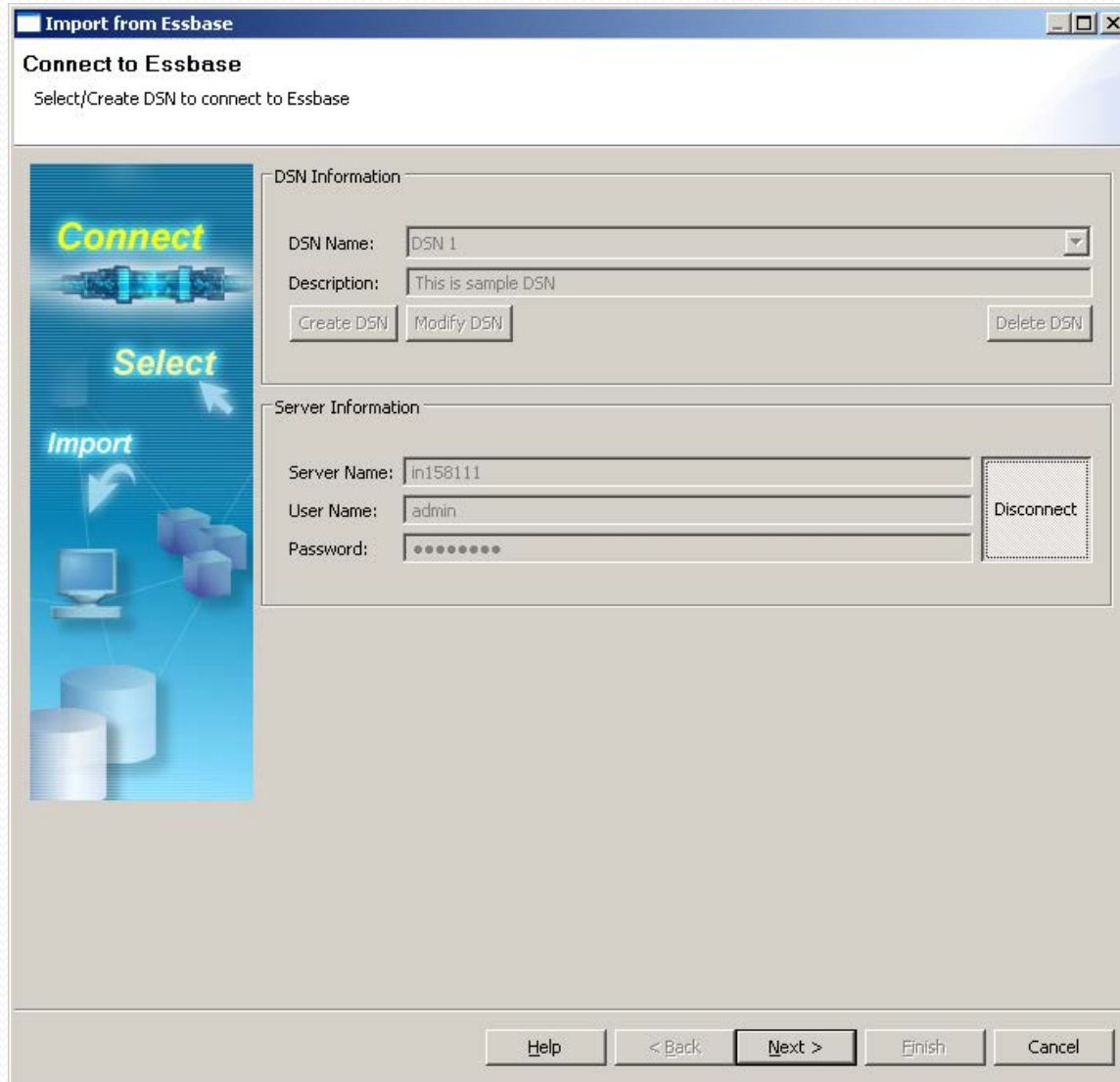
User Name:

Password:

At the bottom of the dialog box are four buttons: , , , and . There is also a  button.



# DSN Page (connected)



**Import from Essbase**

**Connect to Essbase**  
Select/Create DSN to connect to Essbase

**DSN Information**

DSN Name: DSN 1  
Description: This is sample DSN  
Create DSN Modify DSN Delete DSN

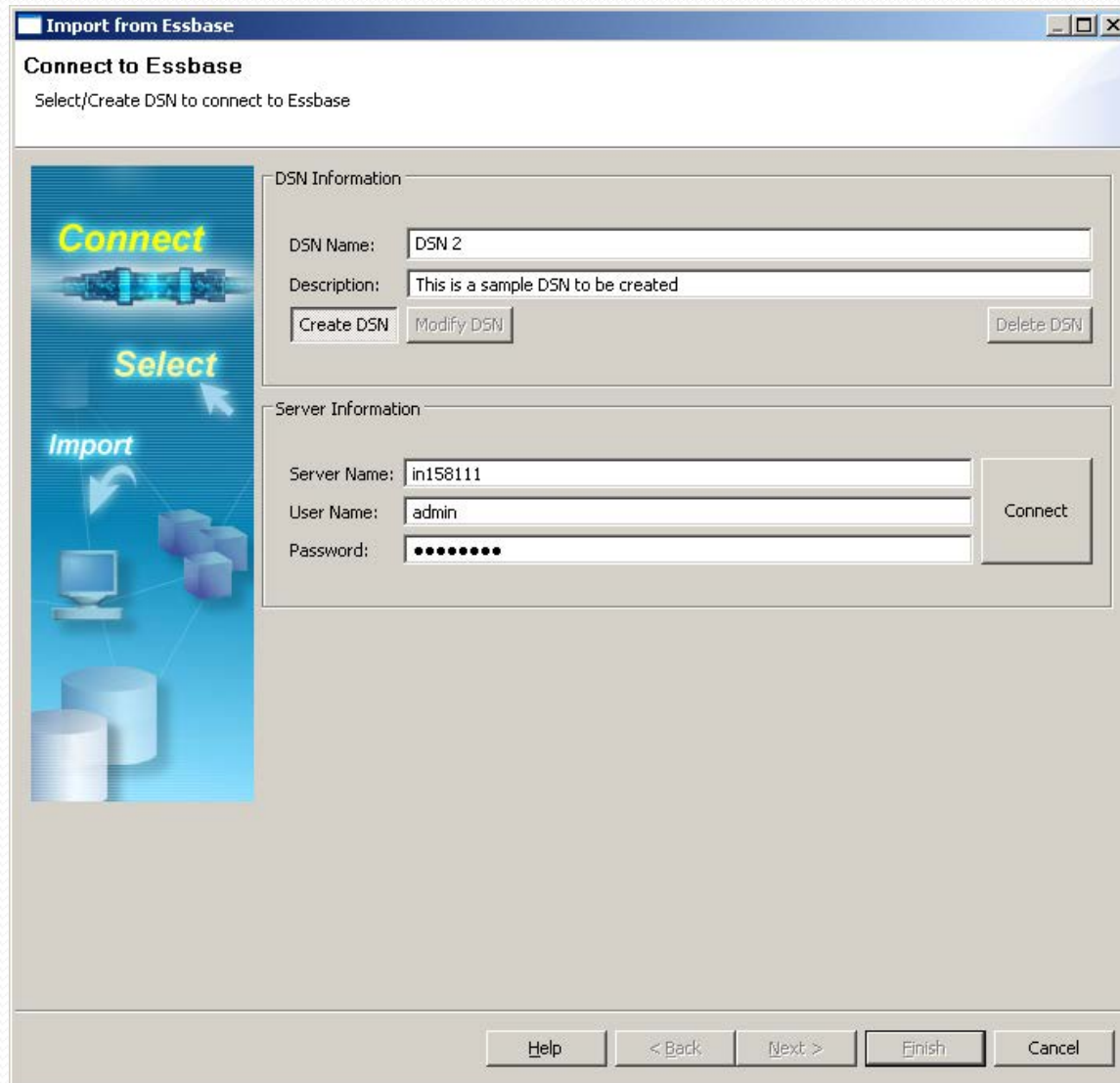
**Server Information**

Server Name: in158111  
User Name: admin  
Password: ..... Disconnect

Help < Back Next > Finish Cancel



# DSN Page(Create Mode)



The screenshot shows a Windows-style dialog box titled "Import from Essbase". Inside, there's a section "Connect to Essbase" with the instruction "Select/Create DSN to connect to Essbase". On the left, a vertical blue bar contains three icons: "Connect" (a network diagram), "Select" (a cursor arrow), and "Import" (a computer monitor). The main area is divided into two sections: "DSN Information" and "Server Information".

**DSN Information**

DSN Name:

Description:

**Server Information**

Server Name:

User Name:

Password:

At the bottom of the dialog are five buttons: , , , , and .

# XML for Table Creation

```
<DSN>
- <TABLE App="Sample" DB="Basic" DBOtl="Basic" DBOtlType="Block Storage Outline" Desc="This is sample Table 1" Filter=""
  Name="Table 1" ParentDsn="in158111" RuleFile="" RuleSeperator="" Type="1">
  --
  --
  Column Details
  --
  --
</TABLE>
</DSN>
```



# Table Creation Page

**Import from Essbase**

**Create Essbase Table**  
Create Essbase Table

Table Information

DSN Name: DSN 2

Table Name: Table 1

Description: This is sample Table 1

Create New Table Modify Table Delete Table

Database Information

Application: Sample

Database: Basic

Outline: Basic

Outline Type: Block Storage Option(BSO)

Table Type: Type 1:Account Dimension Member as a Column

Type 1:Account Dimension Member as a Column

Type 2:Account Dimension as a Column

Type 3:Extract Members

Create

Help < Back Next > Finish Cancel



- Table Types

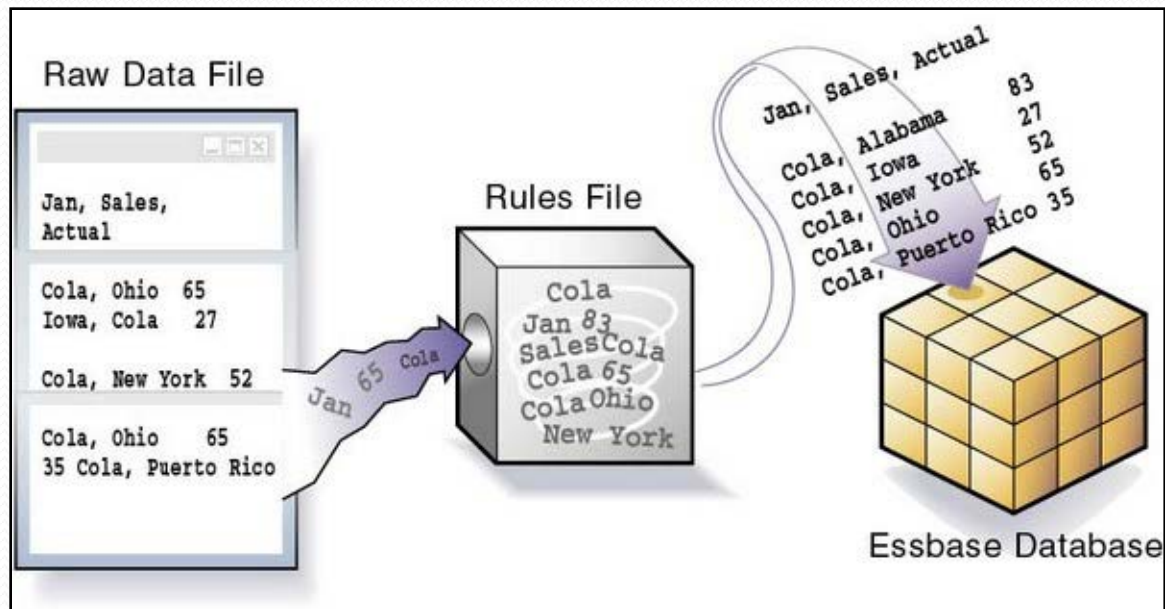
- Type 1
- Type 2
- Type 3

	A	B	C	D	E	F
1	CITY	PRODUCT	MONTH	SALES	COGS	
2	New York	100-10	Jan	271	700	
3	New York	100-10	Feb	258	710	
4	New York	100-10	Mar	270	720	
5	New York	100-10	Apr	284	730	
6	New York	100-10	May	302	740	
7	New York	100-10	Jun	356	750	
8	New York	100-10	Jul	364	760	
9	New York	100-10	Aug	364	770	
10	New York	100-10	Sep	316	780	
11	New York	100-10	Oct	260	790	
12	New York	100-10	Nov	249	800	

	A	B	C	D	E
1	CITY	PRODUCT	ACCOUNT	MONTH	DATA
2	New York	100-10	Sales	Jan	700
3	New York	100-10	Sales	Feb	710
4	New York	100-10	Sales	Mar	720
5	New York	100-10	Sales	Apr	730
6	New York	100-10	COGS	May	740
7	New York	100-10	COGS	Jun	750
8	New York	100-10	COGS	Jul	760
9	New York	100-10	COGS	Aug	770
10	New York	100-10	COGS	Sep	780
11	New York	100-10	COGS	Oct	790
12	New York	100-10	COGS	Nov	800



# Essabse Rule Files



## XML for Column

```
<TABLE>  
<COLUMN AssociatedDimen="Product" ColumnType="1" DTS="" Datatype="Text" DimenName="Product" Filter="<SORTNONE  
  <CHILDREN "Product" Name="Product" ParentTable="Table 1" Precision="80" Scale="0" UDA="" />  
</TABLE>
```





# Column Mapping Page

**Import from Essbase**

**Dimension - Column Mapping**  
Map Dimension to Column

Table Information

Table Name:  Table Type:

Set Outline Filter

☐ Enable Filter

Dimension

☐ Dimension

Filter Expression For Dimensions

Account Dimension

☐ Account Dimension

Filter Expression For Account Dimension

Level:

Dimension

Dimension	Type
Inventory	None
Ratios	None
Product	None
ProductAlias	Alias
100	None
200	None
300	None
400	None
Diet	None

Column Mapped

Dimensi...	Column Name	Data Type	Scale	Precision
Year	Year	Text	0	80
Product	Product	Text	0	80
Caffeina...	Caffeinated	Boolean	0	1
Measures	Profit	Numeric	0	15
Intro Date	Intro Date	Date	0	10
Population	Population	Numeric	0	15
Pkg Type	Pkg Type	Text	0	80
ProductA	ProductAlias	Text	0	80



# Column Popup(with DTS and UDA)

**Column Information**

Column Name:

Column Type:

Column Scale:

Column Precision:

**UDA Information**

☐ User Defined Attributes

**Dynamic time Series Members**

DTS List:

Member Name:

**Dynamic time Series Tag**

DTS	DTS Member
Q-T-D	May

**Column Information**

Column Name:

Column Type:

Column Scale:

Column Precision:

**UDA Information**

☒ User Defined Attributes

☒ Major Market  
☐ Small Market  
☒ New Market

**Dynamic time Series Members**

DTS List:

Member Name:

**Dynamic time Series Tag**

DTS	DTS Member

# Essbase Report Page

**Import from Essbase**

**Report Script Page**  
View/Modify Essbase Report Script

**Table Information**

Table Name:

Table Type:

**Member Selection**

☐ Get Data For DTS Members Only

Column Name	Dimension Name
<input type="text"/>	

Member Sort Order:  Member Sort Option:

Member Selection Command:  Command Parameters:

**Data Filter**

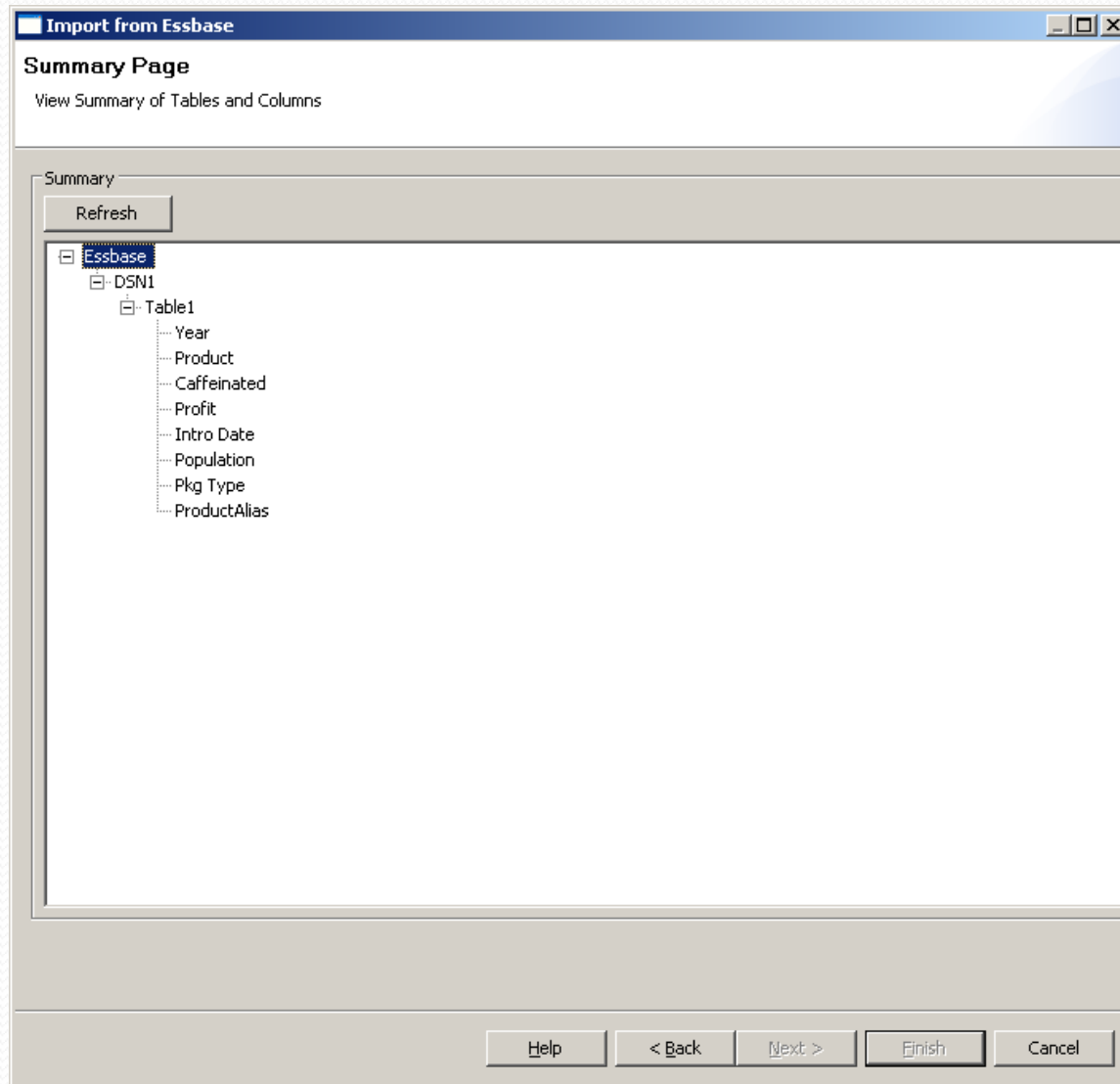
Data Range Command:

Command Parameters:

**Report Script** | **Preview**



# Essbase Summary Page



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# Automation of Build Process and understanding make file architecture used in Informatica

```
Message#      {"Message to be a part of standard printf C++ function"}
```

```
#define      MSG_NAME      Message#
```



```
<?xml version="1.0" ?>
<group name="ebiz_msg.msg" prefix="EB_">
  <!-- WARNING! Do not change parameters order during translation! This message is going to be used in C++ code.
  -->
  <error code="40001" key="ERR_CONNECTION_FAILED" text="The Integration Service could not connect to Oracle E-Business Suite." />
```

**sed /s <Source String> /<Target String> /g <Source File>  
><Target File>**



# **Compilation of three of the Informatica Adapters on different platforms for version 8.6.1 recertification**

AIX

HP-UNIX

Windows 64-bit

:XLC

:ACC

:ICL





# Results, Conclusions and Future Scope of Work

- The prototype does not fully implement the functionality and is just for demonstration purposes.
- Actual implementation will require rigorous exception handling and error checking as well as proper logging into various logging levels.
- Only Type 1 sources are currently running, others need to be supported.
- The filter conditions are currently not functional.
- Rigorous testing is still to be done to use the experience with the old adapter into the new one.
- New features that are suggested by the clients can be incorporated





# Thank You