

**Business Objects
XI Designer**

Lesson 4: Managing Universes

Lesson Objectives

- List the coverage for this lesson
 - Maintaining the existing Universes
 - Exporting and sharing new Universes
 - Linking of Universes



4.1: Managing a Universe

Overview

■ Saving and Sharing the Universe:

- .unv file is created on the local machine.
- .unv file has file name and long name for a universe.
- The file needs to be exported (deployed) to the repository for sharing.
- Exported universes are stored at a central location.



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Managing Universe:

- When you save a Universe, Designer stores it as a file with a .unv extension. In Desktop Intelligence or Web Intelligence, the end user identifies the Universe by the Universe name. By default, Designer stores the files that you save in the Universe sub-folder.
- A file name can have at most 100 characters followed by .unv extension. A long name can have up to 35 characters and used to identify a universe by an end user.
- The Universe saved locally is available to Desktop Intelligence users only. In order to share the universe and make it available to other users, a developer needs to export the universe to the repository (CMS).

4.2: Deploying a Universe

Overview

- There are two ways for distributing a Universe:
 - Through the file system
 - By using the Central repository



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Deploying a Universe:

- When a Universe has completed the design, build, and test phases, a developer needs to distribute it to Desktop Intelligence and Web Intelligence users.
- A .unv file can be shared with other users to make it available to other Desktop Intelligence Users. In order to make it available to Web User, it needs to be exported.

4.2: Deploying a Universe

Using File system

- You can distribute Universes to users or designers through the file system.
- You can set a password for a Universe that has to be shared by using the Save tab of the Options dialog box.



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Using File System:

This method does not have the same degree of security and control as the repository does. It is the simplest way to make the universe available to selected users.

4.2: Deploying a Universe

Using Repository

- The Repository is a centralized set of relational data structures stored on a repository database.
 - This enables Desktop Intelligence and Web Intelligence users to share resources in a controlled and secured environment.
 - When a universe is exported, the universe is moved to the selected universe folder on the Repository created in the Central Management System (CMS).
 - Each subsequent export updates the version number.



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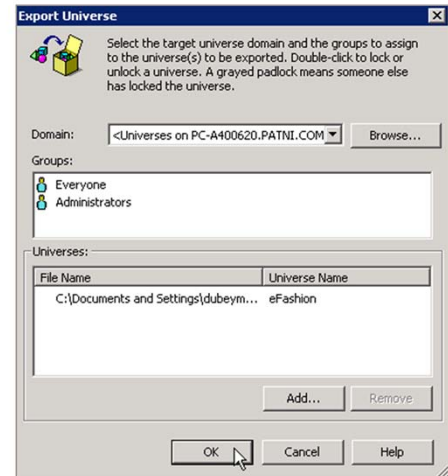
Using Repository:

- A repository is a centralized storage location to store various universes. An access to a universe is controlled by Central Management Console. Once the universe is exported, it is moved to the selected universe folder on CMS.
- A CMS also takes care of updating the universe version number each time a universe is exported.

4.3: Exporting a Universe

Overview

- By exporting a Universe to the repository, you make it available to end users or other designers.
- A universe needs to be imported if you wish to update it.



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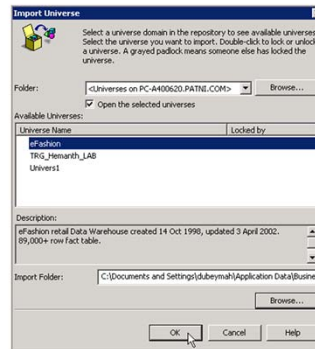
Exporting a Universe:

- The Export and Import functionalities of Designer let you move Universes to and from the Repository.
- The following rules apply to the Universe identifiers stored in the Universe domains:
 - A Universe identifier is unique across all Universe domains.
 - The combination of file name and long name must be unique within a Universe domain.
- In order to make changes, one needs to import the universe from the repository.

4.4: Importing a Universe

Overview

- A Universe that you import becomes available to you as a file in the Universe subfolder or in any other folder that you specify.

**Importing a Universe:**

- In order to make changes in the already exported universe, a developer needs to import it from the repository. This makes the universe available in the local file system of a developer.
- It can be exported again after due modification or enhancement.

4.4: Importing a Universe

Demo on Universe Distribution

- Demonstration using Universe Distribution



4.5: Setting up Restrictions

Concept

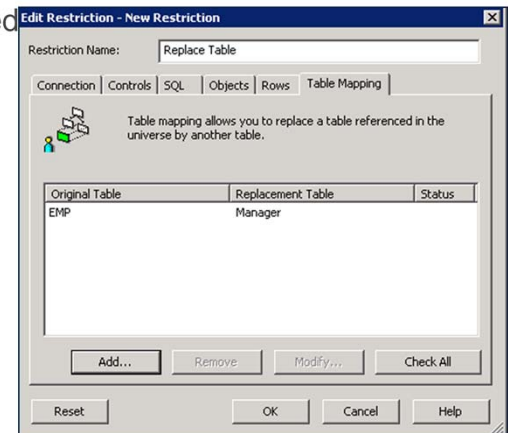
- A Restriction set is a named group of restrictions that apply to universe components.
- A Restriction set can be applied to a user or a group.
- Applying Restrictions limits the access for universe objects or resources to a user or a group of users.
- Restrictions can be applied for the objects, rows, query types, connection, and so on.
- Once assigned, restrictions get applied when the users log-in.

4.5: Setting up Restrictions

Concept (Contd...)

- A Restriction set can be applied

- Connection
- Query controls
- SQL generation options
- Object access
- Row access
- Table Mapping



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Setting up Restrictions:

A Restriction set can be applied on the following:

- **Connection:** It enables to select an alternative connection for the universe. (Different for Development team and Testing team)
- **Query controls:** It provides options to limit the size of the result set and query execution time.
- **SQL generation options:** It provides options to control the SQL generated for queries.
- **Object access:** It specifies the objects that will not be accessible in this Universe.
- **Row access:** Defining a WHERE clause on the RDBMS table allows you to restrict access to rows, and limit the results returned by a query.
- **Table Mapping:** Table mapping allows you to replace a table referenced in the universe by another table.

4.6: Linking of Universes

Concept

- Linked Universes are Universes that share common components such as parameters, classes, objects, or joins.
- Among linked Universes, one universe has the role of a core universe, the other a derived universe.
- You can use one of the following three approaches while linking Universes:
 - The kernel approach
 - The master approach
 - The component approach



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Linking of Universes:

- Linking a Universe is useful when a set of objects are common across multiple universes. When changes are made in the Core Universe, they are automatically propagated to the derived universes.
- A Kernel or Master Universe represents a re-usable library of components. Derived Universes may contain some or all the components of the Kernel or Master Universe, in addition to any components that have been added to it.

4.6: Linking of Universes

Core Universe - Definition

- Core Universe is a universe to which other universes are linked.
- The Core Universe represents a re-usable library of components.



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Core Universe:

- A Core Universe contains a list of objects common to multiple universes. Once a derived universe is build using the core universe, all objects are made available in the derived universe.
- A Core Universe can be a Kernel or Master Universe depending on the way the Core Universe components are used in the derived universes.

4.6: Linking of Universes

Derived Universe - Definition

- A Derived Universe is a universe that contains a link to a Core Universe.
- The link allows the Derived Universe to share common components of the Core Universe.



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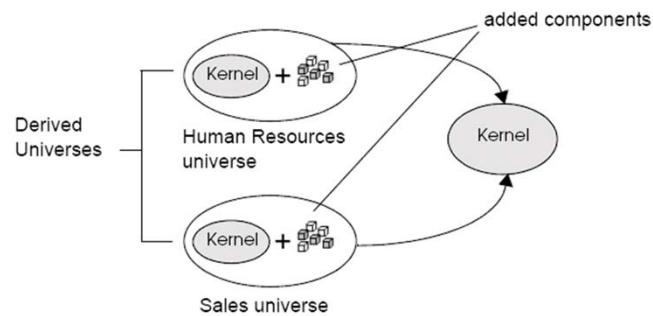
Derived Universe:

After a Core Universe is built, a Derived universe can make use of the objects available in the Core Universe. The number of objects available in the derived universe depends upon the way the Core Universe is linked.

4.6: Linking of Universes

Kernel Approach

- With the kernel approach, one Universe contains the core components that are the common in all Universes.
- A Derived Universe can have additional components.



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Kernel Approach:

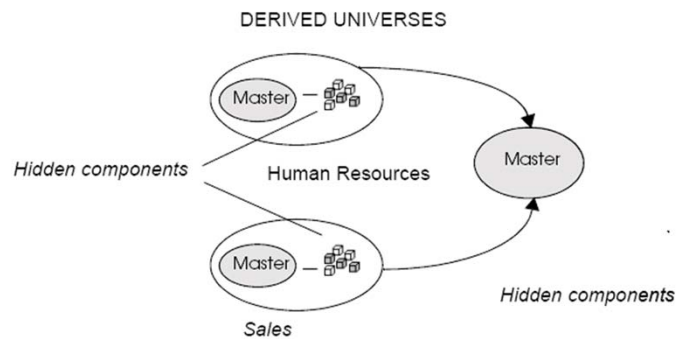
The Derived Universes that you create from this Kernel Universe contain the core components as well as their own specific components.

For Example: The Human Resources Universe and Sales Universe are derived from a Kernel Universe. They contain core components of the Kernel Universe as well as their own specific components. Any changes you make to the Kernel Universe are automatically reflected in the core components of all the Derived Universes.

4.6: Linking of Universes

Master Approach

- One Master Universe holds all possible components.
- In the Derived Universes certain components of Master Universe might be hidden as per relevance.



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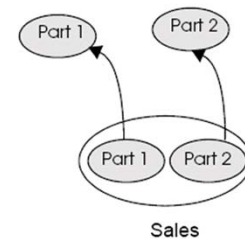
Master Approach:

- The Master Approach is another way of organizing the common components of linked Universes.
- The Human Resources Universe and Sales Universe are derived from a Master Universe. Some of the components may be hidden in the Derived Universe. Any changes you make to the Master Universe are automatically reflected in the core components of all the Derived Universes.
- The components visible in the Derived Universe are sub-set of the Master Universe. There are no components added in the Derived Universe.

4.6: Linking of Universes

Component Approach

- Component Approach involves merging two or more Universes into one Universe.
- It is used when each Universe is designed with limited functionality or keeping specialization in mind.

**Component Approach:**

- The Component Approach involves merging two or more Universes, allowing to combine the work of multiple Designers into a single new Universe.
- In the figure in the above slide, the Sales Universe was created by merging two Universes: Part 1 and Part 2.

4.6: Linking of Universes

Pros and Cons of Linking Universe

■ Advantages:

- Reduces development and maintenance time
- Centralizes frequently used components in a core universe
- Facilitate specialization

■ Disadvantages:

- Supports only one level of linking
- Requires Core and Derived Universes to be in the same repository
- Requires exporting and re-importing of the core universe at least once prior to development of Derived Universe.



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Pros and Cons of Linking Universe:

Advantages:

Linking of the Universe enables the developer to build a Core Universe with commonly used objects. It reduces the development and maintenance time of Derived Universe. A developer can even build the specialized universe specific to functional needs.

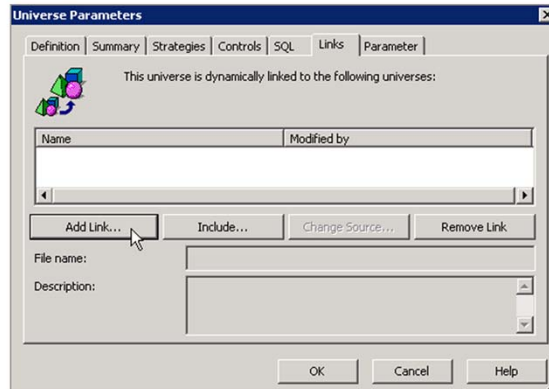
Disadvantages:

Only one level of linking is supported. One cannot create Derived Universe from an already Derived Universe. The Core Universe needs to be exported and re-imported prior to development of a Derived Universe.

4.7: Adding Link to a Universe

Method

- A universe can be linked to pre-existing universe only.
- To link a universe, select File → Parameters → Link.

**Adding Link to a Universe:**

In order to link a Core Universe, a developer needs to build a Core Universe, and export it.

4.7: Adding Link to a Universe

Including Universes

- Other than linking Universes, you can include the components of the Kernel Universe in a Derived Universe.
- When you do this, Designer copies the components of the Kernel Universe to the Derived Universe.



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Including Universes:

- The resulting components in the Derived Universe are independent of those in the Kernel Universe. Therefore, modifying a Kernel Universe has no effect on any Universes derived from it.
- You may decide to include one Universe within another for one of the following two reasons:
 - You simply wish to copy the contents of a given Universe into an active Universe.
 - You wish to end the dynamic link between two Universes.

4.7: Adding Link to a Universe

Demo on Linking of Universes

- Demo on linking the Universes



Summary

- In this lesson, you have learnt:
 - Maintaining the existing Universes
 - Exporting and sharing new Universes
 - Linking of Universes



Review Question

- Question 1: Master approach involves merging two or more Universes into one Universe.
 - True / False
- Question 2: ____ Universe represents a re-usable library of components.
- Question 3: You can distribute your Universe by publishing it to the corporate repository.
 - True / False

