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EnterpriseOne  
Configurable Network Computing  
Implementation 8.9 PeopleBook

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EnterpriseOne  
Configurable Network Computing Implementation 8.9 PeopleBook  
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# Table of Contents

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<b>Configurable Network Computing Implementation</b>	<b>1</b>
ERP 9.0 Roles.....	1
Technology Roles.....	2
Development Roles.....	2
Functional Roles.....	2
Systems Integration Roles.....	2
<b>Path Code Setup</b>	<b>4</b>
Understanding How ERP 9.0 Uses Path Codes.....	4
Understanding Path Codes at Installation.....	4
Understanding Path Codes at Runtime.....	4
Understanding Path Codes at Development.....	5
Working with Path Codes.....	5
Adding a New Path Code.....	5
Creating a Path Code Definition.....	7
Modifying Tables for the New Path Code.....	7
<b>Object Configuration Manager</b>	<b>12</b>
Understanding the Object Configuration Manager.....	12
Example: Application Request for Logic.....	12
Working with the Object Configuration Manager.....	14
Mapping Objects.....	15
Mapping Generic Text.....	19
Running Object Configuration Manager Reports.....	20
Setting Processing Options for Object Configuration Manager Reports.....	20
Running the Object Configuration Mapping Comparison Report.....	25
Running the Object Configuration Global Update Report.....	25
Running the Object Configuration Delete Report.....	26
Running the Object Configuration Copy Report.....	27
Running the Verify OCM Report.....	27
Running the Object Configuration System Table Update Report.....	30
Running the Create OCM Records for Business Function Report.....	31
Running the Job Master Deletion by Days Old Report.....	32
Running the OCM Category Update/Delete Report.....	33
Partitioning Application Logic on Servers.....	34
Two-Tier: Typical Network Traffic.....	35
Three-Tier: Network Traffic Segmentation.....	35
How a Master Business Function Operates.....	35
Server Behavior with Partitioned Application Logic.....	36
When Not to Distribute Logic.....	39
Issues with Distributed Logic.....	39
Business Function Processing Problems.....	39

Failure to Connect to the Server.....	40
Failure to Load the Business Function .....	42
Failure While the Business Function is Running.....	43
Resetting the Server Cache .....	43
<b>Environment Setup</b>	<b>44</b>
Understanding Environments .....	44
Where ERP 9.0 Stores Environment Definitions .....	44
Working with an Environment.....	45
Adding an Environment .....	46
Copying an Environment .....	46
Copying a New Environment to a New Path Code.....	47
Deleting an Environment .....	49
<b>Environment Director</b>	<b>51</b>
Running the Environment Director from Different Environments .....	55
Shared vs. Environment Data Source .....	56
Database Configuration and Permissions .....	56
Data Source Customization.....	56
Data Class .....	56
Create A New Data Class.....	56
Data Source Templates By Environment .....	57
Table Data Classes .....	57
Data Load.....	58
How OCM is Created .....	58
New and Copied .....	58
TBLE, GT When Creating New Environments .....	58
TBLE, GT When Copying Environments.....	58
When Creating New or Copying Existing Environments .....	58
<b>Data Sources</b>	<b>61</b>
Understanding Data Sources .....	61
Understanding Database Data Sources .....	61
Understanding Logic Data Sources.....	62
Required Data Source Types .....	62
Planning ERP 9.0 Data Sources .....	67
Working with Data Sources .....	68
Data Source Naming Conventions .....	68
Adding or Modifying a Data Source.....	68
Running Data Source Reports .....	74
Setting Processing Options for Data Source Reports .....	74
Running the Data Source Master Comparison Report.....	76
Running the Data Source Master Report .....	76
<b>Middleware</b>	<b>78</b>
Understanding JDENet Communication Middleware .....	78

JDENet Communication Middleware.....	79
Understanding JDEBase Database Middleware .....	81
<b>Modes of Processing</b>	<b>82</b>
Direct-Connect Processing.....	82
Store-and-Forward Processing.....	82
Batch-of-One Processing .....	83
Zero-Client Processing.....	84
Working with Direct-Connect Processing.....	84
Recommendations for Data and Logic Distribution .....	84
Setting Up Direct-Connect Processing.....	84
Object Mappings for Direct-Connect Environments .....	85
Working with Store-and-Forward Processing.....	85
Setting Up Store-and-Forward Processing.....	86
Administering Store-and-Forward Processing.....	88
Technical Data Tables Needed for Store-and-Forward.....	93
Business Data Tables Needed for Store-and-Forward .....	95
<b>Typical Customer Configuration</b>	<b>100</b>
Typical ERP 9.0 Configuration .....	100
Understanding Your Environments.....	100
Understanding Typical Data Sources .....	108
The Configuration at a Glance.....	111



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# Configurable Network Computing Implementation

The Configuration Planning and Setup suite is designed for use by Configurable Networking Computing (CNC) specialists, ERP 9.0 system administrators, and network and server administrators. The assumption throughout these guides is that the initial ERP 9.0 installation is complete and the standard data sources, path codes, and environments are defined. These guides tell you how to make changes or additions to the configuration setup after the initial installation.

The Configuration Planning and Setup suite consists of the following guides:

- *Configurable Network Computing Implementation Guide*  
Written primarily for CNC specialists.
- *System Administration Guide*  
Written primarily for ERP 9.0 system administrators.
- *Package Management Guide*  
Written primarily for ERP 9.0 system administrators and others who manage custom modifications to the ERP 9.0 environments.
- *Server and Workstation Administration Guide*  
Written primarily for network administrators.

The *Configurable Network Computing Implementation Guide* focuses primarily on how to set up your enterprise after you have loaded ERP 9.0. Although it is aimed primarily at CNC specialists, those with other job functions might find the information useful or essential to their positions.

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## ERP 9.0 Roles

The ERP 9.0 implementation methodology defines specific roles that are involved in the design, installation, and configuration of an ERP 9.0 solution. These roles are generally divided into four implementation teams:

- Technology – installation and upgrades, system administration, security, change management
- Development – data conversions, interfaces, custom modifications
- Functional – business process, application configuration, integration and testing, end-user training
- Systems Integration – data center design, hardware support, network infrastructure, 3<sup>rd</sup> party software

Each of these implementation teams is staffed by both consultant and customer roles. As an implementation progresses to completion, the consultant roles diminish, while the customer roles remain and often increase in level of responsibility. It is critical, therefore, that the customer ensures that each role to be assumed by its personnel is adequately trained.

## Technology Roles

Typically, the technology project team is led by a single consulting role, the technology specialist, and two customer roles, the system administrator and the change management administrator. The technology specialist and system administrator are involved with installing ERP 9.0 and setting up environments, users, security, distributed processing, data replication, and other system administration and operations support topics. The technology specialist and change management administrator are responsible for setting up version control, applying software updates and service packs, reviewing and promoting code and data across change management environments, and deploying code and data changes to the servers and workstations involved in the ERP solution.

## Development Roles

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The development project team is typically led by a custom solution consultant and staffed by one or more application developers. The custom solution consultant resolves business issues by developing applications. Their primary responsibilities include developing a data migration strategy, designing interfaces to legacy and third-party systems, and designing custom modifications with upgrades in mind. The application developers migrate legacy data, code and test interfaces, code and test custom modifications, and integrate all code changes into the ERP solution.

While the change management administrator performs the version control functions that control the acceptance, promotion, and deployment of software changes, the custom solution consultant must help develop the internal procedures for realizing an application development life cycle within your business. In addition, development team members must be aware of change management tools and procedures, as well as how the technology components affect the design and operation of interfaces and custom modifications.

## Functional Roles

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The functional project team is led by a consulting project manager and a customer project manager, and staffed by application specialists and customer process owners. These project members are responsible for the design, configuration, and deployment of ERP 9.0 applications, as well as the modeling of all business processes that will be realized through the ERP 9.0 application set. After ERP 9.0 is installed, configured, and rolled out, the application specialists continue in their role as product experts. Although application specialists do not implement technology-level solutions, they must understand how ERP 9.0 handles distributed processing, data replication, environments, and so on, because these application issues influence technology design and configuration. In addition, application specialists and process owners must become expert at troubleshooting potential problems and identifying the difference between a technology issue and an application issue

## Systems Integration Roles

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The System Integration Roles team is responsible for many tasks that are outside the scope of J.D. Edward services. Third-party consultants provide some of these services and supplement J.D. Edwards staff as CNC consultants, network architects, custom modification consultants, and so on. In addition, customers provide hardware and network infrastructure support.

Implementing ERP 9.0 includes many tasks that are outside the scope of J.D. Edwards software and services. Systems Integration (that is, third-party) consultants provide these services to help you align your infrastructure to optimally support ERP 9.0 applications and runtime services, as well as expand the overall business solution with complementary third-party products. These consultants are able to assist with such services as data center design, IT process improvement, and network infrastructure. They are also able to assist with the installation, configuration, and integration of third-party hardware and software products that enhance and extend the J.D. Edwards software solution. These project members should be aware of the architecture and technical behavior of J.D. Edwards software and of how the various ERP technology components interact with operating systems, database management systems, third-party middleware, and the network.

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## Path Code Setup

Path codes keep track of sets of objects and their locations in ERP 9.0. For every set of objects in your configuration, ERP 9.0 requires a path code definition in the Object Path Master File (F00942) table.

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## Understanding How ERP 9.0 Uses Path Codes

A path code is a pointer to a set of objects. For each set of objects in your configuration, you must define a path code in the Object Path Master File (F00942) table. For example, J.D. Edwards recommends a separate path code definition for each of the following sets of objects:

- J.D. Edwards pristine objects
- Production objects
- Development objects
- Conference Room Pilot (CRP) objects

The Path Code Master (P980042) application uses the Object Path Master File (F00942) table.

## Understanding Path Codes at Installation

ERP 9.0 requires that you define a path code in the Object Path Master for each set of central objects. A set of ERP 9.0 objects consists of a central-objects data source and a directory of objects, which includes business function source and include files, object files, and dynamic link libraries (DLLs). A path code definition contains the data source name of the central-object specifications and the directory path to the objects.

When you build a package for the workstation, you must specify a path code. ERP 9.0 uses this path code to determine which set of central objects to use as the source for the package and the directory to use as the destination for the package.

If ERP 9.0 opens an application that does not reside on the workstation and Just-In-Time Installation (JITI) is set for the workstation, the deployment data source will install the needed objects to the workstation at runtime.

## Understanding Path Codes at Runtime

ERP 9.0 uses path codes at runtime in the following ways:

- To validate available environments

When you log on to ERP 9.0, it checks the path codes that you have defined in your environments against the path code directories that are physically installed on the workstation. If that workstation does not have a path code that you defined in one of your environments, that environment is not displayed when you log on to ERP 9.0.

- To determine the directory location of a requested object

## Understanding Path Codes at Development

When you check out an object for development, you use the Object Librarian to specify a path code. ERP 9.0 uses the path code to determine where the central objects are stored and checks out the object from those locations (both database and file server).

When you check in an object, you use the Object Librarian to specify a path code. ERP 9.0 uses the path code to determine the location of the central objects in which to place the objects.

## Working with Path Codes

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You might want to create path codes to supplement the one you created during installation. The tasks in this chapter describe how to add a path code and create a path code definition. When you add a new path code, you also must modify some Object Librarian tables.

### Adding a New Path Code

During installation, you created one path code (PD7334). You can use the information from this path code to create another one, such as DV7334. When adding a new path code, always do so by copying existing objects, such as from your production path code. You can copy from any existing path code. You cannot add a new path code with an incomplete set of objects.

#### ► To add a new path code

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##### Note

For this task, DV9 is the new path code.

---

1. Create a new directory on your deployment server for your new path code. For example, create a directory called DV9.  
  
Each central-object data source should have an associated directory path on the deployment server. The PD9 directory on your deployment server contains all of the ERP 9.0 objects (including business function source and include files, object files, and DLLs) and standard packages. Use this directory as a template for creating new central-object directories.
2. Copy the subdirectories of the PD9 path code into the new directory (DV9) that you created.
3. Create a new Oracle or SQL database (or increase the size of your existing Oracle or SQL databases) to hold a set of central-object specifications for the new path code.
4. Create a new table owner for the new set of central-object specifications (DV9).
5. Modify the Object Librarian - Status Detail (F9861) and Versions List (F983051) tables for the new DV9 path code.
6. Copy your production path code (PD9) set of central-object specifications to that database.

7. Verify that the installation process created a new ERP 9.0 data source for the newly copied central-objects database (Central Objects - DV9).

If the process did not create this data source, you must create it.

8. Using the Object Path Master, modify the DV9 path code definition. Verify that the Deployment Data Source field specifies your new data source for the newly copied central-objects data source (DV9). Verify that the Location and Server Share Path fields specify the location of your new DV9 path code.
9. Verify that the package definitions (DV9\_A and DV9\_B) provided with the installation exist.
10. Copy existing packages from your PD9 path code to your new DV9 path code. Modify your new path code package INF files by changing the path code directories to that of your new path code.
11. Verify that the installation process created the DV9 environment.

If the installation process did not create the environment, create it by copying an existing environment. Make sure you change the path code to the new path code.

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**Note**

Remember to add new environments to a user profile so that the environment is available for selection when the user logs on to ERP 9.0.

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12. Modify your Object Configuration Manager mappings for the new environment.

For tables mapped to the previous central-objects data source, add records that point the tables to the newly created central-objects data source. Map the Versions List table (F983051) and Processing Option Text table (F98306) to point to the Central Objects - DV9 data source. You will want the default data source to be Business Data - Test.

---

**Note**

OCM does not determine the location of the F987\* series tables. The deployment data source determines the location of these tables, including the Central Objects specifications tables.

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**See Also**

- ❑ *Copy Path Code Objects* in the *ERP 9.0 Installation Guide* for more information about creating a new directory on your deployment server
- ❑ *Modifying Tables for the New Path Code* in the *Configurable Network Computing™ Implementation Guide* for more information about modifying the Object Librarian
- ❑ *Adding a Database Data Source* for more information about verifying a new data source
- ❑ *Overview of Creating and Deploying a Package* in the *Package Management Guide* for more information about verifying package definitions
- ❑ *Package Build* in the *Package Management Guide* for more information about copying existing packages

- ❑ *Adding an Environment* in the *Configurable Network Computing™ Implementation Guide* for more information about verifying the new environment
- ❑ *Working with the Object Configuration Manager* in the *Configurable Network Computing™ Implementation Guide* for more information about determining the location of specifications tables

### **Before You Begin**

- ❑ Observe the following naming conventions when adding a new path code:
  - Limit to 10 characters
  - Use only uppercase

## **Creating a Path Code Definition**

The Object Path Master File (F00942) table contains all path code definitions for your configuration. This table resides in your system data source.

### **► To create a path code definition**

---

*From the Environments menu (GH9053), choose Path Code Master (P980042).*

1. On Work With Path Codes, click Add.
2. On Path Code Revisions, complete the following fields and click OK:
  - Path Code
  - Description
  - Location
  - Release
  - Deployment Data Source
  - UNC Flag

## **Modifying Tables for the New Path Code**

You must modify the Object Librarian - Status Detail (F9861) table and the Versions List (F983051) table to reflect the new path code. This modification allows developers to perform the check-in/check-out process with valid Central Objects information.

### **► To modify the Object Librarian - Status Detail table (F9861)**

---

1. Log on as follows depending on which platform you are using:
  - For Oracle  
Log on to SQL Plus Utility.
  - For Query Analyzer  
Log on to SQL Server as user JDE.

- For DB2®/400  
Invoke SQL by typing STRSQL.
- For DB2®/UDB  
Windows:  
  
Start the command window with “Start | Programs | IBM DB2 | Command Window” and connect to OWSH9.  
  
UNIX®:  
  
Log on as the instance owner and connect to OWSH9.

2. Save a backup copy of master table F9861 as follows:

- Oracle  
CREATE TABLE F9861SAV AS SELECT \* FROM OBJ9.F9861
- Query Analyzer  
SELECT \* INTO F9861SAV FROM OBJ9.F9861
- DB2®/400  
Press F13.  
  
Choose option 1.  
  
Change SELECT output to 3.  
  
Press Enter.  
  
Change output file to OL9/F9861SAV  
  
Press Enter.  
  
Press Enter.  
  
Select \* FROM OL9/F9861  
  
Press Enter.  
  
Press F13.  
  
Choose option 1.  
  
Change SELECT output to 1.  
  
Press Enter.  
  
Press Enter.
- DB2®/UDB  
DB2 “CREATE TABLE OBJ9.F9861SAV LIKE OBJ9.F9861”

DB2 "INSERT INTO OBJ9.F9861SAV SELECT \* FROM OBJ9.F9861"

3. Get a record count of master table F9861 as follows:
  - Oracle and Query Analyzer  
SELECT COUNT(\*) FROM OBJ9.F9861
  - DB2®/400  
SELECT COUNT(\*) FROM OL9/F9861
  - DB2®/UDB  
DB2 "SELECT COUNT (\*) FROM OBJ9.F9861"
4. Create a temporary table that contains a subset of the master F9861 records as follows:
  - Oracle  
CREATE TABLE TEMPF9861 AS SELECT \* FROM OBJ9.F9861 WHERE  
SIMKEY = 'DEPLOYMENTSERVERNAME' AND SIPATHCD = 'PD9'; COMMIT  
  
SELECT COUNT(\*) FROM TEMPF9861
  - Query Analyzer  
SELECT \* INTO TEMPF9861 FROM OBJ9.F9861 WHERE SIMKEY =  
'DEPLOYMENTSERVERNAME' AND SIPATHCD = 'PD9'
  - DB2®/400  
Press F13.  
  
Choose option 1.  
  
Change SELECT output to 3.  
  
Press Enter.  
  
Change output file to OL9/TEMPF9861.  
  
Press Enter.  
  
Press Enter.  
  
SELECT \* FROM OL9/F9861 WHERE SIMKEY =  
'DEPLOYMENTSERVERNAME' AND SIPATHCD = 'PD9'  
  
Press Enter.
  - DB2®/UDB  
DB2 "CREATE TABLE OBJ9.TEMPF9861 LIKE OBJ9.F9861"  
DB2 "INSERT INTO OBJ9.TEMPF9861 SELECT \* FROM OBJ9.F9861 WHERE  
SIMKEY = 'DEPLOYMT' AND SIPATHCD = 'PD9' "
5. Update the temporary F9861 records with the new path code as follows:
  - Oracle

```
UPDATE TEMPF9861  
SET SIPATHCD = `DV9`  
  
COMMIT
```

- Query Analyzer

```
UPDATE TEMPF9861  
SET SIPATHCD = `DV9`
```

- DB2®/400

```
UPDATE OL9/TEMPF9861  
SET SIPATHCD = `DV9`
```

Press Enter.

- DB2®/UDB

```
DB2 "UPDATE OBJ9.TEMPF9861 SET SIPATHCD = 'DV9' "
```

6. Add the temporary F9861 records to the master F9861 records as follows:

- Oracle

```
INSERT INTO OBJ9.F9861  
AS SELECT * FROM TEMPF9861;  
  
COMMIT;
```

- Query Analyzer

```
INSERT INTO OBJ9.F9861  
SELECT * FROM TEMPF9861
```

- DB2®/400

```
INSERT INTO OL9/F9861;  
SELECT * FROM OL9/TEMPF9861
```

- DB2®/UDB

```
DB2 "INSERT INTO OBJ9.F9861 SELECT * FROM OBJ9.TEMPF9861"
```

7. Verify that the new number of combined total records in master F9861 is correct as follows:

- Oracle and Query Analyzer

```
SELECT COUNT(*) FROM OBJ9.F9861;
```

- DB2®/400

Press F13.

Take option 1.

Change SELECT output to 1.

Press Enter.

Press Enter.

```
SELECT COUNT(*) FROM OL9/F9861
```

- DB2®/UDB  
DB2 "SELECT COUNT (\*) FROM OBJ9.F9861"
8. Drop the temporary F9861 table as follows:
- Oracle and Query Analyzer  
DROP TABLE TEMPF9861;
  - DB2®/400  
DROP TABLE OL9/TEMPF9861
  - DB2®/UDB  
DB2 "DROP TABLE OBJ9.TEMPF9861"
9. Drop the backup F9861SAV table as follows:
- Oracle and Query Analyzer  
DROP TABLE F9861SAV;
  - DB2®/400  
DROP TABLE OL9/F9861SAV
  - DB2®/UDB  
DB2 "DROP TABLE OBJ9.F9861SAV"

► **To modify the Versions List table (F983051)**

---

*Verify that you are logged on to SQL Plus Utility for Oracle or ISQL/w for SQL Server as user JDE.*

Run the following SQL command to create a backup of the OBJ9.F9861 table:

- For Oracle:  
UPDATE DV9.F983051 SET  
VRMKEY='DEPLOYMENTSERVERNAME',VRENHV='DV9';  
  
COMMIT;
- For ISQL/w:  
UPDATE DV9.F983051  
  
SET VRMKEY='DEPLOYMENTSERVERNAME',VRENHV='DV9'

---

## Object Configuration Manager

ERP 9.0 enables you to distribute data and logic in a manner that optimizes both the power of the workstation and the data integrity of the server. This provides you with:

- Flexibility in determining your own partitioning schemes. As requirements change, you can repartition the system quickly and easily to meet new needs.
- Independence in using the data and logic objects that you need. For example, if you are a salesperson on the road, you can download only the data and logic you need to quote prices and availability. Later, you can connect to your server and place your orders in a batch process.
- Growth for your enterprise systems. Your system can be as large as you need because ERP 9.0 allows you to move objects around the system in practically endless combinations.

To keep track of where data resides and where logic processing occurs, ERP 9.0 uses a tool called the Object Configuration Manager. This tool enables users to specify data and logic processing locations.

---

## Understanding the Object Configuration Manager

The Object Configuration Manager (P986110) tool configures distributed processing and data dynamically without any programming. Depending on the environment and the user, the Object Configuration Manager points to the correct location for the following:

- Data
- Batch processes
- Business functions

The Object Configuration Manager stores information in tables that tell ERP 9.0 where data resides and where processing occurs. At runtime, ERP 9.0 looks to the Object Configuration Manager to determine these data and processing locations.

In ERP 9.0, business data objects (tables) map to database data sources. Batch processes and business functions map to machine data sources.

You always need at least two Object Configuration Manager tables:

- One table for all workstations. Store this table in a centralized system data source. Normally, a central data server stores your system data source. If the central server is unavailable, ERP 9.0 looks to the workstation's jde.ini file for a secondary location.
- One table for each logic server. Servers process differently than workstations; for example, the server map data source for each logic server stores separate Object Configuration Manager tables for server processing.

### Example: Application Request for Logic

The following illustration is an example of how the Object Configuration Manager works with a general logic request:

Step 1: The request process for application logic is similar to data requests. The Object Configuration Manager controls where all business functions and batch processes are processed.

For example, when you add a purchase order, any event that calls a business function looks to the Object Configuration Manager to determine where to process that business function. After you click OK to complete a purchase order, the ERP 9.0 process calls a master business function to validate all information and record the transaction. ERP 9.0 can process these business functions locally or on the server.

The primary, unique index to the Object Configuration Manager includes:

- Environment, such as PD9 or DV9
- User, which is either a specific User ID / Role or \*PUBLIC
- Object Name, such as F0101, B401002, or R09801
- Database Path

The following table shows the sequential search hierarchy that the Object Configuration Manager uses to locate the correct data source for a logic request. For this example:

The following shows the search hierarchy that the Object Configuration Manager uses to locate the correct data source for a logic request. For this example:

- The environment is PD9 (production)
- The status is AV (active)
- The object type can be either a batch process (UBE) or business function (BSFN)

Search Sequence	Object Name	User or Group	Search Criteria
1	B0900049	SI5745669 (user ID)	Is there a record for the named environment, status active, type (UBE or BSFN) for the named object, and the specific user?
2	B0900049	OWTOOL (role)	Is there a record for the named environment, status active, type (UBE or BSFN) for the named object, and the specific group?
3	B0900049	*PUBLIC	Is there a record for the named environment, status active, type (UBE or BSFN) for the named object, and *PUBLIC?
4	DEFAULT	SI5745669 (user ID)	Is there a record for the named environment, status active, type (UBE or BSFN) with no named object (default), and the specific user?
5	DEFAULT	OWTOOL (role)	Is there a record for the named environment, status active, type (UBE or BSFN) with no named object (default), and the specific group?
6	DEFAULT	*PUBLIC	Is there a record for the named environment, status active, type (UBE or BSFN) with no named object (default), and *PUBLIC?
7			If there is no record for this object type, then ERP 9.0 processes the process on the workstation.

Step 2: Once the data source is determined, ERP 9.0 passes the definition of that data source to JDENet.

Step 3: JDENet sends a message to the server to begin processing logic. When JDENet on the server receives the message, an ERP 9.0 process on the server responds to the message by processing the requested logic object.

## **Working with the Object Configuration Manager**

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The Object Configuration Manager provides the flexibility to map data, batch applications, and business functions to a data source, which allows you to coordinate your ERP 9.0 distributed processing. For example, you would map table objects to database data sources and logic objects to machine data sources.

You must have at least two sets of the Object Configuration Manager and Data Source Master tables, as explained below:

- |                                 |   |
|---------------------------------|---|
| <b>One for All Workstations</b> | The Object Configuration Manager and Data Source Master tables that ERP 9.0 uses for workstation processing are stored in the centralized system data source normally kept on an enterprise server. If the system data source is not available, ERP 9.0 looks to the workstation's jde.ini file for a secondary location. |
| <b>One per Logic Server</b>     | The Object Configuration Manager and Data Source Master tables that the logic server uses are stored on that server in the server map data source. Each logic server type requires its own server map data source.  |

In ERP 9.0, business objects are used to configure distributed processing and distributed data at runtime. The Object Configuration Master (F986101) table defines this configuration. You can work with the server object map to modify the entries in this table.

Workstation mappings are stored in a centralized system data source. The table F986101 used by the enterprise server is stored on that server in the server map data source. Each enterprise server requires a separate server map data source.

Compared to a workstation, an enterprise server processing a logic object has a different perspective of where data should be retrieved. For a workstation that is requesting user defined codes, its table F986101 (in the system data source) points to the local database.

When an enterprise server requests user defined codes, it makes no sense for the enterprise server to look to a workstation for this information; therefore, the enterprise server should have unique mappings for user defined codes. These mappings are set up in the Object Configuration Master table (F986101) in the server map data source.

If you have changed table F986101 for the workstation, you should check it in the server maps to see if they should also be changed. For example, if you have new environments with unique mappings for the workstation, you should check to see if changes are required in the corresponding mappings for the enterprise server.

The Object Configuration Manager also provides batch processes to help with the administration of your object mappings. These processes perform such tasks as comparing, updating, copying, and deleting Object Configuration Manager records.

The Object Configuration Manager (P986110) application updates the Object Configuration Master (F986101) table.

## Mapping Objects

You map objects by environment. You choose an environment that you have already created and map that environment's objects to the data sources you want those objects to use. You can set default mappings for all instances of an object type to one data source, and you can map individual objects to data sources.

**Mapping Object Types: Default Maps** To create a default map for an object type, create a mapping whose object name is the literal value: DEFAULT. Then enter an object type (such as TBLE) and a data source. By creating a default map for the object type TBLE, any table objects not mapped individually will point to the default data source.

**Mapping Individual Objects** You can map individual objects within an environment. For example, you can map a specific table, such as the Security Workbench Table (F00950), to a data source other than the default, such as to the system data source.

If you do not explicitly map an object by name in the Object Configuration Manager, ERP 9.0 uses the default map for that object's type.

---

### Caution

Each environment must have a default map for TBLE (table) objects for the \*PUBLIC user profile because there is no inherent default location for table objects. If table objects do not have a default map and are not explicitly mapped by name, ERP 9.0 produces a Select/Failed error message.

---

Batch applications and business functions automatically run locally if there is no default map for that object type.

### ► To map objects

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*From the System Administration Tools menu (GH9011), choose Object Configuration Manager (P986110).*

1. On Machine Search and Select, choose the data source that stores the Object Configuration Manager table with which you want to work, and click Select.  
The Machine Search and Select form displays data sources that have the OCM Data Source field checked on the data Source Revisions form. The machine name next to the data source in the grid refers to the machine where the data source resides. Workstations use the system data source for their mappings. Each enterprise server has its own server map data source.
2. On Work With Object Mappings, click Add to locate data sources for which to revise object mappings and to access a form to which you can add new object mappings for data sources.
3. On Object Mapping Revisions, complete the following fields to specify the data source to which your objects map:
  - Environment Name

- Object Name  
To define parameters for all objects in a data source, type DEFAULT in this field.
  - Primary Data Source  
The primary data source that you choose must be valid for the type of object that you map. For example, you can only map objects of type TBLE and GT to a database data source, and you can only map objects of type BSFN to a logic data source.
  - User
  - Data Source Mode  
Only use the secondary data source for business function (BSFN) data sources.
  - Allow QBE
4. Click OK to save your object mapping.
- You can continue to map objects, clicking OK after each mapping. Be sure to click OK to save your latest mapping, and then click Cancel to return to the Work With Object Mappings form.

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**Note**

On the Work With Object Mappings form, NA (inactive) in the Object Status field is verification that the Object Configuration Manager created your map with an inactive status.

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5. To activate your map, on the Work With Object Mappings form, choose the map and, from the Row menu, choose Change Status. AV (active) appears in the Object Status field.

**See Also**

- *Object Configuration Management Processing Options* in the *Configurable Network Computing™ Implementation Guide* for more information about validating the TBLE object type

► **To change the mapping for an Object Librarian table**

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*From the System Administration Tools menu (GH9011), choose Object Configuration Manager (P986110).*

1. On Machine Search and Select, choose the machine and data source for the Object Configuration Manager table you want to work with, and click Select.  
The data source resides on the machine. Workstations use the system data source for their mappings. Each enterprise server has its own server map data source.
2. On Work With Object Mappings, choose Revise OL DS from the Form menu to add and revise object mappings to data sources.

---

**Note**

When you map any of the Object Librarian tables, ERP 9.0 validates your entries to ensure that all environments based on the same path code have their Object Librarian tables mapped to the same data source. ERP 9.0 alerts you with an error message if you map your Object Librarian tables to different data sources.

---

3. On Revise OL Data Source, complete the following fields to define the new mapping for the Object Librarian tables:
  - Path Code
  - OL Data Source
4. Click OK to save the revision to your data source mapping.

When you click OK, ERP 9.0 automatically updates the Object Librarian data source mapping for each environment that contains the path code you entered in the Path Code field.

## Updating the Oracle Parameters Table

You must update the Oracle parameters table if you use Oracle and do not follow the J.D. Edwards-recommended naming conventions or if you add new Oracle data sources.

### ► To update the Oracle parameters table

---

*From the System Administration Tools menu (GH9011), choose Object Configuration Manager (P986110).*

1. On the Machine Search and Select form, choose the machine and data source for the Object Configuration Manager table you want to work with and click Select.

The data source resides on the machine. Workstations use the system data source for their mappings. Each enterprise server has its own server map data source.
2. On the Work With Object Mappings form, click Find to display object mappings.
3. Choose an object and then, from the Row menu, choose Oracle Params.
4. On the Work with Oracle Database Object Sizing form, click Find to locate information with which to work.

You can modify the fields on this form to search by release level, data source, and object name. If you are adding new parameters, you do not need to click Find.

You also can access this application from the Data Sources application.

5. On the Work with Oracle Database Object Sizing form, do one of the following:
  - Choose a record and click Select.
  - Click Add.

The Oracle Database Object Sizing form appears. On this form, you can revise and add table and index information for a data source or table.

Alternatively, you can display the Revise Table and Data Source Sizing form by choosing Default Database from the Work With Data Sources form's Row menu. When you do so, the DEFAULT value is automatically entered at the Object Name field so that default values are used for the form. If you change the object name from DEFAULT, the fields that were formerly filled with default values on the form appear.

6. If you are adding new parameters, complete the following fields:
  - Data Source
  - Object Name  
To define parameters for all objects in a data source, type DEFAULT in this field.
  - Release
7. Depending on whether you select a data source for the DEFAULT map or for a specific object, different fields appear on the Oracle Database Object Sizing form. For the DEFAULT map, you can define only the name of the Oracle space where tables or indexes reside. However, for a specific object you can define parameters such as the amount of space to use for an Oracle table.  
For the DEFAULT map, complete the following fields:
  - Table Space Name
  - Index Space NameFor a specific object, complete the following fields:
  - Index Initial Storage
  - Index Next Storage
  - Index Percent Increase Storage
  - Index Minimum Extent
  - Index Maximum ExtentThese values are valid for both the table information and the index information.
8. To enter override information, choose Overrides from the Form menu.  
This option is also available from the Work With Table and Data Source Sizing form's Row menu.
9. On the Revise Table and Data Source Overrides form, complete or modify the following fields:
  - Copy Data (Y/N)
  - Create Tables(1/0)
10. Click OK to return to the previous form. If necessary, click OK on all subsequent forms until you return to the System Administration Tools menu.

## Processing Options for Object Configuration Manager (P986110)

The Object Configuration Manager application (P986110) has one processing option that controls error handling.

### Process Tab

#### 1. Non-existent table error

Use this processing option to specify whether to issue an error or a warning when a TBLE object you are mapping does not exist in the data source to which it is mapped. Valid values are:

1 Issue an error.

Blank Issue a warning.

### Mapping Generic Text

The Generic Text Language Status (F001651) table has more mapping flexibility than other objects because the data stored in this table has different uses. The generic text categories are as follows:

- Common data that all environments use.  
For example, data dictionary glossaries and business function notes are the same across all environments.
- Production data specific to an environment.  
For example, inventory item notes and address book supplemental data can be different for a corporation running ERP 9.0 over multiple environments, such as production, test, and J.D. Edwards demo data.

#### ► To map generic text

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*From the System Administration Tools menu (GH9011), choose Object Configuration Manager (P986110).*

In the Object Configuration Manager, use the GT object type to map specific generic text objects.

The following is an example of what the Object Configuration Master (F986101) table looks like after installing ERP 9.0 if your business follows the typical configuration. This example shows only the PD9 (production) and TS9 (test) environments.

Environment	Object Name	Description	Data Source	Object Type
PD9	F00165	Generic Text Table	Business Data - Prod	TBLE
PD9	GT92002	Data Dictionary Glossary	Data Dictionary	GT
PD9	GT9860A	Object Librarian	Object Librarian	GT

PD9	GT9862A	Business Function Notes	Object Librarian	GT
PD9	GT98DSA	Data Structure Notes-Structure	Object Librarian	GT
PD9	GT98DSB	Data Structure Notes-Structure and Item	Object Librarian	GT
PD9	GT98TMPL	Media Objects Templates	Object Librarian	GT
TS9	F00165	Generic Text Table	Business Data - Test	TBLE
TS9	GT92002	Data Dictionary Glossary	Data Dictionary	GT
TS9	GT9860A	Object Librarian	Object Librarian	GT
TS9	GT9862A	Business Function Notes	Object Librarian	GT
TS9	GT98DSA	Data Structure Notes-Structure	Object Librarian	GT
TS9	GT98DSB	Data Structure Notes-Structure and Item	Object Librarian	GT
TS9	GT98TMPL	Media Objects Templates	Object Librarian	GT

## **Running Object Configuration Manager Reports**

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The Object Configuration Manager provides batch processes that produce a report that helps you track your mappings.

Some Object Configuration Manager reports are called when you choose that report from the ERP 9.0 menu. Other Object Configuration Manager reports are called from a report driver job. Although the result is the same, you set processing options and data selection differently for a batch process called from a report driver.

When a report is called by a driver, processing options are set from the report for all reports that are launched from the driver. For example, the R988611A driver calls the Mapping Comparisons, Global Update, OCM Delete, and OCM Copy reports.

Any data selection for a report must be entered for the specific report, not from the driver. When you finish entering processing options and data selection, if any, you can run the report from the driver.

## **Setting Processing Options for Object Configuration Manager Reports**

The following task describes how to use a report driver to set processing options for a data source report. The following Object Configuration Manager reports are called by a report driver:

- Object Configuration Mapping Comparison
- Object Configuration Global Update

- Object Configuration Delete
- Object Configuration Copy
- Job Master Deletion By Days Old

All of the reports except Job Master Deletion By Days Old are called from the R98611A report driver. Job Master Deletion By Days Old is called from the R9861101 report driver. Except as noted, the process for setting processing options for these reports is identical, regardless of which report you select.

► **To set processing options for Object Configuration Manager reports**

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*From the Advanced Operations menu (GH9012), choose one of the Object Configuration Manager (P986110) reports called by a report driver.*

1. On Work With Batch Versions - Available Versions, choose a version and then choose Processing Options from the Row menu.
2. If you chose the Job Master Deletion by Days Old report, on the Processing Options form, click the tab for the report whose processing options you want enter the fields.
3. Click OK to save and exit to the Work with Batch Versions - Available Versions form.

## Processing Options for Object Configuration Batch Applications

The following batch applications have processing options that are entered from the R98611A report driver using the same processing option form:

- Object Configuration Mapping Comparison (R986101)
- Object Configuration Global Update (R986110)
- Object Configuration Delete (R986120)
- Object Configuration Copy (R986121)

The processing options for OCM batch applications let you specify the data source used when comparing, updating, deleting, or copying data. These processing options let you set other parameters used by the specific batch application.

Only the processing options for the report you are currently running are used. Processing option fields for other reports are ignored until you run that report.

### 1. Object Configuration Manager Report Name

Use this processing option to specify the name of the report that you want to run. Valid values are:

R986101 OCM Mapping Comparison

R986110 OCM Global Update

R986120 Object Configuration Delete

R986121 Object Configuration Copy

### 2. Version

Use this processing option to specify the version of the report that you want to run.

## **R986101 (Mapping Comparison) Tab**

These processing options let you specify the data sources used in the mapping comparison. You can also specify a method to use when running the comparison and how to handle report exceptions.

For information about a processing option, right-click the processing option field and choose What's This from the menu. Or, click the processing option field and press F1.

### **1. Data Source One and 2. Comparison Data Source Two**

Use this processing option to specify the names of the data sources that you want to compare.

### **3. Comparison Method**

Use this processing option to specify the comparison method used. The comparison method determines how ERP 9.0 searches the data sources. When you compare in one direction, ERP 9.0 lists records only in data source 1 that are not in data source 2. When you compare in both directions, ERP 9.0 lists records that are in data source 1 but not in data source 2, AND records in data source 2 that are not in data source 1. Valid values are:

1 Compare one direction only. Print only the records found in the first data source, but not in the second data source.

Blank Compare both directions. Print records in the first data source but not in the second data source, and also the records in the second data source that don't exist in the first data source.

### **4. Exceptions**

Use this processing option to specify whether to print only the report exceptions or to print every record from the data selection, noting the differences between the data sources. Valid values are:

1 Print exceptions only

Blank Print all records

## **R986110 (Global Update) Tab**

These processing options let you specify the data source used for the update. You can also specify whether you want to create new OCM records from existing ones or enter new values. When you elect to create new OCM records from existing ones, values you enter through the Process Control processing option will overwrite any existing values.

For information about a processing option, right-click the processing option field and choose What's This from the menu. Or, click the processing option field and press F1.

### **1. Process Mode**

Use this processing option to specify the mode in which the report processes data. Valid values are:

1 Proof Mode. Produce a report that lets you view the records you want to delete. No records are deleted.

Blank Final Mode. Produce a report of records you want to delete. The records are then deleted.

## 2. Data Source name

Use this processing option to specify the name of the data source for the Object Configuration Manager table. Any updates that occur as a result of running this report will be made to the Object Configuration Manager table found in the specified data source.

## 3. Process Control

Use this processing option to specify whether to create new OCM records or change existing ones. Valid values are:

1 Create new OCM records from existing ones. The records created are similar to those selected, except that the new OCM values entered in the processing options will be substituted where appropriate.

Blank Change selected records with new OCM values. Use data selection to specify which records will be changed with the new OCM values entered into the processing options.

## 4. Enter New OCM Values

Use this processing option to enter new OCM values. If you are creating new OCM records from existing ones, any values you enter for this processing option will replace the existing ones. Valid values are:

Environment Name

Object Name

Primary Data Source

User

Object Type

Data Source Mode

Secondary Data Source

Allow QBE

## R986120 (Object Configuration Delete) Tab

These processing options enable you to specify the data source from which to delete specific Object Configuration Manager records. You can also select the mode of operation and specify whether to run the Object Copy batch application (R986121), which enables you to create a copy of records before deleting them.

For information about a processing option, right-click the processing option field and choose What's This from the menu. Or, click the processing option field and press F1.

### 1. Process Mode

Use this processing option to specify the mode in which the report processes data. Valid values are:

1 Proof Mode. Produce a report that enables you to view the records you want to delete. No records are deleted.

Blank Final Mode. Produce a report of records you want to delete. The records are then deleted.

## 2. Enter Data Source Name

Use this processing option to specify the name of the data source for the Object Manager Configuration table. Any updates that occur as a result of running this report will be made to the Object Manager Configuration table found in the specified data source.

## 3. Process Mode

Use this processing option to specify the mode in which the report processes data. Valid values are:

1 Proof Mode. Produce a report that enables you to view the records you want to delete. No records are deleted.

Blank Final Mode. Produce a report of records you want to delete. The records are then deleted.

## 4. Object Copy

Use this processing option to specify whether to run the Object Configuration Copy report (R986121) along with the Object Configuration Delete report. Valid values are:

1 Run the Object Copy (R986121). This creates a copy before deleting records. When you run the Object Copy, remember to enter the processing options on the R986121 tab and to set up data selection. Data Selection should be defined on the same version of R986121 that you specified for R986120 (Object Configuration Delete).

Blank Do not run Object Copy (R986121). This deletes the records without first creating a copy.

## R986121 (Object Configuration Copy) Tab

These processing options enable you to enter the target and destination data sources that are used in copying Object Configuration Manager records.

For information about a processing option, right-click the processing option field and choose What's This from the menu. Or, click the processing option field and press F1.

### 1. Process Mode

Use this processing option to specify the mode in which the report processes data. Valid options are:

1 Proof Mode. Produces a report that enables you to view the records you want to delete. No records are deleted.

Blank Final Mode. Produces a report of records you want to delete. The records are then deleted.

### 2. From Data Source

Use this processing option to specify the name of the data source with the Object Configuration Manager table from which you want to copy records.

### 3. Target Data Source Name

Use this processing option to specify the name of the data source with the Object Configuration Manager table to which you want to copy.

## Running the Object Configuration Mapping Comparison Report

Run the Object Configuration Comparison report to compare Object Configuration Master (F986101) tables from two different data sources and display the differences between them. For example, you might compare the F986101 table in the system data source to the F986101 table for a given server map data source.

### Before You Begin

- ❑ Set processing options for the report from the report driver, not from the actual report.

### ► To set up data selection for the Mapping Comparison report

---

*From the System Administration Tools menu (GH9011), choose Batch Versions (P98305).*

1. On Work With Batch Versions - Available Versions, enter R986101 in the Batch Application field, and then click Find.
2. Double-click the version you specified on the Driver processing option tab.
3. On Version Prompting, choose the Data Selection option and click Submit.
4. On the Data Selection form, choose from the appropriate columns to specify the exact records you want to compare.
5. Click OK.

### ► To run the Object Configuration Mapping Comparison report

---

*From the Advanced Operations menu (GH9012), choose Batch Versions (P98305).*

1. On Work With Batch Versions - Available Versions, choose the version that corresponds to the report that you want to run.
2. Click Select.
3. On Version Prompting, click Submit to run the report.

## Running the Object Configuration Global Update Report

This process performs global updates and global copies of object mappings in the same Object Configuration Master (F986101) table. You can use this batch application rather than the interactive application (P986110). This application is useful in updating and copying multiple records.

### Before You Begin

- ❑ Set processing options for the report from the report driver, not from the actual report.

### ► To set up data selection for the Global Update report

---

*From the System Administration Tools menu (GH9011), choose Batch Versions (P98305).*

1. On Work With Batch Versions - Available Versions, enter R986110 in the Batch Application field, and then click Find.
2. Double-click the version you specified on the Driver processing option tab.

3. On Version Prompting, choose the Data Selection option and then click Submit.
4. On the Data Selection form, choose from the appropriate columns to specify the exact records you want to update or copy.
5. Click OK.

---

► **To run the Object Configuration Global Update report**

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*From the Advanced Operations menu (GH9012), choose OCM Category Update/Delete (T986101B).*

1. On the Available Versions form, click Find and then choose the version that corresponds to the report that you want to run.
2. Click Select.
3. On Version Prompting, click Submit to run the report.
4. On Processing Options, verify the processing options chosen.

---

**Note**

You might receive the following messages when you run this report:

- Duplicate Key - Update/Copy not done  
You cannot update a record or create a new record using the key of an existing record.
  - Active DEFAULT \*Public records cannot be updated  
You cannot update the DEFAULT records of the \*PUBLIC group.
- 

## Running the Object Configuration Delete Report

This batch process deletes specific Object Configuration Manager records from one data source.

### Before You Begin

- Set processing options for the report from the report driver, not from the actual report.

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► **To set up data selection for the Object Configuration Delete report**

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*From the System Administration Tools menu (GH9011), choose Batch Versions (P98305).*

1. On Work With Batch Versions - Available Versions, enter R986120 in the Batch Application field, and then click Find.
2. Double-click the version you specified on the Driver processing option tab.
3. On Version Prompting, choose the Data Selection option and then click Submit.
4. On the Data Selection form, choose from the appropriate columns to specify the exact records you want to delete.

5. Click OK.

► **To run the Object Configuration Delete report**

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*From the Advanced Operations menu (GH9012) choose OCM Category Update/Delete (T986101B).*

1. On the Available Versions form, click Find and then choose the version that corresponds to the report that you want to run.
2. Click Select.
3. On Version Prompting, click Submit to run the report.

## **Running the Object Configuration Copy Report**

This process copies Object Configuration Manager records from one data source to another and automatically deletes any duplicate records. For example, if you create a new environment by copying an existing one, Object Configuration Manager records are created for the new environment in the system data source.

You use the Object Configuration Copy batch process to copy those records to the appropriate server map data source. After copying the records, use the Object Configuration Global Update (R986110) process to change, at the minimum, any mappings for LOCAL to the appropriate server location.

### **Before You Begin**

- ❑ Enter processing options for the report from the report driver, not from the actual report.

## **Running the Verify OCM Report**

The Verify OCM (R9861130) report is a useful troubleshooting tool that can help you verify that:

- All Data Source Master definitions have Object Configuration Manager mappings
- Object Configuration Manager mappings are consistent for a given user, have data source definitions, and are not duplicated
- Appropriate specification files exist on a specific server
- Business function DLLs exist on a specific server

Run this report to verify the above items for a workstation or any server. The machine on which you run this report determines which set of Object Configuration Manager and Data Source Master tables will be verified. Consequently, you should run this report on your local machine and on each server that runs ERP 9.0. You also can run this report on the deployment server.

► **To run the Verify OCM report**

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*From the Advanced Operations menu (GH9012), choose Verify OCM (R9861130).*

1. On Work With Batch Versions - Available Versions, choose a version and then click Select.
2. On the Version Prompting form, click Data Selection and then click Submit.

3. On the Processing Options form, complete the fields.

Processing options are divided into categories so that you can select the type of validation that you want. The first two options pertain to extraneous data source validation, and the remaining options pertain to object configuration mapping validations.

Leave an option blank if you do not want ERP 9.0 to run that validation.

The fields on the Processing Options form let you do the following:

- Verify data source master definitions. Enter 1 to enable ERP 9.0 to verify that all of your Data Source Master (F98611) definitions have Object Configuration Manager mappings.
- Enter the name of the environment you want to verify. You also can enter \*ALL to verify all of your environments. This environment will be used for all of the following verifications.
- Enter the user ID of the individual or group (including \*PUBLIC) for which you want to verify the object mappings. You also can enter \*ALL or leave this field blank to verify all of your users. If you enter a user ID, the report also prints the \*PUBLIC records.
- Specify whether to verify active or inactive mappings. Enter 1 to verify that all of the active Object Configuration Manager mappings for the user and environment that you entered have data source definitions in the Data Source Master (F98611) table. Enter 2 to verify both active and inactive mappings.
- Check for duplicate records. Enter 1 to verify that no duplicate Object Configuration Manager mappings exist for the user and environment that you entered. This option verifies only duplication for active mappings.
- Check for consolidated DLL names. Enter 1 to verify that a consolidated DLL name exists for each business function on a specific server, and that the DLL name is valid.
- Verify specification files. Enter 1 to verify that all specification files required to run ERP 9.0 exist for the path code. This option applies only when running against a server.

## **Processing Options for Verify Object Configuration Manager (R9861130)**

For information about a processing option, right-click the processing option field and choose What's This from the menu. Or, click the processing option field and press F1.

### **1. Data Source Mappings**

Use this processing option to specify whether to perform data source validation for data source master definitions. Valid values are:

- 1 Verify that each data source has at least one OCM mapping defined.

Blank Do not verify data source definitions.

### **2. Environment Validation**

Use this processing option to specify the environments for which you want to run the validations. Valid values are:

\*All Run the validations for all environments.

Specific environment name Validates only that environment.

### **Parent DLL Tab**

This processing option enables you to verify that each business function has a valid parent DLL assigned.

For information about a processing option, right-click the processing option field and choose What's This from the menu. Or, click the processing option field and press F1.

#### **1. Business Function Parent DLL**

Use this processing option to specify whether each business function has a parent DLL assigned. Valid values are:

1 Verify that each business function has a parent DLL assigned. Also, verify that the DLL name is valid.

Blank No verification occurs.

### **Specifications Tab**

This processing option enables you to indicate whether you want to verify that all specifications required to run ERP 9.0 exist on the server.

For information about a processing option, right-click the processing option field and choose What's This from the menu. Or, click the processing option field and press F1.

#### **1. Validate Server Specifications**

Use this processing option to verify that all specifications required to run ERP 9.0 exist for the pathcode. This processing option applies only when running against a server. Valid values are:

1 Verify whether the required specifications exist.

Blank Do not verify specifications.

### **OCM Tab**

These processing options enable you to enter validation parameters for User IDs, OCM mappings, and duplicate OCM mappings.

For information about a processing option, right click the processing option field and choose What's This from the menu. Or, click the processing option field and press F1.

#### **1. User ID to Validate**

Use this processing option to specify the user ID for which the OCM validations should be run. Valid values are:

Blank Run the validations for all users.

\*ALL Run the validations for all users.

\*PUBLIC Run the validations for only \*PUBLIC.

Specific User ID Performs validations for only that user.

## 2. OCM Mappings

Use this processing option to indicate whether to validate OCM mappings. Valid values are:

Blank      Do not validate OCM mappings.

- 1 Validate all active OCM mappings.
- 2 Validate both the active and inactive OCM mappings.

## 3. Duplicate OCM Mappings

Use this processing option to specify whether OCM records should be checked for duplicates. Valid values are:

Blank      Do not check for duplicates.

- 1 Verify that the active OCM mapping records have no duplicates.

## Running the Object Configuration System Table Update Report

This process adds active Object Configuration Manager (OCM) records for a specified table, user ID, and data source for all environments listed in the Environment Detail - ERP 9.0 (F00941) table. You can use data selection to filter the environments to which this process adds OCM records.

### ► To run Object Configuration System Table Update

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*From the Advanced Operations menu (GH9012), choose Object Configuration System Table Update (R986101A).*

1. On Work With Batch Versions - Available Versions, click Find and then choose XJDE0001 and click Select.
2. On the Versions Prompting form, click Data Selection and then click Submit.
3. On Data Selection, determine which records to update and then click OK.
4. On the Processing Options form, enter the following information:
  - The table name for which to create mappings
  - The data source to which the table should be mapped
  - The user ID for whom to map the records  
The value \*PUBLIC maps the records for all users. You also can map by group.
  - Proof or final mode  
If left blank, the application runs in proof mode. Run this process in proof mode first to test whether the current values create a successful result. Enter 1 for final mode.
5. Click OK.

## Processing Options for Create System Table Mappings (R986101A)

### Process Tab

These processing options enable you to specify the table name, data source, and user ID to use in creating an OCM mapping. You can also specify whether to run the report in proof or final mode.

For information about a processing option, right-click the processing option field and choose What's This from the menu. Or, click the processing option field and press F1.

#### 1. Enter a specific Table Name

Use this processing option to specify the name of the table you want to map to each environment. The table name, along with the values you specify for the Data Source and User ID processing options, will be used to create a whole OCM Mapping.

#### 2. Enter a specific Data Source

Use this processing option to specify the data source you want to map to each environment. The Data source, along with the values you specify for the Table Name and User ID processing options, is used to create a whole OCM Mapping.

#### 3. Enter a specific User ID

Use this processing option to identify the user ID that will be mapped to each environment. The user ID, along with the values you specify for the Table Name and Data Source processing options, will be used to create a whole OCM Mapping.

#### 4. Proof/Final Mode

Use this processing option to indicate whether the batch application runs in Proof or Final mode. Running the batch application in Proof mode means that records are not changed. Final mode updates and adds records. Valid values are:

Blank      Proof mode.

1      Final mode.

## Running the Create OCM Records for Business Function Report

This batch process reads the Object Librarian tables for server business functions, and then creates Object Configuration Manager records for those business functions in the target data source that you specify in processing options. Processing options also allow you to specify the source data source and environment to use when creating these Object Configuration Manager records.

### ► To run Create Server Business Function for OCM Records

---

*From the Advanced Operations menu (GH9012), choose Create OCM Records for Business Functions (R986140).*

1. On the Available Versions form, choose XJDE0001 and then click Select.
2. On the Versions Prompting form, click Data Selection and then click Submit.
3. On Data Selection, specify which records to create and then click OK.
4. On the Processing Options form, enter the following information:
  - Specify proof or final mode.

When you enter 1, the report runs in Final mode, which means that the report will be printed and reports will be updated. When you enter 0 or leave this field blank, the report runs in Proof mode, which means that the report will be printed but not updated.

- The machine data source that corresponds to the server you wish to run the business function on.
- The environment you wish to use real-time events on.
- The system data source that your client-to-server machines use.

## Running the Job Master Deletion by Days Old Report

This batch application lets you produce a report listing obsolete print jobs submitted to servers. You have the option of generating the report only, or generating the report and then deleting obsolete records from the F986110 table.

This batch application is launched by a report driver. Enter any data selection from the batch application, but enter processing options from the report driver (R9861101), not from the actual application (R9861102).

### ► To set up data selection for Job Master Deletion

---

*From the System Administration Tools menu (GH9011), choose Batch Versions (P98305).*

1. On Work With Batch Versions - Available Versions, enter R9861102 in the Batch Application field and then click Find.
2. Double-click one of the following versions:
  - XJDE0001 = Jobs With All Status
  - XJDE0002 = Jobs With Done Status
  - XJDE0003 = Jobs With Error Status
  - XJDE0004 = Jobs With Wait Status
3. On Version Prompting, choose the Data Selection option and click Submit.
4. On the Data Selection form, choose from the appropriate columns to specify the exact records you want to compare.
5. Click OK.

### ► To run Job Master Deletion by Days Old

---

*From the Advanced Operations menu (GH9012), choose Job Master Deletion by Days Old (R9861101).*

1. On Work With Batch Versions - Available Versions, click Find and then choose the version that corresponds to the report that you want to run.
2. Click Select.
3. On Version Prompting, click Submit.
4. On the Processing Options form, enter the following information and then click OK:
  - Data Source (Defaults Tab)

- Days Old (Defaults Tab)
- Control Mode (Defaults Tab)
- Job Control Status UBE (Versions Tab)

## Running the OCM Category Update/Delete Report

This batch application lets you add or delete member objects of a specified category from the Object Configuration Manager (F986101). You can add or delete OCM mappings for all members in the same category rather than adding or deleting them individually. The processing options for this batch application allow you to specify whether to add or delete mappings, as well as the appropriate path code, environment, and data source to use.

### ► To run OCM Category Update/Delete

---

*From the Advanced Operations menu (GH9012), choose OCM Add/Update/Delete (R986101B).*

1. On Work With Batch Versions - Available Versions, choose XJDE0001 and then click Select.
2. On Version Prompting, click Data Selection and then click Submit.
3. On Data Selection, specify which records to add or delete, and then click OK.
4. On the Processing Options form, click the OCM Modes tab and enter the following information:
  - Proof or Final Mode  
Enter 1 to run the report in Proof mode. The report will print and the Object Configuration Manager table will not be updated. Enter 2 to run the report in Final mode. The report will print and the Object Configuration Manager table will be updated.
  - Add or Delete Mode  
Enter 1 to add OCM mappings for objects in the category or 2 to delete mappings.
  - Override Mapping
  - Enter 1 to delete OCM mappings for objects that already have mappings for the environment and user. Enter 2 or leave this field blank to deactivate but not delete mappings for conflicting OCM records.
5. Click the OCM Settings tab and enter the following information:
  - Path Code to use when adding or deleting OCM mappings  
When you enter a path code, mappings are added or deleted for all environments with the path code you enter. You do not need to enter a path code if you entered an environment name in the Environments processing option. If this field is blank, OCM mappings will be added or deleted regardless of the path code.
  - Environment to use when adding or deleting OCM mappings  
If this field is blank, OCM mappings are added or deleted regardless of the environment. If you entered a path code in the Path Code processing option, that path code is used. If both the Environments and Path Code processing option

fields are blank, OCM mappings will be added or deleted for all environments in the Environment Detail (F00941) table.

- User Class/Group  
If you are deleting OCM mappings and this field is blank, all OCM records will be deleted regardless of the user class or group. If you are adding OCM mappings, you must enter a value in this field.
- Data Source  
If you are deleting OCM mappings and this field is blank, all OCM records will be deleted regardless of the data source. If you are adding OCM mappings, you must enter a value in this field.

## **Partitioning Application Logic on Servers**

---

The logic for ERP 9.0 applications can be partitioned to run remotely by mapping individual or specified groups of business function components to run on an application server or enterprise server instead of on a workstation.

J.D. Edwards has found that redeploying certain business function components (including master business functions and business functions) can significantly increase the performance of a distributed ERP 9.0 workstation while simultaneously decreasing network traffic. This redeployment involves remapping objects using the ERP 9.0 standard Object Configuration Manager methodology.

Examples of such configurations are illustrated by the Windows light client/ heavy server and the Java light client/heavy server models. Both models have applications specifications on the client and business function components on the server. The main difference is that the Windows model uses JDENet communication middleware, while the Java model uses JDENet/CORBA middleware.

While the ERP 9.0 design allows you to partition all ERP 9.0 business function components, the biggest benefit is derived from partitioning Master Business Functions (MBFs).

ERP 9.0 transaction-oriented applications are built around the concept of MBFs, which are typically responsible for transaction edits and for committing transactions to the database. Most of the I/O services for transaction-oriented applications are performed by MBFs. By localizing the majority of business logic for transactions in MBFs and partitioning the MBFs to run on application servers, network traffic can be minimized, thus dramatically improving the performance of the application in distributed and WAN environments.

In a two-tier setup where MBFs are processed on the client, a lot of interaction occurs across the WAN between client and server. In a three-tier setup consisting of a client, a data server, and an application or enterprise server, transaction processing can occur across a LAN between the two servers. Interaction across the WAN between the client and server is thus reduced to entering input on the client and sending back results from the server. This three-tier configuration can result in a significant reduction in traffic across the WAN.

The following figure contrasts typical network traffic for a two-tier setup where MBFs are processed on the client versus network traffic segmentation for a three-tier setup where MBFs are processed on the server.

## Two-Tier: Typical Network Traffic

In a two-tier configuration, the GUI, event rules, and MBFs are typically handled by the client, and data is stored on the server. Typically, the following processing occurs across the WAN between client and server:

- Fetch Record (client to server)
- Return Record (server to client)
- Validate Data Format (client to server)
- Format OK (server to client)
- Send Record Detail (client to server)
- Detail OK (server to client)
- End Transaction (client to server)

## Three-Tier: Network Traffic Segmentation

In a three-tier configuration, the GUI and event rules are handled by the client, but an application server or enterprise server handles MBF processing. The database server stores data. The following processing occurs across the WAN between client and application or enterprise server:

- Input Processing Request or Data (client to server)
- Return Processing Results (server to client)

The following processing occurs locally across the LAN between the application or enterprise server and the database server:

- Fetch Record
- Return Record
- Validate Data Format
- Format OK
- Send Record Detail
- Detail OK
- End Transaction

## How a Master Business Function Operates

The following series of events demonstrates how a typical application uses a Master Business Function (MBF). This example uses the Sales Order Entry application.

- End  
The first event occurs when the end of a sales order line is reached, causing the ERP 9.0 client application to call the `jdeCallObject` API. This command sends a message to the MBF. Included with the message is data (in the form of a data structure) for the line. The application sends the message asynchronously with its associated data; that is, once the message is sent, the client application proceeds to the next line.
- MBF Receives Line Message

This event occurs when the MBF receives the JDENet message that includes the data for the line. The line data is cached in the server's shared memory.

- **MBF Extends and Edits the Line**

This event occurs when the MBF extends and edits the sales order line. The data necessary to extend and edit the line is typically accessed locally on a LAN. The data is requested by a database-dependent SQL call and is transported by the applicable Open Database Connectivity (ODBC) or Oracle Call Level Interface (OCI) mechanisms.

- **MBF Sends a Return Message to the Client Application**

This event, the fourth event, occurs after the MBF extends and edits the sales order line and returns the extended line, as well as any error codes, to the client. The return message is sent using JDENet. Events 1 through 4 are then repeated asynchronously for all of the lines associated with the sales order.

- **End of Sales Order (OK Button)**

This event indicates that the user has completed all sales order lines. The user triggers this event by clicking OK after all edited lines have been returned to the client. When the user clicks OK, an end of transaction message is sent to the MBF. The client is immediately released to enter the next transaction.

- **MBF Processes the Full Transaction**

The full transaction is processed when the MBF asynchronously reads the shared memory cache (where all transaction lines are stored) and begins the process of committing the transaction to the database.

- **Transaction Commitment to the Database and MBF Cleanup**

The MBF commits the entire transaction to the database, typically locally through ODBC and OCI, and cleans up the shared memory cache for the completed transaction.

Mapping the MBF to run on the server causes the bulk of the database and logic interaction to occur within a single server machine (enterprise server) or between LAN-attached machines (application server and data server). This means that the transaction has been processed with a minimum of network traffic. This type of application transaction is ideally suited for performance gains in distributed and WAN environments.

## **Server Behavior with Partitioned Application Logic**

Compared to a typical heavy-client scenario, partitioning application logic by configuring business function components (such as Master Business Functions and other business functions) to run on the server requires the server to run more processes and to manage additional user sessions. To control the server's behavior under this increased workload, important `jde.ini` parameters must be set.

### **See Also**

- *Middleware* in the *System Administration Guide* for more information about setting `jde.ini` parameters

## Example: Processing Rule 1 - JDENet on Client

On the client, the JDENet functions reside in a dynamic-link library (DLL) called jdenet.dll. These functions are called by the ERP 9.0 Explorer program (Oexplore.exe). That is, they are not run as a separate process or service; they are run from within the Oexplore.exe process.

When ERP 9.0 clients first initiate a communication session with an ERP 9.0 server (as defined by the Object Configuration Manager), they are assigned to communicate with a specific JDENet process on that server. This assignment persists for the ERP 9.0 session. That is, the same logical connection is maintained for as long as the user is logged on.

## Example: Processing Rule 2 - JDENet on the Server

You can configure multiple JDENet processes to run on a server. Parameters in the server's jde.ini file specify how many JDENet processes can be started on the server, as well as the total number of network connections that can occur to and from that server.

If you specify multiple JDENet processes, ERP 9.0 starts the processes as required on a one-for-one basis with incoming session requests until the maximum number of JDENet processes is started. Then, ERP 9.0 sequentially assigns subsequent sessions to JDENet processes. Within each JDENet process, messages are queued and processed one at a time. For example:

```
Session 1: JDENET_1
Session 2: JDENET_2
Session 3: JDENET_3
Session 4: JDENET_1
Session 5: JDENET_2
Session 6: JDENET_3
```

The preceding example is based on the characteristics listed in the following table:

Characteristic	Value	jde.ini Parameter
Number of JDENet processes	3	[JDENet] maxNetProcesses=3
Number of connections per server	nnn	This is a site-specific variable number. Typically, the setting should be a value large enough to accommodate the practical maximum for the installation.  For example:  [JDENet] maxNetConnections=800
Number of incoming sessions	6	N/A

## Example: Processing Rule 3 - Kernels on the Server

To handle different functions, the ERP 9.0 architecture allows for different types of kernel processes to run on the server. The kernel type that processes distributed objects through the `jdeCallObject` API is a Type 2 kernel. A parameter in the server's `jde.ini` file specifies how many individual kernels of a specific kernel type can be started.

The total number of active sessions that might connect to a kernel cannot be directly controlled. That is, ERP 9.0 dynamically allocates sessions to applicable kernel types on an as-available basis. However, you can indirectly control the number of users per kernel by specifying a sufficient number of kernels in the desired relationship based on the number of connections (client-to-server and server-to-server). For example, you can specify enough kernels to have one user for each kernel, or two users for each kernel, and so on.

In determining the number of required kernels, remember that each kernel process consumes server memory resources. The exact amount of memory consumed is not as important a consideration as the performance aspect. Consider how many users (or MBFs) can use a single kernel simultaneously before performance begins to degrade significantly.

Kernel processes are started in a manner similar to the JDENet network communication sessions. For each kernel type, ERP 9.0 starts a new kernel for each new session until the maximum number of kernels allowed is started. After the maximum is reached, ERP 9.0 assigns sessions sequentially to a specific kernel process.

Each Type 2 kernel queues and processes a single `jdeCallObject` API request at a time. If multiple sessions are assigned to a single kernel, when the `jdeCallObject` routine completes it takes the next request off the queue for that kernel type.

Care must be taken when configuring the `jde.ini` file for the server. Using this kernel-balancing methodology, there is no way to distribute the jobs being executed based on the nature of those jobs. As illustrated in the following example, this can result in Kernel\_2 being loaded with heavy Sales Order Entry Processing while the other kernel, Kernel\_1, is idling with less process-intensive functions. This insight into load balancing may be used to your advantage when considering hardware tiers. For example:

```
Session 1: JDENET_1, Kernel_1
Session 2: JDENET_2, Kernel_2
Session 3: JDENET_3, Kernel_1
Session 4: JDENET_1, Kernel_2
Session 5: JDENET_2, Kernel_1
Session 6: JDENET_3, Kernel_2
```

The preceding example is based on the characteristics listed in the following table:

Characteristic	Value	Jde.ini Parameter
Number of JDENet processes	3	[JDENet] maxNetProcesses=3
Number of incoming sessions	6	N/A
Number of Type 2 kernels	2	[JDENet_KERNEL_DEF2] maxNumberOfProcesses=2

Number of sessions requesting Type 2 kernel	6	N/A
---	---	-----

### See Also

- *Middleware* in the *System Administration Guide* for more information about kernels

## When Not to Distribute Logic

Do not distribute logic in the following scenarios:

- When a business function mapped to the server creates cache that is required by another business function invoked from the calling application, those business functions must also be mapped to the same logic server as the business function creating the cache.
- When client-only business functions contain GUI or Windows functions that are only valid on a Windows NT workstation, master business functions distributed to a logic server might not call a business function that can only execute on a client.

---

### Note

When a master business function is mapped to a logic server, the server looks to its own server map data source to determine OCM tables for processing. For example, if a master business function is mapped to a logic server, then any logic called by that master business function will be called based on the server map data source in the OCM.

---

## Issues with Distributed Logic

The following issues exist concerning distributed logic:

- Batch control functionality might cause problems with distributed logic. When closing a transaction application, the batch control business function presents an additional form for review. No problem exists if the application calls the batch control business function directly. However, the call will fail if the mapped master business function calls the batch control business function because GUI presentations cannot be performed from the server. For example, the Purchasing and Inventory applications cannot use batch control if logic is mapped to the server.
- When implementing localization and custom logic, you must avoid mapping logic that contains GUI or windows functionality.

## Business Function Processing Problems

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The ERP 9.0 configurable network computing solution allows developers and administrators to map business functions to one or more application servers for logic processing. When a problem occurs on the server, ERP 9.0 attempts to reconnect to the application server so that the business function can run. If ERP 9.0 can reconnect to the server and run the business function, work proceeds uninterrupted.

However, the following circumstances can complicate business function processing:

- The client workstation cannot reconnect to the application server because a server process has died.
- Business function processing creates cache, or state information, on the application server whose process has died.
- The business function causes one or more processes to die on the server.
- The client workstation cannot reconnect to the application server because the server machine has gone down and the server machine is part of a server cluster.

When the client workstation cannot communicate with the server, ERP 9.0 redirects business function processing to a secondary server. A list in the CallObject code designates the name of the original server and the name of the secondary server to which future calls should be rerouted.

---

**Note**

The default configuration is that no secondary server is defined during the ERP 9.0 installation process. Defining a server will require changes to your OCM mappings. If you do not define a secondary server and failover occurs, ERP 9.0 remaps business function processing from the failed server to the client workstation.

---

When business function processing creates cache on the application server where a process has died, the client workstation reconnects to the application server, but the user must exit the application and restart it.

When a business function causes one or more processes to die on the server, the client workstation reconnects to the server. Because the business function is causing the `jdenet_k` process to die, ERP 9.0 fails the business function call.

When the client workstation cannot communicate with a server in a server cluster, ERP 9.0 recognizes that the server is part of a cluster and continues to try to reconnect. The transfer of control from one server in a cluster to another server in a cluster can take several minutes.

The ERP 9.0 configurable network computing solution provides a methodology that handles business function failure and allows you to continue working, even when a server has failed or a kernel process has died, ending the processing of logic on an application server. In addition, ERP 9.0 writes a message to the `jde.log` whenever a failover occurs, allowing you to troubleshoot the problem.

## Failure to Connect to the Server

The mechanism by which a business function fails to connect to a server depends on how the server is configured in the network. Failures for the following two types of configurations are discussed in this section:

- Failure to connect to a server in a non-clustered server configuration
- Failure to connect to a server in a clustered configuration

## Failure to Connect to the Server in a Non-Clustered Server Configuration

In a non-clustered server configuration, ERP 9.0 redirects business function processing if it cannot connect to the primary server. The following steps describe what occurs during the initial stages of an attempt to call a business function to run on an application server:

1. The user calls a business function on a server.
2. ERP 9.0 checks to see if the server has been failed over from the primary server to a secondary server or to the client workstation.
3. If processing has been directed to another server, ERP 9.0 remaps the business function and sends the CallObject message to the secondary server or to the client workstation to run the business function.
4. If the server has not been failed over, ERP 9.0 sends the CallObject message to the original server to run the business function.


In the second phase of business function processing, ERP 9.0 attempts to run the logic on the application server or client workstation. The following steps describe what occurs during the second stage of processing:

1. If the business function runs without error, either on the original server or the failover alternative, the request has been processed.
2. If the client workstation request is not successfully processed by the server, ERP 9.0 increments a reconnect counter and attempts one reconnection.
3. If the value on the reconnect counter is greater than 1, the business function fails. If the value on the reconnect counter is not greater than 1, ERP 9.0 reconnects to the server and attempts to run the business function.
4. If the client is unable to reconnect to the server, the request is redirected to a secondary server if one is defined, or to the client workstation if one is not defined.

If cache has been created on the server, the user must exit the application and restart it.

## Failure to Connect to a Server in a Clustered Configuration

If a business function fails because of a server failure in a clustered configuration, rather than failing over to a secondary server or the client workstation the client will wait until a new machine in the cluster is available then resubmit the business function request. While trying to reconnect, ERP 9.0 displays the following transient window:



**Waiting for clustered server hp9000b.**

**This may take several minutes.**

This window refreshes once a minute and continues to display until the client is able to successfully reconnect to the clustered server.

If the business function cache was created on the first server before it went down, ERP 9.0 will not submit the business function request to the server cluster. In this case, you must exit the application and then resubmit the business function.

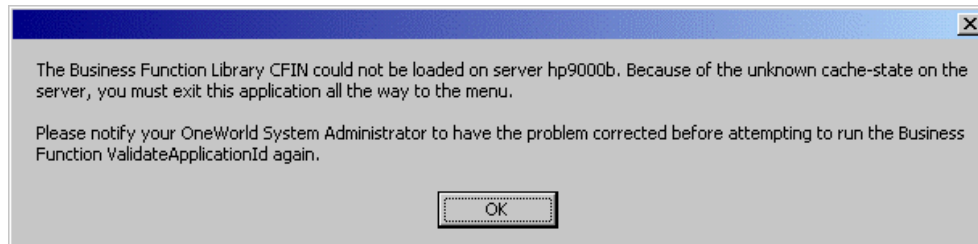
## Failure to Load the Business Function

When a client workstation requests to run a business function on a server, the server must successfully load the business function before it can run. This process can fail for the following two reasons:

- Server cannot load the library where the business function resides.
- Server cannot get the address of the business function.

### Server Cannot Load the Library Where the Business Function Resides

When the server cannot load the business function library, ERP 9.0 displays the following message on the client workstation and writes the text of the message to the jde.log file on that machine:



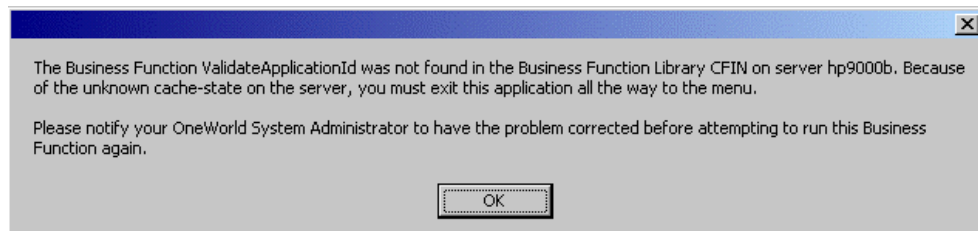
Following are probable reasons that the library failed to load:

- The business function library failed to build during the package build process.
- The library was inadvertently deleted or renamed.
- A problem exists with permissions.

If the library fails to load, close the application until you get to the menu, and contact your system administrator. Ensure that the problem is corrected before you attempt to re-run the business function.

### Server Cannot Get the Address of the Business Function

When the server cannot get the address of the business function within the library, ERP 9.0 displays the following message on the client workstation and writes the text of the message to the jde.log file on that machine:



Following are probable reasons why the server cannot get the address of the business function:

- The package build process failed to create the module that contains the business function and, therefore, the module was not included in the business function library.
- The client has a newer package than the server, and the business function exists on the client but not on the server.

If this error occurs, close the application until you get to the menu and contact your system administrator. Ensure that the problem is corrected before you attempt to re-run the business function.

## **Failure While the Business Function is Running**

The business function itself can cause one or more processes to die on the server. In this case, ERP 9.0 displays a dialog box indicating that the business function is causing problems.

You might have to change OCM mappings or fix a bug in the business function if this dialog box appears.

## **Resetting the Server Cache**

If the business function does not run the first time, ERP 9.0 checks to see if cache was created on the server during the first failed attempt. If no cache is created and the reconnection attempt to the primary server fails, ERP 9.0 attempts to run the business function on the secondary server or the client workstation.

If cache is created on the server, ERP 9.0 instructs the user to close the application and start over. This message is also written to the client jde.log file.

The creation of cache on the server is vital to the processing of business functions. ERP 9.0 creates cache when one business function runs so that one or more subsequent functions can use the data in the cache. For example, one business function might create and initialize the cache, a second might add data to it, and a third might access the data and insert it into a database.

If a process on the server dies after the first business function creates the cache and the client workstation is unable to communicate with the process on the server that contains the cache, the subsequent business functions are not able to access the original cache. Therefore, in this scenario, ERP 9.0 forces you to close the application and start over.

---

### **Note**

UBEs and table conversions continue to process business functions after a failure, even if they create cache on the server.

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## Environment Setup

ERP 9.0 environments, which you define, are collections of pointers indicating the location of data and ERP 9.0 objects. An ERP 9.0 environment definition contains a path code and a set of Object Configuration Manager mappings.

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## Understanding Environments

An ERP 9.0 environment consists of Object Configuration Manager mappings and a path code. The Object Configuration Manager mappings for an environment answer the following questions:

- Where are my logic objects processed?
- Where do my data objects reside?

The path code associated with an environment answers another question:

- In what directory are the objects located?

ERP 9.0 has the following types of environments:

- Distributed data and distributed logic environments  
Distributed data and logic environments determine where data resides and where application processing occurs.
- Mode of processing environments  
Mode of processing environments support the three types of transaction processing available with ERP 9.0: store and forward, direct connect, and batch of one.
- Group of object environments  
Group of object environments control which set of objects is used, such as production, development, or pristine.

## Where ERP 9.0 Stores Environment Definitions

ERP 9.0 environment definitions are stored in the following five tables:

- Library List Control (F0093) table
- Library List Master File (F0094) table
- Environment Detail - ERP 9.0 (F00941) table
- Object Configuration Master (F986101) table
- Object Path Master File (F00942) table

### Library List Control (F0093) Table

The Library List Control (F0093) table contains valid environments for each user. You must assign to each user at least one valid environment for logging on to ERP 9.0. The environments you assign to each user in the Library List Control table are validated at ERP 9.0 startup against the ERP 9.0 directories on the workstation. Only those environments for

which a user is authorized and that are installed on the machine they log on to are listed as available environments.

The Environment Revisions form of the User Profile application enables you to specify which users are authorized for specific environments.

### **Library List Master File (F0094) Table**

The Library List Master File (F0094) table contains the name of the environment and the description.

### **Environment Detail - ERP 9.0 (F00941) Table**

This table contains the environment name and the associated path code from the Object Path Master File (F00942) table.

Every environment must have an associated path code, but environments can share the same path code. For example, two environments can use production objects and have different data location mappings, such as in the case of a group of users processing against data on a corporate server and a group of users processing against data on a departmental server.

### **Object Configuration Master (F986101) Table**

The Object Configuration Master table has data and logic object mappings for every environment. Every environment must have entries in the Object Configuration Master (F986101) table, even if the mappings for the environments are identical. Two environments might have different path codes but have the same mappings for data and logic. For example, developers and testers could have different sets of objects, but their data is in the same database and their logic processes locally.

### **The Object Path Master File (F00942) Table**

This table stores the location of the path code's central objects, the release associated with this path code, and other details.

## **Working with an Environment**

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You can create a new environment either by adding a new environment or by copying an existing environment. The custom environments functionality in Installation Planner and Environment Director applications simplify this process.

Because the Object Configuration Manager (OCM) mappings are an important element of the environment, determining these mappings is the first step in deciding whether to create a new environment or copy an existing environment.

When you copy an environment, the OCM mappings for that environment are copied along with the environment. It is sensible to create a new environment by copying an existing environment when the OCM mappings for the environment you want to create closely match the mappings of an existing environment. For example, if a development environment and a test environment contain similar mappings, it might be easier to copy an environment and change the mappings that are different.

You should add a new environment rather than copying an existing environment when you do not want to use another environment's object mappings. For example, if you are setting up store-and-forward processing, consider adding a new environment because the OCM mappings for the store-and-forward users are different from the OCM mappings for the direct connect users.

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**Note**

Remember that when you add an environment without copying an existing one, you must create the OCM mappings manually. For this reason, it is typically easier to create a new environment by copying an existing one and adjusting the OCM mappings instead of creating all of them manually.

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## Adding an Environment

Add a new environment rather than copying an existing environment when you do not want to use the OCM mappings of another environment.

**See Also**

- *Working with the Object Configuration Manager in the Configurable Network Computing Implementation Guide* for more information about adding OCM mappings

## Copying an Environment

When you create a new environment by copying an existing environment, ERP 9.0 also copies the Object Configuration Manager mappings associated with the existing environment. You can set up a processing option if you want to specify additional Object Configuration Manager mappings to copy at the time that you copy the environment.

You can copy environments from your own existing environments, or you can use the Installation Planner, which provides sample production environments you can use as templates. These templates contain suggested mappings for all J.D. Edwards tables.

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**► To copy an environment**

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*On the Environments menu (GH9053), choose Environment Master (P0094).*

1. On Work With Environments, choose an environment, and then click Find.  
If the Display Only ERP 9.0 Environments option is checked, this form displays only those environments that have an entry in the ERP 9.0-only environment detail file (F00941).
2. Choose the row in the detail area, and click Copy Environment on the Row menu.
3. On the Copy Environment form, type an environment name in the New Environment field.

To copy only the \*PUBLIC Object Configuration Manager mappings of an environment, ensure that the Copy \*PUBLIC Records Only option is turned on. Leave this option turned off to copy mappings for the environment, for individual objects, and for \*PUBLIC.

4. Click OK.

A new environment will be added to the Library List Master File (F0094) table. For that new environment, a record in the Environment Detail (F00941) table is created, as well as a set of mappings in the Object Configuration Master (F986101) table in the system data source. Depending on your processing options, there might also be a set of mappings in server map data sources.

5. To change the path code for the newly created environment, choose the environment from the Work With Environments form and change the path code.
6. Modify other Object Configuration Manager mappings, if needed.

#### See Also

- *Mapping Objects* in the *Configurable Network Computing™ Implementation Guide* for more information about adding OCM mappings

## Copying a New Environment to a New Path Code

Copying a new environment to a new path code requires that you know how to use the copy feature to create a new test environment with demo data loading in a new path code.

### ► To add an environment

---

1. On Work With Environments, click Add.

If the Display Only J.D. Edwards Environments option is checked, this form displays only those environments that have an entry in the Environment Detail - ERP 9.0 (F00941) table.

2. On the Environment Revisions form, complete the following fields, and then click OK:

- Environment Name
- Description
- Path Code
- Release
- Just In Time Installation
- Developer (Y/N)

A new environment will be added to the Library List Master File (F0094) table. For that new environment, a record is created in the Environmental Detail (F00941) table.

3. Click the following options:

- WAN Configured Environment
- Detached Mode

If the path code you entered on the Environment Revisions form does not exist on any other record in the Library Master File (F0094), the system displays the Data Source Selection form.

4. On Data Source Selection, complete the OL Data Source field.

The system uses the data source you enter on this form to create Object Librarian OCM mappings for the new environment. The system writes the required records to the Object Configuration Master (F986101) table.

If the path code you enter on the Environment Revisions form already exists in another environment record, the system determines the data source that is associated with that environment's Object Librarian OCM record. The system uses this value to create a new record in the Object Configuration Master (F986101) table.

► **To copy a new environment to a new path code**

---

*From the Environments menu (GH9053), choose Environment Master (P0094).*

1. On Work With Environments, click Find.  
Make sure the option for \*Public Records Only is set in the manner you want.
2. Choose the environment that most closely matches the one you want, and choose Copy Environment from the Row menu.
3. On Copy Environment, fill in the New Environment field and turn on (or off) the Copy \*Public Records Only option.
4. Click Close to go back to the Work With Environments form.
5. On Work With Environments, click Find.
6. Choose your new environment and change the path code to the new one you created in step 1.
7. Click OK when you are finished.
8. Verify that the path code was changed by closing to the Environments menu (GH9053) and choosing Environment Master (P0094) again.

► **To create test batch files**

---

1. Remark out all lines in the LOADALL and JDESET files and format a test set in the same format as the prod set.
2. Copy the LOADPROD to a LOADTEST.BAT file, and change the appropriate parameters to the ones you created in the JDESET.BAT file.
3. Run the LOADALL.BAT batch application.
4. Add the data sources you need in your current plan's planner environment.  
For logical data sources, you will probably want Business Data Test, Central Objects Test, ERP 9.0 Local Test, and Control Tables Test.

Make sure the deployment server source matches the Central Objects Data source and the LOADALL specifications that you entered.

► **To update the AS/400 server map with the new environment**

---

*On the System Installation Tools menu (GH961), choose Custom Installation Plan (P98240).*

1. On the Work with Installation Plans form, choose your plan and expand.
2. Choose the host and click Select.

3. Choose Environment from the Form menu, and then add the new environment to the grid. Save the environment you added.
4. When you are at the Host Planner form, choose Revise Host from the Row menu.
5. Choose Generate Svr. Map from the Form menu.

► **To add the new path code on the AS/400**

---

1. Modify the LIBRARY file in B9/hosts/as400/*machinename* so that it contains B9SYS as the first entry.
2. Add the name of each path code you want to add, such as PD9, PY9, and so on.
3. Use the ENDNET and CLRIPC commands on the AS/400 to end B9 services.
4. Log on to the AS/400 as QSECOFR.
5. Use the CLRLIB JDEOW command to clear the JDEOW library on the AS/400.
6. Use the CHGCURLIB JDEOW to change the current library on the AS/400 to JDEOW.
7. Use the FTP *deploymentservername* command to transfer files from your deployment server.
8. Sign on as JDE and enter the following commands:
  - `cd x:\PeopleSoft\B9\hosts\as400 \enterpriseservername`
  - `get ftpinput (replace)`
  - `cd..`
  - `bin`
  - `get jdesav1 (replace)`
  - `quit`
9. Enter the following commands on the AS/400:
  - `RSTOBJ OBJ(J98OW10 J98OW20) SAVLIB (JDEOW) DEV(*SAVF) SAVF(JDEOW/JDESAV1) MBROPT(*ALL) ALWOBJDIF(*ALL) FRCOBJCVN(*YES *ALL) RSTLIB(JDEOW)`
  - `SBMJOB CMD(CALL PGM(J98OW10) PARM('deploymentservername' 'JDEOW'))`
10. Start the ERP 9.0 services with the STRNET command.
11. Run PORTTEST over each environment to verify that each one is working.

## Deleting an Environment

When you delete an environment, the environment definition is removed and the Object Configuration Manager records associated with the environment are deleted. You can set a processing option if you want to specify additional Object Configuration Manager mappings to delete when you delete the environment.

► **To delete an environment**

---

*On the Environments menu (GH9053), choose Environment Master (T0094).*

On the Work With Environments form, choose an environment, and click Delete.

## **Processing Options for Environment Master (P0094)**

### **Process Tab**

These processing options give you greater flexibility when copying or deleting by enabling you to specify whether users have the ability to copy or delete OCM mappings for this environment in other data sources.

Regardless of what you enter for these processing options, ERP 9.0 automatically copies or deletes OCM mappings for the environment you are using. The processing option values you enter determine whether you can copy or delete mappings in other data sources.

For information about a processing option, right-click the processing option field and choose What's This? from the menu. Or, click the processing option field and press F1.

#### **1. Delete OCM Mappings**

Use this processing option to indicate whether users can delete Object Configuration Manager mappings for this environment in other data sources. Valid values are:

Blank      Users cannot delete OCM mappings.

1      Users can delete OCM mappings.

#### **2. Copy OCM Mappings**

Use this processing option to indicate whether users can copy Object Configuration Manager records for this environment in other server map data sources. Valid values are:

Blank      Users can copy OCM mappings.

1      Users cannot copy OCM mappings.

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## Environment Director

Environment Director (P989400) is a new application in ERP 9.0 and is designed to simplify the process of creating System Environments.

Environment Director brings all the steps necessary to create an environment together in one place. It allows the user to create a new environment or copy an existing environment, share or copy an existing path code, set up data sources, create client and server map OCM mappings, and copy data from an existing environment.

While Environment Director is a useful tool for creating custom environments, J.D. Edwards recommends using Installation Planner (P9840) and Workbench (P9841) to create custom environments. These are the standard applications used for configuring ERP. Environment Director and Installation Planner and Workbench share common functionality for configuring custom environments.

### ► To create a new environment

---

Use this method to create a new environment whose settings will not be copied from an existing environment. It is recommended that you use director mode rather than express mode to allow for greater control of new environment settings.

*On the Advanced Operations menu (GH9611), choose Environment Director (P989400).*

1. On the Environment Director form, choose New Environment and click Next.
2. On the Environment form, choose Director and click Next.
3. On the Environment Properties form, complete the following fields:
  - Environment Name  
The environment encompasses both a path code (objects) and a data source (data). When put together, users have a valid workplace.
  - Description  
A user defined name or remark.
  - Abbreviation  
Will be used when creating business data and control tables data sources. For example, the data sources for the environment in the screenshot will be named Business Data – TN and Control Tables – TN. The default is the first two letters of the environment name.
  - Release  
The release number as defined in the Release Master. The default is the current release.
  - Just In Time Installation  
Use this field to turn ON/OFF just-in-time installation for anyone signed onto this environment. Consider turning just-in-time installation OFF before you transfer modified applications into the production path code. Once you have fully tested the application and are ready for production users to receive the changes, you can turn just-in-time installation back ON.

- JAS/WTS Environment  
Select JAS/WTS Environment if this is a Java or Windows Terminal Server environment. Choosing this option will affect how the system creates business function mappings for the environment and which environments are displayed at logon.

4. Click Next.

5. On the Path Code form, choose either to Share an Existing Path Code with another environment, or Copy an Existing Path Code for use with the new environment. Enter the path code name to be shared/copied and click Next.

The Path Code's release level must match the new Environment's release level. If you choose Copy an Existing Path Code, the Path Code Properties form appears, otherwise the Machines form appears.

6. On the Path Code Properties form, complete the following fields:

- Path Code

The Path Code is a pointer to a set of system objects, and is used to keep track of sets of objects and their locations.

- Description

A user defined name or remark.

- Release

The release number as defined in the Release Master. It must match the environment's release.

- Cumulative Description

The Cumulative Description further identifies the release level of the Path Code, it is only used by OMW for SAR integration.

- Location

The Location or Machine Key indicates the name of the machine on the network (server or workstation).

- Server Share Path

This field indicates the shared directory for this Path Code. The objects that are stored on a file server will be found in this path.

- UNC Flag

Determines how to create the server path. Valid options are:

Checked

Creates the path using relative paths. Enter a double slash (\\), rather than the specific followed by a single slash (\).

Unchecked

Creates the path using the actual drive letter.

Deployment Data Source

This field indicates the location (data source) of the Central Object Specifications data source that corresponds to the path code. For example, if your environment has a PDxxxx path code, where xxxx is the current system release level, a valid data source for that path code would be Central Objects – PDxxxx, where xxxx is the current release level.

#### Status Code

This code determines the status of the software in the development cycle.

#### Merge Option

The Merge Option denotes whether a customer's object will be merged in with the J.D. Edwards object. The Merge Option can be set at the Path Code level so that all objects checked into that path will carry the same Merge Option as the Path Code.

7. Click Next.
8. On the Machines form, select the enterprise servers where the new environment will run. To select machines, highlight the machine in the left tree view and click the right arrow. It will be moved to the right tree view.
9. To filter the list of machines in the left tree view, enter a Machine Key and/or Port Number and click Find. (If the new environment is being copied from an existing environment, the machines in the existing environment can be automatically selected for the new environment by clicking the link.)
10. To continue, click Next.
11. Data Source Revisions will prompt for each data source for the new environment as defined in Data Source Templates By Environment (GH9012, P98503, F98511). Shared Data Sources will not be displayed.
12. On the Data Source Revisions form, click OK. The screen will reappear for each environment data source. Once all data sources have been defined, the Data Load form appears.
13. On the Data Load form, select or deselect from the following the data loads the system should perform:
  - Load Business Data (R98403 XJDE0021)  
When selected, a form will prompt for the source environment.
  - Load Control Tables (R98403 XJDE0022)  
When selected, a form will prompt for the source environment.
  - Central Objects And Versions (R98403 XJDE0019)
  - Deployment Server Directory (R9800942 XJDE0001)

This UBE will do the following:

Copy either the path code on the local filesystem or the path code on the deployment server. If run from the deployment server, these are the same.

Copy package inf files on the deployment server.

Copy Software Package Detail (F9631), Software Package Build Header (F96021), and Software Package Build Header – History (F96215).

Check Out Records (R989861 XJDE0001)

ESU History (R9672 XJDE0001)

14. Click Next.
15. On the Environment Director Revisions form, highlight a node and click Select to review the node's properties.
16. Click OCM to create the environment and review the OCM.
17. Click Back to review the choices in the environment director or click Cancel to exit the environment director (all changes will be lost if you Cancel).
18. Click End to finish the creation of the environment.

The following actions will be performed:

- Create OCM if it does not already exist
- Write F98403 record for the new environment, which allows Installation Planner to display the environment
- Load Business Data
- Load Control Tables
- Load Central Objects and Versions
- Copy Path Code Directory and Packages
- Copy Check Out Records
- Copy ESU History
- Configure Enterprise Servers
- Create server map OCM
- Create server map F98611 records
- Write F9651 records for enterprise servers
- Configure BSFN and UBE mappings

#### ► **To create a new environment using the Express option**

---

Use this method to create a new environment whose settings will not be copied from an existing environment. It is recommended that you use director mode rather than express mode to allow for greater control of new environment settings.

*On the Advanced Operations menu (GH9611), choose Environment Director (P989400).*

1. Choose New Environment and click Next.
2. On the Environment form, choose Express and complete the following fields:
  - Environment Name  
A valid environment that encompasses both a path code (objects) and a data source (data).
  - Description  
A user defined name or remark.
  - Path Code Name

The name of an existing path code.

3. Click the link under Enterprise Servers.
4. On the Machines form, select the enterprise servers where the new environment will run. To select machines, highlight the machine in the left tree view and click the right arrow and it is moved to the right tree view.
5. To filter the list of machines in the left tree view, enter a Machine Key and/or Port Number and click Find (If the new environment is being copied from an existing environment, the machines in the existing environment can be automatically selected for the new environment by clicking the link.)
6. To continue, click OK.  
You are returned to the Environment form.
7. Click Next to generate defaults for the environment.
8. On the Environment Director Revisions form, highlight a node and click Select to review the node's properties.
9. Click OCM to create the environment and review the OCM, or click Cancel to exit the environment director (all changes will be lost if you cancel).
10. Click End to finish the creation of the environment.

The following actions will be performed:

- Create OCM if it does not already exist
- Write F98403 record for the new environment, which allows Installation Planner to display the environment
- Load Business Data
- Load Control Tables
- Configure Enterprise Servers
- Create server map OCM
- Create server map F98611 records
- Write F9651 records for enterprise servers
- Configure BSFN and UBE mappings

## **Running the Environment Director from Different Environments**

It is recommended that custom environments be created from the JDEPLAN environment using Installation Planner. This will create the environment in the planner databases and deploy it to the system data source. The environment must exist in the planner databases in order to apply Software Updates to the environment.

Installation Planner's Select Environment form now has Add and Copy buttons to allow custom environments to be added to a plan. These buttons use a few forms of the Environment Director to define the environment, and Installation Planner and Workbench will configure the remainder of the environment (data sources, data load, etc.).

Environment Director cannot be run from the deployment environment. The deployment environment exists only on the deployment server. It uses the bootstrap tables (F98611 and

F986101) from the B9 System Planner; the remainder of the system tables are in the system data source. This split will cause inconsistencies between the planner and system definitions.

If the Environment Director is run standalone it should be run from a Windows client. The environment will be created in the system data source and needs to be copied to the planner environment before software updates can be applied to the environment. The Copy System to Planner function (R9698611) has been created to automate the process of copying the environment definition from system to planner.

## Shared vs. Environment Data Source

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The Environment Director will not prompt for shared data sources. These data sources are shared by all environments and have already been configured and do not need to be reconfigured. By default, these are the System, Object Librarian, and Data Dictionary data sources. Only the environment data sources will be configured. By default, these are the Business Data, Control Tables, Central Objects, and Versions data sources.

## Database Configuration and Permissions

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New databases, table spaces, and libraries must be created before the Environment Director can load data into the new environment.

Typically, System, Object Librarian, and Data Dictionary data sources are shared with existing environments and will not need new databases. Business Data and Control Tables data sources, as well as any custom data sources, will need new databases if these data sources are not being shared with another environment. Central Objects and Versions will need new databases if the new environment will be using a new path code.

### See Also

- *Installing the System Databases* in the *ERP 9.0 Install/Upgrade Guide* for more information on how to set up the databases

## Data Source Customization

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Following is a description of various data classes and source templates by environment.

### Data Class

The data class is at the center of automatic OCM generation. It categorizes the type of data stored in data sources and tables. For example, Business Data is data class 'B', and System is data class 'S'. If you want to split business data into multiple data sources, you need to create a new data class, modify the data source template (so Environment Director or Planner will prompt for a data source) and assign tables and GT objects to that data class. OCM will be created based on the information provided above.

### Create A New Data Class

Create a new data class by adding a value to the H96/DU UDC for data sources and H96/CL UDC for table and GT objects.

## Data Source Templates By Environment

A data source template defines the set of data sources that will be used by new environments, and the default values for the data source's properties. They are stored in the Data Sources by Environment table (F98511).

F98511 also stores the set of data sources for an environment after they have been generated from the template.

Installation Planner and Environment Director both use this table when prompting for data sources and when creating OCM. When prompting for a data source, it will first check Data Source Master (F98611) to see whether it has already been defined. If so, it will ignore the defaults in F98511 and prompt based on the existing data source definition.

The information in this table can be edited using Data Source Templates By Environment (GH9611). By understanding this application, you can implement custom environment naming standards and ease the creation of environments.

When creating a new environment, template records are copied to create data sources for the environment and tokens in the properties are replaced with values for the environment. Records with an environment value of \*SHARED are used as a template for shared data sources. This is used once to set up the shared data sources, whereas new records with environment DEFAULT are created. Environment Director does not prompt for shared data sources, and these must be set up from Installation Planner. The default set of shared data sources is system, object librarian, and data dictionary.

Records with an environment \*ENV are used for new environment data sources. Whenever a new environment is created, the \*ENV records are copied. The environment name replaces \*ENV and tokens are replaced in order to receive the actual data source name and default properties. The default set of environment data sources is business data, control tables, central objects, and version. (The central objects data source is also specified on Path Code Master).

Records with an environment \*LOGIC are used for logic and server map data sources. These are set up when selecting an enterprise server.

## Table Data Classes

A table is associated with a data class using a field on the Object Librarian table (F9860.sicldf). Table data classes can be modified two ways:

- Object Management Workbench (GH902) – Choose the table in the left tree view in OMW and click Design. Choose the Install/Merge Codes tab and modify the Data Class value. Click OK. Modifying the data class does not affect existing OCM mappings; it is only used when creating mappings for a new environment.
- Table Data Classes – This application can be used to modify the data class for several tables at once. This application should only be used by a system administrator. Go to GH9611 and open Table Data Classes. Use the QBE to filter the list of tables in the grid. Choose one or more tables whose data class will be changed. Click Select. Type in the new data class value and click OK.

## Data Load

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Environment Director can automate data load for an environment using UBEs. Cases might exist, however, when you wish to use third-party tools to load the data (that is, DTS, BCP, Import/Export, CPYLIB). In these cases, the default data load can be de-selected in the director.

## How OCM is Created

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ERP 9.0 OCM mappings (TBLE, GT, BSFN, UBE) can be created for new or copied environments.

### New and Copied

OCM for the new environment is created in two steps: first, mappings for tables and GTs are set up; second, BSFN and UBE mappings are configured.

### TBLE, GT When Creating New Environments

ERP finds the data class for each table or GT object in Object Librarian (F9860). Based on the environment and data class for the object, the data source name is fetched from the Data Sources by Environment table (F98511). If a record is not found, ERP looks for a record for the data class where environment name is DEFAULT (a shared data source). If that data source is the default mapping, a mapping with object name DEFAULT is created; otherwise, the actual object name is used. Mappings are not created for tables in the Planner and Internal data classes.

### TBLE, GT When Copying Environments

ERP looks at each \*PUBLIC OCM record for TBLE and GT objects for the environment being copied. It then fetches the data class for the object from Object Librarian. It then looks in F98511 for the data source in the new environment for that data class. If the data source is different than that in OCM, it changes the mapping to point to the new data source.

### When Creating New or Copying Existing Environments

The OCM generation algorithm for UBEs and BSFNs is identical, but the output depends on whether the default mapping is LOCAL or an enterprise server.

#### Default Mapping to LOCAL

A default mapping to LOCAL is created. Server mappings are created for any object whose Location (labeled Business Function Location for BSFNs and Process Location for UBEs) in OMW is Server Only (F9860.SIBFLOCN = 3) or whose Location is Client/Server (F9860.SIBFLOCN = 2) and OCM Category in OMW is Map To Server (F9860.SIOLCD02 = 002).

## Default Mapping to Server

A default mapping to the enterprise server is created. LOCAL mappings are created for any object whose Location (labeled Business Function Location for BSFNs and Process Location for UBEs) in OMW is Client Only (F9860.SIBFLOCN = 1) or whose Location is Client/Server (F9860.SIBFLOCN = 2) and OCM Category in OMW is Map Local Only (F9860.SIOLCD02 = 001).

The default mappings are as follows:

	<b>Base Environment</b> <b>(DV9, JD9, PD9, PY9)</b>	<b>JAS/WTS Environment</b> <b>(JDV9, JJD9, JPD9, JPY9)</b>
UBE	Enterprise Server	Enterprise Server
BSFN	LOCAL	Enterprise Server

<b>Object Name</b>	<b>Data Class</b>
F0094	S
F9860	O
F9200	D
F0101	B
F01012	B
F0004	T
F98710	C
F983051	V
GT92002	D
GT9860A	O
GT3711	B
GT4801	B

<b>Environment</b>	<b>Object Name</b>	<b>User/Group</b>	<b>Data Source</b>
ENV1	DEFAULT	*PUBLIC	Business Data – ENV1
ENV1	F0094	*PUBLIC	System – B9
ENV1	F9860	*PUBLIC	Object Librarian – B9
ENV1	F9200	*PUBLIC	Data Dictionary – B9
ENV1	F0004	*PUBLIC	Control Tables – ENV1

ENV1	F983051	*PUBLIC	Versions – PY9
ENV1	GT92002	*PUBLIC	Data Dictionary – B9
ENV1	GT9860A	*PUBLIC	Object Librarian – B9
ENV2	DEFAULT	*PUBLIC	Business Data – ENV2
ENV2	F0094	*PUBLIC	System – B9
ENV2	F9860	*PUBLIC	Object Librarian – B9
ENV2	F9200	*PUBLIC	Data Dictionary – B9
ENV2	F0004	*PUBLIC	Control Tables – ENV2
ENV2	F983051	*PUBLIC	Versions – DV9
ENV2	GT92002	*PUBLIC	Data Dictionary – B9
ENV2	GT9860A	*PUBLIC	Object Librarian – B9

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## Data Sources

ERP 9.0 data sources are the building blocks that you use to set up an ERP 9.0 enterprise configuration. Data sources define to ERP 9.0 all the databases and logic machines required by the ERP 9.0 configuration.

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## Understanding Data Sources

ERP 9.0 data sources define where your database tables reside and where ERP 9.0 runs logic objects for your enterprise. Data sources can point to:

- A database in a specific location (for example, an MSDE database, such as JDELocal located in \b9\data, or an AS/400 data library, such as PRODDATA)
- A specific machine in the enterprise that processes logic

Data source definitions are stored in the Data Source Master (F98611) table. Workstations use a common table F98611, which generally resides in the system data source on the enterprise server. ERP 9.0 servers that process logic and request data require their own unique definitions for ERP 9.0 data sources; therefore, they have their own table F98611 in the server map data source.

At least two sets of table F98611 exist. They reside in a centralized system data source normally kept on an enterprise server and accessed by workstations, and in a server map data source, which each logic server requires.

## Understanding Database Data Sources

A database is a grouping of tables in a database management system. You must identify databases to the applications that access them. You can distribute databases across a network and involve various servers and database management systems. A database data source identifies to ERP 9.0 the database information that ERP 9.0 needs to identify and connect to a database.

### Data Source Names

You define names to identify the data source. You should use a meaningful name for your data sources. For example, to indicate that you are storing business data for production users, your data source name could be Business Data - Prod or something similar.

J.D. Edwards provides demonstration data source names at installation; you can use these for your own data sources.

### See Also

- The *ERP 9.0 Installation Guide* and the *ERP 9.0 Installation Reference Guide* for more information about defining data source names

### Database Names

The data source definition must contain information about the database and the server in which it is located. Different database management systems identify the databases in

different ways. For example, you must identify Oracle databases by the Oracle SQL\*Net V.2 connect string. You must identify databases that you access through ODBC by the ODBC data source name.

### **Network Machine Name (Server Name)**

Database management systems reside on a machine. You must identify this machine to the network so that other computers can access its resources. You must provide to ERP 9.0 (in the data source definition) the machine name for the server that hosts the database management system in which the database resides.

### **JDEBase (DLL Name)**

J.D. Edwards buffers the business solution from the technology. The JDEBase middleware product provides a set of APIs that resolve SQL differences across multi-vendor database management systems. JDEBase can automatically determine the proper program. These programs translate the generic Data Manipulation Language (DML) requests into appropriate SQL statements and work with the third-party communication software to communicate requests across the network.

## **Understanding Logic Data Sources**

A logic machine is the machine on which batch applications and master business functions run. You must identify logic machines to ERP 9.0 using a data source definition. The data source definition must include the network information about the machine, such as a server name like HP9000.

When mapping logic objects for distributed processing, ERP 9.0 uses the machine data source (distributed processing data source) as the target location for processing logic objects.

## **Required Data Source Types**

You must set up a minimum number of data sources for ERP 9.0 to run. Two of the required data sources define machines that process logic in the enterprise. The other data sources define various databases used in the enterprise.

The ERP 9.0 installation software provides samples of these required data sources to build your system configuration.

### **Distributed Processing Data Source**

This data source definition contains information that ERP 9.0 uses to identify the logic machine in the network. You need to define each logic machine as a data source.

### **Local Data Source**

This data source defines the ERP 9.0 workstation. Use this data source to override the process location of a batch application that you mapped in the Object Configuration Manager to run on the server.

## Business Data Data Source

This data source is used when you divide your business data into multiple owners or libraries, which can reside on the same enterprise server or on different ones. Each group of data requires a separate data source.

Some examples of business data include:

- Production data (nontechnical data, such as financial and manufacturing data)
- Test data
- Demo data (demonstration or training data)
- Conference Room Pilot (CRP) data

The ERP 9.0 installation procedure provides demonstration data that you can copy to supported host databases. The data source name is Business Data - JDE.

## Control Table Data Sources

This data source consists of user defined codes, menus, and next numbers.

## Data Dictionary by Release Data Source

This data source allows you to store ERP 9.0 data dictionary master tables in a central location to allow easier administration of changes. Group these master tables together to form a data dictionary database. You should share one data dictionary between your production (such as PD7334) and development (such as DV7334) path codes. ERP 9.0 allows one data dictionary per path code, but multiple data dictionaries are not recommended or supported. The Data Dictionary data source is named by base release number—for example, Data Dictionary - B734, Data Dictionary - B733, or Data Dictionary - B732.

## System Data Source

This data source consists of the technical tables you use to run all ERP 9.0 applications. You must set up one system data source per release. When running applications, the system tables provide the following:

- Object mappings (location of tables, batch processes, and business functions)
- Data source definitions
- ERP 9.0 security
- Next IDs (used for development only)

All workstations use a central set of system tables usually stored on your enterprise server but not on your deployment server. Each logic server requires its own subset of system tables. These server system tables are stored in the server map data source.

### See Also

- *Server Map Data Source* in the *Configurable Network Computing™ Implementation Guide* for more information about server system tables

## System Table Caching

When a user firsts logs on, ERP 9.0 uses the user ID and environment to retrieve information from the system tables for that user and environment. ERP 9.0 caches this information in memory on the workstation. Any time a change is made to the central system tables, dynamic caching of the system information occurs for those workstations with an active ERP 9.0 session.

## How ERP 9.0 Connects to the System Data Source

When ERP 9.0 starts on a workstation, ERP 9.0 attempts to connect to the base data source found in the workstation jde.ini file. If this data source is unavailable, ERP 9.0 attempts to connect to a secondary data source for system information. It is important to have processes for ensuring that the alternate system data source location contains current information. You can maintain an alternate data source's information using table conversion or data replication.

The jde.ini file should look like the following for the primary system data source connection:

```
[DB SYSTEM SETTINGS]
.
.
Default Env=DEMOB7A
Default PathCode=DEMO
Base Datasource=System B733
Database=System B733
.
.
.
Secondary System Data Source connection
[DB SYSTEM SETTINGS - SECONDARY]
Base Datasource=Access32
Object Owner=
Server=
Database=Access32
Load Library=JDBODBC.DLL
```

During installation, the Release Master application relates the system data source to a release. Configuring the release updates the setup.inf file used during the workstation install to create the jde.ini file.

## See Also

- ❑ *Storing Object Librarian and Central Objects in the Configurable Network Computing™ Implementation Guide* for more information about connecting to the System Data Source
- ❑ *Major ERP 9.0 Technical Tables in the ERP 9.0 Installation Reference Guide* for more information about the Release Master Application

## Object Librarian Data Source

This data source points to the Object Librarian tables you use for custom development. You should have only one set of Object Librarian tables for each software release, regardless of how many path codes (sets of central objects) you maintain. This data source can reside on any J.D. Edwards-supported platform. The Object Librarian data source is named by base release number; for example, Object Librarian - B733.

## Central Objects Data Source

This data source points to the ERP 9.0 source objects (central objects specifications), as well as the User Overrides table (F98950). Central Objects data sources are databases.

If you have multiple path codes, each must have a separate Central Objects data source. Developers check objects out of a Central Objects data source for modification. When the developer checks in the objects, the system copies the objects from the developer's workstation to the relational database tables in the Central Objects data source. You must set up one Central Objects data source for every path code needed in your configuration, for example, Central Objects - PD9 or Central Objects - DV9.

You must have a Central Objects data source for:

- Pristine objects
- Production objects
- Development objects

You connect each Central Objects data source to a path code used by the environments that you created for your configuration. This data source must reside in a SQL server or Oracle database, and can reside on any J.D. Edwards-supported platform that can run those databases. For best performance and use of table space, you should keep your central objects in Oracle UNIX. If your configuration does not include a UNIX enterprise server, you should use Microsoft SQL Server or Oracle on the deployment server.

## Storing Object Librarian and Central Objects

The Object Librarian and the Central Objects data sources can reside on either Oracle Server or Microsoft SQL Server. The Object Librarian also can reside in DB2/400 and can be on a machine separate from the Central Objects data source, which resides on Oracle or Microsoft SQL Server.

J.D. Edwards recommends the following:

- For businesses with an Oracle/UNIX platform, store the Object Librarian and the Central Objects data sources in Oracle. Otherwise, store them on your deployment server's Oracle Server or Microsoft SQL Server database.

- Regardless of which database is storing the relational database (RDB) components of the central objects, you must store the C programming language components on the deployment server that is accessible to all workstations for deployment and redeployment. Therefore, J.D. Edwards recommends storing C components on the deployment server.

## Server Map Data Source

This data source enables you to create for each logic server its own subset of system tables, which are called server map tables. Server map tables are required for each logic server. You must maintain these tables to ensure integrity with the workstation's system tables.

Use Server Map data sources to establish unique object mappings for logic servers. When batch jobs and business functions running on the server request data, they look to the Object Configuration Manager and the Data Source Master tables in the server map data source; this is necessary because the mappings are different.

For example, suppose a user logs on to an environment that maps static local data on the workstation, dynamic transaction data to the server, and the master business functions and batch processes to the server. The user enters a sales order and clicks OK to enter the order, which runs the Sales Order Entry master business function on the server. It does not make sense for the master business function to go back to the workstation to retrieve user defined codes and tax information; therefore, the server map Object Configuration Manager table maps all data to the appropriate server data source.

The following tables in the Server Map database are unique to a server's perspective of processing:

<b>Object Configuration Master (F986101)</b>	<p>Provides logic objects processing on a server request data and perhaps other logic objects. When these requests are made to ERP 9.0 running on a server, Object Configuration Master must be accessed to find the correct mappings for the data and logic objects. Servers might have different mapping requirements than workstations.</p> <p>For example, you should map all user defined codes locally to the workstation for performance during interactive processing. Server processing would require you to map these files locally to a server database to enhance server processing performance.</p>
<b>Job Control Status Master (F986110)</b>	<p>Records information about batch jobs launched on a server.</p>
<b>Job Number Master File (F986111)</b>	<p>Records next numbers for batch jobs launched on a server.</p>

### See Also

- *Working with the Object Configuration Manager in the Configurable Network Computing™ Implementation Guide* for more information about processing logic objects

- ❑ *Data Replication* in the *System Administration Guide* for information about replicating tables

## Versions Data Source

This data source corresponds to the path code, as in Versions – PD9. It stores versions and processing option information. It includes the following tables:

- Versions List (F983051)
- Processing Option Text (F98306)

## Planning ERP 9.0 Data Sources

---

Because ERP 9.0 data sources are the building blocks of your ERP 9.0 configuration, the proper identification of all required ERP 9.0 data sources is critical to having a correct configuration to support your business needs.

The following data source types require just one data source definition for each release:

- Object Librarian
- System
- Data Dictionary
- Local

The following other data source types might require you to define multiple data sources for each type to support your business requirements:

- Business Data (production, test, CRP, and JDE demo data)
- Distributed Processing (one per logic server)
- Server Map (one per logic server)
- Central Objects (one per path code)
- Control Tables

To plan for ERP 9.0 data sources, do the following:

5. Evaluate the location of your system data.
6. Identify all of the enterprise servers in your configuration that will host logic:
  - Set up one distributed processing data source for each enterprise logic server.
  - Set up one Server Map data source for each distributed processing data source.
7. Evaluate how many groups of ERP 9.0 objects you require to support your business environment, such as production, pristine, and development. Set up one Central Objects data source for each group of objects.
8. Evaluate the various locations of your business data:
  - Set up one Business Data data source for each database and library that contains Business Data tables that ERP 9.0 applications use.
  - Set up one Control Table data source for production and one for testing.

## Working with Data Sources

---

The database data sources and logical data sources applications let you add or modify a database data source or logic data source, respectively. After you add a new data source, you must update the Release/Data Source Map (F00948) table using the Release/Data Source Map application.

### Data Source Naming Conventions

When you add data sources, observe the following naming conventions:

- Limit to 30 characters
- Text is case sensitive
- Text is space sensitive

Specific exceptions for the Client Access data source follow.

#### Data Source Name

- Limit to 32 characters
- Begin with an alphabetic character
- Do not use the following characters: { } [ ] ( ) ? \* = ! @ ;

---

#### Note

You must type the data source name before you can use the Client Access ODBC driver to access AS/400 data.

---

#### Data Source Description

- Limit to 80 characters

#### Table Owner (Object Owner ID)

Oracle and SQL Server database management systems have unique table owner IDs for each group of tables. For example, the database that contains the system tables might have an owner such as B733SYS. You must identify the table owner ID for Oracle and SQL Server database management systems.

### Adding or Modifying a Data Source

This task explains how to add a database or logic data source to a Data Source Master (F98611) table in the system data source, or modify an existing data source. Use this application to modify or add a data source definition after ERP 9.0 is initially installed.

As part of adding or modifying, you also can enter or modify sizing and override information for tables and data sources.

► **To add or modify a data source**

---

*On the System Administration Tools menu (GH9011), choose Database Data Sources (P986115) or Logical Data Sources (P986115).*

Those data sources that have the OCM Data Source field checked on the Data Source Revisions form are displayed.

1. On the Machine Search & Select form, choose the data source you want to work with, and click Select.

The Machine Search & Select form displays those data sources that have the OCM Data Source field turned on in the Data Source Revisions form. Your selection should be the machine that contains the data source you want to view. Workstations use the system data source for their mappings. Each enterprise server has a unique server map data source.

2. To add a data source, on the Work With Data Sources form, click Add.
3. To modify an existing data source, click Find on the Work With Data Sources form to display a list of data sources.
4. Locate the data source you want to modify and click Select.

---

**Caution**

If you want to view your data sources without adding or changing one, make sure you exit from the Data Source Revisions form by clicking Cancel instead of OK. When you click OK, ERP 9.0 assumes you have added or changed a data source, and your existing ODBC drivers might not work correctly. You will have to modify them using the ODBC Data Source Administrator applet accessible from the Control Panel.

---

5. On the Data Source Revisions form, complete or modify all required fields, and then click OK: The application will display those fields that are required for the data source type being configured. Required fields may include the following:
  - Data Source Name
  - Data Source Type
  - Data Class
  - Platform
  - JDBNET Data Source?
  - Database Server Name
  - JDBNet Server Name
  - Logical Server Name
  - JDBNet Server Map Data Source Name
  - Data Source to Use on Server
  - Object Owner ID
  - Schema

- Library Name
  - Database Name
  - Database Name (TNS)
  - Database Alias Name
  - Database Instance
  - ODBC Data Source Name
  - Server Map Data Source Name
6. Use the Advanced form exit to choose additional options.
- The form will display options that are related to the data source type being configured. Additional options include:

- Clustered
  - Unicode
  - Use Decimal Shift
  - Use Julian Dates
  - Support For Updates
  - OCM Data Source
  - Use Table Owner
  - LOB Data Type Support
  - AS/400® BLOB Support
7. Use the Port form exit to specify database server port information.
- Database Server Port Number
  - Oracle SID Name
8. Click OK.

The ODBC Data Source Administrator applet that allows you to enter or change ODBC drivers opens automatically for DB2/400, UDB, and SQL Server databases using ODBC. Add or update ODBC drivers to reflect the data source you just added or changed.

#### **See Also**

- *Database Middleware Drivers* in the *Configurable Network Computing™ Implementation Guide* for a list of DLL names

### **Modifying the Release/Data Source Map Table**

The Release/Data Source Map program (P00948) allows you to define the release level for a Data Source for a data source type. When you add a new data source, you need to update the Release/Data Source Map table (F00948). This table contains entries for the data dictionary, Object Librarian, versions lists, and workflow and organizes the entries according to release. For example, you should have separate data dictionary entries for releases B73.1, B73.2, and B73.3, and so on.

When you copy or transfer objects between data sources, ERP 9.0 checks the release of each data source and then determines whether the source data source and the target data source reside in compatible releases. If unicode conversion is needed (for example, transfer from an Xe version to an ERP/SCM90 version), ERP 9.0 converts the data for you when you are using a release of ERP/SCM90 or greater.

ERP 9.0 does not allow you to move or copy objects between data sources with incompatible releases. When you add a Data Source, if record is already found in the Release/Data Source Map table (F00948) for the data structure and data type entered, the system displays an error. You can only have one release level defined for a Data Source per data type.

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► **To enter or modify table and data source sizing or override information**

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*On the System Administration Tools menu (GH9011), choose Database Data Sources (P986115) or Logical Data Sources (P986115).*

1. On the Machine Search & Select form, find the data source you want to work with, and click Select.
2. On the Work With Data Sources form, choose 'Database Sizing' or 'Default Sizing' from the Row menu.

---

**Note**

You also can access this application from the Object Configuration Manager application.

---

3. To add table and data source sizing information, on Work with Table and Data Source Sizing, click Add.

The Revise Table and Data Source Sizing form appears. On this form, you can revise or add table and index information for a data source or table.

4. To modify existing table and data source sizing information, on the Work with Table and Data Source Sizing form, choose the desired data source.

The Revise Table and Data Source Sizing form appears with previously entered information.

---

**Note**

Alternatively, to display the Revise Table and Data Source Sizing form, choose Default Database from the Row menu of the Work With Data Sources form. When you do this, the DEFAULT value is entered at the Object Name field so that default values are used for the form. If you change the object name from DEFAULT, the fields that were formerly filled with default values appear.

---

5. To add new parameters rather than modify existing ones, complete the following fields:

For Oracle Data Sources:

- Data Source
- Object Name

For UDB Data Sources:

- Data Source
- Table Name

---

**Note**

You can define parameters for all objects in a data source by entering DEFAULT at the Object/Table Name field.

---

6. On the Revise Table and Data Source Sizing form, complete or modify the following fields:

For Oracle Data Sources

- Index Initial Storage
- Index Next Storage
- Table Percent Increase Storage
- Table Minimum Extent
- Table Maximum Extent

These values are valid for both the table information and the index information.

For UDB Data Source:

- Target Operating System
- Table – Table Space Manager
- Database Alias Name
- Physical Database Name
- Table – Table Space
- LOB Default Size (bytes)
- Percentage Free Space per Index Page
- Table – Table Space 32K
- Index Table Space
- LOB – Table Space
- Percentage Free Space per Table Page
- Minimum Percentage of Free Space
- LOB – Log Changes
- LOB – Compact Data
- Initial Logging
- Volatile Table
- Append Mode

---

**Note**

For Oracle data source, if the object name is DEFAULT, the only fields you can enter or modify on the Revise Table and Data Source Sizing form are Table Space Name and Index Space Name.

---

7. To enter override information for Oracle data sources, choose Overrides from the Row menu of the Revise Table and Data Source Sizing form.  
This option is also available from the Row menu of the Work With Table and Data Source Sizing form.
8. On the Revise Table and Data Source Overrides form, complete or modify the following fields:
  - Copy Data (Y/N)
  - Create Tables(1/0)
9. Click OK to return to the previous form. If necessary, click OK on all subsequent forms until you return to the System Administration Tools menu.

**See Also**

- *Adding or Modifying a Data Source* in the *Configurable Network Computing™ Implementation Guide* for more information about data sources

## **Processing Options for Database Data Sources and Logical Data Sources (P986115)**

**Defaults Tab**

These processing options enable you to do the following:

- Specify a local (database) data source or a server data source
- Indicate whether you want to create an ODBC data source when the Workstation Installation program runs

For information about a processing option, right-click the processing option field and choose What's This? from the menu. Or, click the processing option field and press F1.

### **1. Data Source Type**

Indicates how the data source is configured: Servers (SVR) to run UBEs and Business Functions or a Database (DB) to access table data.

### **2. ODBC Data Sources**

Use this processing option to specify whether to create an ODBC data source during the workstation installation process. Valid values are:

Blank      Do not create ODBC data sources.

- 1    Create Client Access, SQL Server, and DB/2 data sources.

## Running Data Source Reports

---

The Data Source Master batch processes enable you to create a report for a data source or a comparison report for two data sources.

The Data Source Master batch processes are called from a report driver (R98611B) other ERP 9.0 reports do not require a report driver. You use the R98611B report driver to set processing options for each report. Any data selection for a report must be entered for the specific report, not from the driver. When you finish entering processing options and data selection, you run the report from the driver.

### Setting Processing Options for Data Source Reports

The following task describes how to set processing options for a data source report through the report driver.

#### ► To set processing options for data source reports

---

*From the Advanced Operations menu (GH9012), choose Data Source Master Report (P98305) or Data Source Master Comparison (P98305).*

1. On Work With Batch Versions - Available Versions, click Find and then choose one of the reports.
2. From the Row menu, click Processing Options.
3. Processing Options form appears.
4. On the form's UBE Driver tab, enter information for the report driver.
5. Click the tab for the report whose processing options you want to enter. For more information about entering the fields on these tabs.
6. Click OK to save.

#### See Also

- ❑ *Processing Options for Data Source Master (R98611) and Data Source Master Comparison (R986112) in the Configurable Network Computing™ Implementation Guide for more information*

### Processing Options for Data Source Master (R98611) and Data Source Master Comparison (R986112)

The processing options that are set from the report driver enable you to enter parameters for the Data Source Master Report (R98611) and the Data Source Master Comparison Report (R986112).

The processing options for the report you are running must be completed. Because the XJDE0001 version of the report runs, if data selection is necessary it must be done on the XJDE0001 version of the report.

#### UBE Driver Tab

This processing option lets you specify the Data Source Master report you want to run. Verify that the displayed report number corresponds to the report that you want to run. You can also specify the version you want to use for that report.

For information about a processing option, right-click the processing option field and choose What's This from the menu. Or, click the processing option field and press F1.

### **1. Data Source Master Report Name**

Use this processing option to specify the name of the report you want to run. Valid values are:

R98611 Data Source Master Report

R986112 Data Source Master Compare

### **2. Version**

Use this processing option to specify the version that you want to use for the report.

## **R986112 Tab**

This processing option lets you specify the two data sources to use in the comparison, the comparison method, and how to handle exception printing.

For information about a processing option, right-click the processing option field and choose What's This from the menu. Or, click the processing option field and press F1.

### **1. Data Source One**

### **2. Comparison Data Source Two**

Use this processing option to specify the names of the data sources that you want to compare.

### **3. Comparison Method**

Use this processing option to specify the comparison method used. The comparison method determines how ERP 9.0 searches the data sources. When you compare in one direction, ERP 9.0 lists records only in Data Source One that are not in Data Source Two. When you compare in both directions, ERP 9.0 lists records that are in Data Source One but not in Data Source Two, AND records in Data Source Two that are not in Data Source One.

Valid values are:

1 Compare one direction only. Print only the records found in the first data source, but not in the second data source.

Blank Compare both directions. Print records in the first data source and also the records in the second data source that don't exist in the first data source.

### **4. Exceptions Only**

Use this processing option to specify whether to print only the report exceptions or to print all records on the comparison report. Valid values are:

1 Print only the records that are different between the first and second data sources.

Blank Print all records from both data sources.

## **R98611 Tab**

This processing option lets you specify the data source to use for the report.

For information about a processing option, right-click the processing option field and choose What's This from the menu. Or, click the processing option field and press F1.

## 1. Data Source Name

Use this processing option to specify the data source that you want to use to produce the report.

## Running the Data Source Master Comparison Report

Run the Data Source Master Compare (R986112) report to compare Data Source Master Report (F98611) tables between two data sources. For example, you might compare the F98611 table in the system data source to the F98611 table for a given server map data source. Data sources should always be defined differently on each machine.

### Before You Begin

- Use the report driver to enter processing options for the report.

### ► To set up data selection for Data Source Master Comparison

---

*From the System Administration Tools menu (GH9011), choose Batch Versions (P98305).*

1. On Work With Batch Versions – Available Versions, enter R986112 in the Batch Application field, and then click Find.
2. Double-click version XJDE0001.
3. On Version Prompting, click the Data Selection option and then click Submit.
4. On the Data Selection form, choose from the appropriate columns to specify the exact records you want to compare.
5. Click OK.

### ► To run Data Source Master Comparison

---

*From the Advanced Operations menu (GH9012), choose Data Source Master Comparison (P98305).*

1. On Work With Batch Versions - Available Versions, click Find and then choose the version that corresponds to the report that you want to run.
2. Click Select.
3. On Version Prompting, click Submit.

## Running the Data Source Master Report

Run the Data Source Master Report (R98611) to print a report of the Data Source Master (F98611) table for a specific data source.

### ► To set up data selection for the Data Source Master Report

---

*From the System Administration Tools menu (GH9011), choose Batch Versions (P98305).*

1. On Work With Batch Versions - Available Versions, type R98611 in the Batch Application field and click Find.
2. Choose version XJDE0001, and then choose Data Selection from the Row menu.

3. On the Processing Options form, enter the Processing Options and click OK.
4. On Report Output Destination, choose On Screen or To Printer and click OK.
5. On the Data Selection form, choose from the appropriate columns to specify the exact records.
6. Click OK.

► **To run the Data Source Master Report**

---

*From the Advanced Operations menu (GH9012), choose Data Source Master Report (P98305).*

1. On Work With Batch Versions - Available Versions, click Find and then choose the version that corresponds to the report that you want to run.
2. Click Select.
3. On Version Prompting, click Submit to run the report.

---

## Middleware

In a client/server environment, applications must communicate across different platforms. These platforms can have different communications protocols, database management systems, and hardware operating systems. In order for clients to communicate with servers and servers to communicate with other servers, a mechanism must exist that can bridge multiple protocol and multiple vendor issues. This mechanism is a layer of software called middleware, which resides between the operating system and the business applications. It is important to have an application architecture that is based on a single, consistent middleware strategy.

J.D. Edwards provides the following types of middleware:

**JDENet Communication Middleware** Performs the connections from client to server and server to server, and sends messages for distributed requests. It is a peer-to-peer, message-based, socket-based, multi-process communication middleware solution.

**JDEBase Database Middleware** Provides platform-independent application program interfaces (APIs) for multiple database access. These APIs are used in the following two ways:

- By ERP 9.0 applications that dynamically generate platform-specific Structured Query Language (SQL), depending on the data source request.
- As open APIs for writing advanced business functions in the C programming language. ERP 9.0 uses these APIs to dynamically generate platform-specific SQL statements.

JDEBase also provides client-to-server and server-to-server database access. To accomplish this, ERP 9.0 is integrated with a variety of third-party database drivers, such as IBM Client Access/400 database software and Microsoft Open Database Connectivity (ODBC) programming interface.

---

## Understanding JDENet Communication Middleware

To communicate with each other across a network, the two computers must share a communications protocol (or set of protocols). A communications protocol is a formal set of rules that specifies the format and relationship for exchanging data among different devices. The communication middleware is concerned with the following protocol layers:

**Network Layer** The network layer handles addressing and routing information, error checking, and retransmission requests.

**Transport Layer** The transport layer provides connection-oriented data-delivery services across networks. This layer provides end-to-end data exchanges in which systems maintain a session or connection with each other for the reliable, sequenced exchange of data.

J.D. Edwards supports the TCP/IP protocol suite.

**Application Layer** The application layer provides application-to-application interaction and data exchange. JDENet is the application layer communication middleware.

## **JDENet Communication Middleware**

JDENet is the J.D. Edwards proprietary communication middleware package that provides server-to-server and client-to-server communication.

JDENet is a peer-to-peer middleware solution. For example, think of a client as a network conversation initiator and a server as a network conversation responder. In this example, a client always initiates the conversation by asking for something from another machine; and a machine acts as a server when it responds to a network request, such as when it gives something asked for by the client. In this peer-to-peer middleware solution, the distinction between client and server is determined by which machine starts the conversation. Any machine, running on any platform, can act as a client or as a server at a given time.

With JDENet, communication between client and server occurs through messages. JDENet messages contain processing requests, such as requests for business functions, batch jobs, or ERP 9.0 log in security. JDENet messages can originate from the client or the server. JDENet handles database requests only if multiple servers are in use and if they are different server types.

Application requests (messages) can be synchronous or asynchronous. A synchronous message, such as calling a business function, requires the client to wait for the server to complete the request. An asynchronous request, such as a batch process, enables the client to continue with another task while ERP 9.0 processes the request. In some circumstances, business functions can also be called asynchronously.

## **Socket-Based Communication**

A socket is a communications endpoint through which an application sends or receives packets of data across a network. Sockets provide a duplex communication channel between one or more systems. JDENet uses stream sockets to provide end-to-end communications. Sockets guarantee that the data arrives intact.

## **Message-Based Communication**

Message-based communication means that applications send service requests for logic or data in the form of messages that are received and stored in a queue for processing. The middleware handles message transmission, which enables the client application to process other tasks. Without messaging services to handle these jobs, the application must wait until the request is handled and the results returned.

Messaging is most appropriate for event-driven applications. It is the opposite of remote procedure calls (RPC), which are synchronous. The message packaging and “handshaking” of JDENet ensures that the message transmission is complete.

## **ERP 9.0 Process-Based Design**

Although ERP 9.0 client workstations can have more than one copy of ERP 9.0 loaded, only one ERP 9.0 Windows-executable application can be running at any one time. ERP 9.0 uses

an internal network process (also referred to as a net process) called JDENet to communicate a request to the ERP 9.0 server.

Servers also have a net process called JDENet. This process communicates with the client workstations and routes request messages to appropriate dedicated ERP 9.0 processes. In turn, the dedicated processes route work to the appropriate platform-specific logic processes, such as DLLs, shared libraries, and job queues. A server can have multiple ERP 9.0 main processes, multiple ERP 9.0 dedicated processes, multiple DLLs, shared libraries, and job queues.

The advantage of this architecture is that multiple workstations can make requests to the same server at one time. You can control the number of workstations that can make and maintain a session connection to a main server process. You also can define the total number of dedicated processes (and the number of each type) that ERP 9.0 uses to process specific types of workstation requests.

### **Network Processes**

A relationship exists among network processes, dedicated processes, and logic processes. This relationship is specifically defined by the `jde.ini` file on the enterprise server. Every enterprise server must have at least one ERP 9.0 network process, which is referred to as a JDENET\_n job. This job handles network connections and traffic for ERP 9.0.

As defined in the `jde.ini` file for each server, multiple JDENET\_n processes can exist. Regardless of the number of JDENET\_n processes that exist, the initial JDENET\_n process serves as the "master listener."

If multiple JDENET\_n jobs are specified, ERP 9.0 starts the jobs as required, allocating a job to each request. When the maximum number of JDENET\_n processes is started, ERP 9.0 automatically alternates between the currently running JDENET\_n jobs until the maximum number of connections is reached, providing load balancing among ERP 9.0 network processes. If the maximum number of connections for the JDENET\_n job is met on a given server, a client or server cannot initiate an additional ERP 9.0 session on that server until an existing session connection is ended. By design, all connections to JDENET\_n persist for the duration of an ERP 9.0 session.

For example, suppose that the `jde.ini` file on the server specifies that four JDENET\_n processes are allowed. The first JDENET\_n request is routed to the "master listener," which is the initial JDENET\_n process that is run at server start-up. When a second request to JDENET\_n is received, the "master listener" receives the request and assigns it to a second JDENET\_n process, which it then starts. This assignment persists for the duration of the session between the requesting device and the server. The same process occurs for the third and fourth JDENET\_n requests. When the fifth request is received, it is assigned to the first JDENET\_n process, and the cycle continues.

### **Kernel Processes**

The JDENET\_n process is responsible for handling the network layer of communication. If the JDENET\_n job determines that the incoming message is a request for logic processing, it routes the request to an appropriate JDENET\_k job. ERP 9.0 determines an appropriate JDENET\_k job based on message identifiers. The JDENET\_k job is the ERP 9.0 process that provides the link between the JDENET\_n job and the appropriate platform-specific processing job. The JDENET\_k process is applicable only to servers.

The JDENET\_k job handles the two-way routing to and from the various logic processes, and the JDENET\_n job handles the return delivery to the appropriate machine. Eleven dedicated kernel types exist, and each is responsible for a specific type of ERP 9.0 process.

Examples of logic processes include dynamic link libraries (.dll) for Windows NT platforms, shared libraries (.sl) for UNIX platforms, and JDENet processes for AS/400 platforms.

#### See Also

- *Middleware* in the *System Administration Guide* for more information about JDENet

## Understanding JDEBase Database Middleware

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Different database management systems (DBMS) have their own version of Structured Query Language (SQL). For example, the following illustrates how Microsoft SQL Server, Oracle, and DB2/400 handle the same SQL statement:

**Microsoft SQL Server**    `SELECT * FROM PRODDTA.F0101`

**Oracle**                    `SELECT * FROM PRODDTA.F0101;`

**DB2/400**                    `SELECT * FROM PRODDTA/F0101`

The purpose of a database middleware layer is to provide a common interface to interpret the various versions of SQL. J.D. Edwards has a database middleware product called JDEBase, which is a common set of application programming interfaces (APIs) that programmers can call to request data and perform data manipulation logic. JDEBase interprets the generic APIs and converts the SQL into the appropriate statements for ERP 9.0 to access the database.

Multiple databases in a distributed environment require a monitoring program to ensure database integrity. This monitoring program is referred to as a transaction monitor. The JDEBase database middleware has an embedded transaction monitor.

JDEBase provides:

- The ability to insulate developers from platform-specific SQL coding
- Rapid development of native drivers
- Server-to-server communication
- Transaction processing

JDEBase provides a set of APIs to the developer and a set of translation programs to ERP 9.0. The translation programs are embedded in the data source definitions.

For example, suppose a data request for Address Master is made. The Object Configuration Manager (OCM) determines which data source contains the requested table. The Data Source Master table (F98611) provides the database information.

---

## Modes of Processing

ERP 9.0 provides many ways for you to run interactive applications. The method you choose depends on your needs and your system configuration. All methods allow you to distribute data and logic in a manner that optimizes both the power of the workstation and the data integrity of the server.

ERP 9.0 has four operation modes for interactive applications.

### Direct-Connect Processing

With direct-connect processing, when you run an application you are connected to a server that contains your major business data. The direct-connect model allows you to distribute data and logic. For performance reasons, consider distributing your data and logic in a manner that reduces network traffic and unnecessary input and output on the server.

While J.D. Edwards allows batch applications to run locally, a business reason for doing this rarely exists. Therefore, all batch applications should be set up for server processing (distributed).

#### See Also

- *Working with Direct-Connect Processing* in the *Configurable Network Computing™ Implementation Guide* for more information about the direct-connect model

### Store-and-Forward Processing

J.D. Edwards designed the store-and-forward model for users who need to enter transactions on a workstation that is disconnected from a server. For example, a sales representative working away from the office can use a laptop to enter an order. With store-and-forward processing, a user can connect to the network and transfer the data later.

ERP 9.0 applications designed for store-and-forward processing are separate applications. These applications perform edits on static data and other critical information that must be valid in order to process an order. After initial edits are complete, ERP 9.0 stores the transaction in work tables, called Z files, on the workstation. When a network connection is established, Z files are uploaded to the enterprise server. The transactions are edited again by a master business function, which then updates the records into transaction files.

The upload process, which is the batch process that the user initiates, transfers data from the workstation and completes the following actions:

- Copies order information from the work tables on the workstation to work tables on the server.
- Updates the Transaction Control File (F0041Z1) table on the server with one transaction for each record, and provides one of the following statuses: uploaded, processing, complete with errors, or complete without errors.
- Updates the F0041Z1 table on the workstation to indicate that ERP 9.0 uploaded the transactions. This action prevents ERP 9.0 from uploading the same transaction more than once.
- Invokes a master business function on the server to repeat all local editing and additional editing that was not deemed critical during order entry, and writes records to the permanent transaction tables.

- Sends success or error messages to the Work Center, where users can review and clear them.
- Updates the F0041Z1 table on the server and workstation with the status of each transaction processed in the upload.

The Work Center sends a message for each completed job (with or without errors) to the user who executed the process. To clear an error, look at the details. If the error requires a user action, bring up the transaction where the error occurred.

### See Also

- *Working with Store-and-Forward Processing in the Configurable Network Computing™ Implementation Guide* for more information about the store-and-forward model

## Batch-of-One Processing

Batch-of-one processing combines the performance benefits of the store-and-forward model with the real-time updates of transaction data found in direct-connect processing. Batch-of-one processing uses the store-and-forward application (P4004Z) with the standard production environment, for example PD7334, which means that the local workstation has a physical connection to the network. The P4004Z application still uses the Z-files, but these tables are located on the enterprise server. Each sales order is written directly to the enterprise server.

Batch-of-one processing reduces network traffic because the P4004Z application performs fewer field-by-field edits. For this reason, it is ideal for sales order entry over a wide-area network (WAN).

When using batch-of-one processing, the user gives up direct access to the F4201 and F4211 files, which contain the most current and complete data on all sales orders. Since the P4004Z application does not directly access those files, it can only review, update, and delete current orders in the Z files. Once those orders are moved to the production files (F4201 and F4211), the user would have to use the P4210 application to review, update, or delete a sales order.

To set up subsystem or online mode processing, change the processing option in the Recurring Orders (P4004Z) application.

### Subsystem

The subsystem type of batch-of-one processing has a version of the R40211Z batch application running in the background. The subsystem batch application periodically checks the Z files on the enterprise server, performs the batch edit function when data is present and ready to be processed, and then transfers the data from the Z files on the enterprise server into production tables F4201 and F4211.

---

### Note

Version ZJDE0002 of the R40211Z batch application is shipped with a period of 30 milliseconds. This means that this batch application runs at a frequency of 33.3 times per second, which is not the best use of CPU resources on the enterprise server. Should batch-of-one subsystem mode be used in a production environment, a more reasonable figure for this value should be 15,000 milliseconds, or once every 15 seconds.

---

## Online Mode

The online mode option presents the batch application printer selection screen following completion of the sales order. After choosing the printer, a version of the R40211Z batch application performs the batch edit function, transferring data from the Z files on the enterprise server into production tables F4201 and F4211.

ERP 9.0 sends all errors to the Work Center. Users can set an option to have ERP 9.0 prompt them when a new message is sent, or they can wait and view all messages.

## Zero-Client Processing

Zero-client processing enables you to connect to ERP 9.0 applications and data from your workstation using only an Internet browser. This mode of processing is similar to direct-connect processing because the data and the logic are stored in a central location. This configuration allows you to maintain storage requirements on your workstation easily.

### See Also

- The *Web-Based Solutions Guide* for more information about zero-client processing

## Working with Direct-Connect Processing

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In direct-connect processing, workstations are connected directly to servers that can store data and process logic. For performance reasons, you will want to distribute your data and logic in a manner that reduces network traffic and unnecessary input and output on the server.

## Recommendations for Data and Logic Distribution

To achieve the best performance with direct-connect processing, J.D. Edwards recommends the following location for data and logic processing:

- Map your transaction data to a data server.
- Map user defined codes and menus to the workstation. You also can map other static files locally. If the maintenance costs are more than your performance returns in mapping these tables locally, you can map them to a data server.
- Map all batch applications to the enterprise logic server.

## Setting Up Direct-Connect Processing

The process overview for setting up direct-connect processing is as follows:

- Create a production environment and verify that the new environment uses a production path code.
- Determine the name of the master business functions you should map to the server, if applicable.
- Modify the Object Configuration Manager mappings for the new environment.

## See Also

- ❑ *Adding an Environment* in the *Configurable Network Computing™ Implementation Guide* for more information about verifying production path codes
- ❑ *Locating Master Business Functions* in the *Configurable Network Computing™ Implementation Guide* for more information about mapping to the server
- ❑ *Working with the Object Configuration Manager* in the *Configurable Network Computing™ Implementation Guide* for more information about direct-connect processing

## Object Mappings for Direct-Connect Environments

Depending upon your configuration, you might require multiple direct-connect environments. For example, to support multi-tiered configurations you might need an environment that maps all application processing to one server and all data to a corporate server.

### Master Data Administration Environment

The data administrator uses the Master Data Administration environment to maintain the published tables in the central location. To set up this environment, do the following:

- Map all table objects to a business data source on your server.
- Map user defined codes and menus to a control table data source on your server.  
The control data contains the published set of user defined codes.
- Map system tables to the system data source.
- Map Object Librarian tables to the Object Librarian data source.
- Map data dictionary tables to the data dictionary data source.
- Map batch applications to the server.

### Locating Master Business Functions

In a direct-connect environment, you need to identify the master business functions so that you can map them to a server.

## Working with Store-and-Forward Processing

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Store-and-forward processing is a mode of processing that enables users who are disconnected from a server to enter transactions and then later to connect to the server to upload these transactions. For example, remote sales people who use laptops can process transactions and then upload those transactions to the server later. Store-and-forward processing can also help departments that have store-and-forward applications by allowing them to enter transactions in a disconnected state (which improves performance because the applications perform all edits locally), and then upload those transactions to the server during off-peak hours.

ERP 9.0 minimally edits the transactions on the store-and-forward machine, which allows fast entry. A master business function performs full editing when the user uploads the store-and-forward transactions to the enterprise server.

The following environments must be in place for store-and-forward processing:

- A store-and-forward environment for disconnected transaction entry
- A direct-connect environment for uploading transactions to the enterprise server

---

### **Important**

To maintain data integrity, ensure that unique next numbers or document types exist for each store-and-forward user. Depending on your business requirements, J.D. Edwards recommends the following solutions:

- If your enterprise has a small number of store-and-forward users, you can assign a separate document type for each user. For example, user 1 might have document type S1, user 2 might have document type S2, and so on. When user 1 uploads order number 1009, the order would be 1009S1. User 2 would forward record 1009S2. This method avoids data corruption by creating data unique to a specific sales person and maintaining separate business data during the upload process.

---

### **Note**

Do not use all your document types for store-and-forward users because you might need document types for other areas in your enterprise.

Document types range from A0-Z9. If you think you might use all of your document types for store-and-forward users, you should consider the following solution to maintain data integrity in a store-and-forward environment.

- 
- If your enterprise has a large number of store-and-forward users, assign each user a unique range of next numbers to assign to records. For example, user 1 assigns only numbers between 0001 and 9999; user 2 assigns only numbers between 10000 and 19999; and so on. Multiple records do not share numbers, so your enterprise maintains data integrity. This method can be difficult to manage, so you should use this method only if other methods will not work for your enterprise.

## **Setting Up Store-and-Forward Processing**

Setting up store-and-forward processing is a one-time process that you do after each workstation installation.

### **Before You Begin**

- Create a new environment for your store-and-forward processing. This environment should use your production path code. You can call this environment SFPD9 or something similar.

Do not create the environment by copying an existing environment, because the copy will include that environment's Object Configuration Manager (OCM) mappings. Also, make sure that the Just-in-time Installation flag is set to N to disable just-in-time installation for the store-and-forward environment.

---

### **Note**

See *Adding an Environment in the Configurable Network Computing™ Implementation Guide* for more information.

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► **To set up store-and-forward processing**

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From the System Administration Tools menu (GH9011), choose Object Configuration Manager (P986110).

1. Create a default map for table (TBLE) objects for the store-and-forward environment that points to the local Microsoft Access data source called ERP 9.0 Local - PD9.
2. After you have created the store-and-forward environment, add it to your store-and-forward users' environment list.
3. Copy the store-and-forward database (StoreFwd.mdf) that J.D. Edwards provides to the b9\pd9\data directory on the administrator's local workstation.

The database is located in the `\\deployment server machine name\b9\planner\data` directory on the deployment server. Copy the database to the `b9\pd9\data` directory on the administrator's local workstation. You now have two databases under the `b9\pd9\data` directory on the administrator's workstation.

4. From the `b9\pd9\data` directory on the administrator's workstation, export the following tables from any JDELocal\_Data.mdf database that has your most current data to the StoreFwd.mdf database:

F0004 User Defined Code Types

F0005 User Defined Codes

F0082 Menu Master File

F00821 Menu Selections File

F0083 Menu Text Override File

F0084 Menu Path File

Ensure that the administrator's workstation is set up as a subscriber to the menu and user defined code tables so that future releases have the latest tables.

5. From the `b9\pd9\data` directory on the administrator's workstation, delete the JDELocal\_Data.mdf database and rename StoreFwd.mdf as JDELocal\_Data.mdf.
6. Using Microsoft Access, ensure that all of the technical and business data tables are in the JDELocal\_Data.mdf on the administrator's workstation and that all of the tables (except user defined codes and menus) are empty.

If any tables are missing, import them from the JDELocal\_Data.mdf database located on the deployment server in the following path: `\\deployment server machine name\b9\planner\data`. Make sure you import only the structure and not the data. That is, import only empty tables (except for user defined codes and menus).

7. Copy all data dictionary tables (F92\*) or a full data dictionary TAM file to the store-and-forward client machine.

Your initial setup of store-and-forward processing is complete. You must perform the administration and end-user tasks explained in this chapter at least once to enable store-and-forward processing.

## See Also

- ❑ *Adding an Environment* in the *Configurable Network Computing™ Implementation Guide* for more information about creating a new environment for store-and-forward processing
- ❑ *Working with the Object Configuration Manager* in the *Configurable Network Computing™ Implementation Guide* for more information about creating a default map for table objects
- ❑ *Technical Data Tables Needed for Store-and-Forward* in the *Configurable Network Computing™ Implementation Guide* for more information about tables and a complete list of technical tables
- ❑ *Business Data Tables Needed for Store-and-Forward* in the *Configurable Network Computing™ Implementation Guide* for more information about tables and a complete list of business data tables

## Administering Store-and-Forward Processing

Create the JDELocal\_Data.mdf database on the administrator's workstation. End users need the JDELocal\_Data.mdf database to perform store-and-forward processing. This task refreshes your server store-and-forward database.

---

### Important

You must perform the above task at least once. The administrator should perform it on a regular schedule to ensure accurate and current data for your store-and-forward users.

---

## Downloading Technical Data

For store-and-forward processing, you must copy the technical data tables from the production environment to the administrator's workstation. Use the Environment Database Creation application (R98403) to perform this process, which uses a Copy Table script. When this process is complete, users can run the technical data locally after they install the store-and-forward package. (Users do not have access to the server during store-and-forward transaction processing.)

The administrator's workstation must have the latest production package installed. Perform this task only if your technical data has changed.

### ► To download technical data

---

*From the System Administration Tools menu (GH9011), choose Batch Versions (P98305).*

1. On Work With Batch Versions – Available Versions, type R98403 in the Batch Application field and click Find.
2. Choose the version titled Populate System Tables for Store & Forward, and click Select.
3. On the Version Prompting form, choose the Data Selection option and click Submit.

4. On the Data Selection form, ensure that all of the technical data tables are listed in the data selection area of this form.
5. Click OK.  
The Processing Options form appears.
6. Enter the following values for the processing options, and click OK:

<b>Environment tab</b>	
1. Enter the name of the target Environment for the database to be created for. (If this report is called from another process, the target Environment will be passed in.)	Enter the name of the store-and-forward environment that you created, such as SFPD9.
2. or Enter the name of the target Data Source for the database to be created for.	If you do not enter the previous option, enter the name of the store-and-forward data source.
3. Enter a 1 to load Production Data or a 2 to load Demonstration Data. The default is to load production data. (If this report is called from another process, this flag will be passed in.)	You should always enter 2 for demonstration data because this batch process looks at the Copy Data Y/N flag in the Object Librarian record to determine whether data should be copied for this table. Because some of these technical tables will be specified with a NO for the Copy Data Y/N flag, a value of 2 for this processing option means ERP 9.0 will ignore that flag and copy all of your normal production data for those tables.
4. Enter the name of the source Data Source for Loading the Data. (If this report is called from another process, the source Data Source will be passed in.)	Leave blank if you are copying from many data sources, and use the next processing option instead. If you use this option, enter a data source name such as ERP 9.0 Local.
5. or Enter the name of the source Environment for the database to be copied from. (If this report is called from another process, the source Environment will be passed in.)	Instead of entering a data source name, enter the name of the source environment. Use this option instead of the previous option if you have multiple data sources from which to copy that all reside within one environment.
<b>Update tab</b>	
6. Enter a 0 for Proof Mode or a 1 to create the Environment Database. The default is Proof Mode.	Enter 1 to generate a report and copy the technical tables to the local machine.
7. Enter a A to Re-create existing tables in data sources that allow automatic table creation. The default is not to re-create tables.	Enter A to clear files and re-create the data.
8. Enter a 1 to only copy tables that exist in the source data source. The default is to copy all tables.	Leave blank.
9. Enter a Y to add records without clearing the target table. This is used for language tables. The default is to clear the target table.	Leave blank.
<b>Print tab</b>	

10. Enter a 1 to only print exceptions. The default is to print all lines.	Enter 1 to print only the exception lines of the report. Leave this option blank to print the report.  This report describes any errors encountered during the download, including a list of any technical tables missing from the JDELocal_Data.mdf database on the administrator's workstation.
<b>Licensing tab</b>	
11. Enter a Y to create all tables or an N to create licensed tables only. The default is to create all tables.	Enter Y to create all tables.
12. Enter a Y to print all tables in the report or an N to print licensed tables only. The default is to print all tables.	Enter Y to print all tables.

After you enter processing options, Copy Table runs and then a Copy Table message box provides a status of the download.

## Downloading Business Data

Because business data is shared by multiple store-and-forward users, run this batch process to download the records for the master tables that pertain to all of the store-and-forward applications from the server to the JDEb7.mdb Microsoft Access database.

### Before You Begin

- Use the database administration application to ensure that all business data table definitions exist within the JDELocal\_Data.mdf database on the administrator's workstation.

### ► To download business data

*From the System Administration Tools menu (GH9011), choose Batch Versions (P98305).*

1. On the Work With Batch Versions - Available Versions form, type P00140 in the Batch Application field, and then click Find.

---

#### **Note**

For all non-populated business data tables, you must run the Environment Database Creation (R98403) batch application.

All of the versions that J.D. Edwards ships appear. These versions are the batch processes that download the business data table.

You must run each version of the business data tables that you need copied to the administrator's local machine.

---

2. Choose the business data table version, and then choose Run Version from the Row menu.
3. On the Version Prompting form, click Submit.

4. On the Report Output Destination form, choose a destination and then click OK.
5. On Environment Overrides, complete the following fields with the name of the source environment and then click OK:
  - Source Environment Override  
Ensure that this is your normal production environment, which points to all of the publisher tables that you have set up.
  - Target Environment Override  
Ensure that this is your store-and-forward environment, which should have all of its OCM mappings pointing to ERP 9.0 Local.

---

**Note**

On the Environment Overrides form, if you click a Browse button, the Environment Search form appears. Choose the appropriate environment, and click Select.

---

6. Based on your specific store-and-forward application needs, run the appropriate version for the Store and Forward Download (P00140) batch application.

Each version populates one master table on the JDELocal\_Data.mdf database. Ensure that the batch process runs locally, rather than on a server.

Users can run this batch process from their workstation after they have copied the database from the server to their workstation. Therefore, the administrator could skip this step, leaving the business data tables empty.

## Making the Database Accessible to End Users

You must deploy the JDEb7.mdb Microsoft Access database created with the technical and business data downloading processes. You must make this database accessible to your store-and-forward users because this is the database that they copy to their workstations.

---

**► To make the database accessible to end users**

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1. Copy the JDELocal\_Data.mdf database from the administrator's workstation to a shared folder on the deployment server.
2. Refresh this database as needed to keep your business data synchronized.

## Verifying the Correct Store-and-Forward Settings in the jde.ini File

A store-and-forward user's jde.ini [DB SYSTEM SETTINGS] must be set correctly in order for store-and-forward processing to work on an end-user's workstation.

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**► To verify the correct store-and-forward settings in the jde.ini file**

---

1. In your store-and-forward end user's jde.ini file, ensure that under the [DB SYSTEM SETTINGS] section, the Default Env is set to SFPD9.
2. Verify, under the [DB SYSTEM SETTINGS - SECONDARY] section, that the default value is set to ERP 9.0 Local - PD9. This default environment accesses the local JDELocal\_Data.mdf database after the primary network database setting times out.

You can also change your setup.inf file to have the default environment set to SFPD9 for your production packages so that your store-and-forward users do not need to update their jde.ini file after each workstation installation. The settings should look as follows:

```
[DB SYSTEM SETTINGS]
```

```
Default Env=SFPD9
```

```
Default Pathcode=PD9
```

```
[DB SYSTEM SETTINGS - SECONDARY]
```

```
Default Env=System Local - PD9
```

```
Default Pathcode=PD9
```

## Updating the End-user Database for Store-and-Forward Processing

Your store-and-forward users must perform this task at least once to enable store-and-forward processing on their workstations.

---

### Caution

Users should perform this task on a regular schedule to ensure accurate and current data. You should establish procedures for how often store-and-forward users need to refresh their Microsoft Access database from the Microsoft Access database on the server.

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### ► To update the end user database for store-and-forward processing

1. Ensure that store-and-forward users have the current production package installed on their workstations.
2. With their workstations connected to the enterprise, store-and-forward users should copy the JDELocal\_Data.mdf database from the shared folder on the server to the b9/data directory on their workstations.

## Uploading Store-and-Forward Transactions

This process describes how to upload to the enterprise server the transactions entered by store-and-forward users. A batch application uploads transactions from the work files on the local machine to the work files on the server.

---

### ► To upload store-and-forward transactions

After your users have completed their transactions, they are ready to upload their store-and-forward transactions. Have users log off from ERP 9.0, reconnect their workstations to the enterprise network and reboot their workstations, and then log on to their normal production environment.

*On the System Administration Tools menu (GH9011), choose Batch Versions (P98305).*

1. On Work With Batch Versions - Available Versions, type one of the following applications in the Batch Application field and then click Find:

- R0911Z1 for Store and Forward Journal Entry Upload
- R0411Z1 for Store and Forward Upload
- R42101Z for Sales Store and Forward To Server

You must run each of these versions separately to upload each type of transaction that you processed with store-and-forward processing.

2. Choose the upload version and then click Select.

---

**Caution**

To properly process the data, you must run this batch application locally on the workstation.

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This process copies the following store-and-forward work files from your workstation to your server:

- Transaction Control File (F0041Z1)
- Journal Entry Transactions - Batch File (F0911Z1)
- Voucher Transactions - Batch File (F0411Z1)
- Batch Receiver File - Order Headings (F4001Z)
- Batch Receiver File - Order Details (F4011Z)

After you run each upload batch process, ERP 9.0 creates and displays a transmission upload report for all of the transactions that you upload to the server.

3. Use this report to verify that ERP 9.0 uploaded the transactions correctly.
4. From the server, run ERP 9.0.
5. On the Work With Batch Versions – Available Versions form, type one of the following applications into the Batch Application field and click Find:
  - R09110Z for Journal Entry Batch Processor
  - R04110Z2 for Store and Forward Voucher Batch Processor
  - R40211Z for Recurring Orders Edited Creation

The batch application uses the data from the work files to create records in the transaction files on the server.

Store-and-forward processing is now complete.

## Technical Data Tables Needed for Store-and-Forward

The following technical data tables must reside on the user's local machine, which the tables use for store-and-forward processing.

Table	Description
F0002	Next Numbers - Automatic

F00021 Next Numbers by Company/Fiscal Year - Automatic

F0092 Library Lists - User

F00921 User Display Preferences

F00922 User Display Preferences Tag File

F00924 User Install Packages

F00925 User Access Definition

F0093 Library List Control

F0094 Library List Master File

F00941 Environment Detail OneWorld- ERP 9.0

F00942 Object Path Master File

F00945 Release Master

F00950 Security Workbench Table

F98101 Imaging Constants

F983051 Versions List

F98306 Processing Option Text

F9860 Object Librarian Master Table

F986101 Object Configuration Master

F98611 Data Source Master

F98613 Business View Environmental Server

F9865 Form Information File

F98825 Package Deployment Scheduling

F98950 User Overrides Table

F98980 Font Override by Language

**See Also**

- ❑ *Downloading Technical Data in the Configurable Network Computing™ Implementation Guide* for more information about copying tables to a local machine

## Business Data Tables Needed for Store-and-Forward

The business data tables necessary to run the Voucher Entry (P0411Z1), Journal Entry (P0911Z1), and Sales Order Entry (P4004Z) applications must reside on the local machine used for store-and-forward processing. To copy these tables to the local machine, you must copy each table separately.

### Before You Begin

- ❑ Before end-users download the User Defined Code tables (F0004 and F0005) for any of the verticals (such as Journal Entry, Voucher Entry, or Sales Order Entry), they should use the following criteria to make sure that they need these tables:
  - ❑ The end-user needs to perform data selection on these tables.
  - ❑ The system administrator has not populated these tables as part of the store-and-forward JDELocal\_Data.mdf database provided for end users.

### Voucher Entry (P0411Z1)

Table	Description
F0004	User Defined Code Types
F0005	User Defined Codes
F0006	Business Unit Master
F0008	Date Fiscal Patterns
F0008B	Date Fiscal Patterns - 52 Period Accounting
F0009	General Constants
F0010	Company Constants
F0012	Automatic Accounting Instructions Master
F0013	Currency Codes
F0014	Payment Terms
F0022	Tax Rules
F0041Z1	Transaction Control File
F0101	Address Book Master
F0111	Address Book - Who's Who
F0150	Address Organization Structure Master
F0116	Address by Date

F0401 Supplier Master  
F0411Z1 Voucher Transactions - Batch Upload  
F0901 Account Master  
F0907 Chart of Accounts Format  
F0911Z1 Journal Entry Transactions - Batch File  
F4008 Tax Areas  
F4801 Work Order Master File

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**Note**

Additional tables might be necessary.

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**Journal Entry (P0911Z1)**

<b>Table</b>	<b>Description</b>
F0004	User Defined Code Types
F0005	User Defined Codes
F0006	Business Unit Master
F0008	Date Fiscal Patterns
F0008B	Date Fiscal Patterns - 52 Period Accounting
F0009	General Constants
F0010	Company Constants
F0012	Automatic Accounting Instructions Master
F0013	Currency Codes
F0014	Payment Terms
F0022	Tax Rules
F0041Z1	Transaction Control File

F0101 Address Book Master

F0111 Address Book - Who's Who

F0150 Address Organization Structure Master

F0116 Address by Date

F0301 Customer Master

F0901 Account Master

F0907 Chart of Accounts Format

F0911Z1 Journal Entry Transactions - Batch File

F4008 Tax Areas

F4801 Work Order Master File

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**Note**

Additional tables might be necessary.

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**Sales Order Entry (P4004Z)**

<b>Table</b>	<b>Description</b>
F0004	User Defined Code Types
F0005	User Defined Codes
F0006	Business Unit Master
F0006D	Business Unit Alternate Description Master
F0008	Date Fiscal Patterns
F0008B	Date Fiscal Patterns - 52 Period Accounting
F0009	General Constants
F0010	Company Constants
F0012	Automatic Accounting Instructions Master

F0013 Currency Codes

F0014 Payment Terms

F0022 Tax Rules

F0041Z1 Transaction Control File

F0101 Address Book Master

F0111 Address Book - Who's Who

F0116 Address By Date

F0150 Address Organization Structure Master File

F0301 Customer Master

F0401 Supplier Master

F0901 Account Master

F0907 Chart of Accounts Format

F4001Z Batch Receiver File - Order Headings

F40073 Preference Hierarchy File

F4008 Tax Areas

F4009 Distribution/Manufacturing Constants

F40095 Default Locations/Printers

F4013 Order Processing Cross Reference File

F4011Z Batch Receiver File - Order Details

F40205 Line Type Control Constants File

F4070 Price Adjustment Schedule (Advanced Pricing only)

F4071 Price Adjustment Type (Advanced Pricing only)

F4072 Price Adjustment Detail (Advanced Pricing only)

F4075 Price Variable Table (Advanced Pricing only)

F4092 Group Code Key Definition Table

F4094 Item/Customer Key ID Master File

F41001 Inventory Constants  
F41002 Item Units of Measure Conversion Factors  
F41003 Unit of Measure standard conversion  
F4101 Item Master  
F4102 Item Branch File  
F4106 Item Base Price File  
F4201 Sales Order Header File  
F4207 Price by Item  
F4208 Price by Customer  
F4801 Work Order Master File

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## Typical Customer Configuration

Your ERP 9.0 configuration can be set up in many ways. Examples and recommendations for the setup follow.

You should follow J.D. Edwards-recommended setup and naming standards wherever possible, unless a strong business case exists to support the need to change. Following the typical setup and naming standards enhances the likelihood of success and minimizes confusion when communicating with individuals outside the core project team who are not aware of your specific configuration setup.

If you want to customize your configuration, you should change only the descriptions with the typical setup, not the names. Upgrades will be easier with fewer manual steps if you use the J.D. Edwards-recommended naming standards.

An environment description is important because the description appears on the environment list of the ERP 9.0 log in screen where the user chooses the environment. The environment description should show the following:

- Path code
- Data type (such as production, test, or prototype)
- Data location
- Location that batch applications will execute

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## Typical ERP 9.0 Configuration

This chapter helps you understand a typical ERP 9.0 configuration from the perspective of the workstation. That is, the mappings presented in this chapter are for workstation-to-enterprise server mappings, not server-to-server mappings (for example, mappings for the server map are not listed). Although J.D. Edwards ships ERP 9.0 with a typical configuration, you can change it.

### Understanding Your Environments

You should understand the basic environments of an ERP 9.0 configuration. For each environment, this chapter describes:

- The path code
- The purpose
- The object mappings

All ERP 9.0 environments you receive from J.D. Edwards share the following data sources:

- System – B9
- Object Librarian – B9
- Data Dictionary – B9

## Shared Data Sources for UNIX and Windows NT Environments

The shared data sources for UNIX and Windows NT environments are as follows:

- Central objects
- Versions tables
- Business data
- Control tables
- OneWorld Local

### Production Environment (PD9)

<b>Path Code</b>	PD9
<b>Central Objects data source</b>	Central Objects - PD9
<b>Versions Tables data source</b>	Versions - PD9
<b>Business Data data source</b>	Business Data - PROD
<b>Next Numbers data source</b>	Control Tables - Prod
<b>Menu/UDCs data source</b>	Control Tables - Prod

### Conference Room Pilot Environment (PY9)

<b>Path Code</b>	PY9
<b>Central Objects data source</b>	Central Objects - PY9
<b>Versions Tables data source</b>	Versions - PY9
<b>Business Data data source</b>	Business Data - CRP
<b>Next Numbers data source</b>	Control Tables - CRP
<b>Menu/UDCs data source</b>	Control Tables - CRP

### **Test Environment (TS9)**

<b>Path Code</b>	PY9
<b>Central Objects data source</b>	Central Objects - PY9
<b>Versions Tables data source</b>	Versions - PY9
<b>Business Data data source</b>	Business Data - TEST
<b>Next Numbers data source</b>	Control Tables - Test
<b>Menu/UDCs data source</b>	Control Tables - Test

### **Development Environment (DV9)**

<b>Path Code</b>	DV9
<b>Central Objects data source</b>	Central Objects - DV9
<b>Versions Tables data source</b>	Versions - DV9
<b>Business Data data source</b>	Business Data - TEST
<b>Next Numbers data source</b>	Control Tables - Test
<b>Menu/UDCs data source</b>	Control Tables - Test

### **Pristine Environment (JD7334)**

<b>Path Code</b>	JD7334
<b>Central Objects data source</b>	Central Objects - JD7334
<b>Versions Tables data source</b>	Versions - JD7334
<b>Business Data data source</b>	Business Data - JDE
<b>Next Numbers data source</b>	Business Data - JDE
<b>Menu/UDCs data source</b>	System Local - JD7334

### **Planner Environment (JDEPLAN)**

<b>Path Code</b>	PLANNER
<b>Central Objects data source</b>	Not applicable
<b>Planner Tables data source</b>	OneWorld Planner – B9
<b>Versions Tables data source</b>	OneWorld Local
<b>Business Data data source</b>	OneWorld Business Data
<b>Next Numbers data source</b>	OneWorld Local
<b>Menu/UDCs data source</b>	OneWorld Local

### **Deployment Environment (DEP9)**

<b>Path Code</b>	PLANNER
<b>Central Objects data source</b>	Not applicable
<b>Versions Tables data source</b>	OneWorld Local
<b>Business Data data source</b>	OneWorld Business Data
<b>Next Numbers data source</b>	OneWorld Local
<b>Menu/UDCs data source</b>	OneWorld Local

### **Remote Environments**

Remote environment names are preceded by a 3-character location code followed by a J for Java application server or Windows terminal server.

For example:

xxxJPD9 indicates a Java application server for the PD9 environment at location xxx or a Windows terminal server.

xxxWTS9: Indicates a Windows terminal server for the TS9 environment at location xxx.

The path codes and data sources for remote environments are identical to the base environments.

## PD9 Environment

**Path Code** PD9

**Purpose** PD9 is the live production environment for your end users who will have a tested and released package on their machine. Batch applications run on the server. Eventually, more than one production environment might be established for different types of distributed data, logic, and modes of processing.

### PD9 - Object Mappings

Mapping	Explanation
Business Data - PROD	The default object mapping. Tables that are not specifically mapped by other data sources use this data source as their default mapping. This mapping includes the following table: <ul style="list-style-type: none"><li>F00165 - Media objects storage</li></ul>
Central Objects - PD9	Maps to the central object tables, including F98950 - User Overrides.
Control Tables - Prod	Maps to the next number tables.
Data Dictionary - B9	Maps to the data dictionary tables and the data dictionary media object text in the following data structure: <ul style="list-style-type: none"><li>GT92002 - Data Dictionary - Glossary Information</li></ul>
Logic Data Source	Maps to the machine on which batch applications are run.
Object Librarian - B9	Maps to the object librarian tables and the object librarian media object text in the following data structures: <ul style="list-style-type: none"><li>GT9860A - Object Librarian Generic Text Structure</li><li>GT9862A - Business Function Notes</li><li>GT98DSA - Data Structure Notes - Structure and Item</li><li>GT98DSB - Data Structure Notes - Structure and Item</li><li>GT98TMPL - Media Object Templates</li></ul>
OneWorld Local - PD9	Maps to the user defined code tables.
System - B9	Maps to the system tables.
Versions - PD9	Maps to the version tables, including the following: <ul style="list-style-type: none"><li>F983051 - Versions List</li><li>F98306 - Processing Option Text</li></ul>

## TS9 Environment

**Path Code** PY9

Use the TS9 environment to test:

- The software during a conference room pilot (CRP)
- Modifications made in the development path code, transferred to PY9, but not yet transferred to your production path code and, therefore, not yet released to end users

**Purpose** You also can test conversions in this environment (converting foreign tables into J.D. Edwards tables). If you are authorized to use the test environment, you can safely change data and versions that will never be copied to production. You also can conduct training classes in this environment.

Customer application testing and conversion testing populate this environment. After you run the Installation Workbench, no business data exists until you enter it. Routinely (such as monthly or quarterly), you should refresh this environment from PD9, which represents your production data.

### TS9 - Object Mappings

Mapping	Explanation
Business Data - Test	The default object mapping. Tables that are not specifically mapped by other data sources will use this data source as their default mapping. This mapping includes the following table: <ul style="list-style-type: none"><li>• F00165 - Media objects storage</li></ul>
Central Objects - PY9	Maps to the central object tables, including F98950 - User Overrides.
Control Tables - Test	Maps to the next number tables, user defined code tables, and menus.
Data Dictionary - B9	Maps to the data dictionary tables. Also maps to the data dictionary media object text in the following data structure: <ul style="list-style-type: none"><li>• GT92002 - Data Dictionary - Glossary Information</li></ul>
Logic Data Source	Maps to the machine on which batch applications are run.
Object Librarian - B9	Maps to the object librarian tables and the object librarian media object text in the following data structures: <ul style="list-style-type: none"><li>• GT9860A - Object Librarian Generic Text Structure</li><li>• GT9862A - Business Function Notes</li><li>• GT98DSA - Data Structure Notes - Structure and Item</li><li>• GT98DSB - Data Structure Notes - Structure and Item</li><li>• GT98TMPL - Media Object Templates</li></ul>
System - B9	Maps to the system tables.
Versions - PY9	Maps to the version tables, including: <ul style="list-style-type: none"><li>• F983051 - Versions List</li><li>• F98306 - Processing Option Text</li></ul>

## PY9 Environment

**Path Code** PY9

PY9, the Conference Room Pilot (CRP) environment, is the staging environment for production. Constants tables and master tables (such as company constants, fiscal date patterns, and item master) are populated with customer data during the CRP process.

**Purpose** Copy the tables to the production environment before you go live. After you run the Installation Workbench, no business data exists until you enter it. When appropriate, you should refresh the test data from PD9, which represents your production data.

### PY9 - Object Mappings

<b>Mapping</b>	<b>Explanation</b>
Business Data - CRP	The default object mapping. Tables that are not specifically mapped by other data sources will use this data source as their default mapping. This mapping includes the following table: <ul style="list-style-type: none"><li>F00165 - Media objects storage</li></ul>
Central Objects - PY9	Maps to the central object tables, including F98950 - User Overrides.
Control Tables - CRP	Maps to the next number tables.
Data Dictionary - B9	Maps to the data dictionary tables and the data dictionary media object text in the following data structure: <ul style="list-style-type: none"><li>GT92002 - Data Dictionary - Glossary Information</li></ul>
Logic Data Source	Maps to the machine on which batch applications are run.
Object Librarian - B9	Maps to the object librarian tables and the object librarian media object text in the following data structures: <ul style="list-style-type: none"><li>GT9860A - Object Librarian Generic Text Structure</li><li>GT9862A - Business Function Notes</li><li>GT98DSA - Data Structure Notes - Structure and Item</li><li>GT98DSB - Data Structure Notes - Structure and Item</li><li>GT98TMPL - Media Object Templates</li></ul>
OneWorld Local - PY9	Maps to the user defined code tables.
System - B9	Maps to the system tables.
Versions - PY9	Maps to the version tables including the following: <ul style="list-style-type: none"><li>F983051 - Versions List</li><li>F98306 - Processing Option Text</li></ul>

## DV9 Environment

**Path Code** DV9

**Purpose** DV9, the development environment, is the testing environment for development objects. This environment shares the test data that TS9 uses. Developers log in to this environment to modify objects and test them before transferring the changed objects to the PD9 path code.

Once you have transferred objects into PD9, a user can install a recent PRD package that has not been released to end users and log in to either CRP or TST for additional testing.

### DV9 - Object Mappings

<b>Mapping</b>	<b>Explanation</b>
Business Data - PROD	The default object mapping. Tables that are not specifically mapped by other data sources use this data source as their default mapping. This mapping includes the following table: <ul style="list-style-type: none"><li>F00165 - Media objects storage</li></ul>
Central Objects - DV9	Maps to the central object tables, including: <ul style="list-style-type: none"><li>F98950 - User Overrides</li></ul>
Control Tables - Production	Maps to the next number tables.
Data Dictionary - B9	Maps to the data dictionary tables and to the data dictionary media object text in the following data structure: <ul style="list-style-type: none"><li>GT92002 - Data Dictionary - Glossary Information</li></ul>
Logic Data Source	Maps to the machine on which batch applications are run.
Object Librarian - B9	Maps to the object librarian tables and to the object librarian media object text in the following data structures: <ul style="list-style-type: none"><li>GT9860A - Object Librarian Generic Text Structure</li><li>GT9862A - Business Function Notes</li><li>GT98DSA - Data Structure Notes - Structure and Item</li><li>GT98DSB - Data Structure Notes - Structure and Item</li><li>GT98TMPL - Media Object Templates</li></ul>
OneWorld Local - DV9	<ul style="list-style-type: none"><li>Maps to the user defined code tables.</li></ul>
System - B9	Maps to the system tables.
Versions - DV9	Maps to the version tables, including; <ul style="list-style-type: none"><li>F983051 - Versions List</li><li>F98306 - Processing Option Text</li></ul>

## JD9 Environment

**Path Code** JD9

Use the JD9 environment to test J.D. Edwards pristine (unaltered) objects with J.D. Edwards demonstration data. Also use this environment for training classes. You must have this environment to compare modified objects to pristine objects.

**Purpose** When you encounter a software problem that J.D. Edwards Worldwide Customer Support cannot duplicate, they will ask you to log in to the pristine environment to duplicate the problem. Routinely (such as monthly or quarterly), you should refresh the J.D. Edwards data that this environment uses with the J.D. Edwards demonstration data shipped with the software.

### JD9 - Object Mappings

Mapping	Explanation
Business Data -JDE	The default object mapping. Tables that are not specifically mapped by other data sources use this data source as their default mapping. This mapping includes the following table: <ul style="list-style-type: none"><li>F00165 - Media objects storage</li></ul>
Data Dictionary - B9	Maps to the data dictionary tables and to the data dictionary media object text in the following data structure: <ul style="list-style-type: none"><li>GT92002 - Data Dictionary - Glossary Information</li></ul>
Logic Data Source	Maps to the machine on which batch applications are run.
Object Librarian - B9	Maps to the object librarian tables and to the object librarian media object text in the following data structures: <ul style="list-style-type: none"><li>GT9860A - Object Librarian Generic Text Structure</li><li>GT9862A - Business Function Notes</li><li>GT98DSA - Data Structure Notes - Structure and Item</li><li>GT98DSB - Data Structure Notes - Structure and Item</li><li>GT98TMPL - Media Object Templates</li></ul>
OneWorld Local - JD9	Maps to the user defined code tables.
System - B9	Maps to the system tables.
Versions - JD9	Maps to the version tables, including: <ul style="list-style-type: none"><li>F983051 - Versions List</li><li>F98306 - Processing Option Text</li></ul>

### Understanding Typical Data Sources

If the enterprise server has Oracle Server or Microsoft SQL Server and is a more powerful machine than the deployment server, for performance reasons J.D. Edwards recommends

that you put all data sources (except OneWorld Local) on the enterprise server instead of the deployment server.

## Data Sources

Data Source Name	Owner and Purpose
	The owner is CRPDTA.
Business Data - CRP	The library is CRPDTA. The CRP business data. Before going live, you should copy much of this data to Business Data - PROD.
Business Data - JDE	The owner is PRISTDTA. The library is PRISTDTA. The pristine data shipped with ERP 9.0.
Business Data - PROD	The owner is PRODDTA. The library is PRODDTA. The production business data.
Business Data - TEST	The owner is TESTDTA. The library is TESTDTA. The test data entered during CRP or converted from non-J.D. Edwards systems.
Central Objects - PY9	The owner is PY9. The library is COPY9. The central objects data source associated with the PY9 path code. After you create and test the modifications in this path code, transfer them to the PD9 path code.
Central Objects - DV9	The owner is DV9. The library is CODV9. The central objects data source associated with the DV9 path code. After you create and test the modifications in this path code, transfer them to the PD9 path code.
Central Objects - JD9	The owner is JD9. The library is COJD9. The central objects data source associated with the JD9 path code.
Central Objects - PD9	The owner is PD9. The library is COPD9. The central objects data source associated with the PD9 path code. Transfer objects into this data source after you have tested them in path code DV9.
Control Tables -	The owner is CRPCTL.

CRP	The library is CRPCTL. The control tables used in the CRP environment.
Control Tables - Prod	The owner is PRODCCTL. The library is PRODCCTL. The control tables used in the production environment.
Control Tables - Test	The owner is TESTCTL. The library is TESTCTL. The control tables used in the test environment.
Data Dictionary - B9	The owner is DD9. The library is DD9. The single data dictionary that all environments use.
LOCAL	No owner exists. The data source that defines the local machine to ERP 9.0. Use it to override reports to the workstation.
machine name	No owner exists. A value that defines the logic host to ERP 9.0.
<i>machine name</i> - Server Map	The owner is SVM9. The server map for the logic server.
Object Librarian - B9	The owner is OL9. The Object Librarian, which is ERP 9.0-release specific.
OneWorld Local	No owner exists. The data found in the JDELocal MSDE. This data is used only in the planner.
OneWorld Local - PY9	No owner exists. The source that contains the User Defined Codes (UDCs): Control Tables - CRP.
OneWorld Local - DV9	No owner exists. The source that contains the User Defined Codes (UDCs): Control Tables - Test.
OneWorld Local - JD9	No owner exists. The source that contains the User Defined Codes (UDCs): Business Data - JDE.
OneWorld Local - PD9	No owner exists. The source that contains User Defined Codes (UDCs): Control Tables - Production.
System - B9	The owner is SY99.

	The library is SY99.
	The single set of system tables that all environments use.
	The owner is PY9.
Versions - PY9	The library is COPY9.
	The source that contains the versions list and processing option text tables for the PY9 environment.
	The owner is DV9.
Versions - DV9	The library is CODV9.
	The source that contains the versions list and processing option text tables for the DV9 environment.
	The owner is JD9.
Versions - JD9	The library is JD9.
	The source that contains the versions list and processing option text tables for the JD9 environment.
	The owner is PD9.
Versions - PD9	The owner is COPD9.
	The source that contains the versions list and processing option text tables for the PD9 environment.

## The Configuration at a Glance

The following table summarizes the data, environments, central objects (path codes), and packages that you need:

Requirement	Explanation
Data	<p>You might have the following sets of data:</p> <ul style="list-style-type: none"> <li>• Conference Room Pilot (CRP) business data</li> <li>• Conference Room Pilot (CRP) control tables</li> <li>• Data Dictionary (all environments share)</li> <li>• J.D. Edwards pristine data</li> <li>• Production business data</li> <li>• Production control tables (used by the PD9 environment)</li> <li>• Object Librarian (all environments share)</li> <li>• System (technical data all environments share)</li> <li>• Test business data</li> <li>• Test control tables (used by TS9 and DV9 environments)</li> <li>• Versions</li> </ul>
Central Objects (Path Codes)	You should have the following sets of central objects or path codes, which are release-specific:

- PY9 central objects
- DV9 central objects
- JD9 central objects
- PD9 central objects

## Environments

The installation process defines the environments, which are as follows:

- PY9  
CRP objects (possibly testing a package you have not released to production users), with data mapped to CRP. The path code is PY9 with table objects mapped to CRP data.
- DV9  
Development objects with test data. The path code is DV9, with table objects mapped to test data.
- JD9  
Pristine objects with J.D. Edwards pristine demo data. The path code is JD9, with objects mapped to J.D. Edwards pristine data
- PD9  
Production objects with production data. The path code is PD9, with table objects mapped to production data.
- TS9  
CRP objects with test data. The path code is PY9, with table objects mapped to test data

## Packages

If you are not planning any development projects, you need only two path codes: PY9 and PD9. You should create a development path code if you plan to do extensive software modification.

The fewer path codes you use, the better. With each additional path code comes version control maintenance that is time consuming unless a good reason exists for the additional path code. Even when making extensive software modifications, you should have only the following four path codes (sets of central objects):

- PY9  
This path code contains a practice set of objects that are tested during conference room pilot before transferring objects to production. It is for deploying quick fixes or making minor modifications that you will quickly transfer to production. It can also be used as a place to test modifications that were done in the development path code before taking the risk of transferring them to the production path code.
- DV9  
Use this path code for normal development. Upon successful testing, transfer the objects to your PY9 path code, using Object Transfer, and distribute to your users through a package build and a workstation installation.
- JD9  
This is the set of pristine objects shipped from J.D. Edwards. You should not make changes to this path code other than paper fixes from J.D. Edwards. This path code is used to compare J.D. Edwards standard software to any custom solutions you have implemented in other path codes. You should keep a copy of this path code so that you have a clean copy of ERP 9.0 in case you need to refresh anything.

- PD9

This is the production path code. Just-in-time installations come directly from this location, and production server objects are also deployed from here. After testing software changes in PY9, transfer them to PD9 and then deploy the changes to your enterprise servers and workstations.

All path codes share the same Object Librarian tables, the same system data source, and, normally, the same data dictionary. The only distinct tables across path codes are central objects/specifications (F987\*), Versions List (F983051), and Processing Option Text (F98306).

At J.D. Edwards, we have determined that each package should have an A and B version, and that you alternate between these versions when you build packages.

If you are using both full and partial packages, you would have four packages for each path code. This setup gives you two full packages (A and B) for production and two partial packages (A and B) for production. For example:

- PD9FA (Standard Production Full A)
- PD9FB (Standard Production Full B)
- PD9PA (Standard Production Partial A)
- PD9PB (Standard Production Partial B)