Migration Guide

QAD Business Process Management

70-3319-2.1
BPM 2.1
All QAD Enterprise Applications Standard Edition and Enterprise Edition, 2011 and later
March 2015

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BPM Migration Guide Change Summary

The following table summarizes significant differences between this document and previous versions.

Date/Version	Description	Reference
March 2015/BPM 2.1	Numerous editorial changes	---
	Updated Figure 2.6	page 12
	Updated Figure 2.11	page 17
	Expanded the section Convert the SBM Database Schema from SBM 8.0 to OpenEdge BPM	page 27
September 2014/BPM 2.0	Not applicable. First release of BPM Migration Guide	---

Chapter 1

Migration Overview

This chapter describes basic topics related to QAD BPM migration.

Introduction

This guide provides instructions on migrating QAD BPM 1.x (running with Savvion 8.0 BPM) to QAD BPM 2.x (running with OpenEdge BPM). The migration includes two major parts: database migration and applications migration. Migrating the database makes the history records (completed process instances) and user configuration of the source BPM environment available in the target BPM environment. Migrating applications allows you to run applications (business processes), which were running in the source BPM environment, in the target BPM environment.

Migration Limitations

BPM migrations have the following limitations:

- OpenEdge BPM does not support the migration of live instances. Therefore, ensure that all active instances are completed and the servers are stopped before migration.
- The Process Asset Manager (also known as repository) is deprecated in OpenEdge BPM, so the SBM repository contents cannot be migrated. QAD BPM 2.x has its own repository mechanism.

Migration Requirements

This section provides the requirements for QAD BPM migration.

Note For the most current requirements information, refer to the Product Compatibility Guide in the QAD Store and Download Center at:

http://store.qad.com

Software

For information about the software required to perform BPM migration, refer to *QAD BPM Installation Guide*.

Migration Prerequisites

The source of the migration must be Savvion BPM 8.0 and QAD BPM 1.x.

For BPM database migration, the prerequisites consist of the following:

- Completing all business process instances in the source BPM environment (more details are provided in “BPM Database Migration” on page 5)
- Shutting down the source BPM environment

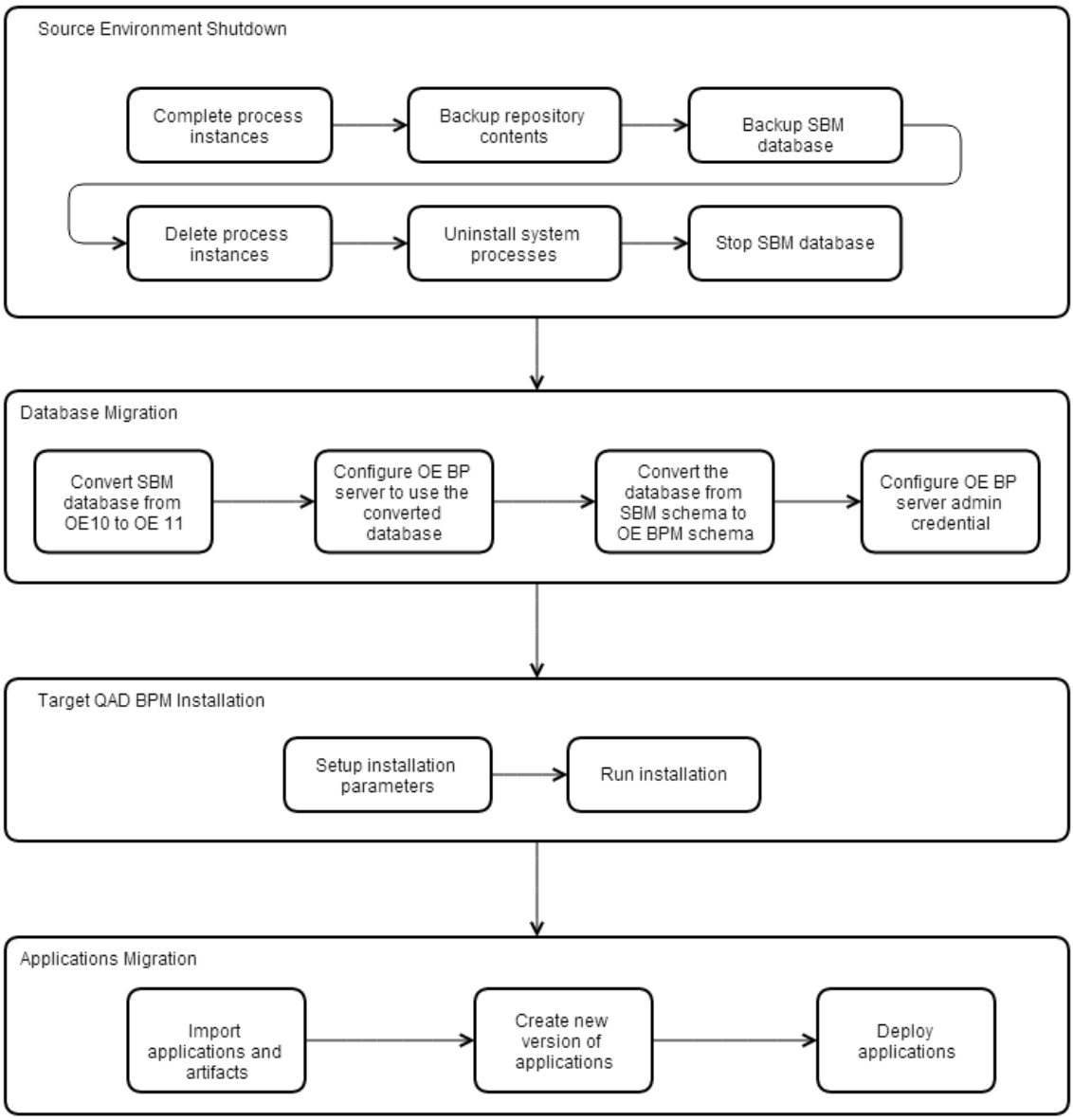
For BPM application migration, the prerequisites consist of the following:

- Completion of BPM database migration, or installation of new BPM version.
- Export of the application artifacts to files
- Completion of Progress OpenEdge Developer Studio installation and setup

Migration Procedure

The following diagram shows the steps required to migrate from QAD BPM 1.x (running with Savvion 8.0 BPM) to QAD BPM 2.x (running with OpenEdge BPM).

Fig. 1.1
Migration Overview



Chapter 2

BPM Database Migration

This chapter describes how to migrate the BPM 1.x database and install/configure BPM 2.x to use the database.

Overview

Database migration allows you to bring history records (completed process instances) and user configuration information to your new BPM 2.x environment. Database migration includes following steps:

- Shut down the source environment and back up the applications/databases
- Convert the Savvion 8.0 BPM database to an OpenEdge BPM database and configure OpenEdge BPM to use it
- Install QAD BPM 2.x

Shut Down Source Environment

To prepare for database migration, complete or delete all process instances in the source environment. Back up the repository contents (also called process artifacts) and back up and stop the SBM database.

Complete Process Instances

Have end users complete process instances that need completion in the source BPM environment. This task may take a few days or longer, so plan accordingly. For further information, refer to *QAD BPM User Guide*.

Note BPM does not support the migration of live instances. Before migration, have all live instances completed by end users or deleted by administrators.

Export Applications and Artifacts

To migrate applications, you must export the following BPM application artifacts:

- Projects
- Business objects
- Managed adapters
- Messages

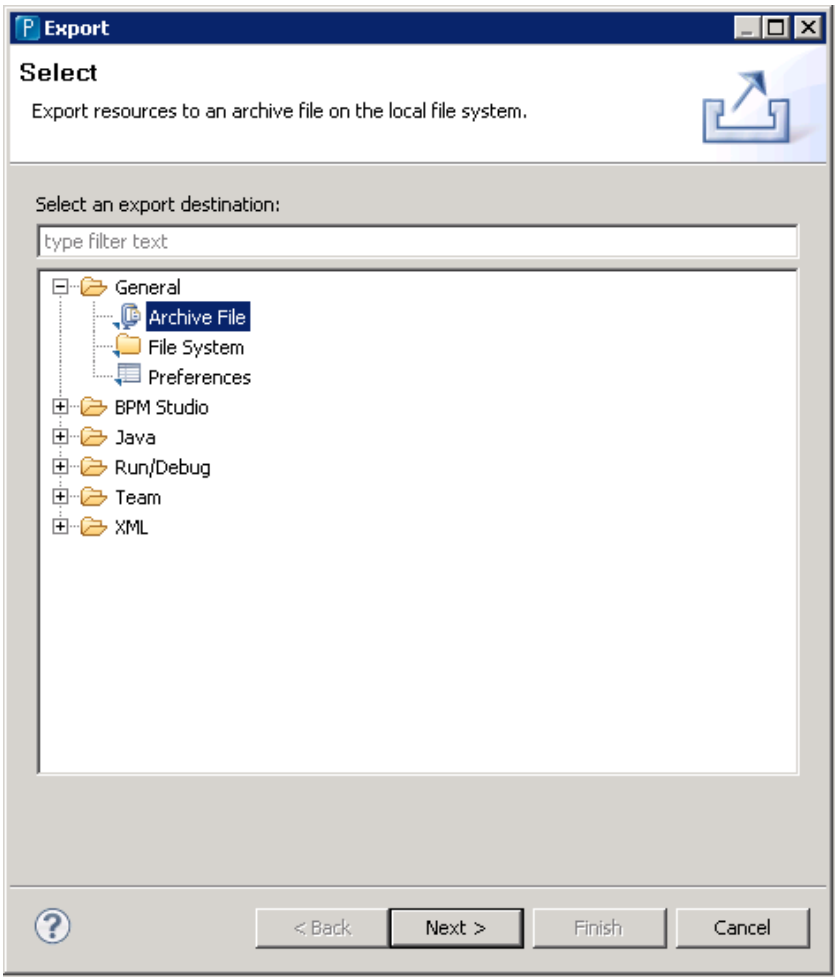
Before the export, make sure that you have a workspace that has all artifacts up to date. If all business process applications running in your source BPM environment were deployed from the workspace, then this workspace has all artifacts up to date. If not, refresh the artifacts with the latest contents. For example, if the latest artifacts of a certain application are kept in another workspace, export those artifacts to the repository from that workspace, then import the artifacts into your current workspace.

Note The Repository is no longer available in OpenEdge BPM. Repository data in the SBM database is not migrated to OpenEdge BPM. Therefore, you must export artifacts from SBM Studio to keep them.

Export Projects

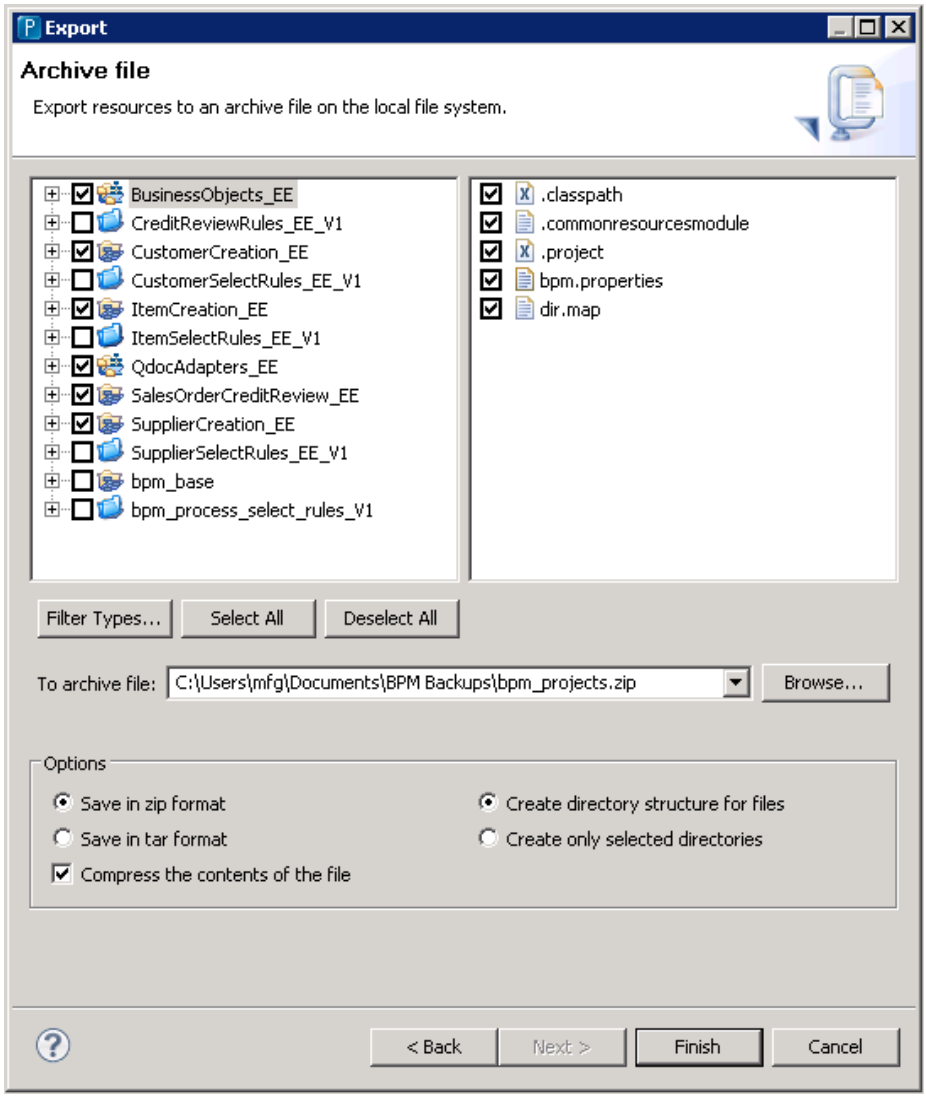
1 In SBM Studio, select menu File|Export. The Export dialog opens.

Fig. 2.1
Select an Export Destination



2 In the Export dialog, select General|Archive File, and click Next.

Fig. 2.2
Select Resources and Define Target File



3 Select the projects that you want to migrate, enter the path of the archive file, and click Finish.

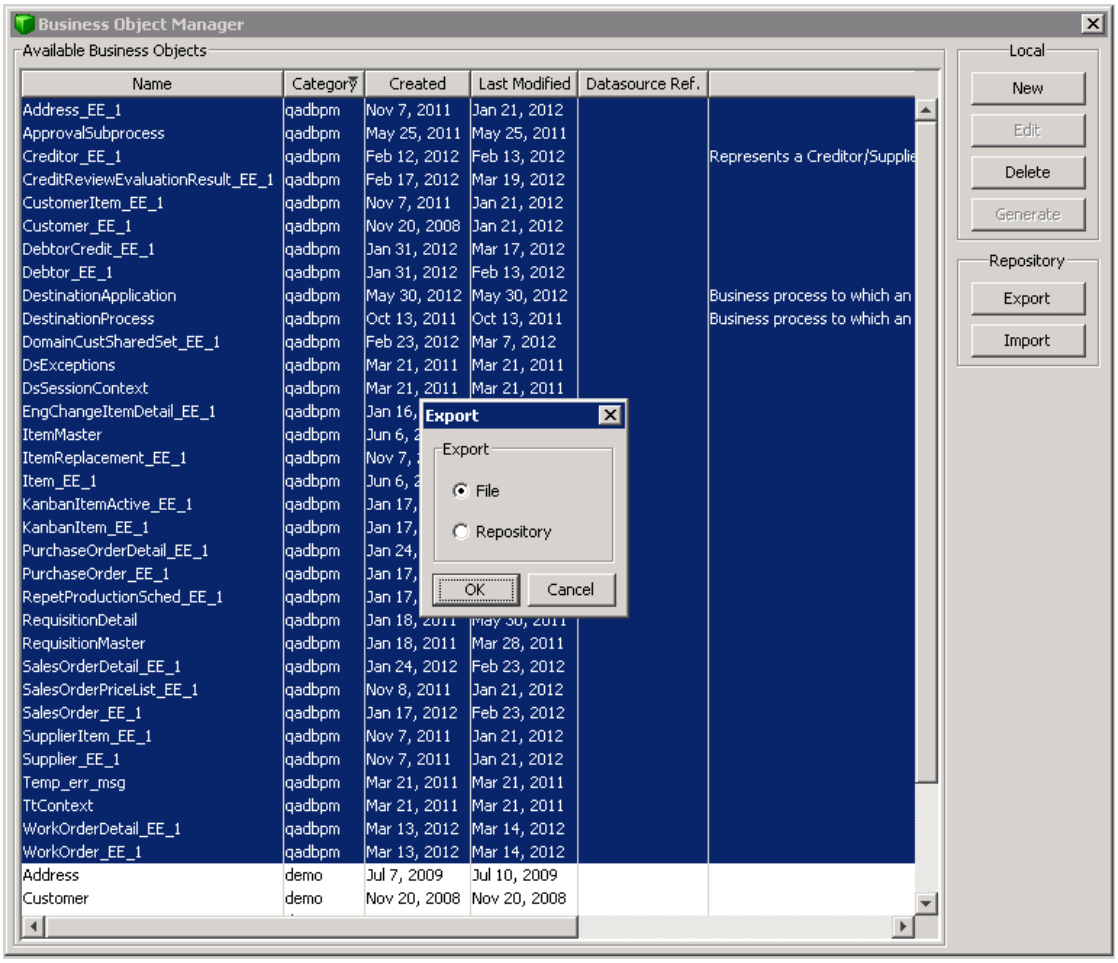
All selected projects are exported to the archive file.

Note There is no need to archive the BizRules projects since you cannot migrate them to QAD BPM 2.x. Also, there is no need to archive the bpm_base project since QAD BPM 2.x provides bpm_base.

Export Business Objects

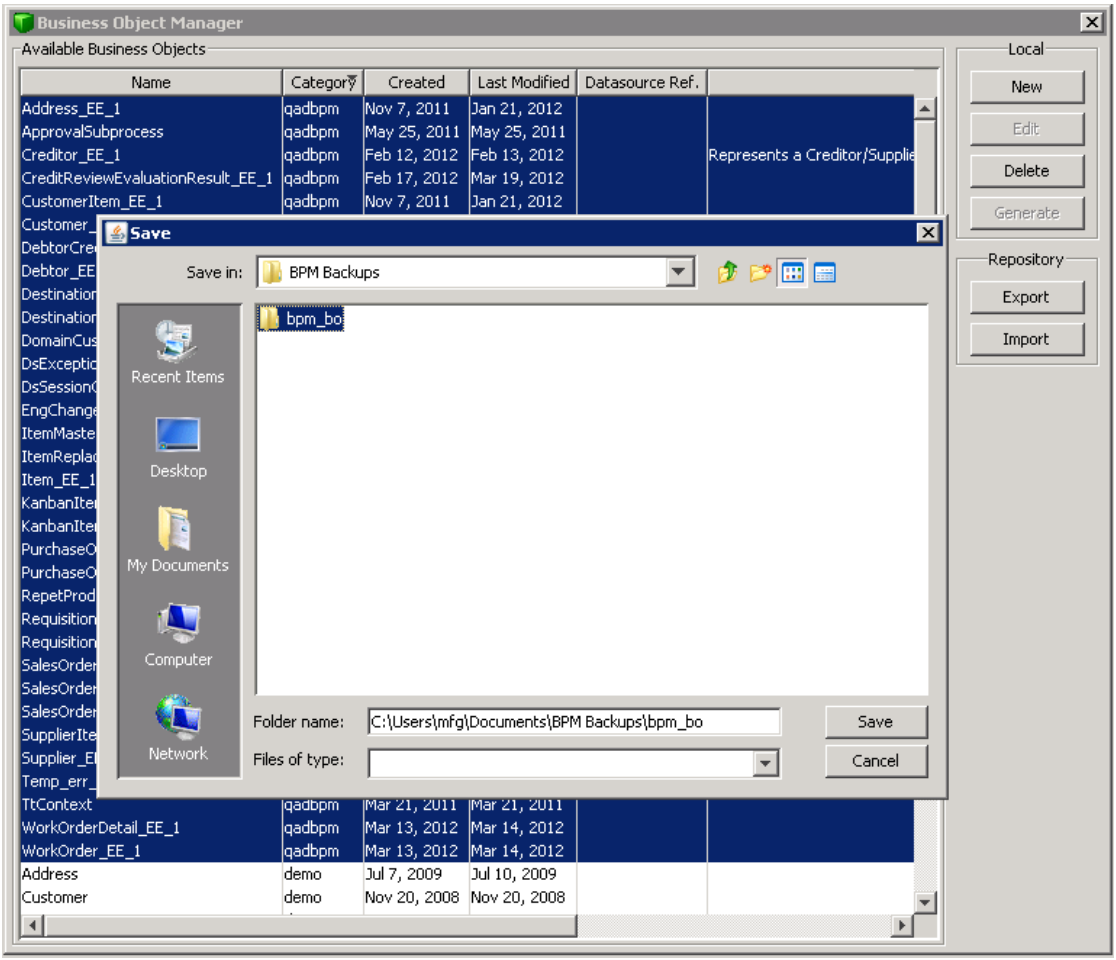
4 Select menu Tools|Business Objects. Select the business objects that you want to migrate in the Business Object Manager dialog, and click Export. Typically, you want to export all business objects in category qadbpm.

Fig. 2.3
Business Object Manager - Export



5 Select File in the Export dialog box and click OK.

Fig. 2.4
Business Object Manager - Save to Files

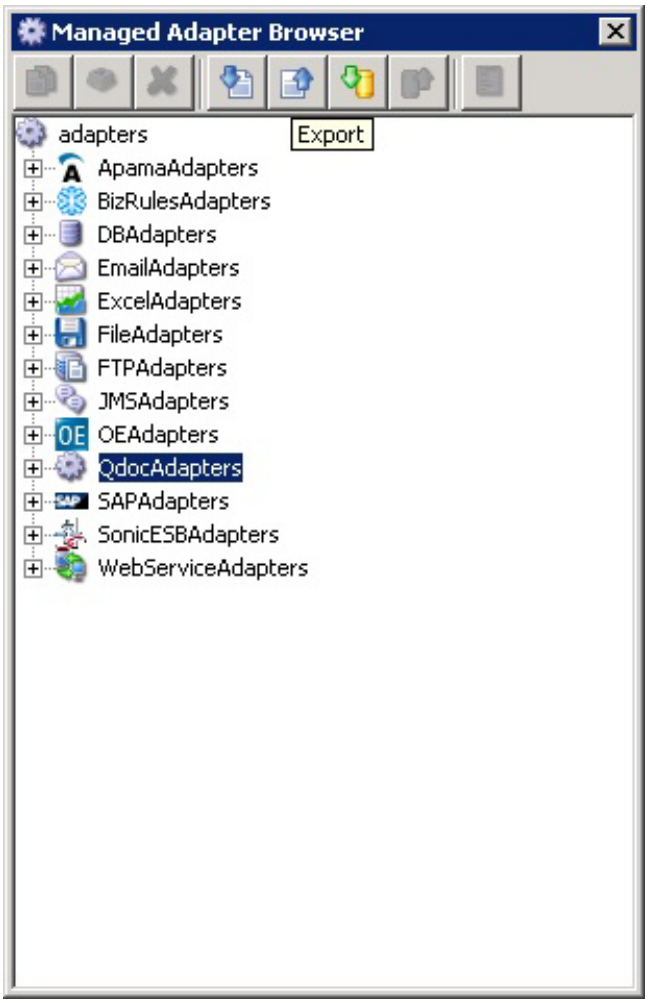


6 In the Save dialog, enter the folder where to export the business objects, and click Save. All selected business objects are exported to the folder.

Export Managed Adapters

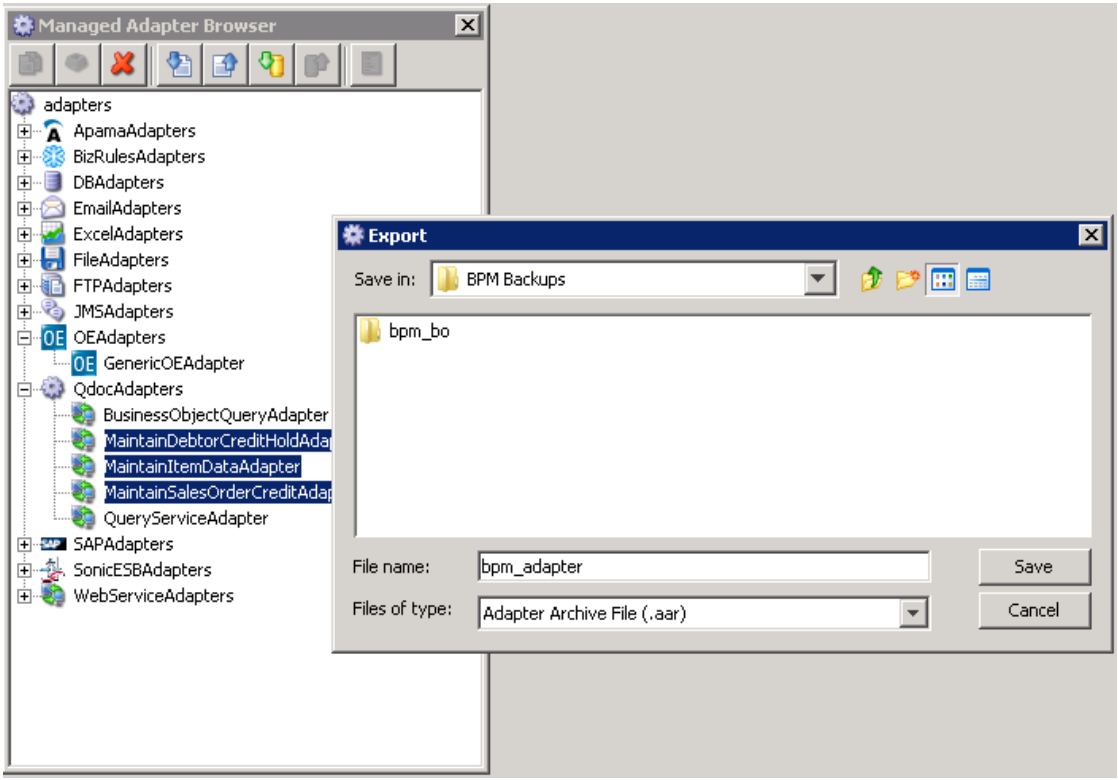
7 Select Tools|Managed Adapters.

Fig. 2.5
List Managed Adapters



8 In the Managed Adapter Browser dialog, select the adapters that you want to migrate, and click the Export icon.

Fig. 2.6
Export Managed Adapters



Note Only back up customized managed adapters that need migration. Do not back up BusinessObjectQueryAdapter and QueryServiceAdapter because they are system adapters.

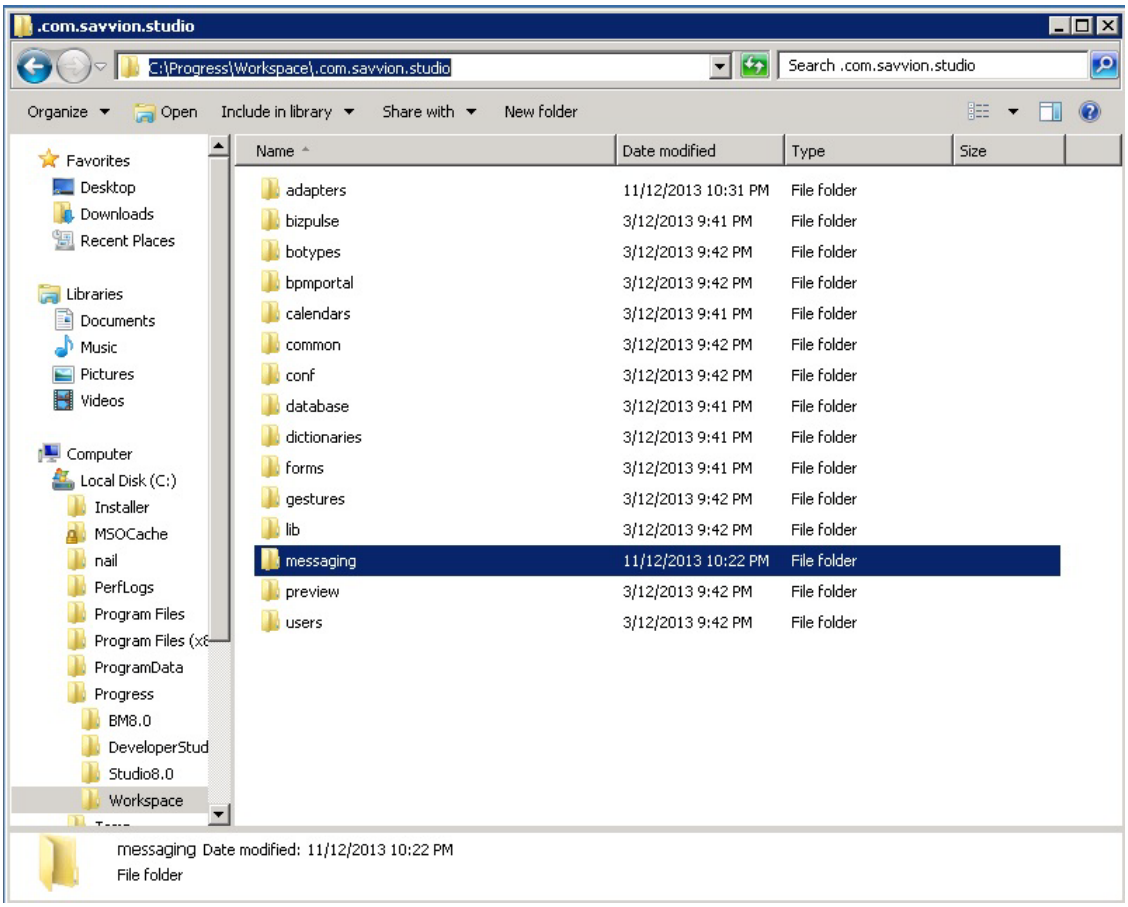
9 In the Export dialog, enter the adapter archive file, and then click Save.

All selected adapters are exported to the adapter archive file.

Export Messages

10 Copy the `<work space>/.com.savvion.studio/messaging` folder to your BPM application export directory.

Fig. 2.7
Copy Messaging Folder



Back Up SBM Database

Before migrating the database, back up the SBM database as described in the following steps.

1. Make sure that the `DLC` and `PATH` environment variables point to the original OpenEdge version (in the example, the original OpenEdge version is 10.2B05):

   ```
   $ export DLC=/progress/dlc
   $ export PATH=$DLC/bin:$PATH
   $ cat $DLC/version
   OpenEdge Release 10.2B05 as of Tue Sep 6 14:17:06 EDT 2011
   ```

2. Shut down BPM using the `stopbpm.sh` script. This script stops the Portal Server, EJB Server, and SBM database.

3. It is a best practice to back up the SBM database before making a significant change to it (for example, before deleting process instances):

   ```
   $ probkup <SBM database name> <backup directory>
   ```

   so that later it can be restored if needed:

   ```
   $ prorest <SBM database name> <backup directory>
   ```

4. Startup BPM using the `startbpm.sh` script.

For more details on backing up and restoring an OpenEdge database, refer to the Progress document *OpenEdge Data Management: Database Administration*.

Delete Process Instances

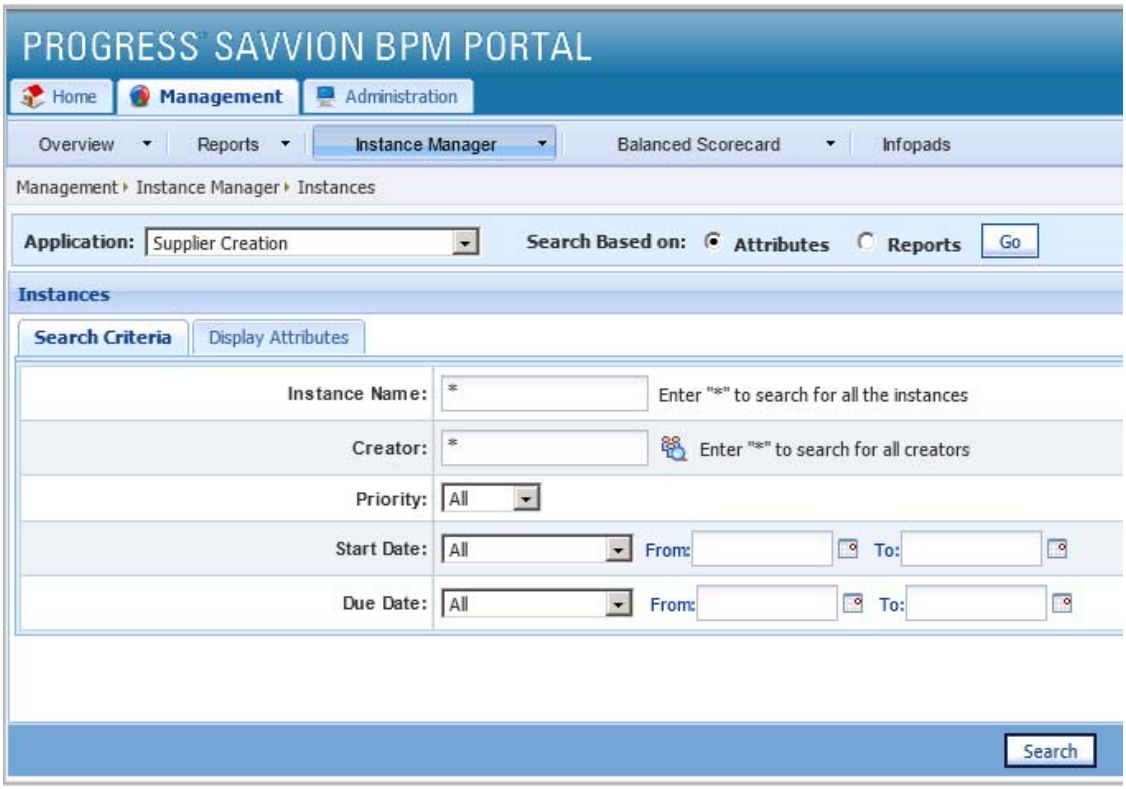
In BPM portal, delete the process instances that end users have not completed.

1 Log in to BPM portal as the administrator.

2 Go to Management|Instance Manager|Instances.

3 Select an application that has live instances and click Go.

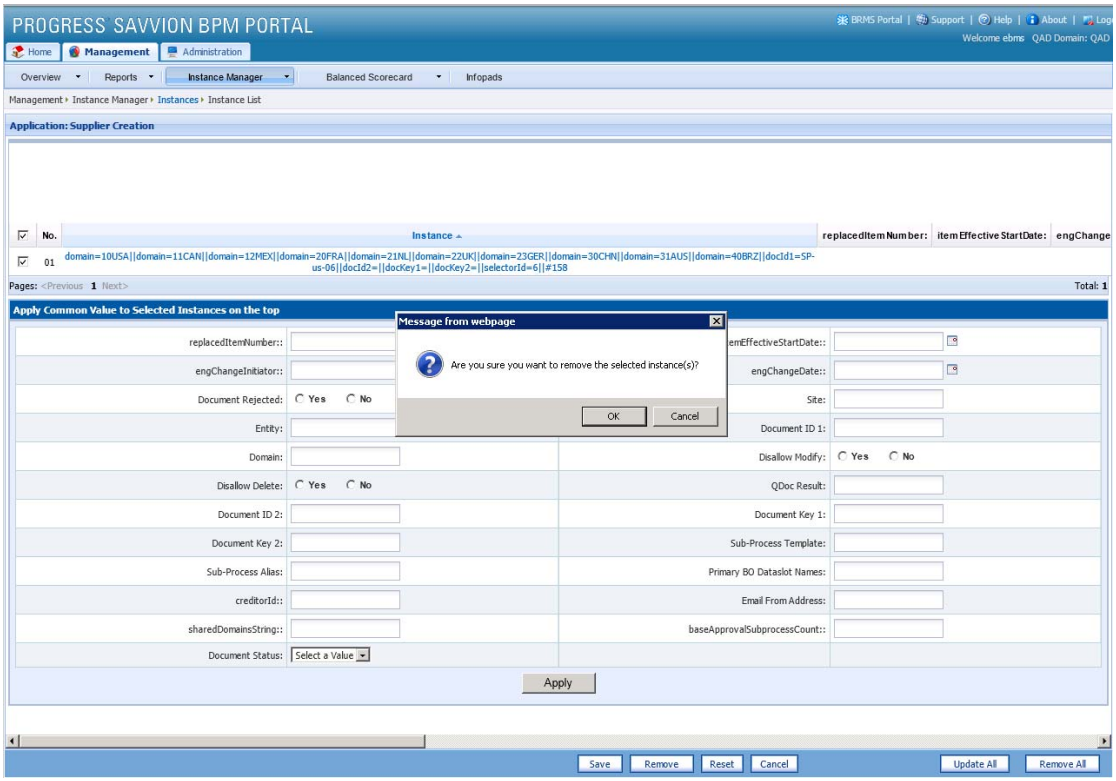
Fig. 2.8
Search for Instances



4 Click Search. All live instances of the application are listed.

5 Select all live instances and click Remove. The instances should be removed successfully.

Fig. 2.9
Delete Instances



6 Repeat the previous steps and remove all live instances. For further information, refer to *QAD BPM Administration Guide*.

Note In this step, only remove instances of user-defined applications, not system processes.

Uninstall System Processes

In the BPM portal, uninstall the following system applications from the Savvion 8.0 SBM:

- QdocEventHandler
- Daily User Tasks Email Notification
- OpenEdgeDDLOperationHandler

Note The OpenEdgeDDLOperationHandler process is no longer in OpenEdge BPM; the others are installed during QAD BPM 2.x installation.

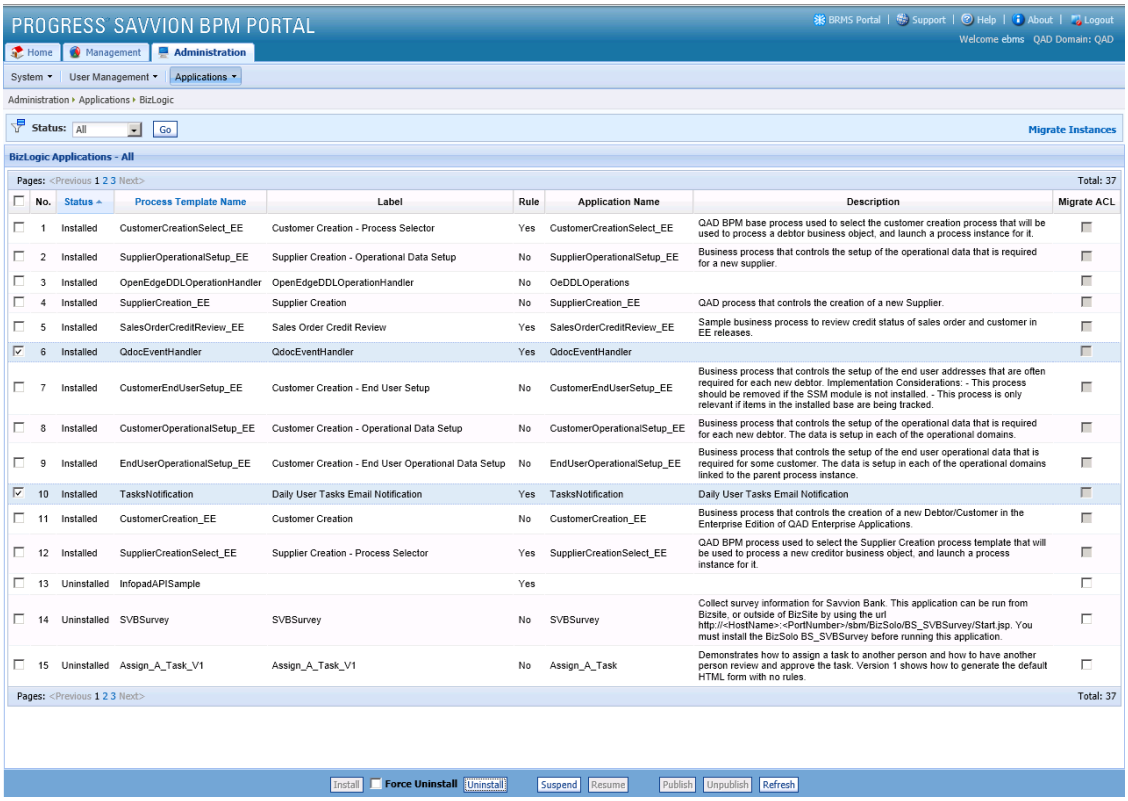
Important You must first uninstall QdocEventHandler and Daily User Tasks Email Notification when OpenEdgeDDLOperationHandler is still running. You can then uninstall OpenEdgeDDLOperationHandler.

1 Remove the running instances of QdocEventHandler and Daily User Tasks Email Notification, following the instructions in Delete Process Instances.

2 Go to Administration|Applications|BizLogic.

3 Select the QdocEventHandler and Daily User Tasks Email Notification and click Uninstall.

Fig. 2.10
Uninstall System Applications



The applications should be successfully uninstalled.

4 Wait for a few minutes until the following messages output to bizlogic.log for both applications:

```
[#| 24 Jun 2014 18:32:01,490 | BizLogic | INFO | ejbServer | BizLogic |
QueryDROP TABLE "QDOCEVENTHANDLER" executed successfully | WorkManager(2)-
79 |#]

[#| 24 Jun 2014 18:32:01,737 | BizLogic | INFO | ejbServer | BizLogic |
(3242):For ProcessInstance <OpenEdgeDDLOperationHandler#124>, Workstep

<Activity 2> is in Activation wait... | WorkManager(2)-79 |#]
```

The messages show that QdocEventHandler was uninstalled successfully.

5 Remove the running instances of OpenEdgeDDLOperationHandler.

6 Uninstall the system application OpenEdgeDDLOperationHandler.

Warning If the system processes are not uninstalled, an error occurs during QAD BPM 2.x installation because the newly installed system processes cannot be activated.

Stop and Back Up SBM Database

1 Stop SBM (servers and database) and go to the SBM database directory.

2 Truncate the before-image file:

```
$ proutil <SBM database name> -C truncate bi
```

3 Disable the after-image (if OpenEdge replication is enabled, you must disable it before being able to disable after-image):

```
$ proutil <SBM database name> -C aimage end
```

4 Disable two-phase commit:

```
$ proutil <SBM database name> -C 2phase end
```

5 Back up the SBM database before conversion:

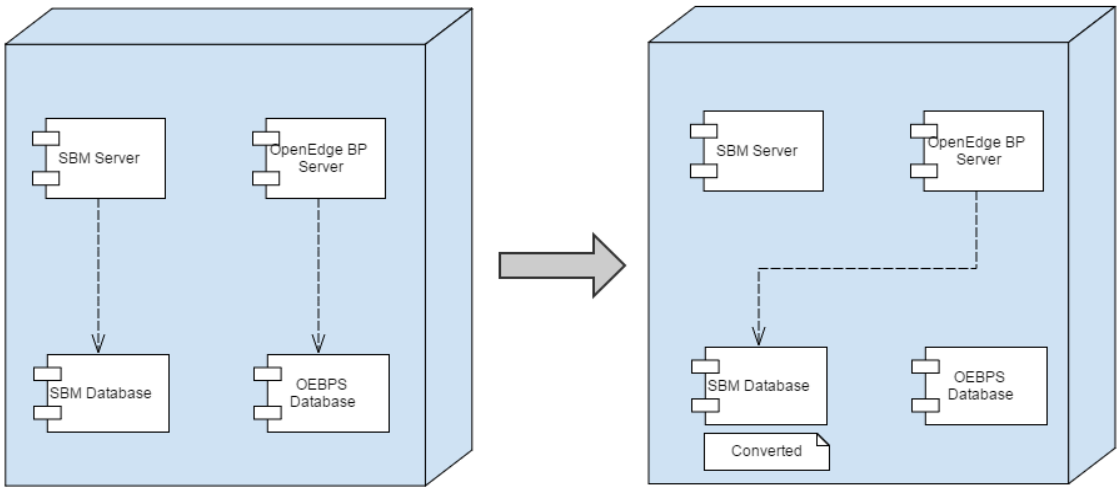
```
$ cp -R . <backup directory 02>
```

Migrate Database

The purpose of BPM database migration is to convert the Savvion 8.0 BPM database that QAD BPM 1.x uses to an OpenEdge BPM database. Migration also configures OpenEdge BPM to use this database. This database is used following QAD BPM 2.x installation.

Keep in mind that the database migration discussed in this guide is not intended to transfer data from the source SBM database to the target OEBPS database. Instead, it converts a source SBM OpenEdge 10 or 11 database using SBM schema to an OpenEdge 11 database using OpenEdge BPM schema. The database is then used in the target BPM environment.

Fig. 2.11
Database Migration Overview



Database migration can migrate the following data from QAD BPM 1.x to QAD BPM 2.x:

- Completed process instances. They can be seen in history browses in the target QAD BPM 2.x system.
- Business calendars.
- User settings include delegation settings, process ownership, management permissions, calendars used by user/group, and subscription to task notification e-mails.

The following data and configuration *cannot* be migrated from QAD BPM 1.x to QAD BPM 2.x through database migration:

- Live process instances. Complete all process instances before migration.

- System configurations in portal, like log level, BizLogic configurations, and e-mail server configurations.
- Task notification configuration. The setting is in the `TasksNotification.conf` file and is set manually after QAD BPM 2.x installation.

Make sure that the `DLC`, `JAVA_HOME`, and `PATH` environment variables point to the new OpenEdge version (instead of OpenEdge 10.x) and Java 1.7. For example, assuming the new OpenEdge version is 11.3.2:

```
$ export DLC=/progress/dlc113
$ export JAVA_HOME=$DLC/jdk
$ export PATH=$JAVA_HOME/bin:$DLC/bin:$PATH

$ cat $DLC/version
OpenEdge Release 11.3.2 as of Mon Jan 27 16:30:16 EST 2014

$ java -version
java version "1.7.0_02"
Java(TM) SE Runtime Environment (build 1.7.0_02-b13)
Java HotSpot(TM) 64-Bit Server VM (build 22.0-b10, mixed mode)
```

Convert SBM Database from OpenEdge 10 to OpenEdge 11

Only perform this step if the Progress version of the source BPM environment is OpenEdge 10.

1. Go to the Savvion 8.0 SBM database directory.
2. Run the OpenEdge conversion utility to convert the sbmdb database from an OpenEdge 10 to an OpenEdge 11 database:

   ```
   $ proutil <SBM database name> -C conv1011 -cpinternal UTF-8
   ```

   Back up the converted OpenEdge 11 database:

   ```
   $ probkup <SBM database name> <OpenEdge 11 SBM database backup directory>
   ```

Configure OpenEdge BP Server to Use the Converted Database

1. Make sure that the operating system user has the permissions to execute the following commands.
2. Make sure that the `DLC`, `JAVA_HOME`, and `PATH` environment variables point to the new OpenEdge version.
3. Make sure that the OpenEdge oebps database is not running.
4. Go to the sbmdb database directory.
5. Create a text file named `oebps.pf` and insert the following content:

   ```
   -db sbmdb
   -S 8910
   -n 150
   ```

```
-Mn 5
-Mi 1
-bibufs 25
-L 32000
-B 10000
-schlockwq
-SQLStmtCache 200
```

6 Create a script file named `startdb.sh` with the following content:

```
PROSQL_LOCKWAIT_TIMEOUT=302
sql_env
proserve -pf oebps.pf
```

Note Ensure that `startdb.sh` has execute permission.

7 Create a script file named `stopdb.sh` with the following content:

```
proshut sdmdb -by
```

Note Ensure that `stopdb.sh` has execute permission.

8 Start the OpenEdge database by executing the following command:

```
./startdb.sh
```

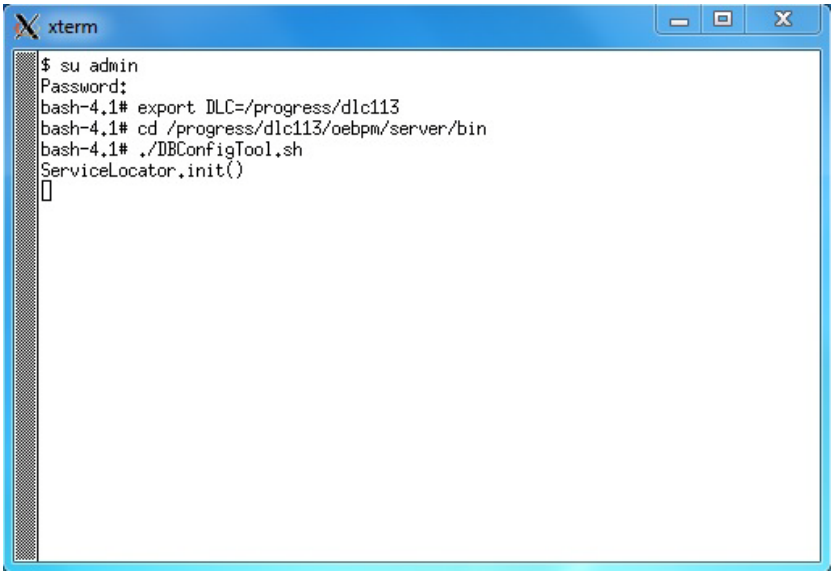
Note If the following error message appears, you can ignore it:

```
$ ./startdb.sh
JDKHOME=/progress/dlc113/jdk
JREHOME=/progress/dlc113/jre
CLASSPATH=/progress/dlc113/java/prosp.jar:/progress/dlc113/java/openedge.jar:
ERROR:The java jvm library path does not exist !
Check your JREHOME for the existence of lib/amd64/server
and lib/amd64/native_threads,
then rerun the script
OpenEdge Release 11.3 as of Wed Jul 17 16:45:16 EDT 2013
16:42:41 BROKER     The startup of this database requires 90Mb of shared memory.
Maximum segment size is 1024Mb.
16:42:41 BROKER  0: Multi-user session begin. (333)
16:42:41 BROKER  0: Before Image Log Initialization at block 0  offset 0. (15321)
16:42:47 BROKER  0: Login by root on /dev/pts/2. (452)
16:42:47 BROKER  0: Started for 8910 using TCP IPV4 address 0.0.0.0, pid 18327. (5644)
```

9 Run the Database Configuration Tool to configure the target OpenEdge BPM to use the converted SBM database.

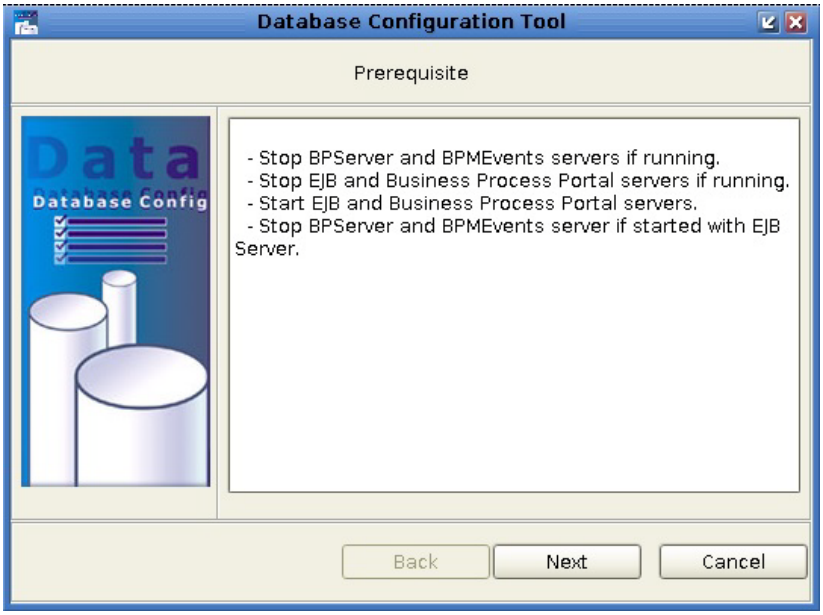
Database Configuration Tool is a GUI program. It is better to use the admin/root user to run this tool. For example, you can use xterm to run the tool in a Linux environment as follows.

Fig. 2.12
Start Database Configuration Tool



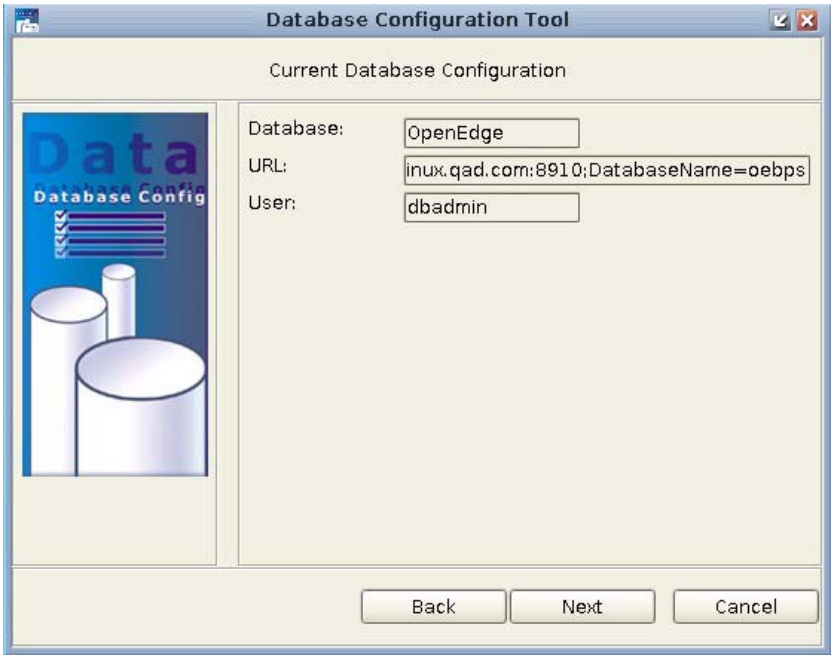
10 Follow the wizard to configure OpenEdge BPM to use the converted sbmdb database.

Fig. 2.13
Database Configuration Tool - Prerequisite



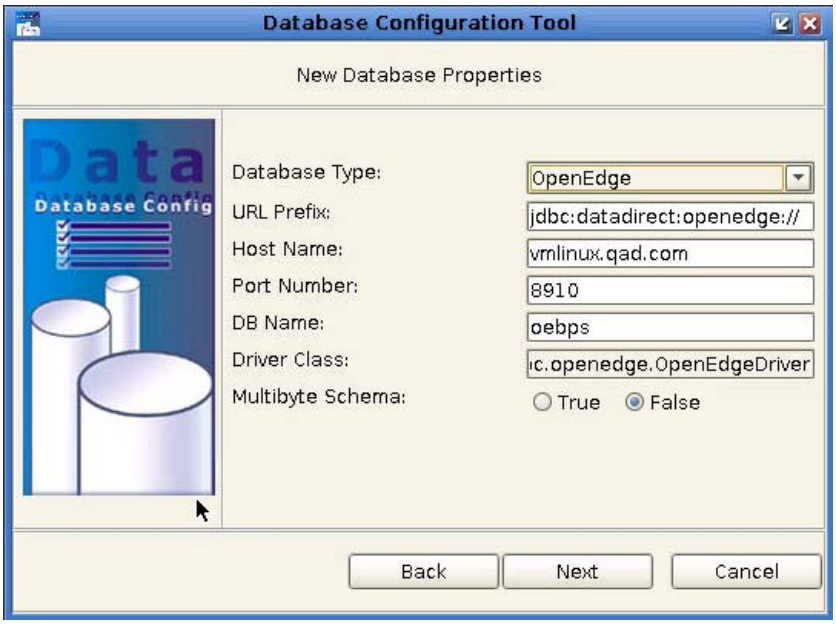
11 Click Next.

Fig. 2.14
Database Configuration Tool – Current Database Configuration



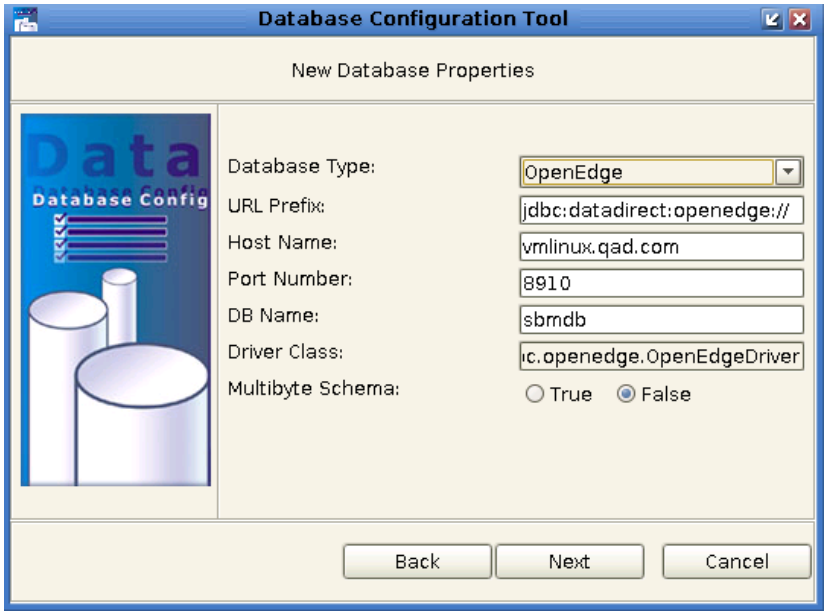
12 Click Next.

Fig. 2.15
Database Configuration Tool – New Database Properties



13 Edit DB Name to use the converted sbmdb database.

Fig. 2.16
Database Configuration Tool – Edit New Database Properties



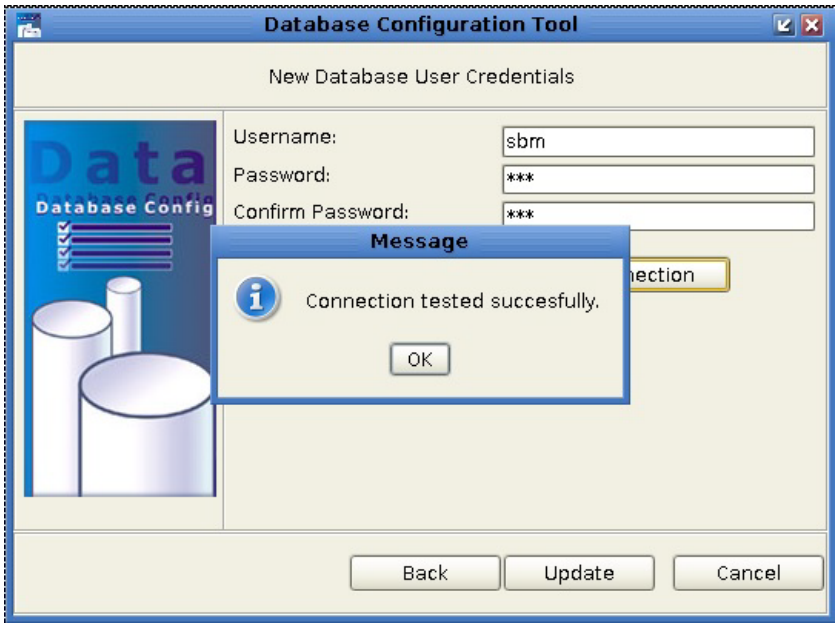
14 Click Next.

15 Provide the sbmdb database Username and Password (both are sbm by default).

Fig. 2.17
Database Configuration Tool – New Database User Credentials

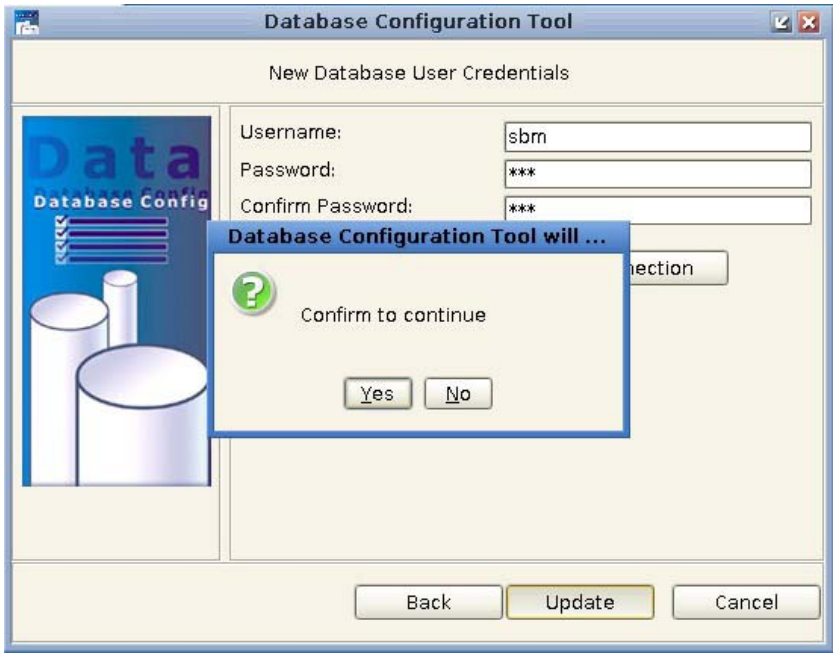
16 Click Test Connection.

Fig. 2.18
Database Configuration Tool – Test Connection



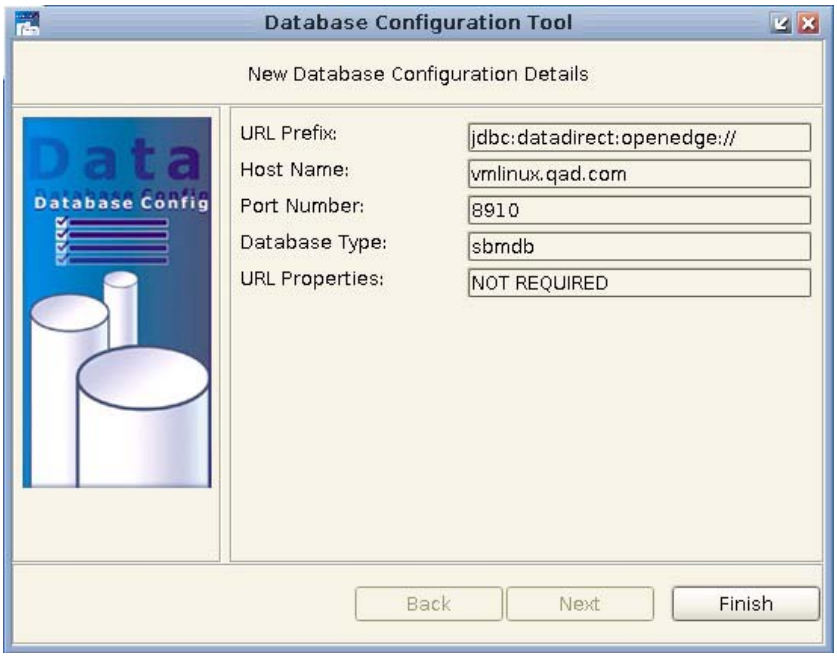
17 Click OK and then Update.

Fig. 2.19
Database Configuration Tool - Confirm



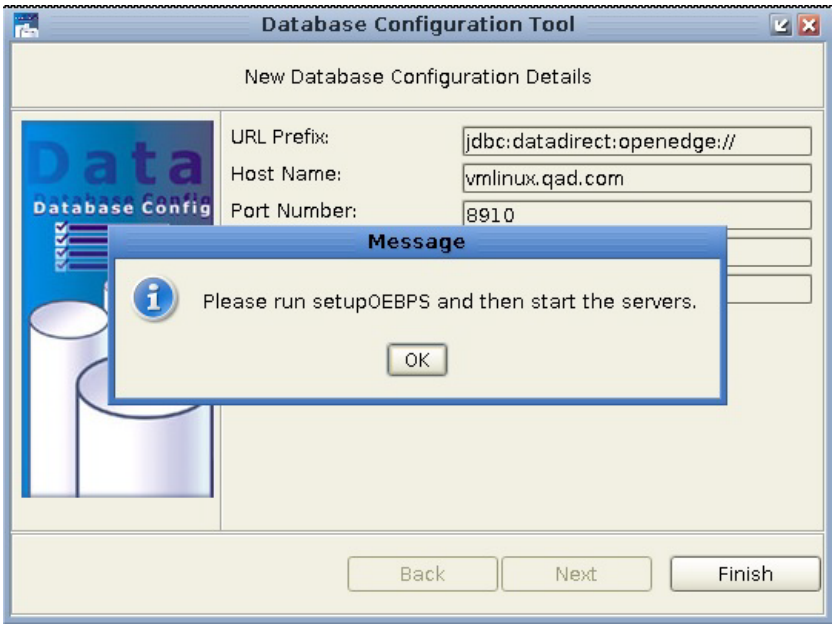
18 Click Yes.

Fig. 2.20
Database Configuration Tool – Finish Configuration



19 Click Finish.

Fig. 2.21
Database Configuration Tool - Reminder



20 Click OK. The change is applied to `$DLC/oebpm/server/conf/oebpsdb.properties`.

Note You do not need to run `setupOEBPS.sh`.

Convert the SBM Database Schema from SBM 8.0 to OpenEdge BPM

Note The instructions in this section are based on a migration to OpenEdge 11.3.2. Migration to OpenEdge 11.4 is described at the end of this section.

1. Make sure the `DLC`, `JAVA_HOME`, and `PATH` environment variables point to the new OpenEdge version.

2. Ensure that the converted sbmdb is running.

3. Extract the OpenEdge migration utility in the migration directory:

```
$ cd $DLC/oebpm/server/migration
$ unzip ./PROGRESS_OEBPM_DATA_MIGRATION_UTILITY_ALL.zip
$ unzip ./PROGRESS_OEBPM_DATAMIGRATION_7.6.X_OR_8.X_TO_11.3.zip -d
./8.0-11.3
$ unzip ./PROGRESS_OEBPM_DATAMIGRATION_11.3_TO_11.3.X.zip -d
./11.3-11.3.2
```

4. Edit `$DLC/oebpm/server/migration/8.0-11.3/bin/setenv.sh` to set the environment variables (replace <*OpenEdge Home Directory*> with the real path of `$DLC`):

```
JAVA_HOME=<OpenEdge Home Directory>/jdk
OEBPS_TARGET_HOME=<OpenEdge Home Directory>/oebpm/server
OEBPS_SOURCE_VERSION=8.0
MIGRATION_HOME=<OpenEdge Home Directory>/oebpm/server
/migration/8.0-11.3
```

   Edit `$DLC/oebpm/server/migration/8.0-11.3/conf/migration.properties` (replace <*OpenEdge Home Directory*> with the real path of `$DLC`):

```
oebps.target.home=<OpenEdge Home Directory>/oebpm/server
oebps.target.version=11.3.2
oebps.target.webapp.folder=<OpenEdge Home Directory>/oebpm
/jboss/webapps
oebps.target.admin.userid=admin
oebps.source.version=8.0
oebps.migration.home=<OpenEdge Home Directory>/oebpm/server
/migration/8.0-11.3
oebps.migration.continueonerror=false
oebps.migration.verbose=true
oebps.db.provider=openedge
oebps.db.driver=com.ddtek.jdbc.openedge.OpenEdgeDriver
oebps.db.multibyteschema=false
oebps.db.target.url=jdbc:datadirect:openedge://localhost:8910;
DatabaseName=sbmdb
oebps.db.target.user=sbm
oebps.db.target.password=sbm
```

Note The oebps.target.version must match the target OpenEdge version, even if the script will first migrate the database to a version that is earlier than the target OpenEdge version.

For example, migrating from Savvion 8.0 to OEBPM 11.3.2 uses two steps. First, you use the script under 8.0-11.3 to migrate from Savvion 8.0 to OEBPM 11.3. Next, you use the script under 11.3-11.3.2 to migrate from OEBPM 11.3 to 11.3.2. However, in the first step (8.0-11.3), when you set the oebps.target.version, you must set the version to 11.3.2, not 11.3.

5 Edit `$DLC/oebpm/server/migration/11.3-11.3.2/bin/setenv.sh` to set the environment variables (replace <*OpenEdge Home Directory*> with the real path of `$DLC`):

```
JAVA_HOME=<OpenEdge Home Directory>/jdk
OEBPS_TARGET_HOME=<OpenEdge Home Directory>/oebpm/server
OEBPS_SOURCE_VERSION=11.3
MIGRATION_HOME=<OpenEdge Home Directory>/oebpm/server
/migration/11.3-11.3.2
```

Check `$DLC/oebpm/server/migration/11.3-11.3.2/conf/migration.properties`:

```
oebps.target.version=11.3.2
oebps.migration.continueonerror=false
oebps.migration.verbose=true
```

6 Go to the Savvion 8.0 SBM `ebmsapps` folder and copy the application folders (do not copy the `com`, `common`, `OpenEdgeDDLOperationHandler`, and `uninstalled` applications folders) to the OpenEdge BPM `oebpm/server/ebmsapps` folder.

Warning Ensure that the `com`, `common`, and `OpenEdgeDDLOperationHandler` folders in OpenEdge BPM are not replaced with the corresponding Savvion 8.0 SBM folders.

7 If there are applications (except uninstalled applications) that have rules, you must compile each of them one by one using the RunCompiler utility:

```
$ cd $DLC/oebpm/server/bin
$ ./RuleCompiler.sh -a <AppName> -blapi_lib -all
```

where <*AppName*> is the actual application name.

8 Execute the migration utility under the `8.0-11.3/bin` folder. Ensure that the `.sh` files in the `$DLC/oebpm/server/migration/8.0-11.3/bin` folder have execute permission.

```
$ cd $DLC/oebpm/server/migration/8.0-11.3/bin
$ chmod 755 *.sh
$ ./oebpsmigration.sh
```

You may need to use Control-c to quit the scripts when you see “SBM data migration is completed.”

9 Execute the migration utility under `11.3-11.3.2/bin` folder. Ensure that the `.sh` files in `$DLC/oebpm/server/migration/11.3-11.3.2/bin` folder have execution permission.

```
$ cd $DLC/oebpm/server/migration/11.3-11.3.2/bin
$ chmod 755 *.sh
$ ./oebpsmigration.sh
```

OpenEdge 11.4 only provides scripts for migrating an OpenEdge BPM database from version 11.3 to 11.4. If the target version is OpenEdge 11.4, use the following steps to migrate the Savvion BPM database to an OpenEdge 11.4 BPM database:

1. Unzip `$DLC/oebpm/server/migration/PROGRESS_OEBPM_DATA_MIGRATION_UTILITY_ALL.zip` and then unzip `PROGRESS_OEBPM_DATAMIGRATION_11.3.x_TO_11.4.zip`.
2. Copy `$DLC/oebpm/server/migration/PROGRESS_OEBPM_DATA_MIGRATION_UTILITY_ALL.zip` of an OpenEdge 11.3 installation to the same directory under the current `$DLC`. Unzip the zip file and then unzip `PROGRESS_OEBPM_DATAMIGRATION_7.6.X_OR_8.X_TO_11.3.zip`.
3. Modify `$DLC/version` and change the version number from 11.4 to 11.3.0.
4. Use the migration script in `PROGRESS_OEBPM_DATAMIGRATION_7.6.X_OR_8.X_TO_11.3.zip` to convert the Savvion BPM database to an OpenEdge 11.3 BPM database.
5. Modify `$DLC/version` and change the version number back to 11.4.
6. Use the migration script in `PROGRESS_OEBPM_DATAMIGRATION_11.3.x_TO_11.4.zip` to convert the OpenEdge BPM database format from 11.3 to 11.4.

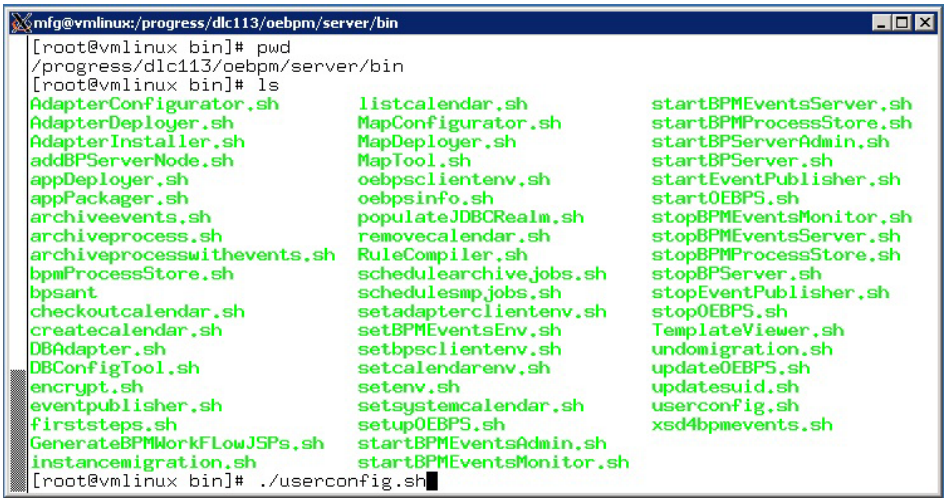
Configure OpenEdge BP Server Admin Credential

Use the xterm to run the user configuration tool.

1. Make sure that the OS user has permissions to modify files in `$DLC/oebpm/server/conf`.

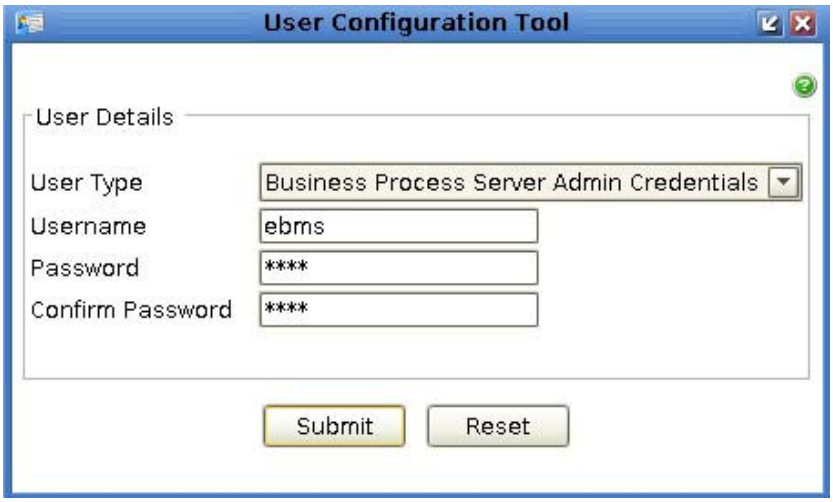
   Note The default OpenEdge BPM administrator Username and Password are admin, which does not exist in the converted sbmdb. Therefore, you must change the Username and Password to the Savvion SBM 8.0 administrator Username and Password, which is ebms by default.

Fig. 2.22
Run User Configuration Tool



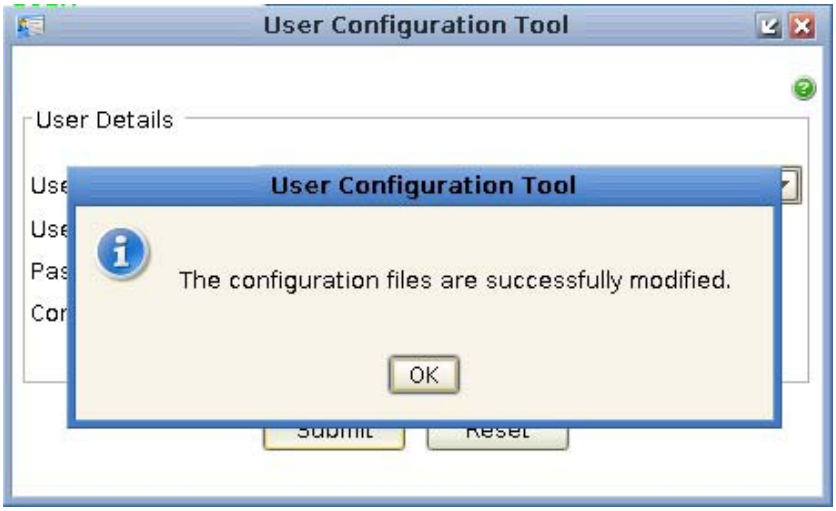
2 Set the Business Process Server Admin Credentials Username to ebms and Password to the ebms password used in the source environment. Then click Submit.

Fig. 2.23
User Configuration Tool – Change Admin Credentials



3 Click OK.

Fig. 2.24
User Configuration Tool – Configuration Changed



4 Click the Close button in the upper right corner and then click Yes.

Fig. 2.25
User Configuration Tool - Exit

Note The change is applied to `$DLC/oebpm/server/conf/bpsboot.properties`.

Install QAD BPM to Target

After database migration, the target OpenEdge BPM uses the migrated SBM database with history records. Now it is time to install QAD BPM 2.x on the target environment. Refer to *QAD BPM Installation Guide* for more information.

Set Up Installation Parameters

Make sure that the following BPM parameters are set properly.

Table 2.1
Installation Parameters

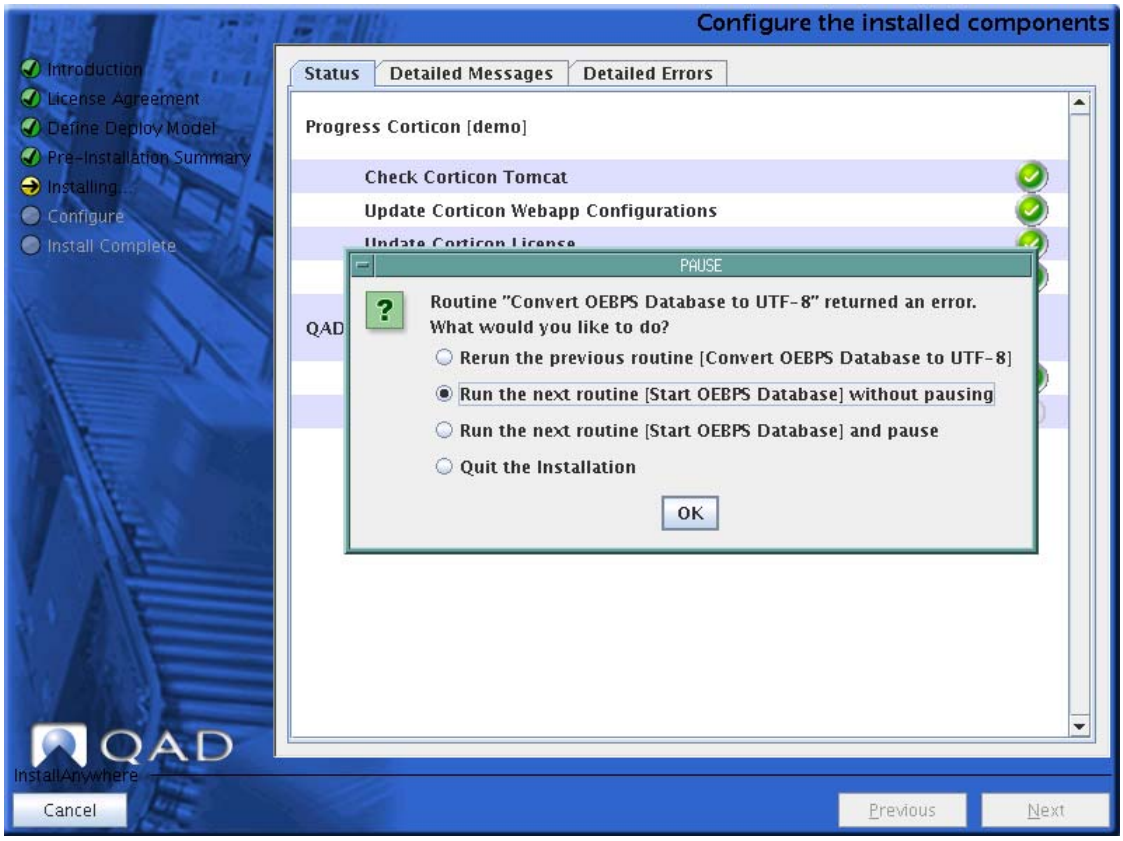
Parameter Name	Parameter Value	Default Value
Admin Name	SBM admin name	`ebms`
Admin Password	SBM admin password	`ebms`
Database Admin Name	Converted SBM database admin name	`sbm`
Database Admin Password	Converted SBM database admin password	`sbm`
Database Home	Converted SBM database directory	
Database Name	Converted SBM database name	`sbmdb`
Database Port	OEBPS port of the OpenEdge BPM	`8910`

Run Installation

Make sure that the Tomcat of QAD Enterprise Application is running on Java 1.7. Make sure that the sbmdb is not running. Shut down the database using the `stopdb.sh` script.

During the installation, if the target OpenEdge version is 11.3.2, you will probably see the following error at the step “Convert OEBPS Database to UTF-8.”

Fig. 2.26
Skip Error on "Convert OEBPS Database to UTF-8"



And the following message is in the installation log:

```
convert-codepage:
        [exec] The BI file is being automatically truncated. (1526)
        [exec] Database is already using requested encoding. (3974)
```

This step can be skipped. The error occurred because the converted SBM database is already in UTF-8. Select the second option, “Run the next routine [Start OEBPS Database] without pausing,” to ignore the error and continue the installation.

Chapter 3

BPM Application Migration

This chapter describes how to migrate the BPM 1.x applications to BPM 2.x environment.

Overview

There are significant changes between OpenEdge BPM and Savvion BPM 8.0. There are also some changes between QAD BPM 2.x and QAD BPM 1.x. Therefore, applications developed for QAD BPM 1.x cannot be deployed to QAD BPM 2.x and run in a QAD BPM 2.x environment. If you want to use the applications, you must migrate them.

Application migration includes following steps:

1 Export application artifacts to files from the Progress Developer Studio in the source environment (QAD BPM 1.x).

Note This step was introduced in the“Shut Down Source Environment” section of “BPM Database Migration”.

2 Prepare a developer environment with OpenEdge Developer Studio installed.

3 Create a workspace and import the application artifacts from files.

4 Modify the applications for QAD BPM 2.x.

5 Deploy the applications to the test environment and test the applications.

6 Once the applications are verified, deploy them to the product environment.

Import Applications and Artifacts

A prerequisite of application migration is that the application artifacts have been exported to files. See “Export Applications and Artifacts” on page 6.

1 Check that the exported BPM application artifacts exist:

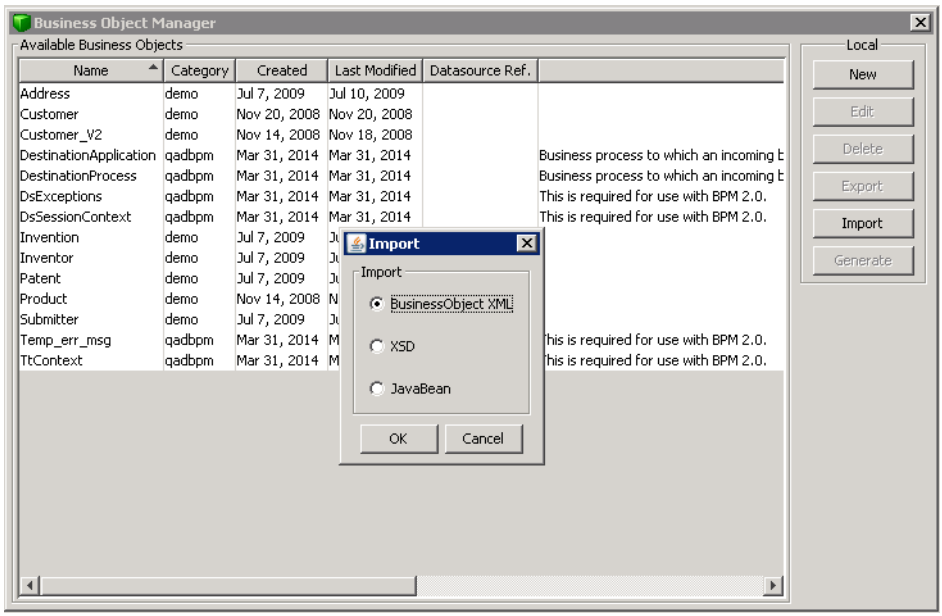
- A `.zip` file for all application projects
- Business objects xml files
- An `.aar` file for managed adapters
- Message xml files under messages folder

2 Make sure that the QAD base project was loaded into your studio workspace. Refer to *QAD BPM Administration Guide* for information on how to load the QAD base project.

Import Business Objects

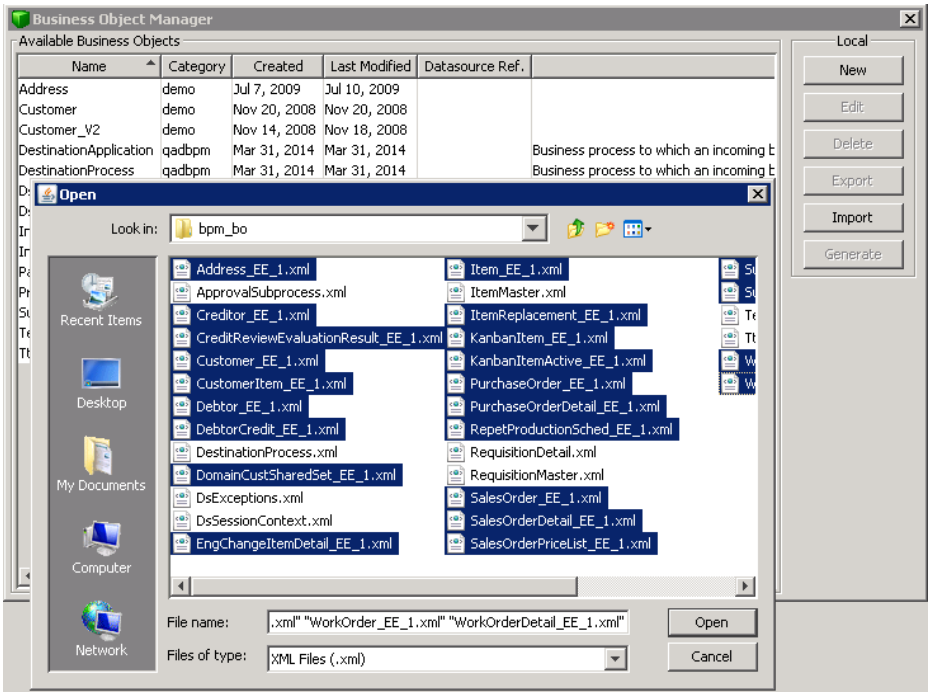
3 Select OpenEdge|Tools|Business Objects..., in the Business Object Manager dialog and click Import.

Fig. 3.1
Business Object Manager - Import



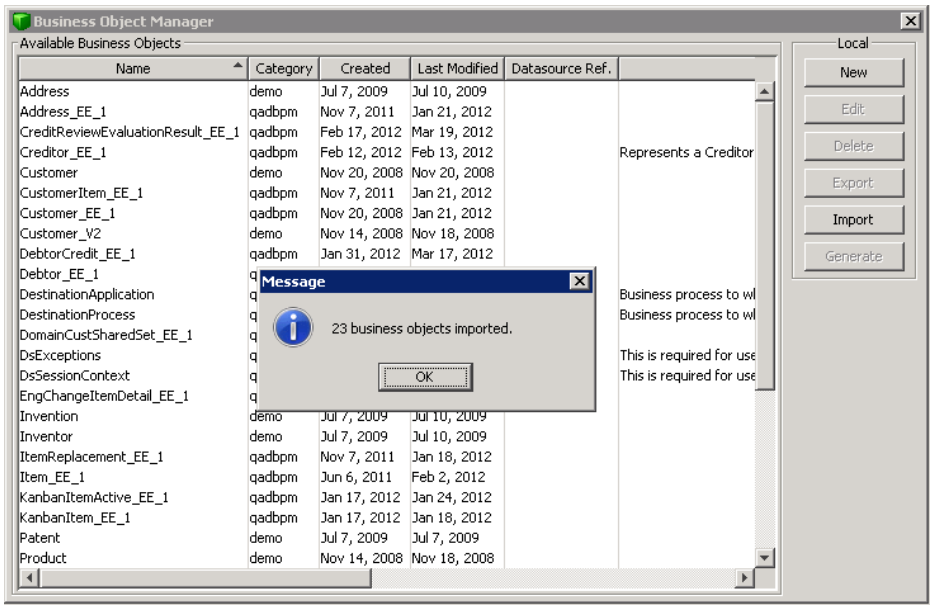
4 In the Import dialog, select BusinessObject XML and click OK.

Fig. 3.2
Select Business Objects to Import



5 In the Open dialog, select business object XML files (which are exported in a previous step) and then click Open. Skip the business objects that are not used in the applications you want to migrate.

Fig. 3.3
Business Objects Imported

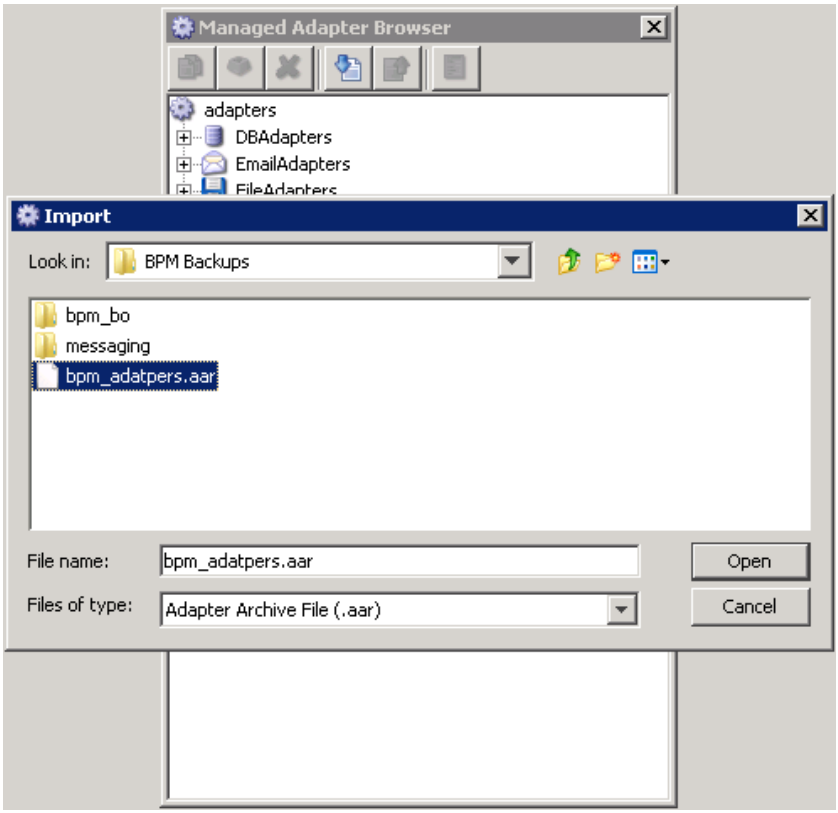


All selected business objects are imported into the workspace.

Import Managed Adapter

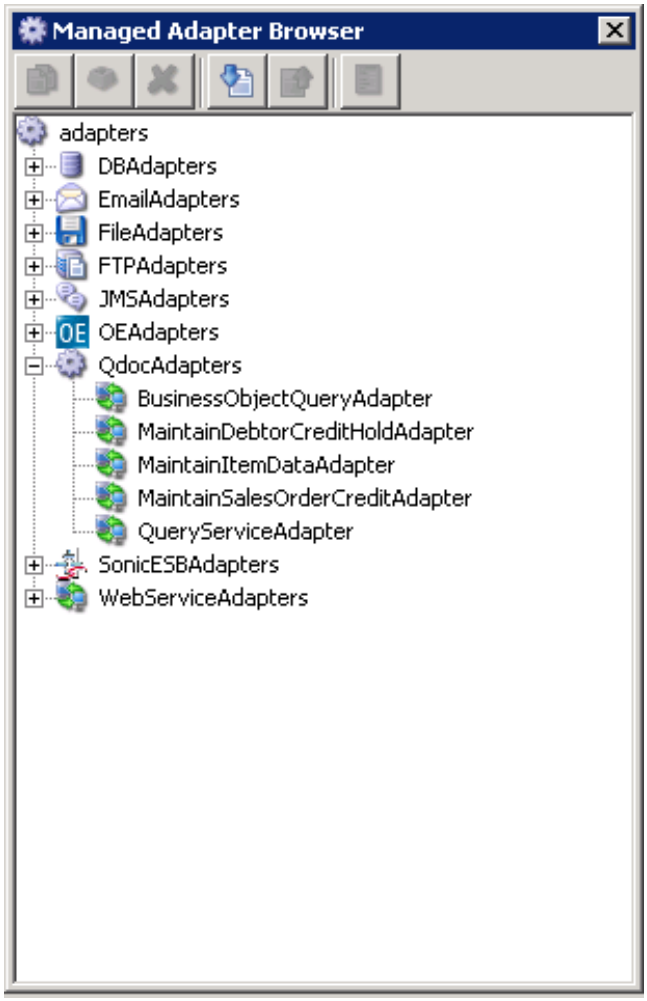
6 Select OpenEdge|Tools|Managed Adapters..., in the Managed Adapter Browser dialog and click Import.

Fig. 3.4
Import Managed Adapters



7 In the Import dialog, select the adapter archive file (which was exported in a previous step) and then click Open.

Fig. 3.5
Managed Adapters Imported



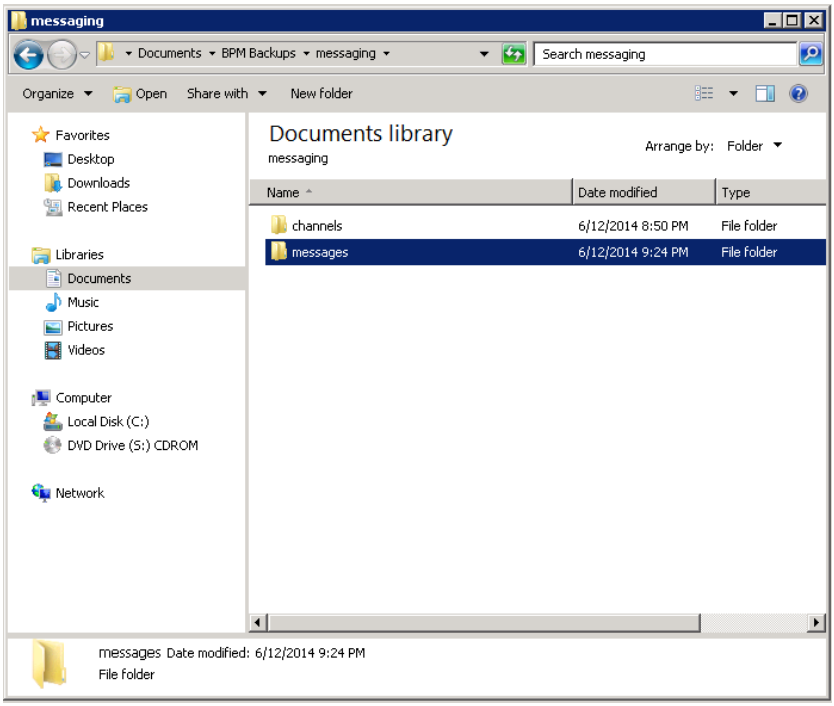
All adapters in the archive file are imported into the workspace.

Import Messages

8 Copy the messaging/messages folder (which was exported earlier) into the `<work space>/.com.savvion.studio/messaging` folder.

Note If the messages exist in the OpenEdge Progress Developer Studio (for example, QdocEventAcknowledgements and SendTasksNotificationEmails messages of QAD BPM 2.0 have been installed), you do not need to import them again.

Fig. 3.6
Import Messages



9 Restart the Developer Studio.

10 Select OpenEdge|Tools|Messages.

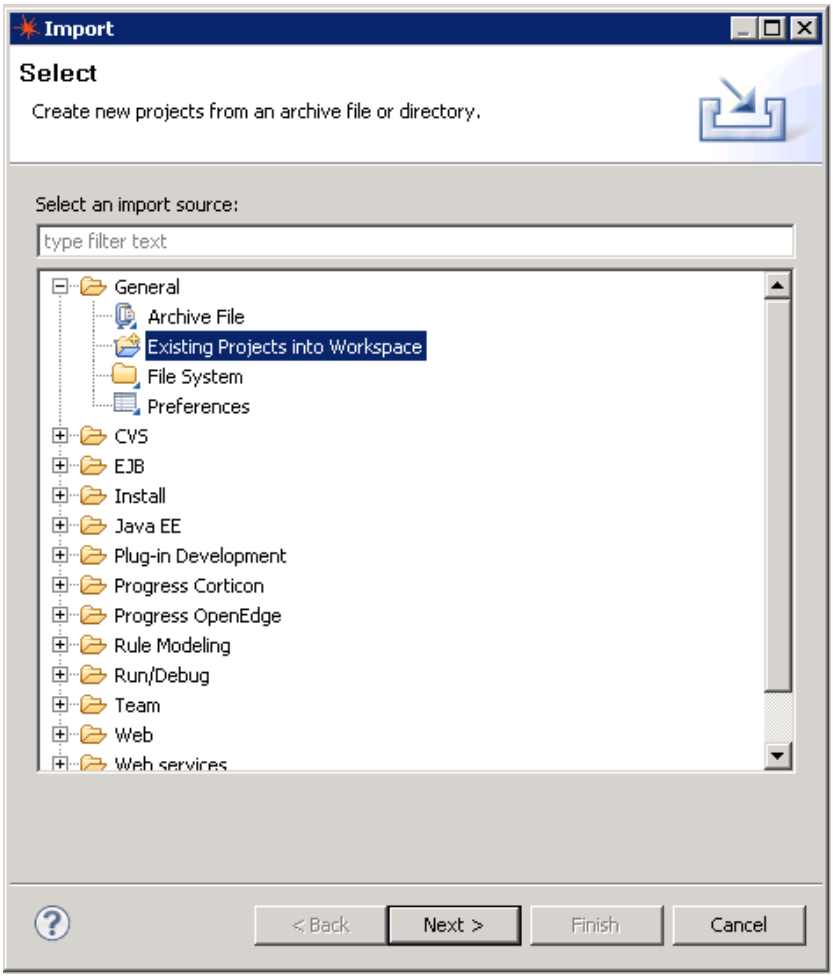
All messages are imported to the workspace and displayed in the Message Manager dialog.

If there are user-defined channels, you can import them as well by copying the messaging/channels folder into `<work space>/.com.savvion.studio/messaging` folder.

Import Projects

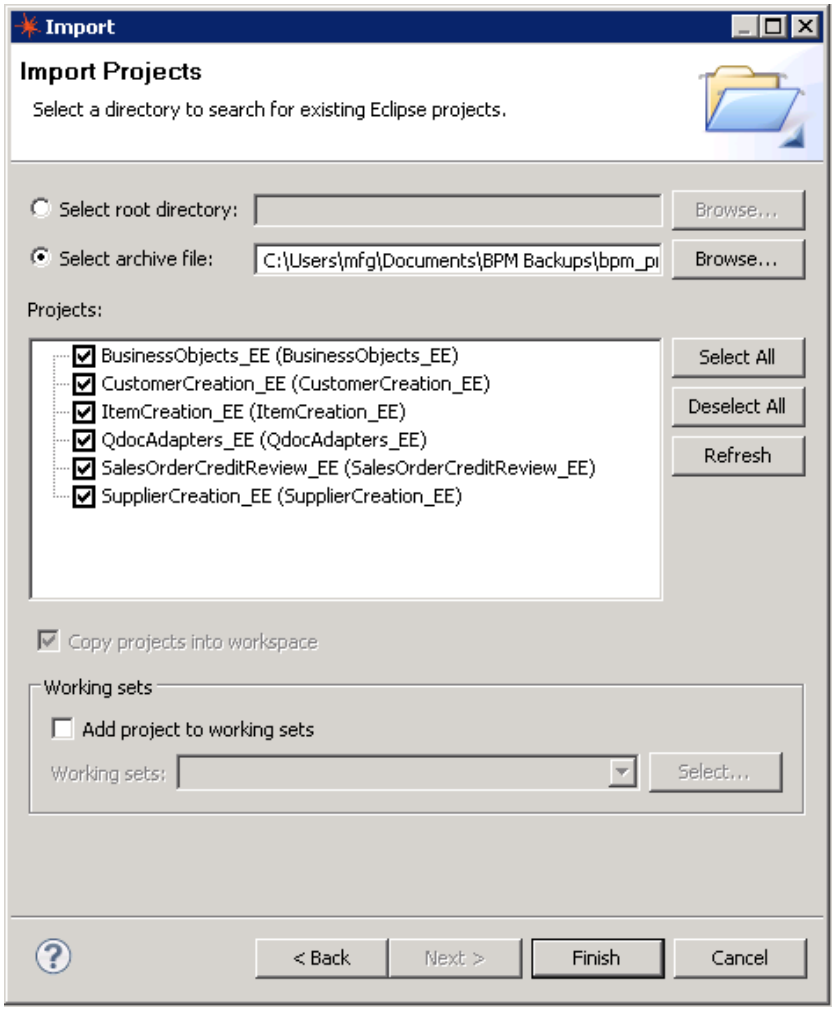
11 Select menu File|Import.

Fig. 3.7
Import Existing Projects into Workspace



12 In the Import dialog, select General|Existing Projects into Workspace.

Fig. 3.8
Select Archive File to Import

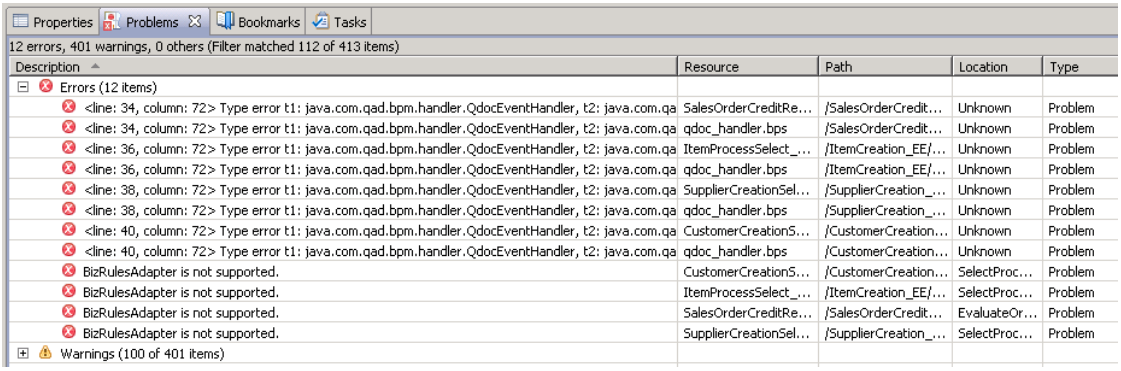


13 Choose “Select archive file” and specify input the projects archive file (which is exported from the Source Environment Shutdown|Export Applications and Artifacts step). Only select projects that you want to import. Do not select BizRule projects; OpenEdge BPM no longer supports them.

14 Click Finish. All selected projects are imported into the workspace.

15 Review errors in Problem view after the imported projects have been rebuilt.

Fig. 3.9
Import Applications and Artifacts

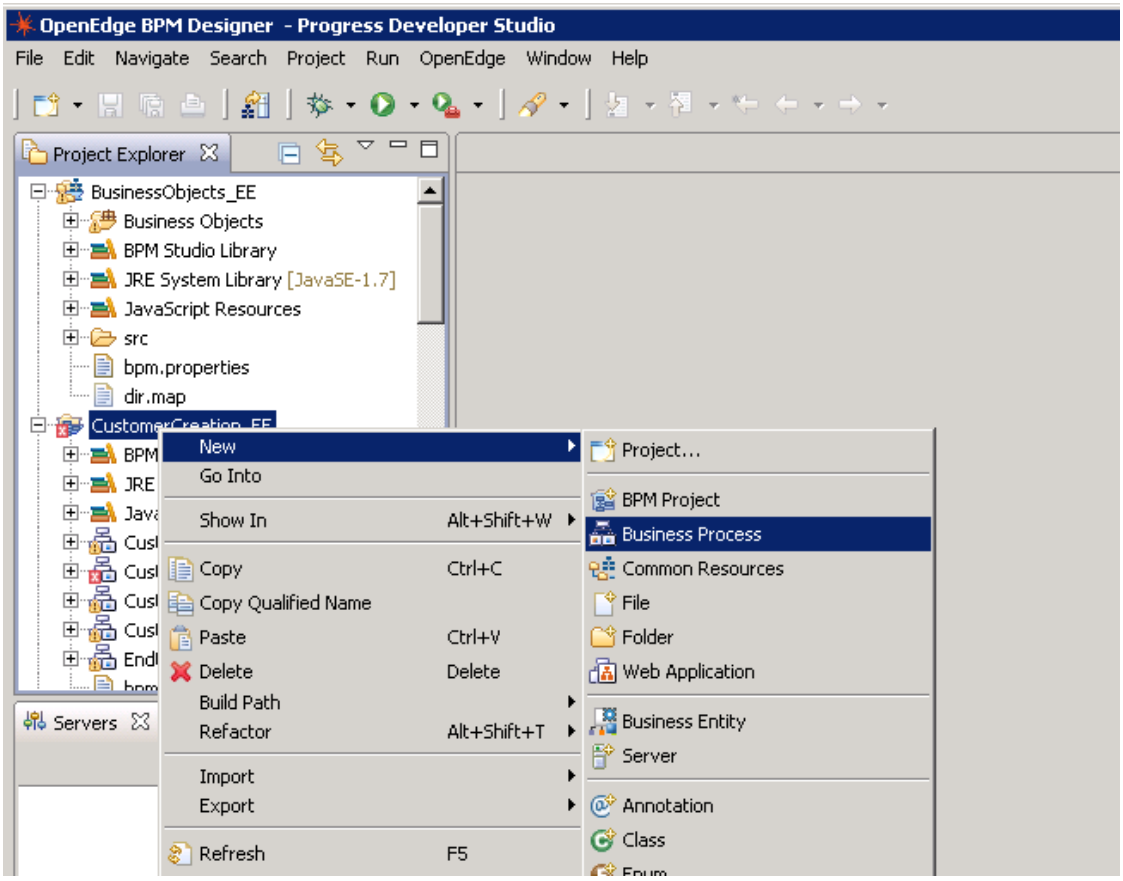


Create New Versions of Applications

The imported applications are running on the source environment, which is different from the target environment, and the applications have been modified. Create versions of these applications and deploy them to the target environment.

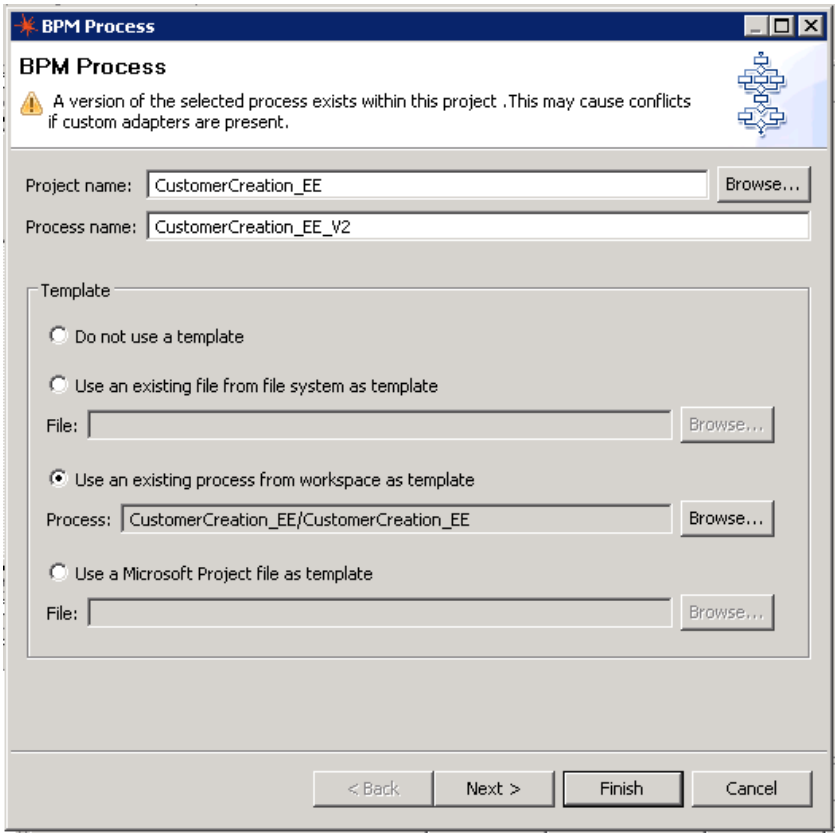
1 Right-click on a project and select New|Business Process.

Fig. 3.10
OpenEdge BPM Designer



2 In the BPM Process dialog, select “Use an existing process from workspace as template” to create an instance of an existing process.

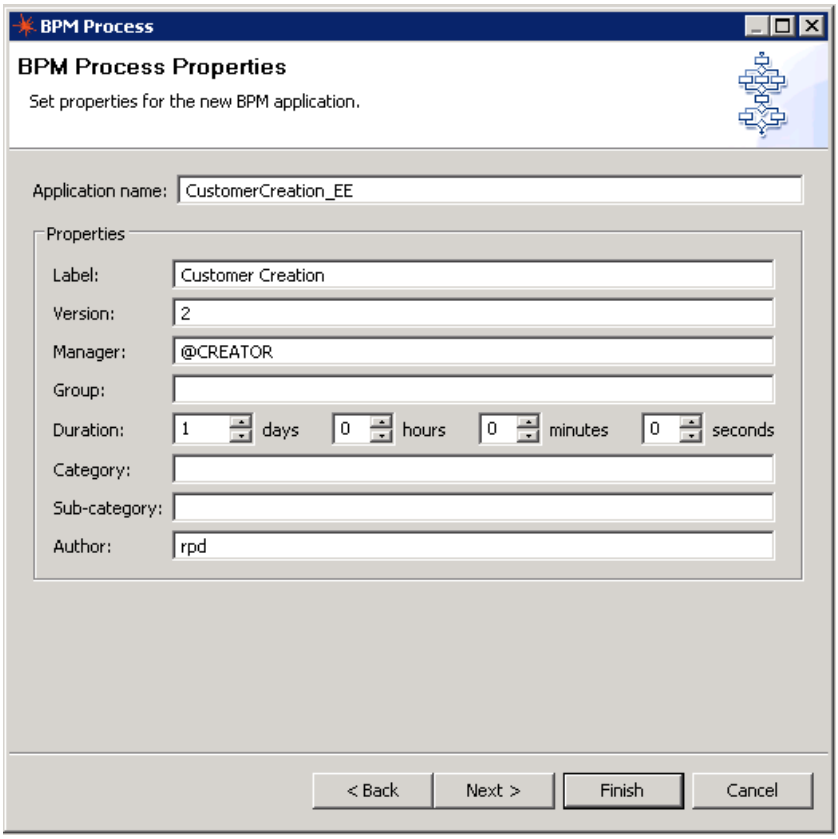
Fig. 3.11
Create Process Using Existing Process as a Template



Note The Progress Developer Studio limits the process name to 30 characters. The BPM server reports an error when the process name exceeds 27 characters, but the process still works. QAD recommends that you limit the name to 27 characters or less.

3 Click Next, and set the process properties. Keep the original application name.

Fig. 3.12
Set Process Properties



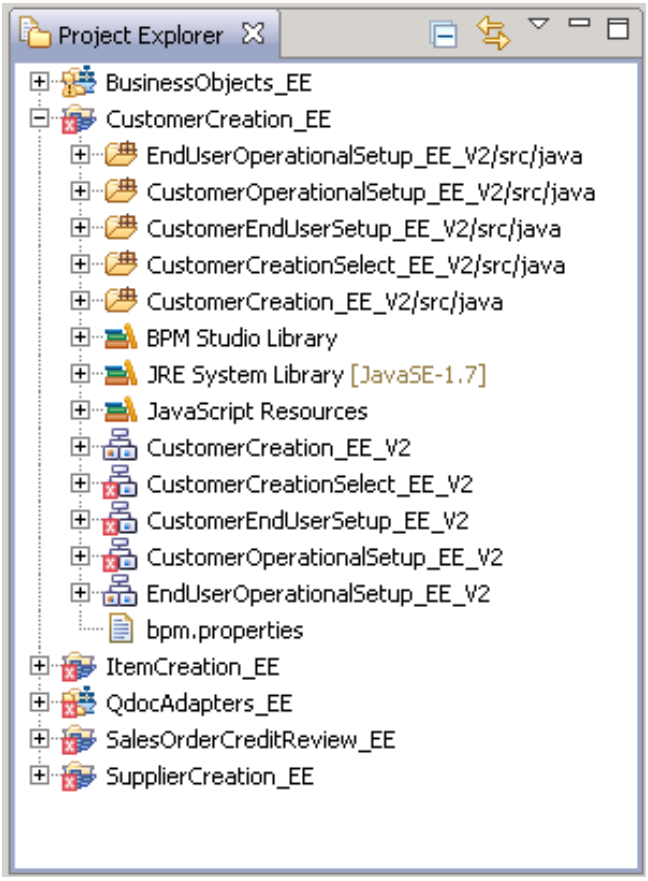
4 Follow the wizard to finish.

5 Delete the old process after the new process is created.

Note If you encounter issues when deleting the old process, restart the OpenEdge Developer Studio and retry the delete.

6 Repeat the previous steps to create versions for all processes in the project.

Fig. 3.13
New Version Created



Update Applications

Modify the applications for BPM 2.x.

Remove BizRuleAdapter Worksteps

You must change the BizRulesAdapter worksteps because Corticon replaced BizRule.

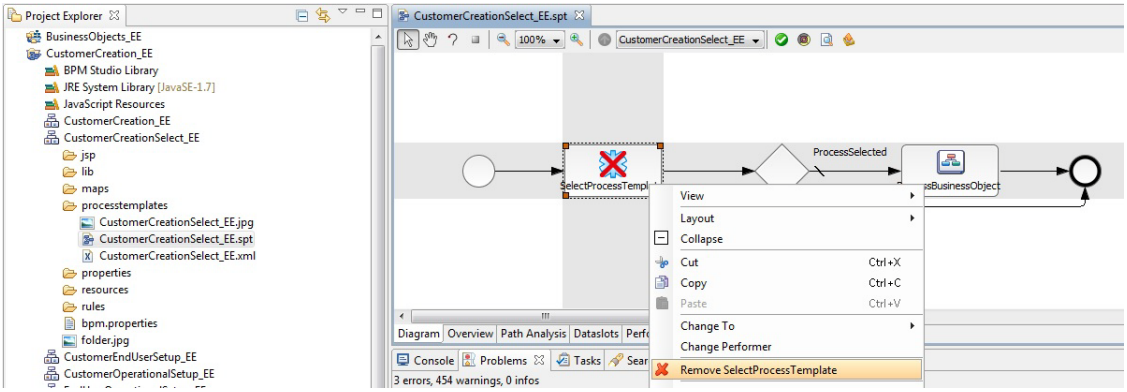
For a selector process, there are three options:

- Keep it as a dummy one, no further change is needed. We describe this option in following steps.
- Totally remove the selector process. However, you must provide BizPulse scripts to the top-level process whose process instances were previously created by the selector process.

- Put a CorticonAdapter workstep in the place where the BizRuleAdapter workstep was removed for the same function.

1 Open each process template that contains the BizRulesAdapter workstep to remove the BizRulesAdapter worksteps.

Fig. 3.14
Remove BizRule Adapter Workstep



2 Rebuild projects and review the Problem view. The errors related to BizRulesAdapter are gone (BizRulesAdapter is not supported).

Remove Class Type in BizPulse Scripts

Remove class type from any object value/variable declaration in BizPulse scripts since the syntax has changed.

3 Select Search|Search.

4 In the Search dialog, do the following:

- Select the File Search tab
- Containing Text field: Enter ":~"
- File name patterns field: Enter "*" or "*.bps"
- Scope: Select Workspace
- Click Search

Fig. 3.15
Search BizPulse Scripts for Modification

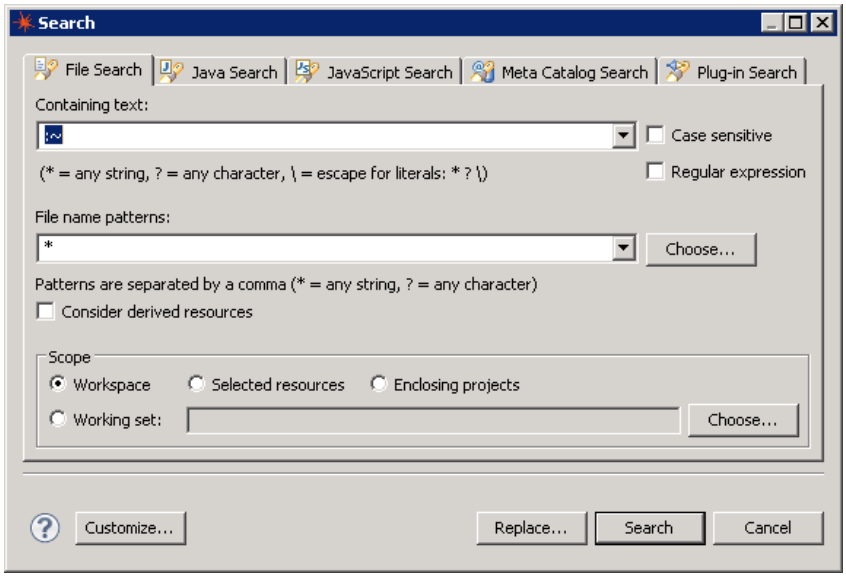
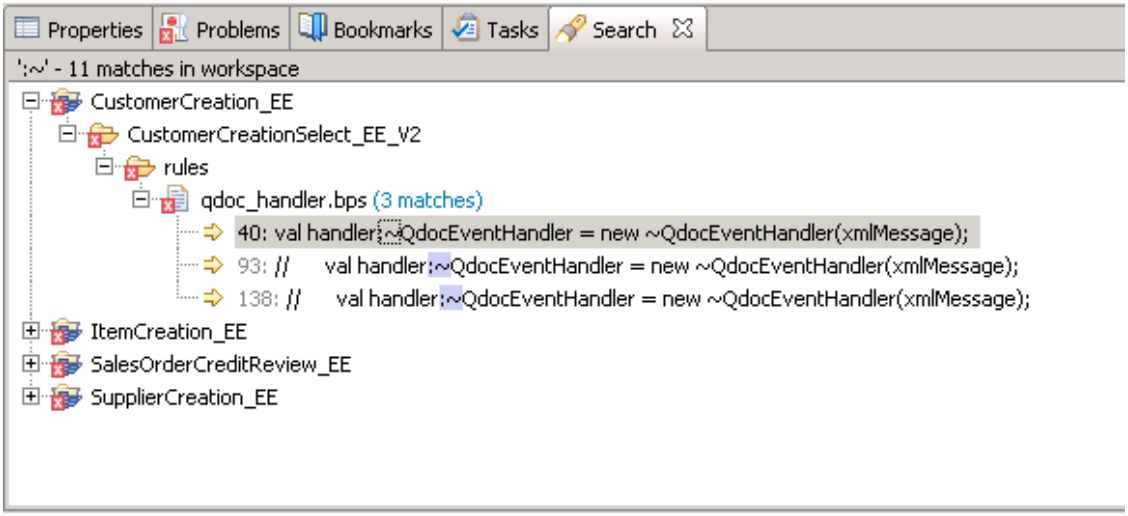
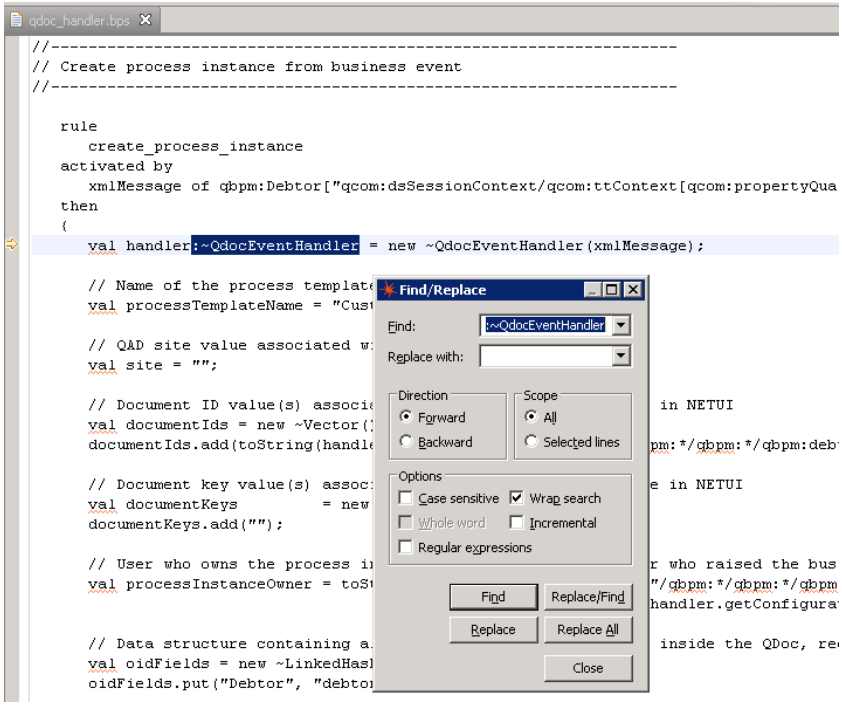


Fig. 3.16
BizPulse Scripts Search Results



5 Open each `.bps` file and remove all instances of ":~QdocEventHandler" from the val handler.

Fig. 3.17
Modify BizPulse Scripts



6 Rebuild projects and review the Problem view. The errors related to BizPulse scripts (Type error t1: java.com.qad.bpm.handler.QdocEventHandler, t2: java.com.qad.bpm.handler.QdocEventHander) are gone.

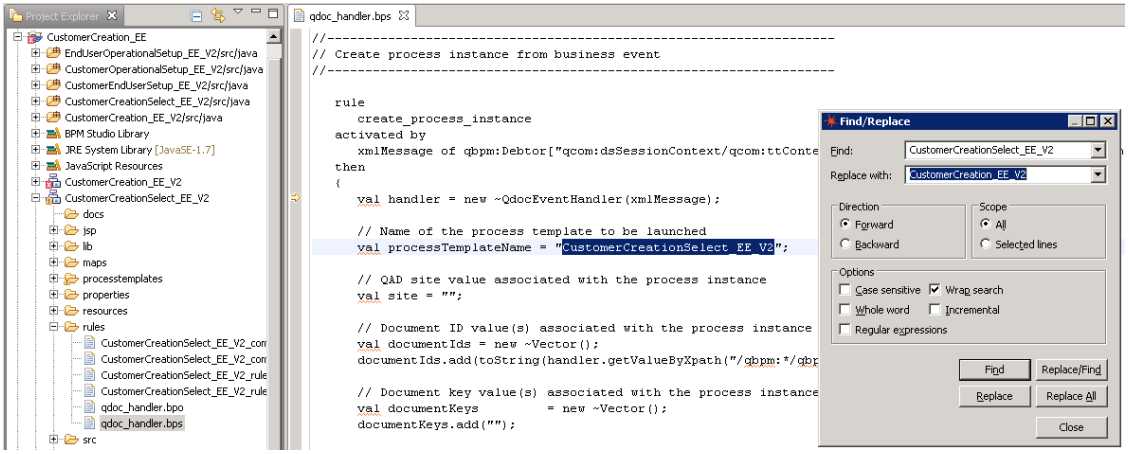
Note You may need to clean up and rebuild the projects to get the correct set of errors.

Replace the processTemplateName In Select Process

In the QDoc handler BizPalse scripts of each select process, set the processTemplateName value to the process template name of the process to be selected, instead of the select process. This action bypasses the select process.

7 Open the `qdoc-handler.bps` in each process. Select the project and change the process template name from `<select_process>*` to `<target_process>*`:

Fig. 3.18
Modify qdoc_handler.bps to Bypass Selected Process



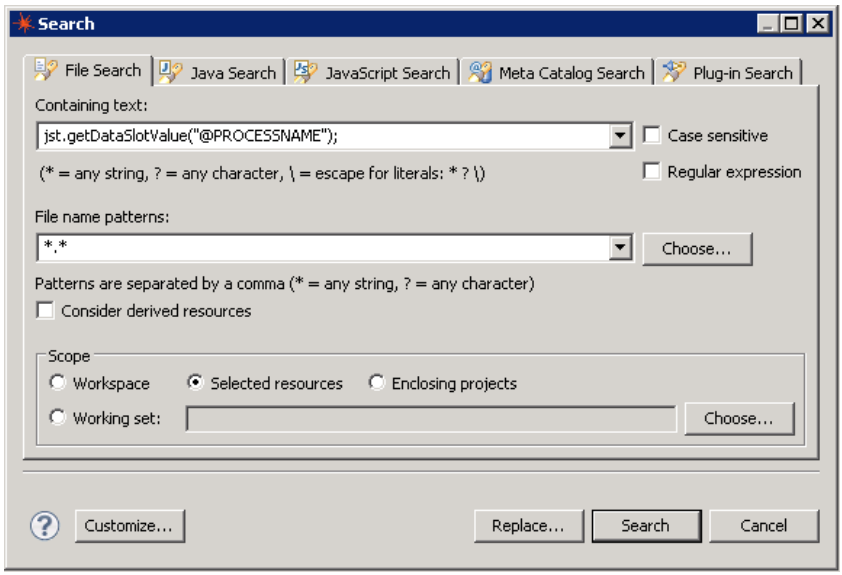
Note Only change the process template name when the selected process is a dummy process that always starts the main process.

Modify Workstep Scripts to Access System Dataslots

Modify the workstep scripts to access the system dataslots since they are now in the Progress data types.

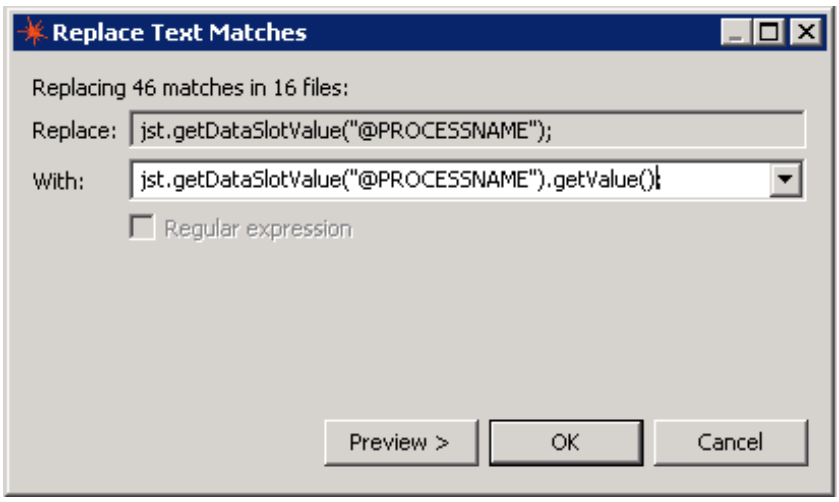
8 Select File Search and search for jst.getDataSlotValue("@PROCESSNAME") in the selected processes.

Fig. 3.19
Search Use of System Dataslots



9 Click Replace.

Fig. 3.20
Replace Text Matches



10 Click OK.

11 Do the same to replace:

String processOwner = jst.getDataSlotValue("@CREATOR");

with:

String processOwner = jst.getDataSlotValue("@CREATOR").getValue();

Take QAD EE sample processes, for example. You must modify the following workstep scripts.

Table 3.1
Workstep Scripts to Modify

Process	Workstep	Script
CustomerCreation_EE	CustomerEndUserSetup	BeforeActivation
	CustomerOperationalSetup	BeforeActivation
	SendCustomerCreationNotice	BeforeActivation
ItemCostSetup_EE	ReviewProductCosts	BeforeActivation
ItemCreation_EE	ItemCostSetup	BeforeActivation
	ItemCustomerSetup	BeforeActivation
	ItemDefinition	BeforeActivation
	ItemEngineeringSetup	BeforeActivation
	ItemManufacturingSetup	BeforeActivation
	ItemSupplierSetup	BeforeActivation
ItemCustomerInfoSetup_EE	ReviewItemPriceList	BeforeActivation
ItemManufacturingSetup_EE	ItemDiscreteSetup	BeforeActivation
	ItemKanbanSetup	BeforeActivation
	ItemRepetitiveSetup	BeforeActivation
SupplierCreation_EE	ReviewSupplierData	BeforeActivation

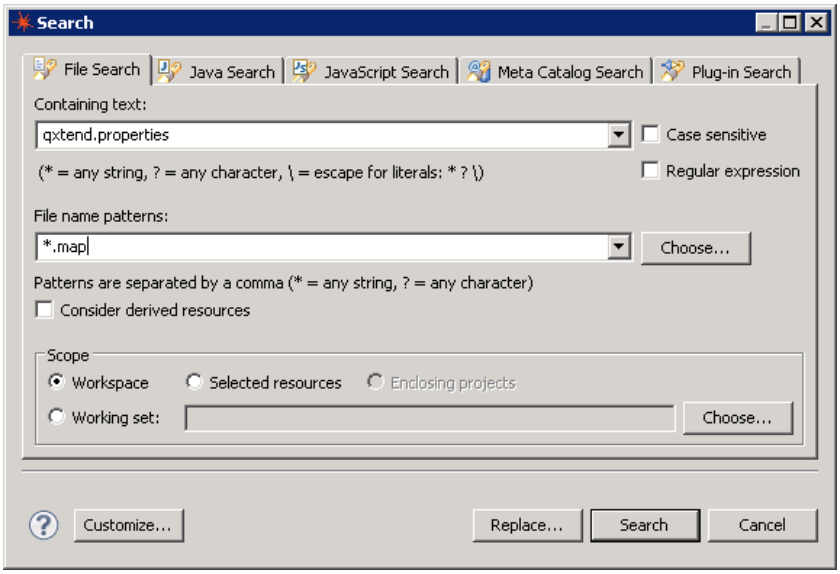
Warning If you forget to modify these scripts, runtime error messages appear in the log file.

Replace qxtend.properties with qadbpm.properties

Since BPM 2.0, the property file `qxtend.properties` has been named `qadbpm.properties`. This change affects some of the worksteps. For example, in a query workstep, if the value of input parameter sourceApplication (QXO Source Application Name) was set to ${qxtend.properties:qxtend.qxo.sourceApplication}, change it to ${qadbpm.properties:qxtend.qxo.sourceApplication}.

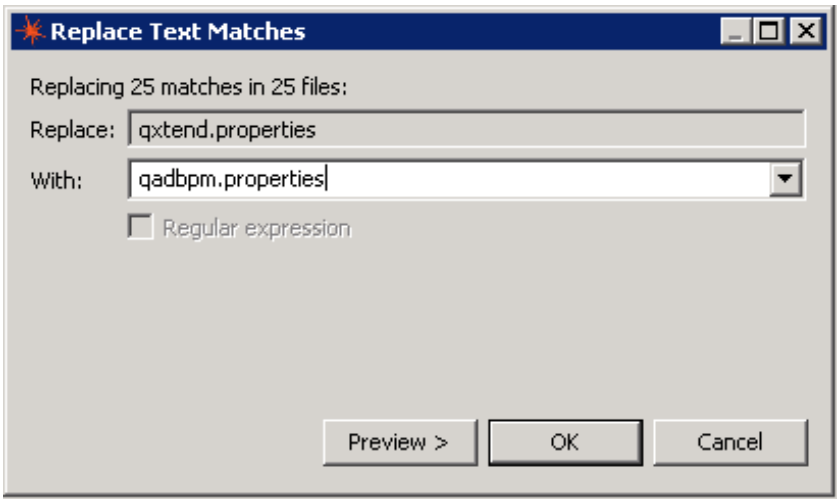
12 Select File Search and search for `qxtend.properties` in map files.

Fig. 3.21
Search `qxtend.properties`



13 Click Replace to replace `qxtend.properties` with `qadbpm.properties`.

Fig. 3.22
Replace `qxtend.properties` with `qadbpm.properties`



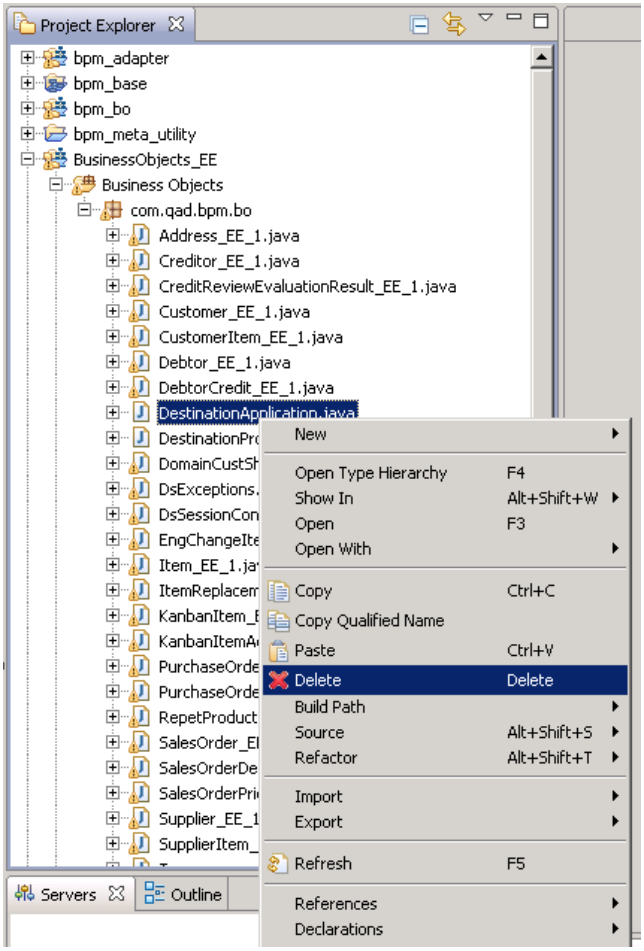
14 Click OK.

Change Business Object Projects

15 Remove system business objects from the business object project. Expand Business Objects| com.qad.bpm.bo of the project (for example, BusinessObjects_EE) and delete the Java files for the following business objects:

- DestinationApplication
- DestinationProcess
- DsExceptions
- DsSessionContext
- Temp_err_msg
- TtContext

Fig. 3.23
Delete System Business Objects from Business Object Project



Modify Custom JSPs

16 Modify the custom JSPs as shown in the following table.

Table 3.2
Modify Custom JSP

Find ...	Replace with ...
<bizsolo:link rel="stylesheet"></bizsolo:link>	<bizsolo:link rel="stylesheet" extJsVer="3"> </bizsolo:link>
function openDocAttWin(slotName, sesID, ptname, piname, docurl, docServer, readonly, ismultiline, appendwith, isStart)	function openDocAttWin(slotName, sesID, ptname, piname, docurl, docServer, readonly, ismultiline, appendwith, isStart, fiid)
formWidgetHandler = new FormWidgetHandler(allWidgets, {proce ssName:'Appin80',adapletCache:{'user':"}});	formWidgetHandler = new FormWidgetHandler(allWidgets, {processName:'Appin80',adapletCache:{'user':"}}, '<%= request.getParameter(BizSoloRequest.BSS_FIID)%>');
<%@ page import= "com.savvion.BizSolo.Server.*,com.savvion.BizSolo.bea ns.*,com.savvion.sbm.util.DatabaseMapping,java.util.Vec tr,java.util.Locale" %>	<%@ page import= "com.savvion.sbm.bizsolo.util.session.*,java.net.*" %>
param += '&isPICreation=' + isStart;	param += '&fiid=' + fiid;
<input name="_ProcessTemplateName" type="hidden" value='<%=bean.getPropString("ptName")%>'>	<input name="<%=BizSoloRequest.BSS_FIID%>" type= "hidden" value="%= request.getParameter(BizSoloRequest.BSS_FIID)%>">

Deploy Applications

You can deploy processes and artifacts separately from OpenEdge BPM Studio to BP Server. However, QAD recommends that you use the packaging and deployment utilities provided in QAD BPM to deploy applications to other environments. See *QAD BPM Administrator Guide* for information on how to create and deploy the QAD BPM package.

Application Migration without Migrating the Database

If the completed process instances are not important to your business, consider not migrating the database. In this case, you only need to migrate business processes to the new BPM environment. However, each QAD Enterprise Application can only have one QAD BPM instance. Therefore, you must make a plan to stop the old QAD BPM 1.x and start the new QAD BPM 2.x.

The steps are:

1. Source application shutdown. Export applications and artifacts before shutting down the original BPM system.
2. Install the new QAD BPM. Follow the standard BPM installation process to install the new QAD BPM.
3. Post-installation setup. Configure system settings like business calendar. Configure user settings like process ownership, calendars used by user/group and subscription to task notification e-mail, and so on.

   There is no tool for migrating the data from the old BPM system to the new system. Therefore, the administrator must note the source environment configuration and use this information to configure new system. End users can change some settings, such as subscriptions to task notification e-mails.

4 Application Migration. Migrate the business process from QAD BPM 1.x to BPM 2.x.

Product Information Resources

QAD offers a number of online resources to help you get more information about using QAD products.

QAD Forums (community.qad.com)
Ask questions and share information with other members of the user community, including QAD experts.

QAD Knowledgebase (knowledgebase.qad.com)*
Search for answers, tips, or solutions related to any QAD product or topic.

QAD Document Library (www.qad.com/documentlibrary)
Get browser-based access to user guides, release notes, training guides, and so on; use powerful search features to find the document you want, then read online, or download and print PDF.

QAD Learning Center (learning.qad.com)*
Visit QAD's one-stop destination for all courses and training materials.

*Log-in required

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