software AG

Natural

Object Versioning

Version 8.3.6 for Windows

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ADABAS & NATURAL

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1   Introduction

This chapter covers the following topics:

What is Object Versioning?

Object Versioning provides the opportunity to bring Natural objects under version control for which applications have been defined with Predict Application Control (PAC) on the mainframe.

Object Versioning is available as an optional plug-in unit for Natural Studio.

⚠ **Important:** Object Versioning uses the term "versioned application". A versioned application is an "application" in terms of the PAC environment. With Object Versioning, the term "versioned application" is used so that PAC applications are not mistaken for Natural applications.

Versioned applications can only be defined with PAC, they cannot be defined with Object Versioning (see also *Restrictions* below).

For detailed information on PAC applications, see the Predict Application Control documentation on your Natural documentation CD. You can also access this documentation via the Software AG web site *https://empower.softwareag.com/*. In case you do not have an Empower user ID and password yet, you will find instructions for registering on this site (this service is only available to users with a valid service contract).

Part II: Migration Concepts in the *Predict Application Control User's Guide* is of special interest when working with Object Versioning, especially the following sections in this part:

- *Migration Events*
- *Authorizing and Submitting a Migration Event*
- *Assigning and Maintaining Object Versions*

Prerequisites

See *Prerequisites for Natural Single Point of Development* at *http://documentation.softwareag.com/natural/spod_prereq/prereq.htm* which lists the minimum requirements for this plug-in.

Restrictions

The following restrictions apply:

- You can only add batch events.

- You can only work with Natural objects (programming objects, DDMs and error messages). External Predict objects cannot be versioned.

- The definition of applications, statuses and links between them has to be performed within PAC.

- Administration functionality (such as unlocking of applications) is not available.

- The following methods of creating migration event names are not supported:

  - Generating the event name by entering a name that includes the string "@GEN".

  - Assigning a unique event name dynamically with user exit PACEX025 or PACEX013.

Benefits

With Object Versioning, you can perform all versioning-related work directly within the Natural development environment. There is no need to change to the SYSPAC library.

2   **Before You Start**

This plug-in is automatically installed when you install the Natural development environment for Windows (see the Natural for Windows installation documentation for further information). Before you can use this plug-in, however, you have to activate it using the Plug-in Manager.

This chapter covers the following topics:

Enabling the Use of Plug-ins

When the use of plug-ins has already been enabled in Natural Studio, the command **Plug-in Manager** is available in the menu **Tools > Configuration Tools**. In this case, you can skip this section.

If the command **Plug-in Manager** is not available in Natural Studio, you have to enable the use of plug-ins as described below.

▶ **To enable the use of plug-ins**

1   From the **Tools** menu, choose **Options**.

     The **Options** dialog box appears.

2   Choose the **Workspace** tab.

3   Activate the **Enable Plug-ins** check box.
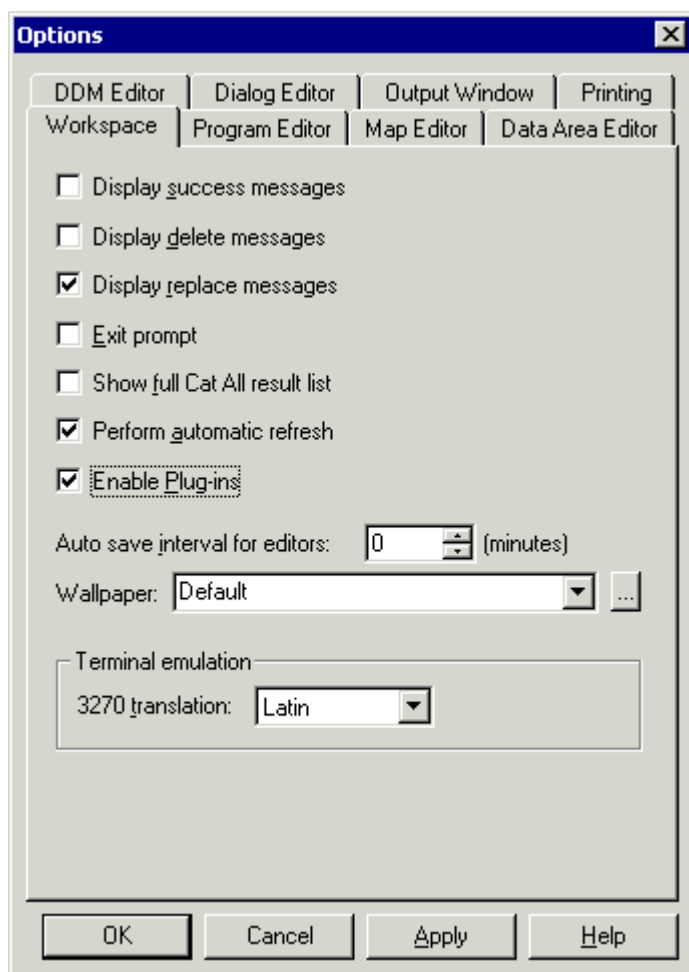
4   Choose the **OK** button.

The **Plug-in Manager** command and the corresponding toolbar button are now available (see below). When the use of plug-ins is not enabled, this command and toolbar button are not shown.

Activating a Plug-in

A plug-in is not active by default. It can be activated when the Plug-in Manager has been enabled.

Two types of activation mode are available:

- **Automatic**
  The plug-in is automatically activated each time Natural is started.

- **Manual**
  The plug-in must be activated manually on demand (default).

▶ **To activate a plug-in**

1   From the **Tools** menu, choose **Configuration Tools > Plug-in Manager**.

Or:

Choose the following toolbar button:

🔲N

> 📄 **Note:** The display of the toolbar containing this button can be switched on and off by
> choosing **Customize** from the **Tools** menu.

The **Plug-in Manager** window appears.
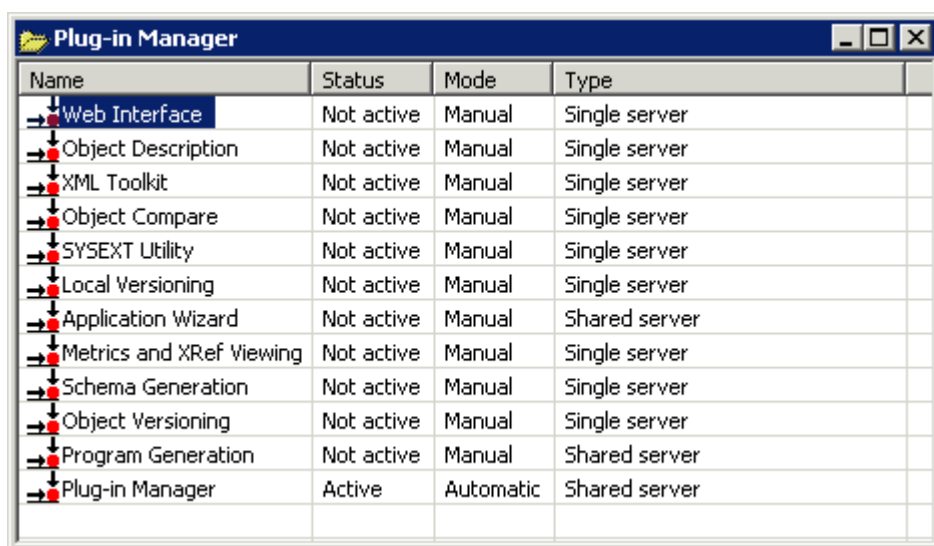
2   Select the entry for the plug-in that you want to activate.

3   Click the right mouse button or press SHIFT+F10 and from the resulting context menu, choose
    Activation mode > Automatic.

    This does not automatically activate the plug-in for the current session. To activate it, you can
    either restart Natural or proceed as described with the next step.

4   Click the right mouse button or press SHIFT+F10 while the entry for the plug-in is still selected
    and from the resulting context menu, choose **Activate**.

Connecting to a Development Server

In order to work with a plug-in, you have to connect to a mapped Natural development server.

Once a development server has been mapped, a node for this development server session is shown in the tree. To connect to a mapped development server, simply expand the node (or double-click the node, or select the node and press ENTER). If required, specify a password in the resulting **Map Environment** dialog box (detailed information on this dialog box is provided below).

When the required development server has not yet been mapped, proceed as described below.

▶ **To map to a development server**

1   From the **Tools** menu, choose **Map > Environment**.

Or:
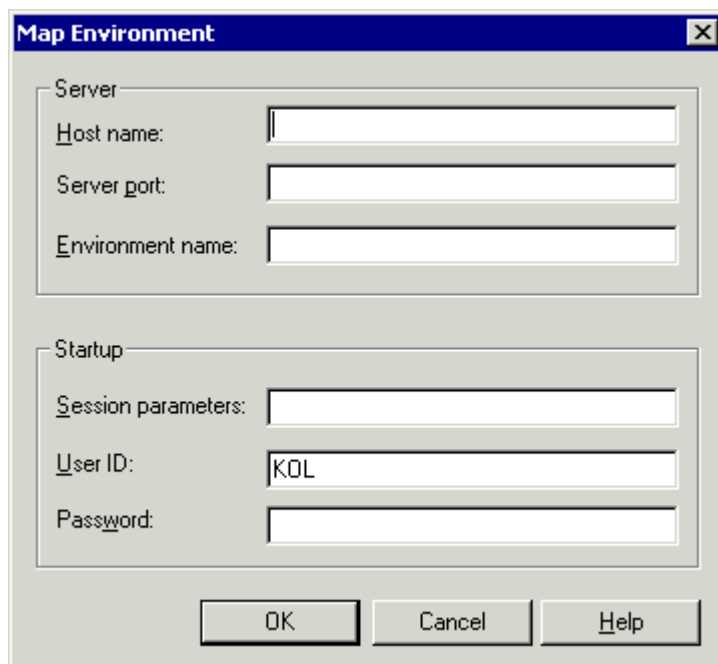
Choose the following toolbar button:

> **Note:** The display of the toolbar containing this button can be switched on and off by choosing **Customize** from the **Tools** menu.

The **Map Environment** dialog box appears. Your user ID is automatically provided.

2   In the **Host name** text box, enter the name of the development server.

3   In the **Server port** text box, enter the TCP/IP port number of the development server.

4   Optionally. In the **Environment name** text box, enter the name that is to appear in the tree. If you leave this text box blank, a combination of server name and port number is shown in the tree.

5   If dynamic parameters are required for your development server, specify them in the **Session parameters** text box. Otherwise, leave this text box blank.

6   If Natural Security is installed on the development server, specify the required password in the **Password** text box. Otherwise, leave this text box blank.

7   Choose the **OK** button.

When the connection has been established, all libraries (according to the security profile) for this session are shown in your library workspace. You are automatically logged on to your default library.

3   Elements of Object Versioning

When Object Versioning has been activated in the Plug-in Manager, additional elements are available in the Natural Studio window:

Menu Commands

When Object Versioning has been activated, the **Tools > Development Tools** menu provides the cascading menu **Object Versioning** with the following commands:

Command	Using this command, you can ...
New Migration Event	Add a new migration event.
Find Migration Event	Display a list of defined migration events.
Versioned Applications	Display a tree containing all versioned applications with their linked statuses and versioned objects.

Context Menus

When the current context (that is, the selected object) allows it, the above commands can be chosen from a context menu. The context menu also contains general Natural commands such as **Delete** or **Rename**.

When the current context allows it, additional context menu commands are available for checking objects in and out, for authorizing and submitting migration events, and for showing the different versions of an object. These commands are described later in this documentation.

▶ **To invoke a context menu**

1   Select the object for which you want to invoke a context menu.

2   Click the right mouse button.

     Or:

     Press SHIFT+F10.

     The context menu appears and you can now choose the required command.

Toolbar

When Object Versioning has been activated, an additional toolbar is shown. The toolbar buttons represent the following menu commands:

New Migration Event

Find Migration Event

Versioned Applications

> **Note:** The display of this toolbar can be switched on and off by choosing **Customize** from the **Tools** menu.

4 Checking Objects In and Out

When checking objects in and out as described in this chapter, a migration event is created which is automatically authorized and submitted. It is also possible to perform these steps separately; this is described later in *Managing Migration Events*.

The migration event is added to the list of migration events. Its processing state is "Completed". For information on how to invoke the list of migration events, see *Finding a Migration Event*.

The commands for checking objects in and out rely on data that have been defined in the migration path (which is defined with PAC on the mainframe).

> **Notes:**

1. If you have missing privileges to check the selected objects in or out, you have to change the authorization settings in PAC. You must have the authorization and submit privileges for the determined migration path.
2. When working under Natural Security, Natural Security groups can be defined as authorizers. The user must then be a member of the specified group.

This chapter covers the following topics:

Transferring Natural Objects to the PAC Environment (Check In)

Using the **Check In** command, you can transfer Natural objects to the PAC environment.

An object can only be checked in if its library is defined in an application status of type

- incorporate,
- development, or
- maintenance.

In addition, a migration path starting *from* this status must exist.

▶ **To transfer a Natural object to the PAC environment**

1 In the library workspace or application workspace, select the object that you want to check in. This can be either a single Natural object or the contents of an entire library. When working in a list view window (which is invoked with the **Open** command), it is also possible to select several Natural objects at the same time.

2 Invoke the context menu and choose **Object Versioning > Check In**.

When the system detects that none of the above status types has been defined or if no status is available at all, the corresponding message appears.

When the selected object is in an appropriate From status and the migration path can uniquely be determined, the **Save As** dialog box appears.
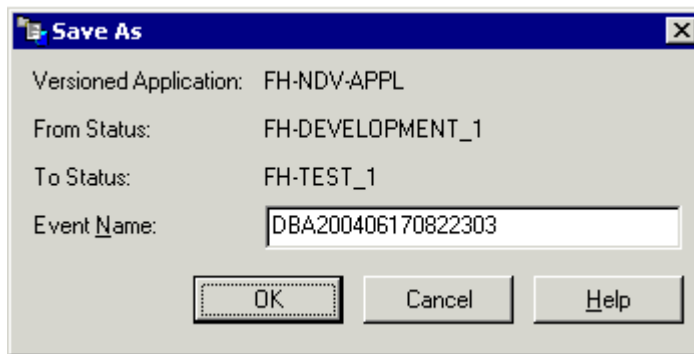
An event name is automatically proposed, consisting of your user name and the current time stamp.

> **Note:** Additional dialog boxes may appear when the migration path cannot uniquely be determined. These dialog boxes appear prior to the **Save As** dialog box. For example, a dialog box may appear in which you have to select a versioned application. Or a dialog box may appear in which you have to define the To or From status.

3 Specify an event name and choose the **OK** button.

The migration event is now created. A dialog box appears, informing you that the event has been added, authorized and submitted. You are also asked whether you want to view the report.

4 To view the report, choose the **Yes** button.

The **Event** window appears. The report is shown on the **Report** tab. For detailed information on the **Event** window, see *Creating a Migration Event*.

Transferring Versioned Objects to Another Status (Check Out)

Using the **Check Out** command, you can transfer a versioned object to a development or mainten-ance status.

An object can only be checked out if a migration path is defined from its current status *to* a status of type

- development, or

- maintenance.

▶ **To transfer a versioned object to another status**

1 Invoke one of the following windows:

- the **Object Versioning** window (see *Invoking a Tree View Window with All Versioned Applications*), or

- the **Show Versions** window (see *Showing the Different Versions of a Natural Object*), or

- a list view window containing versioned objects (this can be invoked from the above win-dows using the **Open** command); in this case, it is possible to select several objects at the same time.

2 Select the object(s) that you want to check out.

3 Invoke the context menu and choose **Check Out**.

When the system detects that no appropriate migration path is defined, the corresponding message appears.

When the appropriate migration path can uniquely be determined, the **Save As** dialog box appears. An event name is automatically proposed, consisting of your user name and the current time stamp.

> **Note:** Additional dialog boxes may appear when the migration path cannot uniquely be determined. These dialog boxes appear prior to the **Save As** dialog box. For example, a dialog box may appear in which you have to select a versioned application. Or a dialog box may appear in which you have to define the To or From status.

4 Specify an event name and choose the **OK** button.

The migration event is now created. A dialog box appears, informing you that the event has been added, authorized and submitted. You are also asked whether you want to view the report.

5   To view the report, choose the **Yes** button.

The **Event** window appears. The report is shown on the **Report** tab. For detailed information on the **Event** window, see *Creating a Migration Event*.

5   **Managing Migration Events**

This chapter covers the following topics:

Creating a Migration Event

Instead of creating migration events that are automatically authorized and submitted (see *Checking Objects In and Out*), you can also create migration events manually. In this case, you (or another user with authorization rights) have to authorize and submit the migration events manually.

▶ **To create a new migration event**

1   From the **Tools** menu, choose **Development Tools > Object Versioning > New Migration Event**.

Or:

Choose the following toolbar button:

The **Event** window appears. This window provides the following tabs:

▪ **General**

▪ **Description**

▪ **Event Attributes**

▪ **Migration List**

▪ **Authorization**

▪ **Report**

2   Specify all required information on the different tabs as described below.

3   Choose the **OK** button.

Your event is added to the list of migration events. Its processing state is either "Validated" (when the migration list has successfully been validated on the **Migration List** tab) or "Pending". For information on how to invoke the list of migration events, see *Finding a Migration Event*.

General

Specify the following information:

Option	Description
Versioned Application	This drop-down list box contains all defined versioned applications. Select the versioned application that you want to migrate.
From Status	This drop-down list box provides all defined From statuses for the selected versioned application. Select the name (or alias) of the status from which the objects are to be migrated (origin status).
To Status	This drop-down list box provides all defined To statuses which correspond to the selected From status. Select the name (or alias) of the status to which the objects are to be migrated (destination status).

Note: To define a different To status, it may be necessary to delete the entry for the From status first, and vice versa.

Description
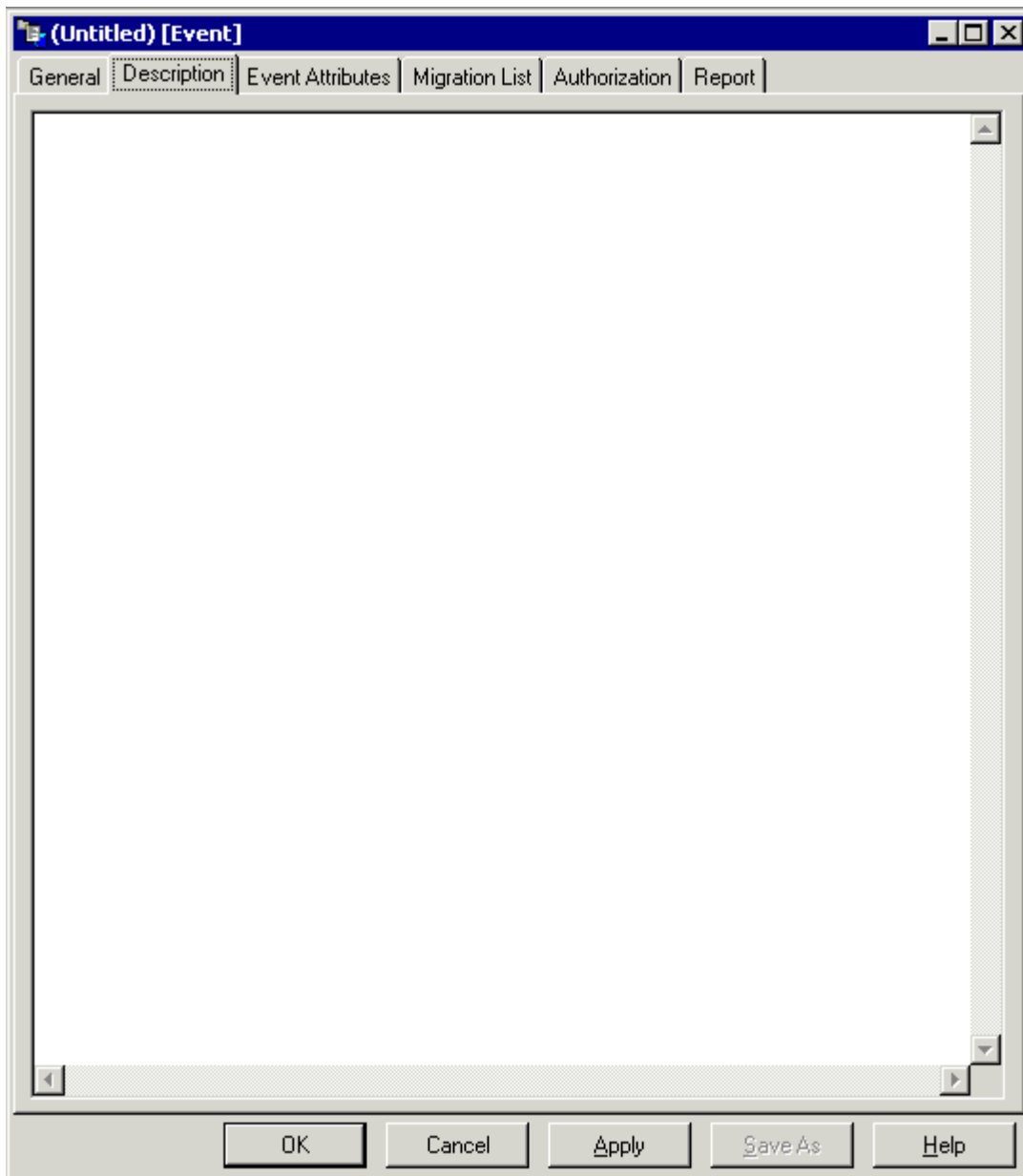
You can enter a description for the migration event (optional).

Event Attributes

You can specify the following event attributes (optional):

Option	Description
Scheduled	When this check box is selected, the date and time information is used (see below). When this check box is not selected, the specified date and time are ignored and the migration event is scheduled to be processed immediately.
Date / at	When the **Scheduled** check box has been selected, you can specify the date and time at which the migration event is to be processed. Specify the date in the format *yyyy-mm-dd* and the time in the format *hh:ii*. If no date and time are entered, the default is the current date and time.
Notes	You can enter comments relevant to the migration event.
Maintenance Request	If you want to link the migration event to an existing maintenance request ID, you can select the request ID from this drop-down list box. The maintenance request must have been defined previously. This enables PAC to keep track of objects processed to or from maintenance status types.

Migration List
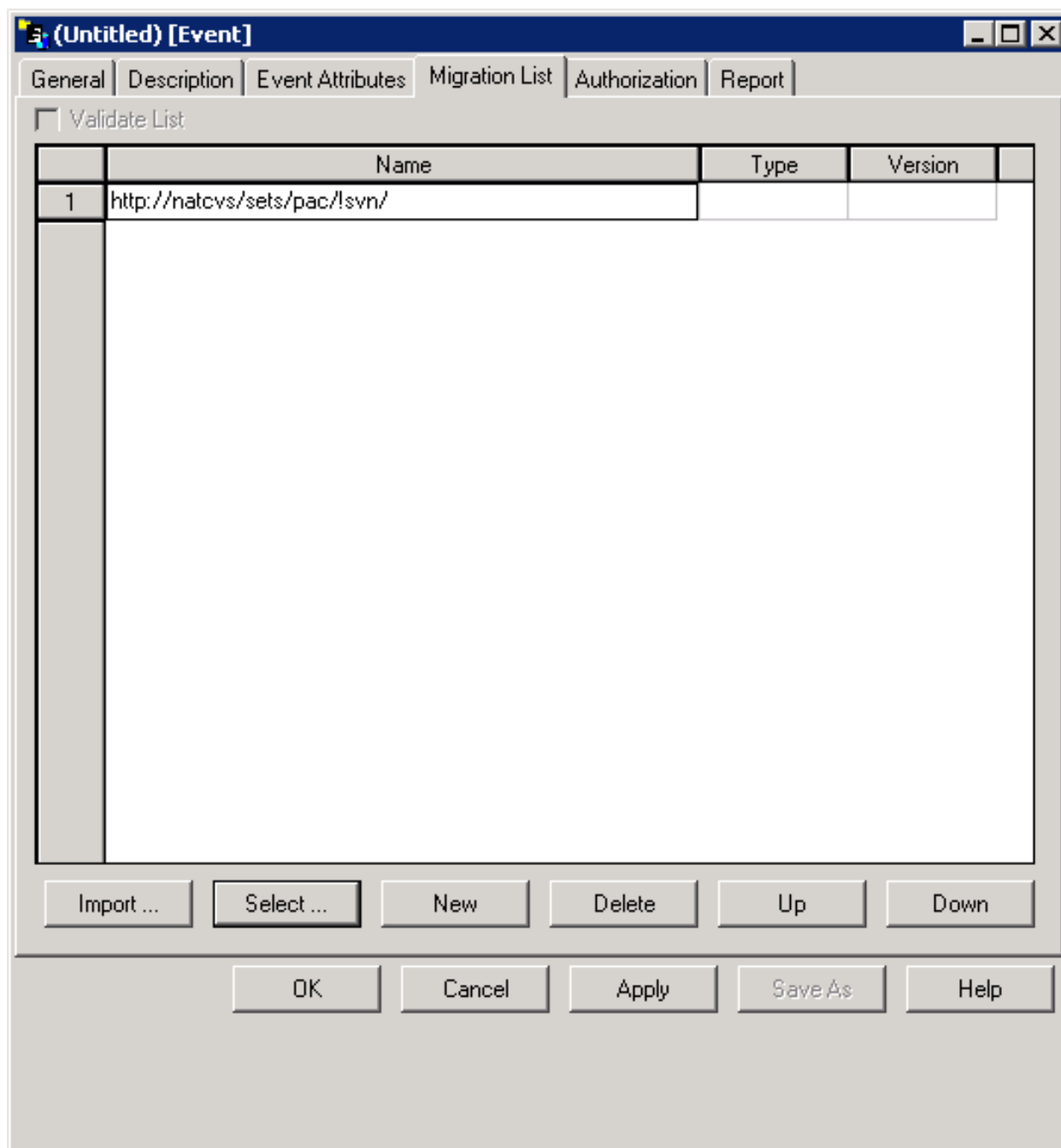
You have to define the objects that are to be migrated. The following command buttons are available for this purpose:

Command Button	Description
Import	Invokes the **Import Transfer List** dialog box. See below.
Select	Invokes the **Select Objects** dialog box. See below.
New	Adds an empty row to the list in which you can specify the required information manually.
Delete	Deletes the selected objects from the migration list.
Up	Moves the selected objects one position up in the migration list.
Down	Moves the selected objects one position down in the migration list.

Import Transfer List

The following dialog box appears when you choose the **Import** button:
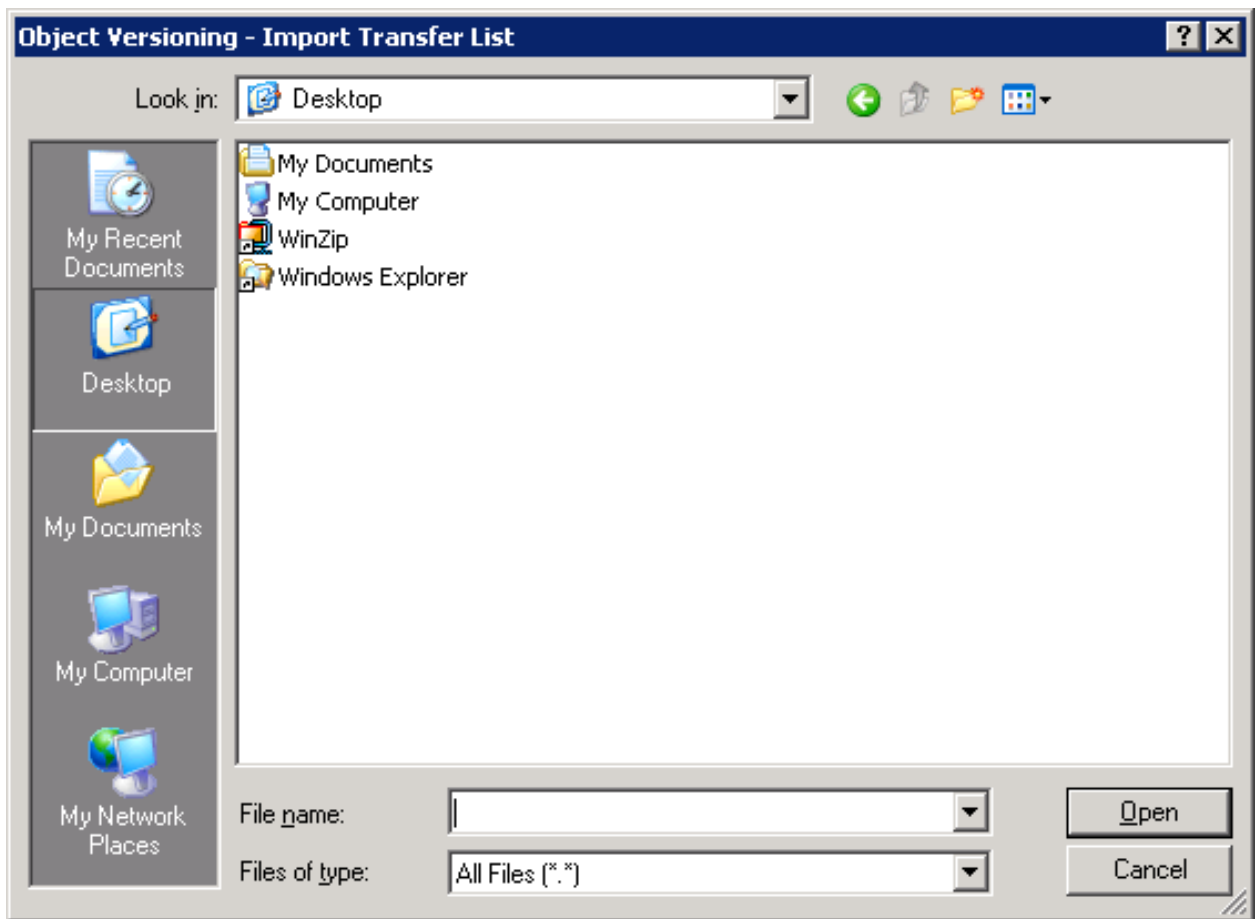
You can specify a transfer list file. This file can contain objects and/or paths (such as URLs) that are then imported.
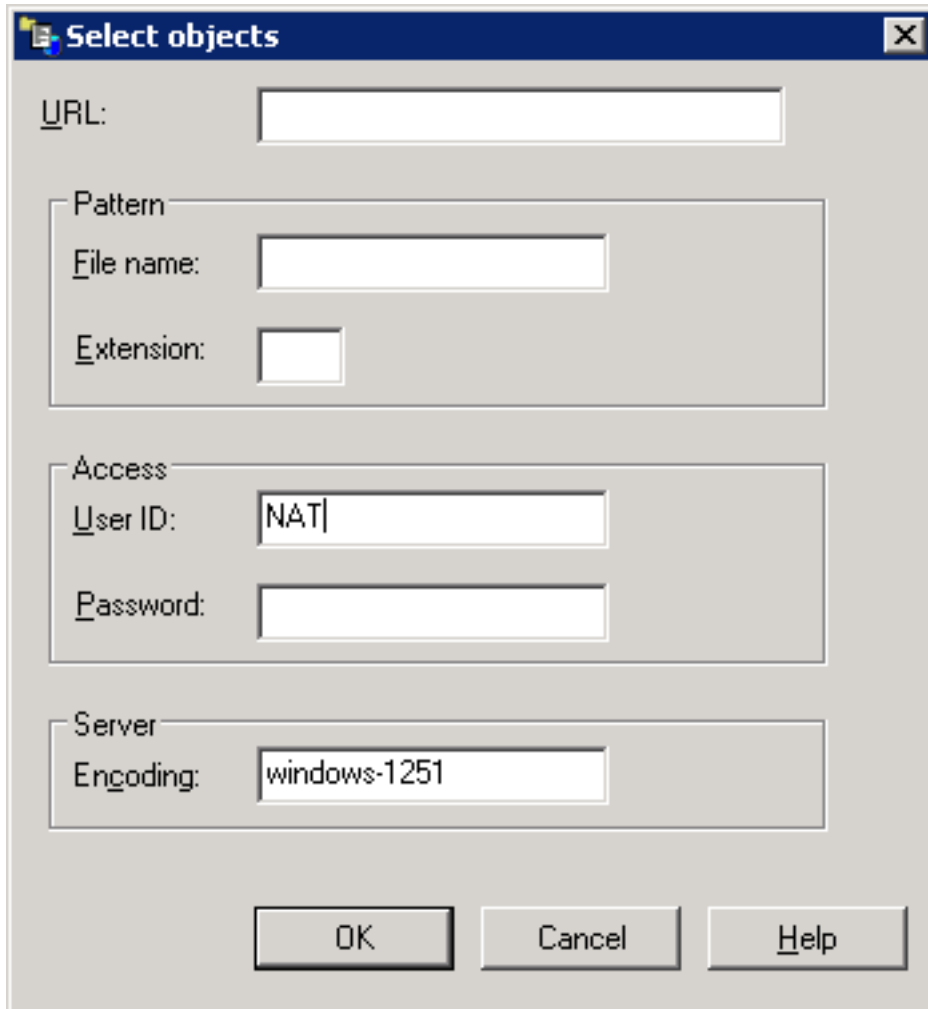
Select Objects

The following dialog box appears when you choose the **Select** button:
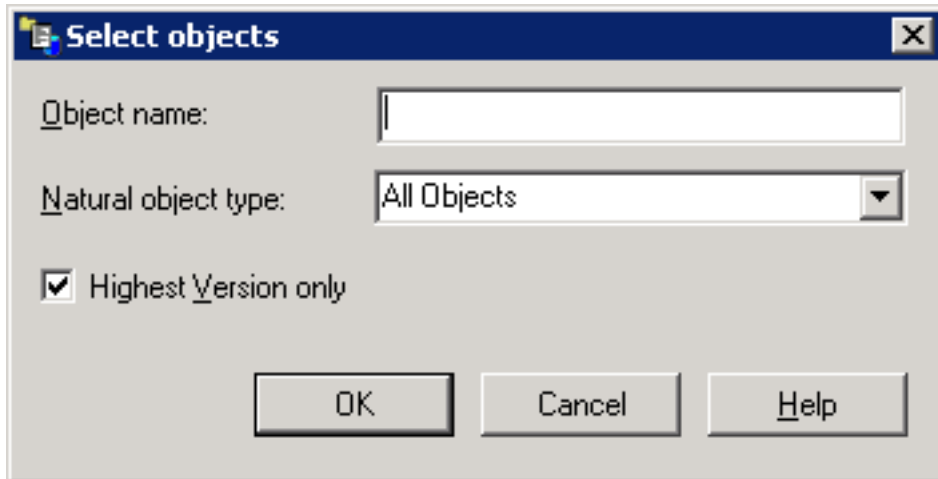
You can specify the objects to be imported. You have the option to import all objects or only objects of a specific type (for example, programs only). It is possible to restrict the list to objects with specific names (for example, to import all objects that start with the letters PGM, you have to specify "PGM*"). You can also specify that only the highest version is to be imported.

For events with **From Status** External, the following dialog box is displayed:

In this dialog box you can specify the user ID, password and server encoding used to access a repository in an external version control software. You can either select all objects below a root URL or select and expand a specific node (a new window will be opened for each node) from the root URL.

In addition, you can further narrow down the list of objects to be selected by specifying a pattern (file name and/or extension). For example using .NS* as input in the **Extension** field would only select Natural sources for the migration list.

Validate List

Once you have defined the objects that are to be migrated, you can validate the migration list. You can either do this immediately or you can do this at a later time. However, the migration list must be validated before the migration event can be authorized or at the time it is authorized.

When the **Validate List** check box is selected, your migration list is validated immediately (when you choose the **OK** button). The objects in your list are compared with those held in the origin

status for consistency of object name, type, and version number. When the list can be validated successfully, it is possible to save the migration event.

When the **Validate List** check box is not selected, the migration list is saved, but not validated. This choice allows you to include other objects in the list. This is a possibility if the event is scheduled to run at some time in the future.

> **Note:** For events with **From Status** External the **Validate List** option is always deactivated.

Authorization

It is not possible to enter any information on this tab when creating a new migration event. After the migration event has been added, you have to use the **Authorize** command. See *Authorizing a Migration Event* for further information.

When you invoke this tab using the **Authorize** command, you can specify the following information:

Option	Description
Batch/Online	Information only - it is only possible to add batch events.
Workfile Usage	When this check box is selected, the objects are to be unloaded to an intermediate work file during event processing. When this check box is not selected, the objects are to be migrated directly without using an intermediate work file. This is not valid for Predict objects. For Predict migrations, workfile usage is not applicable. This attribute is protected in some cases, for example, for migration paths Control to Archive, or Archive to Control.
Copy/Move/Include	Select the desired action from the drop-down list box:
	Copy — Objects are to be copied from the origin status.
	Move — Objects are to be moved from the origin status.
	Include — The origin status input is to be included from a previously created work file.
Replace	When this check box is selected, the objects that exist in the destination status are to be overridden (replaced) with the object being migrated. When this check box is not selected, the objects are not to be replaced.
Job	Select the job name for a batch migration from the drop-down list box.
Auto Expansion	Enter a valid auto-expansion type as follows (optional):
	C — Include all subordinates (compile time objects: data areas, copy code, maps, and views).
	E — Include all subordinate and referenced objects (combination of R and C).
	R — Include referenced objects (programs, maps, subprograms, subroutines, help routines, GDAs).
	U — Include Used By objects (objects that use or reference the object).
	N — Do not auto-expand.
Expand Status	If you entered an auto-expansion type, enter the name of the expand status.

Applymods

The following window appears when you choose the **Applymods** button:

Used	Number	Description
☐	2	Do not optimize size of Cataloged object
☐	4	Suppress Audit Report creation during Migration
☐	5	Suppress GDA auto expand during Migration
☐	6	Migrate objects only previously migrated
☐	8	Force all DDMs/LDAs/PDAs to be unloaded during Migration
☐	9	Expand facility should select for Languages 1-9 on Maps
☐	10	Migrate objects to a status only if they have changed
☐	11	Check runtime subordinates immigrating
☐	12	Do not Supersede objects with an older timestamp
☐	13	Perform recursive expand for objects in the migration list
☐	14	Reject objects with Compilation Errors during Migration

You can select one or more applymods to be used for the current migration event.

Report

Information on this tab is only available after the migration event has been completed. The report gives a detailed listing of all actions that have taken place and any errors that have occurred in the form of PAC messages.
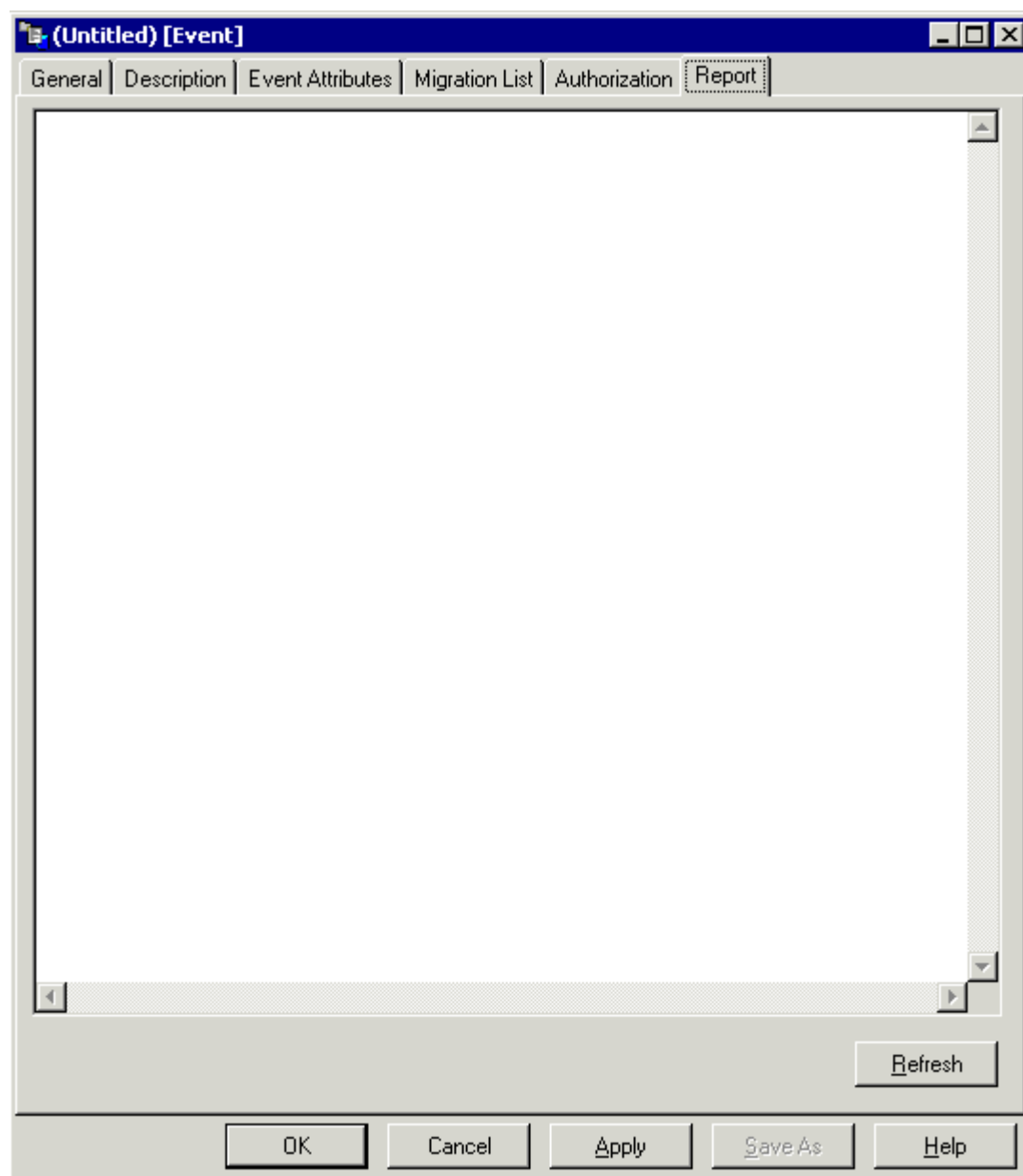
Finding a Migration Event

You can display a list containing defined migration events. You can either display all migration events (which may take some time) or you can restrict the list by defining the required find criteria.

▶ **To find a migration event**

1   From the **Tools** menu, choose **Development Tools > Object Versioning > Find Migration Event**.

Or:

Choose the following toolbar button:

The **Migration Event** dialog box appears.

2   You can enter one or more of the following find criteria:

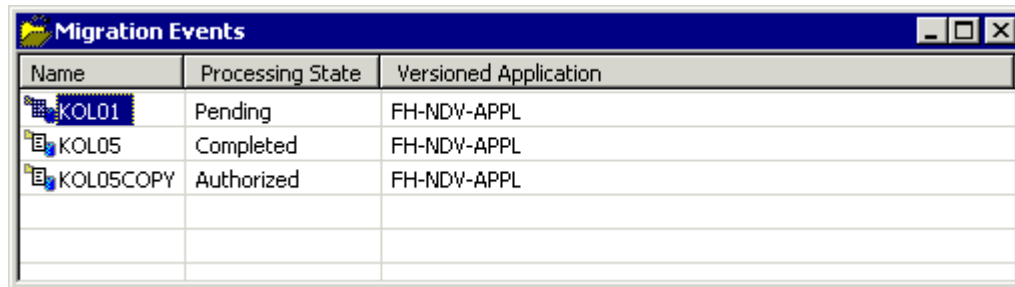| Option	Description
Event	You can restrict the list to migration events with specific names. For example, to find all migration events that start with the letters DBA, you have to specify "DBA*".
Versioned Application	You can restrict the list to migration events with specific versioned applications. For example, to find all versioned applications that start with the letters FH, you have to specify "FH*".
Job	You can restrict the list to migration events with specific jobs for batch migration. For example, to find all jobs that start with the letters JOB, you have to specify "JOB*".
State	You can restrict the list to migration events with a specific processing state. For example, to find all pending events, select **Pending** from the drop-down list box.
Type	This drop-down list box is available for the From status and for the To status. You can restrict the list to migration events with a specific status type. Select the required

Option	Description
	status type (such as development or maintenance) from the corresponding drop-down list box.
Name	This text box is available for the From status and for the To status. You can restrict the list to migration events with a specific status name. For example, to find all status names that start with the letters MYSTAT, you have to specify "MYSTAT*" in the corresponding text box.

> **Note:** If you want to display all migration events, you need not specify any information in this dialog box. You can simply choose the **OK** button.

3   Choose the **OK** button.

The **Migration Events** window appears, listing all migration events that match your find criteria.

You can now manage (for example, authorize or submit) the migration events as described below.

Authorizing a Migration Event

It is common usage that migration events can only be authorized by specific users with special authorization rights. Therefore, a migration event can only be authorized after the migration event has been created and when its processing state is either "Validated" or "Pending".

It may be possible that you do not have authorization rights.

▶ **To authorize a migration event**

1   Display the list of migration events as described above under *Finding a Migration Event*.

2   Select the migration event that is to be authorized.

3   Invoke the context menu and choose **Authorize**.

The **Event** window appears and the **Authorization** tab is shown.

4   Specify all required information on the **Authorization** tab. For detailed information, see the description of the **Authorization** tab in the section *Creating a Migration Event*.

5   Choose the **OK** button.

The migration event is authorized and its processing state changes to "Authorized".

Submitting a Migration Event

A migration event can only be submitted when its processing state is "Authorized".

▶ **To submit a migration event**

1   Display the list of migration events as described above under *Finding a Migration Event*.

2   Select the migration event that you want to submit.

3   Invoke the context menu and choose **Submit**.

A dialog box appears asking whether you are sure that you want to submit the migration event.

4   Choose the **Yes** button.

The migration event is submitted and its processing state changes first to "Submitted" and then to "Completed".

Opening/Displaying a Migration Event

Two different commands are available for invoking the **Event** window for a previously defined migration event. For a description of this window, see *Creating a Migration Event*.

Command	Description
Open	With this command it is possible to modify the settings of a migration event. Modifications are only possible when the migration event has not yet been authorized, that is: when its processing state is "Pending".
	When you use the **Open** command with an authorized migration object, you are informed that the authorization will be removed if you choose to continue. In this case, the processing state is reverted to "Pending".
Display	With this command it is only possible to view the settings of a migration event, it is not possible to modify them. This command can be used irrespective of the processing state.

Command	Description
	When the processing state is "Completed", it is possible to view the report. See the description of the **Report** tab in the section *Creating a Migration Event*.

Copying a Migration Event

A migration event can only be submitted once. If you want to create a similar migration event, you can copy a migration event.

▶ **To copy a migration event**

1   Display the list of migration events as described above under *Finding a Migration Event*.

2   Select the migration event that you want to copy.

3   Invoke the context menu and choose **Copy**.

The **Event** window appears and you can make all required changes.

4   Choose the **OK** button.

A **Save As** dialog box appears.

5   Specify a unique name for the new migration event and choose the **OK** button.

The new event is added to the list of migration events. The initial processing state of a copied migration event is "Pending".

> **Note:** It may be possible that you have to display the list of migration events once more using different find criteria (for example when all migration events in the current list start with the letters DBA and the name of your new migration event starts with different letters).

Deleting a Migration Event

Migration events can be deleted in all processing states.

▶ **To delete a migration event**

1   Display the list of migration events as described above under *Finding a Migration Event*.

2   Select the migration event that you want to delete.

3   Invoke the context menu and choose **Delete**.

A dialog box appears asking whether you are sure that you want to purge the migration event.

4   Choose the **Yes** button.

The migration event is deleted.

6 Displaying Information on Versioned Applications

This chapter covers the following topics:

Invoking the Tree View Window with All Versioned Applications

When you invoke the tree view window with all versioned applications, you can display the linked statuses of a versioned application and the versioned objects.

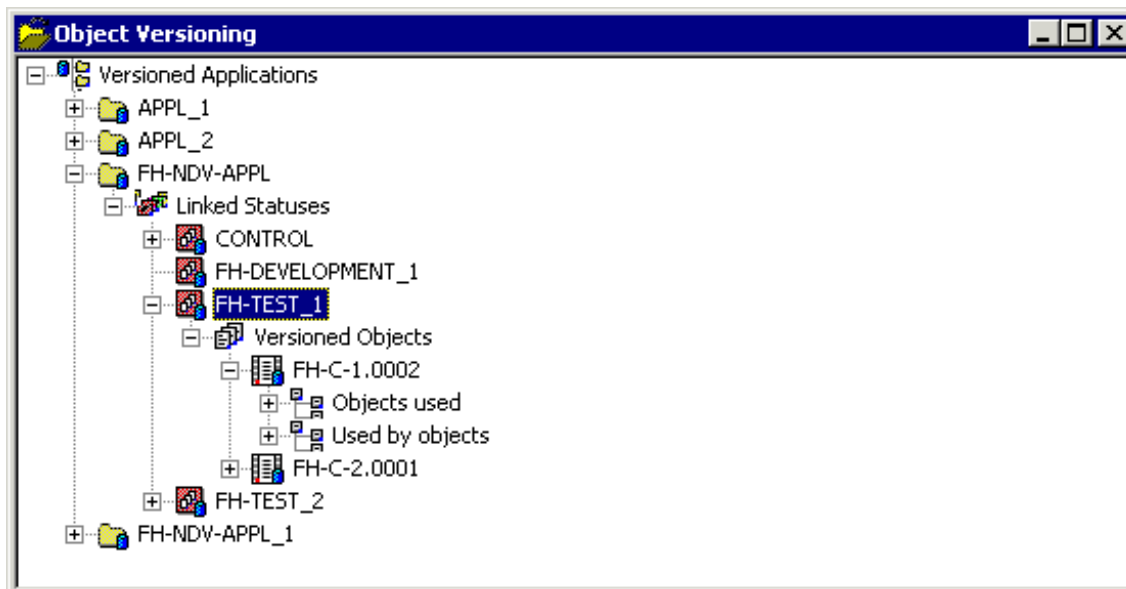▷ **To invoke the tree view window with all versioned applications**

■ From the **Tools** menu, choose **Development Tools > Object Versioning > Versioned Applications**.

Or:

Choose the following toolbar button:

The **Object Versioning** window appears.

This tree view window displays the node "Versioned Applications". When you expand this node, a list of all defined versioned applications of type Natural or Predict is shown.

When you expand the node for a versioned application, a node containing all linked statuses is shown. You can further expand the tree to display the versioned objects for a specific linked status.

For each versioned object, you can further expand the tree. Two nodes are then available: one node containing all objects that are used, and another node containing the objects that use this versioned object.

Displaying Information on a Versioned Application

You can display the information for a versioned application that has been defined with PAC on the mainframe. Among other information this includes the default Natural libraries for the different status types, the description and alias names.
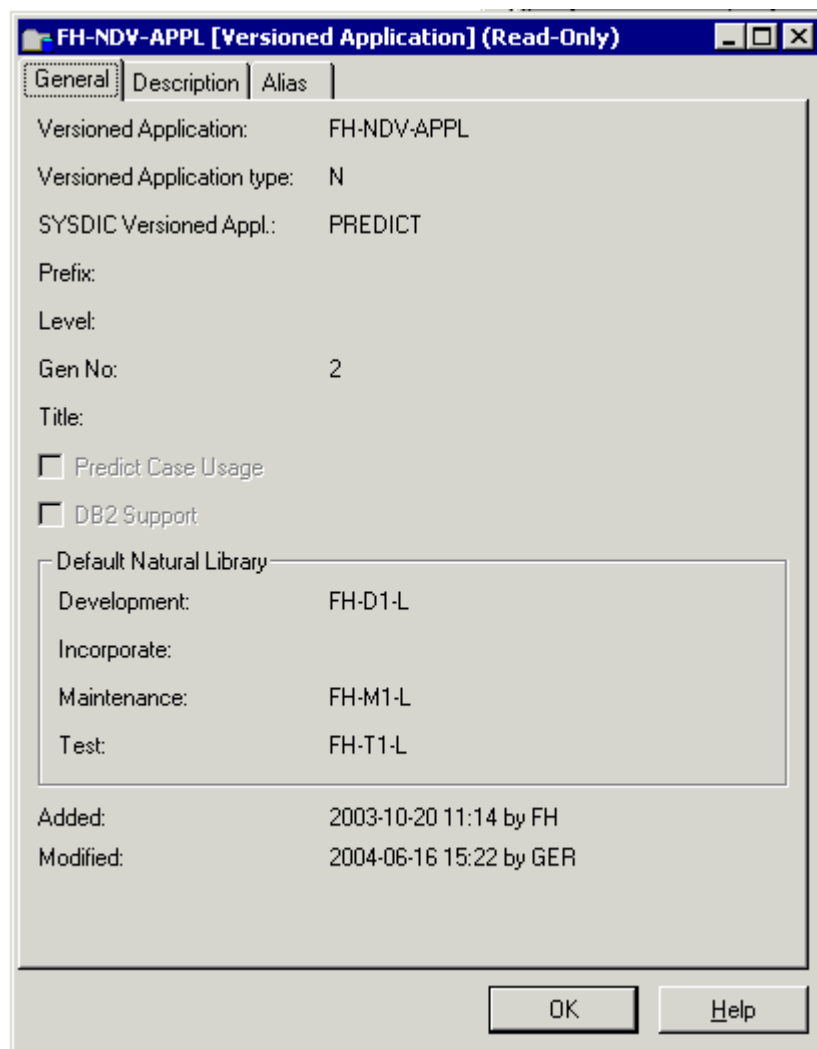
▶ **To display information on a versioned application**

1 Invoke the **Object Versioning** window. See *Invoking the Tree View Window with All Versioned Applications*.

2 Select the versioned application for which you want to display information. Each versioned application in the tree is indicated by the following icon:

3 Invoke the context menu and choose **Display**.

The following window appears.

Displaying Information on a Linked Status

You can display information on a versioned application's linked status. Among other information this includes the location of the versioned application and the compile steplibs.
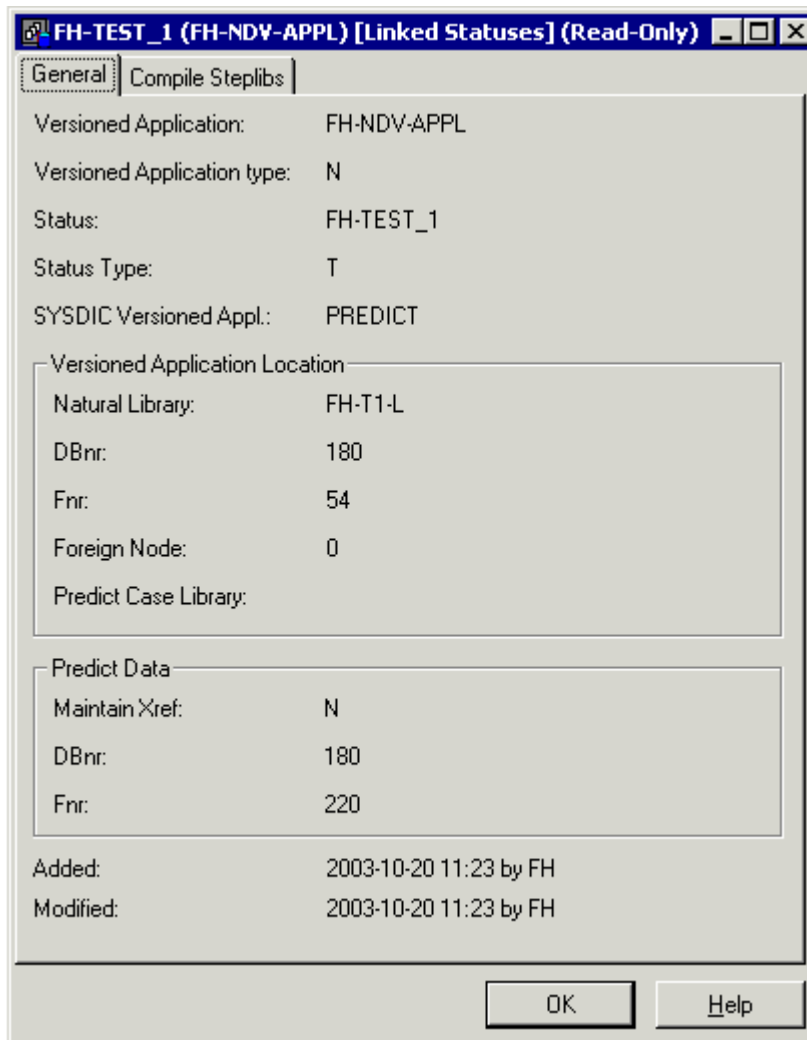
▶ **To display information on a linked status**

1   Invoke the **Object Versioning** window. See *Invoking the Tree View Window with All Versioned Applications*.

2   Select the linked status for which you want to display information. Each linked status in the tree is indicated by the following icon:

3   Invoke the context menu and choose **Display**.

The following window appears.

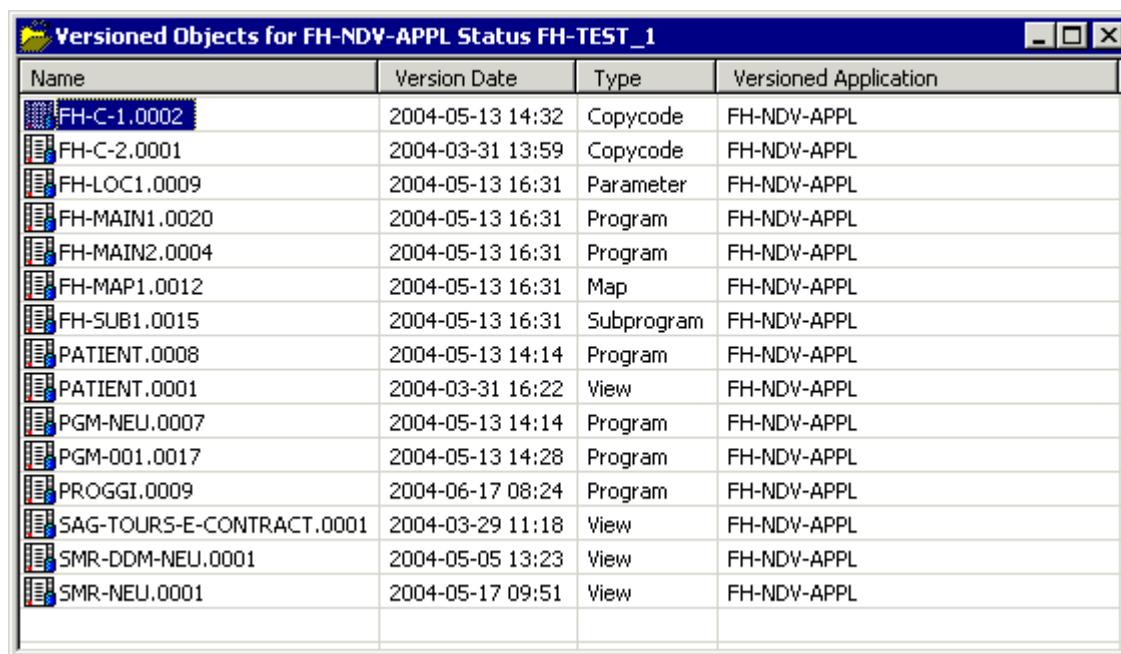# Opening a List View Window for the Versioned Objects

You can open a list view window for each "Versioned Objects" node that is shown in the **Object Versioning** window. The list view window provides more information than the **Object Versioning** window. It shows the date and time when a versioned object was created and its object type (for example, copycode).

In the list view window, it is possible to select several objects at the same time (which is not possible in the **Object Versioning** window). This is helpful, for example, if you want to check out several objects at the same time.

▶ **To open the list view window**

1   Invoke the **Object Versioning** window. See *Invoking the Tree View Window with All Versioned Applications*.

2   Select the "Versioned Objects" node for which you want to open the list view window.

3   Invoke the context menu and choose **Open**.

The list view window appears.

Name	Version Date	Type	Versioned Application
FH-C-1.0002	2004-05-13 14:32	Copycode	FH-NDV-APPL
FH-C-2.0001	2004-03-31 13:59	Copycode	FH-NDV-APPL
FH-LOC1.0009	2004-05-13 16:31	Parameter	FH-NDV-APPL
FH-MAIN1.0020	2004-05-13 16:31	Program	FH-NDV-APPL
FH-MAIN2.0004	2004-05-13 16:31	Program	FH-NDV-APPL
FH-MAP1.0012	2004-05-13 16:31	Map	FH-NDV-APPL
FH-SUB1.0015	2004-05-13 16:31	Subprogram	FH-NDV-APPL
PATIENT.0008	2004-05-13 14:14	Program	FH-NDV-APPL
PATIENT.0001	2004-03-31 16:22	View	FH-NDV-APPL
PGM-NEU.0007	2004-05-13 14:14	Program	FH-NDV-APPL
PGM-001.0017	2004-05-13 14:28	Program	FH-NDV-APPL
PROGGI.0009	2004-06-17 08:24	Program	FH-NDV-APPL
SAG-TOURS-E-CONTRACT.0001	2004-03-29 11:18	View	FH-NDV-APPL
SMR-DDM-NEU.0001	2004-05-05 13:23	View	FH-NDV-APPL
SMR-NEU.0001	2004-05-17 09:51	View	FH-NDV-APPL

The context menu for a versioned object provides the following commands:

Command	Description
Display	For information on the resulting window, see *Displaying Information on a Versioned Object*.
Check Out	For detailed information on this command, see *Transferring Versioned Objects to Another Status (Check Out)*.

Displaying Information on a Versioned Object

You can display information on a versioned object. This includes the migration event, development source directory information and the source code of the object.

▶ **To display information on a versioned object**

1   Invoke the **Object Versioning** window. See *Invoking the Tree View Window with All Versioned Applications*.

2   Select the versioned object for which you want to display information. Each versioned object in the tree is indicated by the following icon:
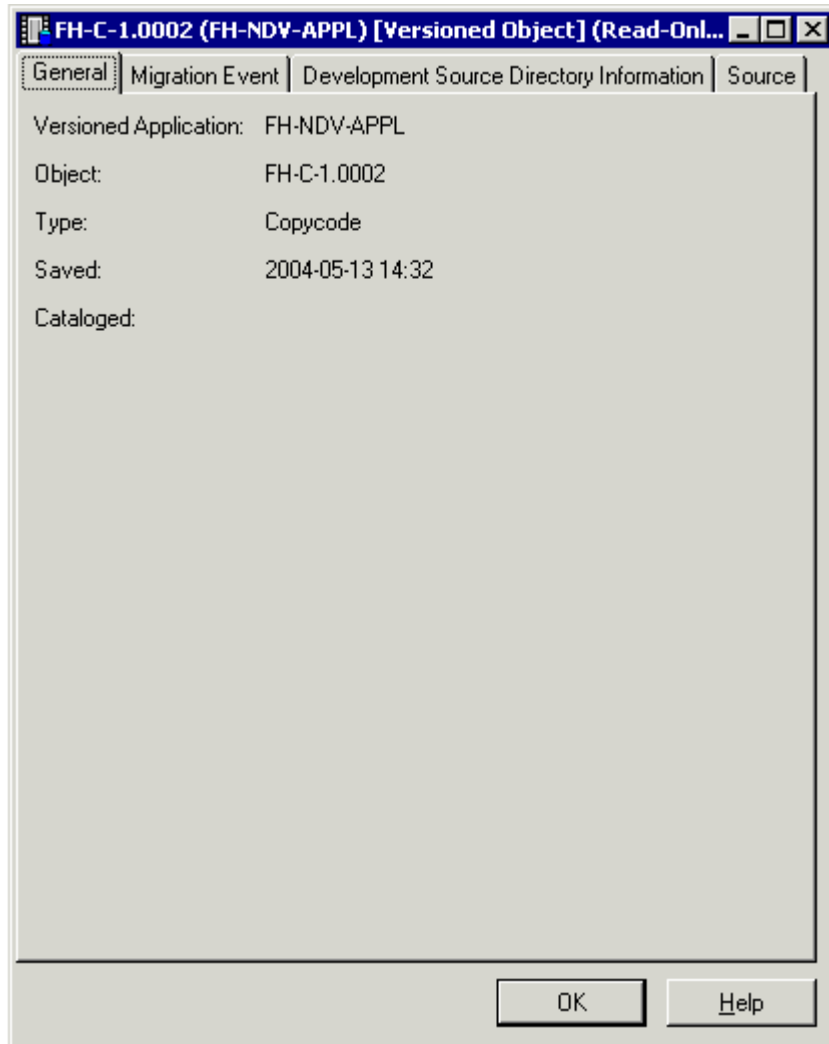

3   Invoke the context menu and choose **Display**.

> **Note:** The context menu for a versioned object also provides the **Check Out** command. For detailed information on this command, see *Transferring Versioned Objects to Another Status (Check Out)*.
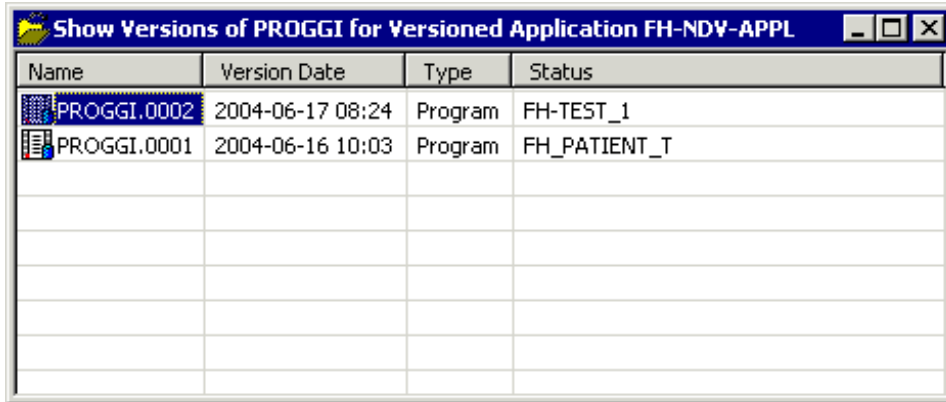
The following window appears.

Showing the Different Versions of an Object

You can invoke a list of all existing versions of a selected Natural object.

▶ **To show the different versions of an object**

1 In the library workspace or application workspace, select the object for which you want to display the different versions. When working in a list view window (which is invoked with the **Open** command, for example on a "Programs" node), it is also possible to select several objects at the same time.

2 Invoke the context menu and choose **Show Versions**.

When a versioned application exists for a selected object, the **Show Versions** window appears. When you have selected more than one object, a separate **Show Versions** window appears for each object. It shows all versions that exist in your environment, with the corresponding status.

When "*Multiple*" is shown in the **Status** column, this object has more than one status. To display a list of all statuses, invoke the context menu for this object and choose **Display**. The statuses are shown on the **Migration Event** tab of the resulting window.

> **Note:** An additional dialog box may appear when more than one versioned application has been defined for a selected object. This dialog box appears prior to the **Show Versions** window. In this case, you have to select the versioned application for which you want to display the list of versions.

The context menu for a version provides the following commands:

Command	Description
Display	For information on the resulting window, see *Displaying Information on a Versioned Object*.
Check Out	For detailed information on this command, see *Transferring Versioned Objects to Another Status (Check Out)*.