

# Locking and Unlocking

An object locking mechanism prevents concurrent updates when working with objects that are stored on a remote development server.

The exercises below demonstrate locking for an object that you are currently modifying in the program editor. You will map to the same development server once more. When you then try to open the same object from the new session, a locking message is shown.

For more information, see Object Locking in the Single Point of Development documentation.

The following topics are covered below:

- Opening an Object
  - Opening the Same Object from Another Session
  - Unlocking Objects
  - Displaying a List of All Locked Objects
  - Moving Folders Containing Locked Objects
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## Opening an Object

When you open an object, it is locked for all other users until you close it.

You will now display the Natural code of the DEMO program that you have previously created. It is assumed that logical view is active.

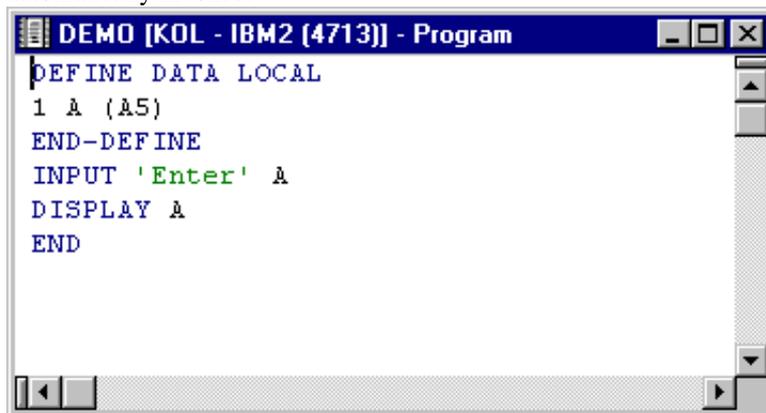
### ▶ To open the DEMO program in logical view

1. Under the node for the user library in which you have stored the DEMO program, click the plus sign next to the "Programs" folder.  
This expands the node and shows all programs in this library.
2. Click the name of the DEMO program with the right mouse button and from the resulting context menu, choose **Open**.

Or press CTRL+O.

Or double-click the program name.

The program is now shown in the source area of the Natural Studio window. The corresponding editor is automatically invoked.



The screenshot shows a window titled "DEMO [KOL - IBM2 (4713)] - Program". The window contains the following Natural code:

```
DEFINE DATA LOCAL
1 A (A5)
END-DEFINE
INPUT 'Enter' A
DISPLAY A
END
```

Do not close this program editor window. Leave it open so that locking can be demonstrated with the next exercise.

## Opening the Same Object from Another Session

When you try to open an object that is currently being modified by another user, the corresponding lock message is shown. This message tells you which user is currently modifying the object and the date and time it was locked.

### ▶ To map the same development server once more and try to open a locked program

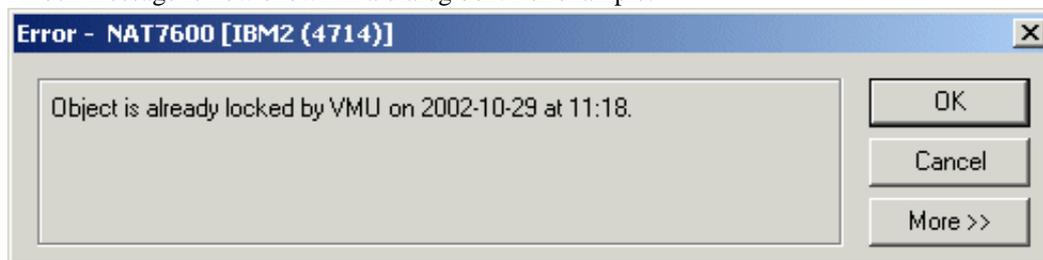
1. From the **Tools** menu, choose **Map> Environment**.  
Or click the following toolbar button.



The "Map Environment" dialog box appears.

2. Proceed as described under Connecting to a Development Server for the First Time.
3. In the new session, expand the node of the library containing the DEMO program.
4. Double-click the program name DEMO.

A lock message is now shown in a dialog box. For example:



5. Choose the **OK** button to close the dialog box.

## Unlocking Objects

You will now unlock your DEMO program from the session in which it is currently locked (not the session in which it was opened).

### Note:

When Natural Security is active, it is possible that you cannot use certain commands. Thus, it may be possible that you are not allowed to unlock your own objects.

### ▶ To unlock a locked object

1. In library workspace, select the library containing the locked DEMO program.
2. From the **Tools** menu, choose **Development Tools > Unlock Objects**.  
Or click the following toolbar button:



The "Unlock Objects" dialog box appears. The name of the library that is currently selected in library workspace is automatically provided.

3. Choose the **OK** button (without entering any information).  
The results window is now shown in the Natural Studio window.

Name	Type	Library	DBID	FNR	Locked User ID	Locked Date	Message
DEMO	Program	A	00010	00032	VMU	2002-10-29 11:18:22	

4. In the results window, click the object to be unlocked with the right mouse button.
5. From the resulting context menu, choose **Unlock Objects**.  
The object is still shown in the results window. The "Message" column, however, indicates that the object has been unlocked.

6. To hide the results window, click the standard close button at the top of the results window.  
Or from the **View** menu, choose **Results**.  
Or press ALT+5.  
When the results window is not shown in the Natural Studio window, no check mark is shown in the **View** menu next to the **Results** command.

**Note:**

You can undock and dock the results window as described previously in this tutorial.

## Displaying a List of All Locked Objects

You can display a list of all locked objects for the currently active development server. This includes the objects of all users in all libraries. You can unlock any object contained in this list.

It is only possible to display and unlock objects from another user in a non-secure environment (i.e. when Natural Security is not active on the development server). In a secure environment, the administrator defines which user locks may be unlocked by other users.

### ▶ To display all locked objects

1. From the **Tools** menu, choose **Development Tools > Unlock Objects**.  
Or click the following toolbar button:



The "Unlock Objects" dialog box appears.

2. Enter an asterisk in the "Library" text box.  
This displays the locked objects in all libraries.
3. Enter an asterisk in the "Locked user ID" text box.  
This displays the locked objects of all users.

A screenshot of the 'UNLOCK Objects' dialog box. The dialog has a title bar with the text 'UNLOCK Objects' and a close button. It is divided into two main sections: 'Objects' and 'Additional'. The 'Objects' section contains four input fields: 'Application name' (empty), 'Library' (containing an asterisk '\*'), 'DBID' (containing '10'), and 'ENR' (containing '941'). Below these are 'Object name' (containing an asterisk '\*') and 'Object type' (a dropdown menu with an asterisk '\*' selected). The 'Additional' section contains 'Locked user ID' (containing an asterisk '\*') and 'Locked date' (a dropdown menu). At the bottom of the dialog are three buttons: 'OK', 'Cancel', and 'Help'. A status bar at the very bottom of the dialog contains the text 'Enter user ID or asterisk notation.'

4. Choose the **OK** button.  
The results window is shown again. Since this is the second time you issued the **Unlock Objects** command, an additional "Unlock Objects" tab is provided.

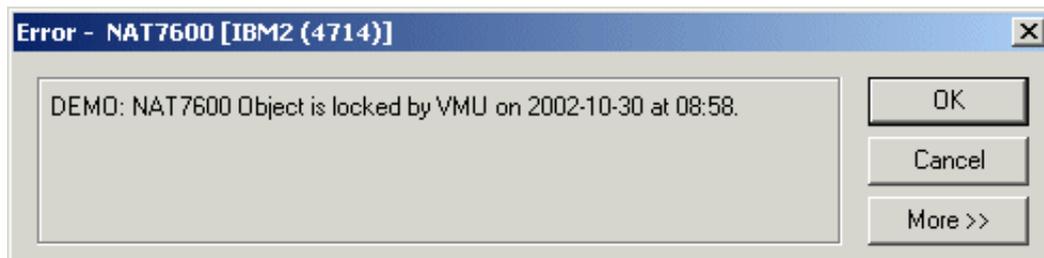
Name	Type	Library	DBID	FNR	Locked User ID	Locked Date	Message
A1	Program	GPR	00010	00032	GPR	2002-08-08 16:20:30	
A4	Program	ASO	00010	00032	ASO	2002-10-07 17:06:12	
ABC	Program	WK	00010	00032	WK	2002-06-04 12:59:11	
ACOMMON	Program	A0000000	00010	00032	ASO	2002-09-12 10:21:25	
ACOMMON	Program	A3	00010	00032	ASO	2002-09-12 10:25:29	
AHAPRG	Program	AHA1	00010	00032	NATURAL	2002-07-16 14:48:30	

5. If you want to delete the first "Unlock Objects" tab, click it to display its contents.
6. Click an object in the "Name" column with the right mouse button and from the resulting context menu, choose **Delete Tab**.
7. Before you continue with the next section, hide the results window as described above.

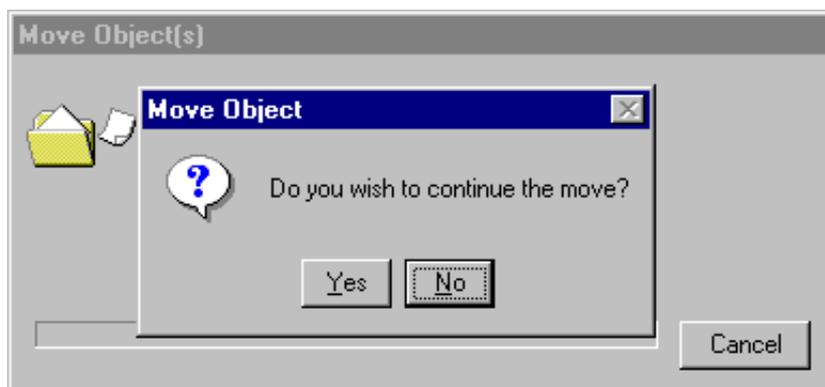
## Moving Folders Containing Locked Objects

Locked objects cannot be moved.

When you try to move a folder containing locked objects to another folder (for example, via drag-and-drop), a lock message appears.



Choose the **OK** button to close the dialog box. Another dialog box appears, asking whether you want to continue the move.



When you choose the **Yes** button, all objects except the locked objects are moved.

You can now proceed with the next exercise: Handling Applications.