IBM® Rational® Developer for System z Interface for CA Endevor® Software Change Manager –Technology Preview

Introduction

The IBM® Rational® Developer for System z interface for CA Endevor® Software Change Manager RAM (repository access manager) allows you to access and edit software assets stored in CA Endevor® SCM projects. RAMs are used by a CARMA server (common access repository manager), which is part of Rational Developer for System z. If the CARMA RAM is available and configured on your host system, then you can connect to a CA Endevor® SCM project using the CARMA plug-in of the Rational Developer for System z client.

Activating the RAM

Once you have installed the CARMA plug-in on your Rational Developer for System z client, check with your systems programmer to activate the IBM Rational Developer for System z Interface for CA Endevor® Software Change Manager RAM on the host.

Accessing the CA Endevor® SCM using CARMA

To access CARMA and the CA Endevor® SCM, you will need an RSE connection and a CARMA connection. If you already have connections to RSE and CARMA, you can skip to step 2 in the Connecting to CARMA instructions.

Connecting to CARMA

The Rational Developer for System z CARMA client requires a connection to a CARMA server in order to retrieve SCM information from the host. CARMA uses the connection services of the Rational Developer for System z Remote System Explorer (RSE) to connect to the host. To create a new CARMA connection, follow these steps:

1. In the CARMA Repositories view do one of the following:
    o Click the New Connection button ![icon].
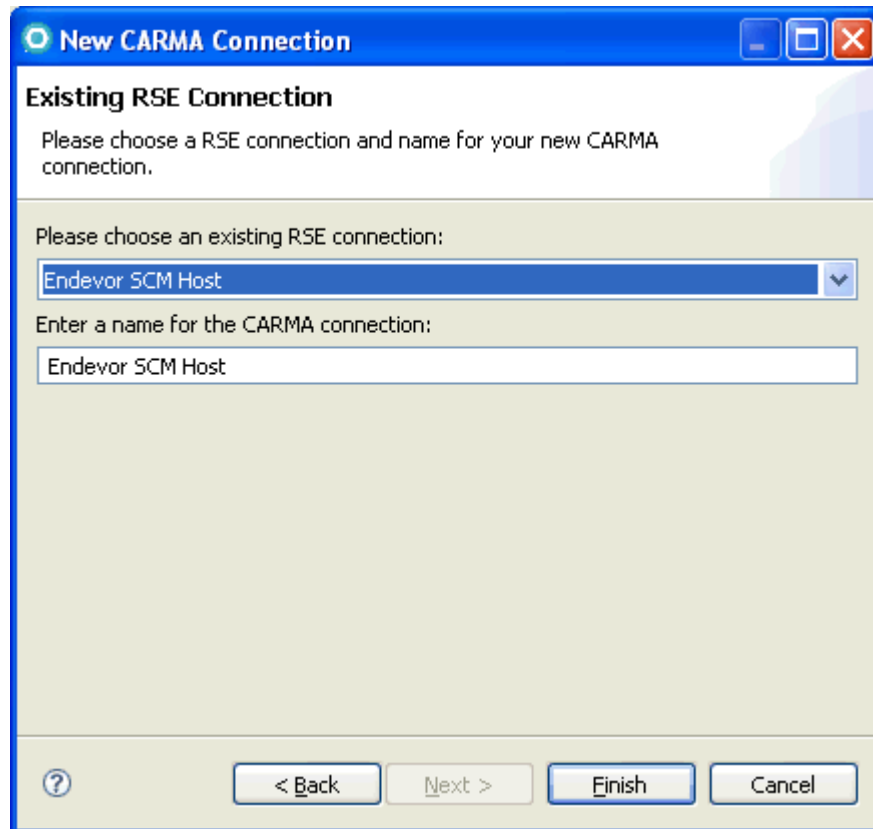   o Right-click inside the view and click New Connection.

    The New CARMA Connection wizard opens.

    Figure 1. New CARMA connection wizard
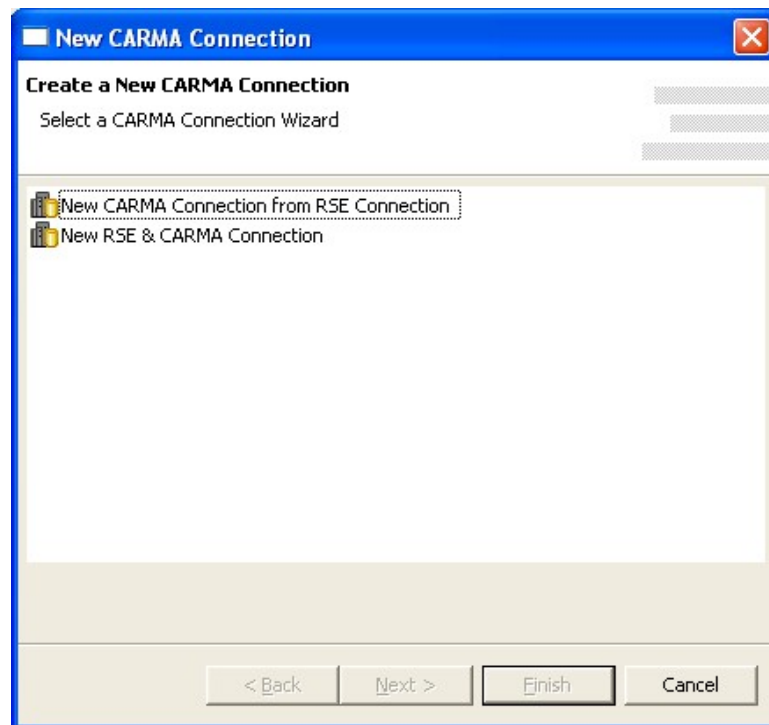
2. Choose one of the options from the list and click Next.

3. If you chose to create a new CARMA connection from an existing RSE connection the following dialog opens:

Figure 2. New CARMA connection wizard

Choose the RSE connection you want to create a CARMA connection from using the drop-down list and provide a name for the new CARMA connection. By default, the name of the existing RSE connection is used for the name of the CARMA connection. This is the label that will be used for the connection in the CARMA repositories view. Skip to step 8.

4. If you chose to create a new RSE and CARMA connection, the New Remote z/OS System Connection wizard opens.

   Note: If this is the first time that you have attempted to create a connection in RSE, you will not see the dialog below yet, but will instead be prompted to create a profile before you can create the new connection.

Figure 3. New connection dialog

5. Complete the following fields in this dialog:

   Parent profile
   The profile named after your workstation appears by default. To choose a different profile, select a predefined profile from the drop-down list. After you create the connection, you can share this profile to allow other users to have this connection in their RSE perspective.
   Connection name
   A unique name to identify your connection in the Remote Systems view. For example, Development System or Test System. The label that you assign to this connection will help you to differentiate between multiple connections to the same type of remote system.
   Host name
   The hostname or IP address of the z/OS system that your RSE server is installed on.
   **Description**
   A short description of the z/OS system that you want to connect to, for example, Development System or Test System. The description that you assign to this remote system will help you to differentiate between multiple remote systems of the same type.
   Verify host name (optional)
   To verify that the hostname or IP address in the Host name field is valid, select the Verify host name check box.

6. Do one of the following:
   o If you don't need to configure any subsystem properties, skip to step 8.
   o Click Next to proceed to the z/OS UNIX Files SubSystem Properties page.

Figure 4. z/OS UNIX files subsystem properties dialog
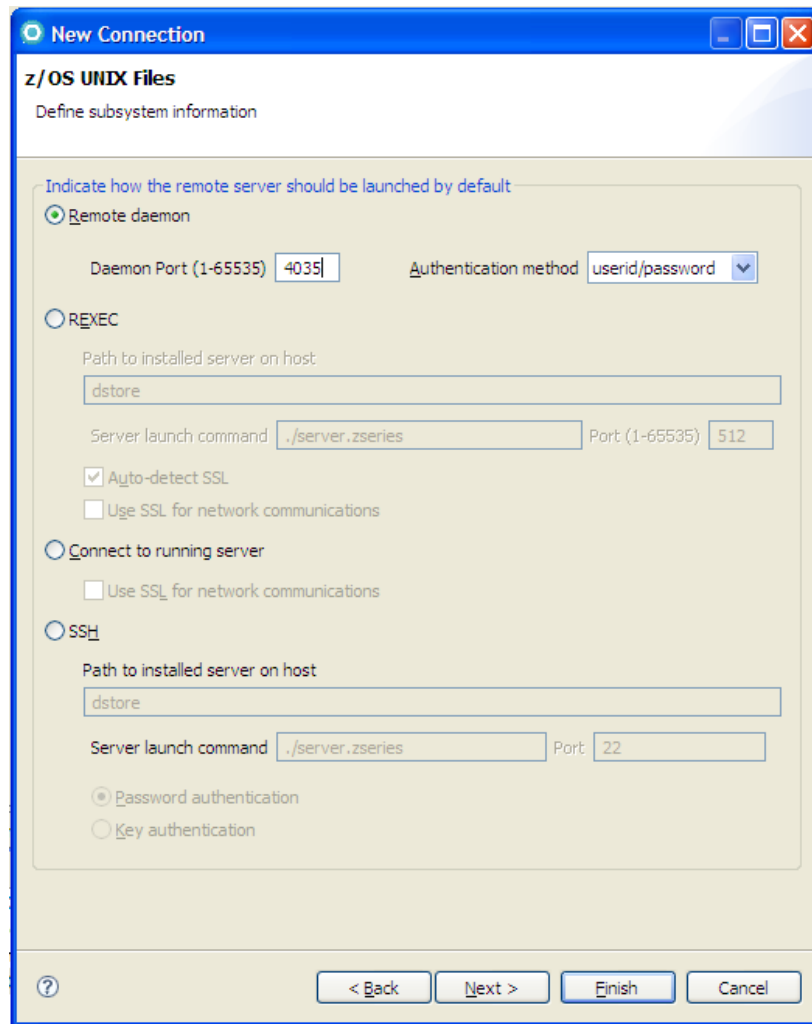
Specify the default method for launching the remote server:

- To automatically start the RSE host server using a server daemon:
    a. Click the Remote daemon radio button.

    b. In the Daemon Port field, type the port number that is used by the server daemon on the remote host. By default, port 4035 appears. Ask your systems programmer for the correct port number.

- To automatically start the RSE host server using an REXEC or SSH command:

a. Click the REXEC or SSH radio button.
b. In the Path to installed server on host field, type the path where the RSE host server configuration files are located. The default used during configuration of the RSE host server is /etc/rdz. Ask your systems programmer for the correct location.
c. In the Server launch command field, type the name of the script file that will start the RSE host server. By default, server.zseries appears. Ask your systems programmer for the correct name.
d. In the Port field, type the port number that is used by the REXEC or SSH daemon on the remote host. By default, port 512 or 22 respectively appears. Ask your systems programmer for the correct port number.

- To connect to an RSE host server that you start manually:

a. Click the Connect to running server radio button. If your remote system is not configured to use the RSE daemon, REXEC or SSH to start the RSE host server, this option allows you to connect to an RSE host server that you start manually.

Note: When you start the RSE host server manually on the remote host, you can configure it to receive connection requests at a specified port or to use the next available port on the system. The port number used by the server is displayed when you start the server. After you start the server, you must specify that port number in the Subsystem properties page before you can connect. To access the Subsystem properties page:

i. Switch to the RSE perspective.
ii. In the Remote Systems view, double-click the z/OS connection to expand it and reveal the USS Files subsystem.
iii. Right-click the USS Files node and select Properties from the pop-up menu to open the Properties for USS Files dialog box.
iv. In the left navigation pane, click Subsystem to open the Subsystem properties page.

Click Next to proceed to the MVS files SubSystem Properties page and repeat the actions you did previously for the z/OS UNIX Files SubSystem Properties page

Figure 5. MVS files subsystem properties dialog
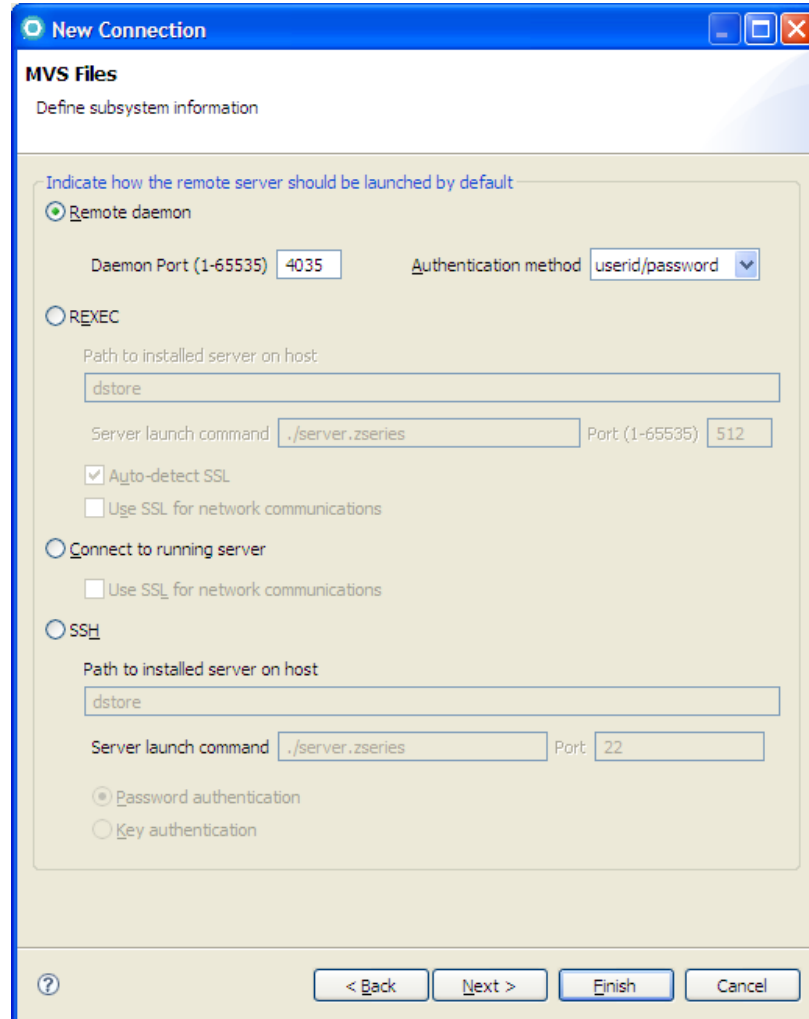
7. Do one of the following:
    o   If you don't need to configure the JES subsystem properties, skip to step 8.
    o   Click Next to proceed to the JES SubSystem Properties page.

Figure 6. JES subsystem properties dialog
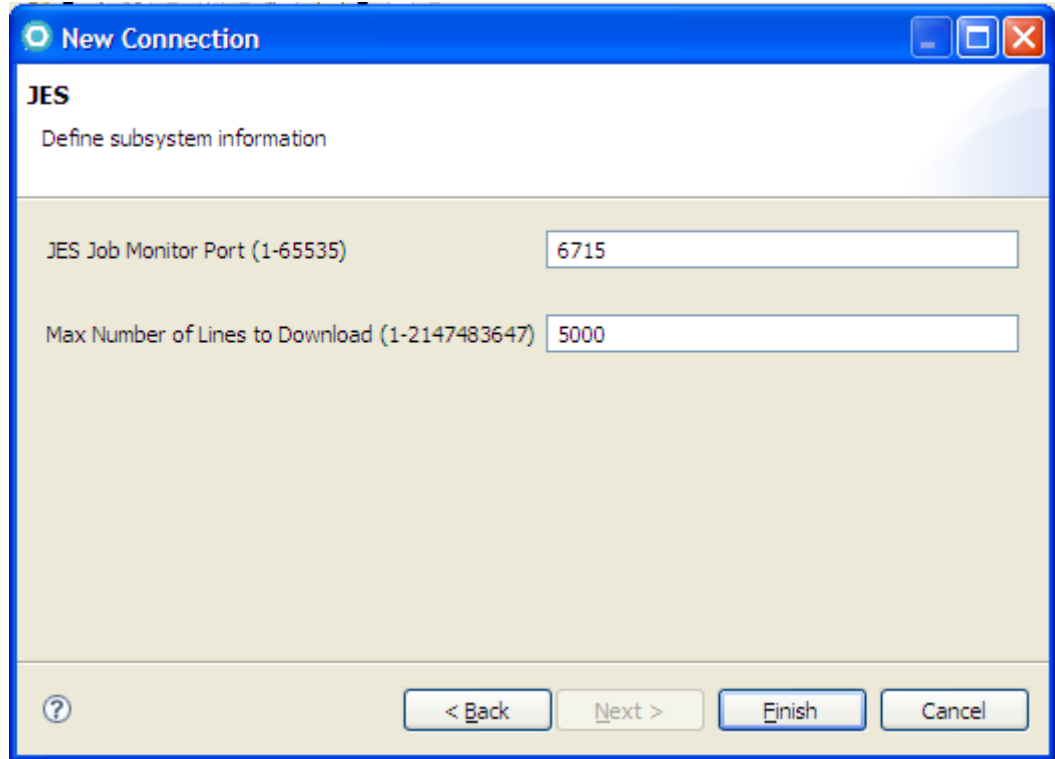
- In the JES Job Monitor Port field, type the port on which the Remote Job Monitor is listening. By default, port 6715 appears.
- In the Max Number of Lines to Download field, type the number of lines to download before prompting you to specify if you want to download all of the lines in the data set.

8. Click Finish to create the new CARMA connection and add it to the CARMA Repositories view.

Connecting to CA Endevor® Software Change Manager

1. Once the RSE connection is created, switch to the CARMA view.
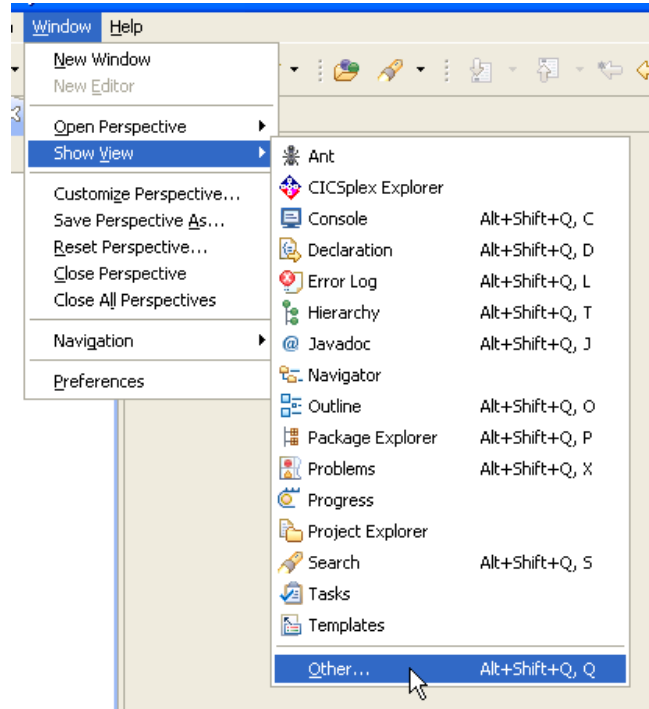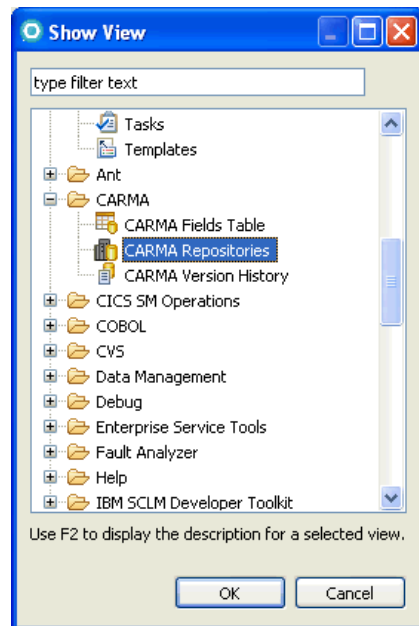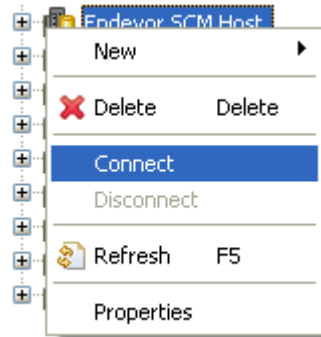
Figure 7. Opening the CARMA view

Figure 8. Opening the CARMA view

2. To activate the connection, do one of the following:
   o Right-click on the connection and select the Connect menu item.

Figure 9. Activating the CARMA connection

- o Alternatively, you can activate the connection by expanding the connection by clicking the + next to the connection name. Note that this method will only work the first time you are connecting to this CARMA host. Use the previous method to explicitly connect to the CARMA host for subsequent connection attempts. **Note:** Attempting to perform any action on the elements under a CARMA connection will automatically activate the connection.

3. In the Enter Password dialog, type a valid user name and password and click OK. When you expand the repository connection, a list of repository access managers (RAMs) appears under the CARMA host in the CARMA Repositories view.

Figure 10. User authentication
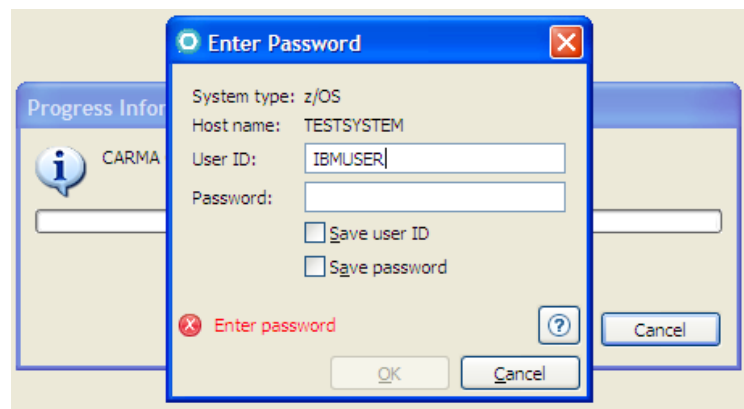
Note: This image shows a password authentication session. If using certificate authentication, the dialog will be different.

4. Once connected, expand the repository connection and select CA Endevor® SCM.
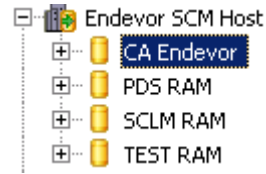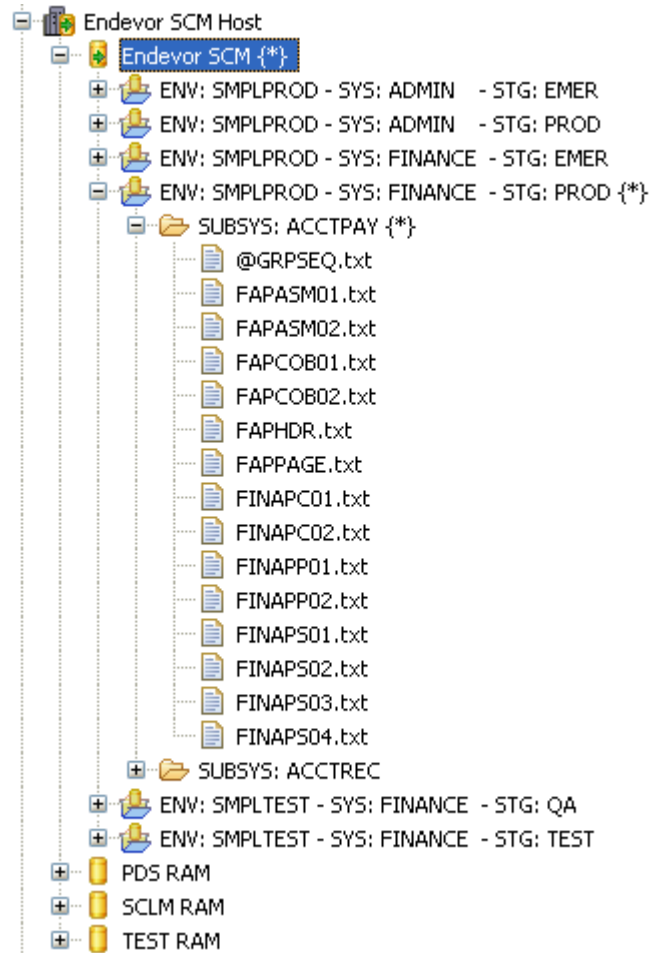
Figure 11. Selecting the CA Endevor® SCM

Figure 12. Selecting the CA Endevor® SCM

5. To view the properties, right-click on the CA Endevor® SCM system, subsystem or element and select properties.

Figure 13. CARMA properties view for an element

Properties for

type filter text

⊞ CARMA

CARMA

Transfer type
- ⦿ Inherit from parent: Text
- ○ Text

Codepages
- ⦿ Inherit from connection: 037 / UTF-8
- ○ Remote Codepage 037
-   Local Encoding UTF-8

Property	Value
User id associated with base	IBMUSER
Signout user id	
Relative mapped stage number	0001
Element base member name	FINAPC02
Element base date YYYYMMDD	20090323
Record type	M
Record update date YYYYMMDD	20090323
Number of statements in last level	00000003
Stage name	PROD
Current component level number	
Element name	FINAPC02
Last element - modifying action	MOVE
Type name	COPY
Comment associated with base	INSTALL SAMPLE APPLICATION ELEMENTS
Last action Time HHMMSSTT	18020000
Y - if Element base is compressed	Y
Element delta last level date YYYYMMDD	20090323
Environment name	SMPLPROD
Current element version number	01
Last action return code	00000
Number of inserts in last level	00000
Stage id	P
Last action	MOVE
Number of statements in base	00000003
Element delta member name	E13NHUIS
Stage number (1/2)	2
Element base time HHMMSSTT	18020000
User id associated with last level	IBMUSER
Number of deletes in last level	00000
F-Forward / R-Reverse delta format	R
Record update time HHMMSSTT	18024264
Last action User id	IBMUSER
Current element level number	00
Last action Date YYYYMMDD	20090323
Site id	0
Base level number	00
Element delta last level time HHMMSSTT	18020000
Processor group name	*NOPROC*
Last action CCID	SAMPLE
Comment associated with last level	INSTALL SAMPLE APPLICATION ELEMENTS
Current component version number	
Subsystem name	ACCTPAY
System name	FINANCE
CCID associated with last level	SAMPLE
Last action Comment	MOVE ELEMENTS TO PRODUCTION

Refresh Properties

OK   Cancel

Figure 14. CARMA properties view for a subsystem
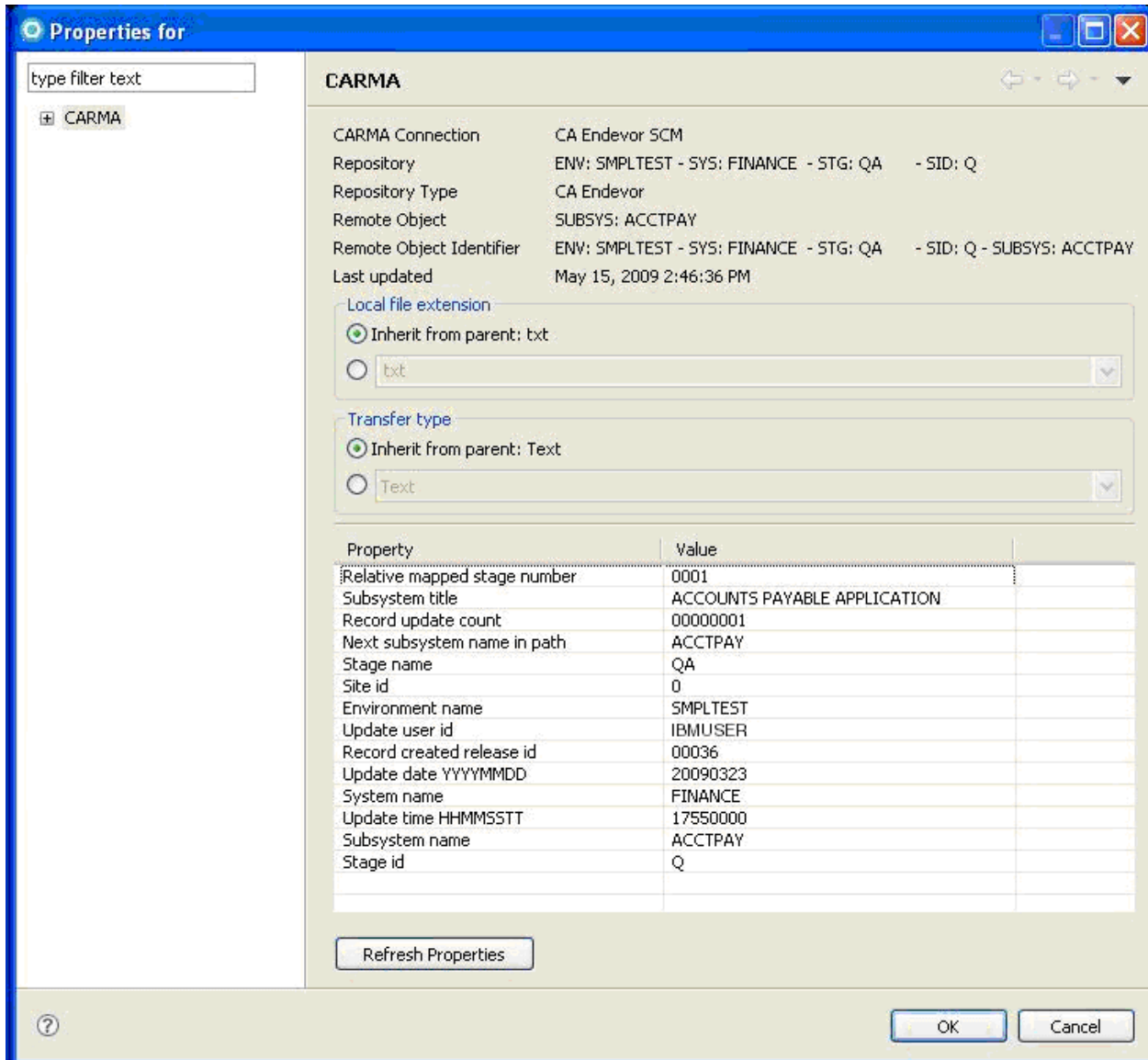

Content views

CARMA provides advanced filtering capabilities for RAMs (repository access managers), RAM Instances, and containers in CARMA enabled environments by allowing users to pass filter arguments to the RAM. Using filter/views can help expedite performing navigational functions by allowing the RAM to return a smaller set of content for a RAM or container. By default, a CARMA client will request all available resources in a selected RAM. To narrow the results, one or more filter/views may be specified to help sort the content.

Applying a filter to the environment, system and stage id

1. Select the CA Endevor® Software Change Manager that you want to apply a filter to.

2. Right-click on the object to display the context menu and select New -> New View…

Figure 15. Specifying a new view
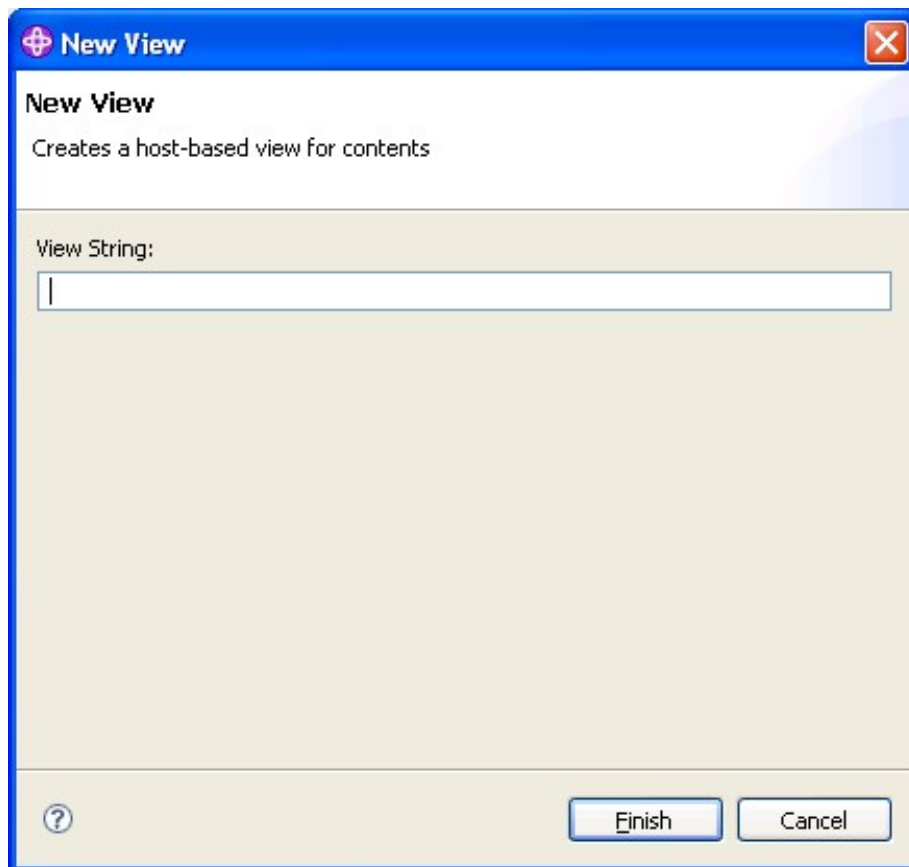
3. Enter a string you want to use as a filter.

   The syntax for the filter is KEY1:VALUE1,KEY2:VALUE2,KEY3:VALUE3…

   where KEYn is

   ENV – Environment
   TOENV – To Environment
   SYS – System
   STGID – Stage id
   TOSTGID – To Stage id
   SUBSYS – Subsystem name
   ELEM – Element
   TYPE – Element type

14

VALUE is the filter value that you specify for the Environment, To Environment, Stage id, To Stage id, System, Subsystem, Element or Element type.

Note: The values for the ENV, STGID, SYS, SUBSYS, ELEM and TYPE keys can contain wildcard characters. However, the values for the TOENV and TOSTGID keys must not contain wildcard characters. You can only specify a KEY once for a new view.

You can use a combination of filters to narrow the list of items displayed. The order you specify the KEYs does not matter. Multiple KEY:VALUE entries must be separated by a comma (,) and you can only use a KEY once for each new view.

For example, figure 16 displays a list without a filter.

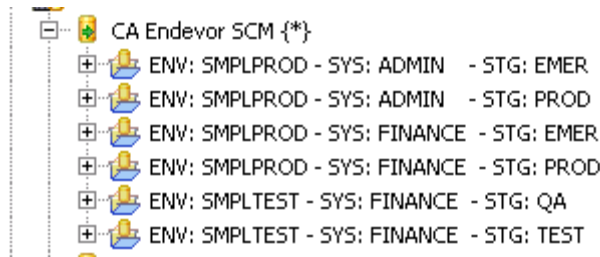*Figure 16. Example listing of CA Endevor® SCM items without a filter*

Figure 17 displays a list using the filter ENV:.SMPLPROD

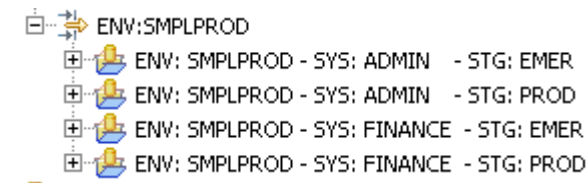*Figure 17. Example listing of CA Endevor® SCM items using the filter ENV:SMPLPROD*

Figure 18 displays a list using the filter ENV:.SMPLPROD,SYS:FINANCE

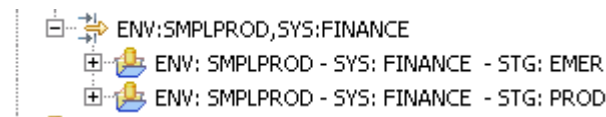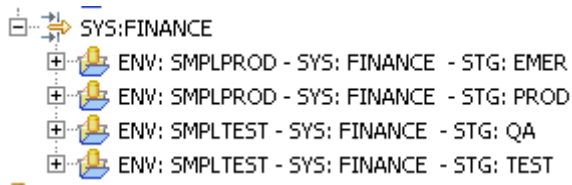*Figure 18. Example listing of CA Endevor® SCM items using the filter ENV:SMPLPROD,SYS:FINANCE*

15

Figure 19 displays a list using the filter SYS:FINANCE

Figure 19. Example listing of CA Endevor® SCM items using the filter SYS:FINANCE

4. Select Finish.

Applying a filter to the subsystem

1. Select the CA Endevor® SCM system that you want to apply a filter/view to.

2. Right-click on the object to display the context menu and select New -> New View…

3. Enter a string you want to use as a filter.

   The syntax for the filter is KEY1:VALUE1,KEY2:VALUE2…

   > where KEYn is

   >> SUBSYS – Subsystem name
   >> ELEM – Element
   >> TYPE – Element type

   > VALUE is the filter value that you specify for the Subsystem, Element or Element type.

   Note: The values for the SUBSYS, ELEM and TYPE keys can contain wildcard characters. You can use a combination of filters to narrow the list of items displayed. The order you specify the KEYs does not matter. Multiple KEY:VALUE entries must be separated by a comma (,) and you can only use a KEY once for each new view.

4. Select Finish.

Applying a filter to the element

1. Select the CA Endevor® SCM subsystem that you want to apply a filter/view to.

2. Right-click on the object to display the context menu and select New -> New View…

3. Enter a string you want to use as a filter.

   The syntax for the filter is KEY1:VALUE1…

   Where KEYn is

   ELEM – Element
   TYPE – Element type

   VALUE is the filter value that you specify for the Element or Element type.

   Note: The values for the ELEM and TYPE can contain wildcard characters. The order you specify the filter KEYs does not matter. Multiple KEY:VALUE entries must be separated by a comma (,) and a you can only use a KEY once for each new view.

   The CARMA view lists the CA Endevor® SCM items in alphabetical order. If you want to view a range of elements, specify the starting item and ending item separated by a space.

   Select finish and the CARMA view lists the items in the range including the start item and the end item.

   For example, if you have the following list of elements:

   FILAAS01
   FILAAS02
   FILAAS03
   FILAAS04
   FILAAS05
   FILAAS06
   FILAAS07
   FILAAS08

And you want to view all of the elements FILAAS02 through FILAAS04, specify ELEM:FILAAS02 FINAAS04. The CARMA view will display the following elements:
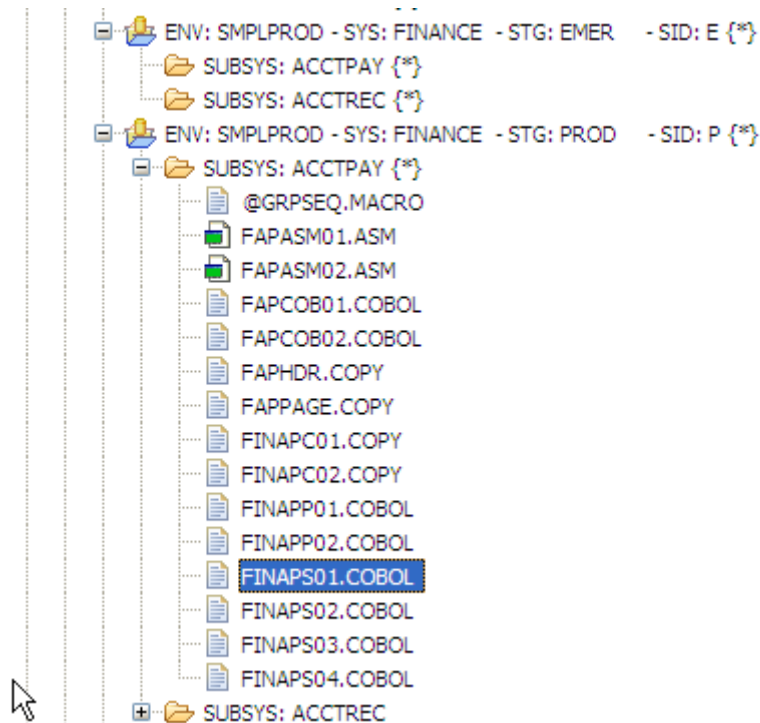
> FILAAS02
> FILAAS03
> FILAAS04

4. Select Finish.

Displaying element types

You can set the RAM to display the element type as the extension, as shown in figure 20.
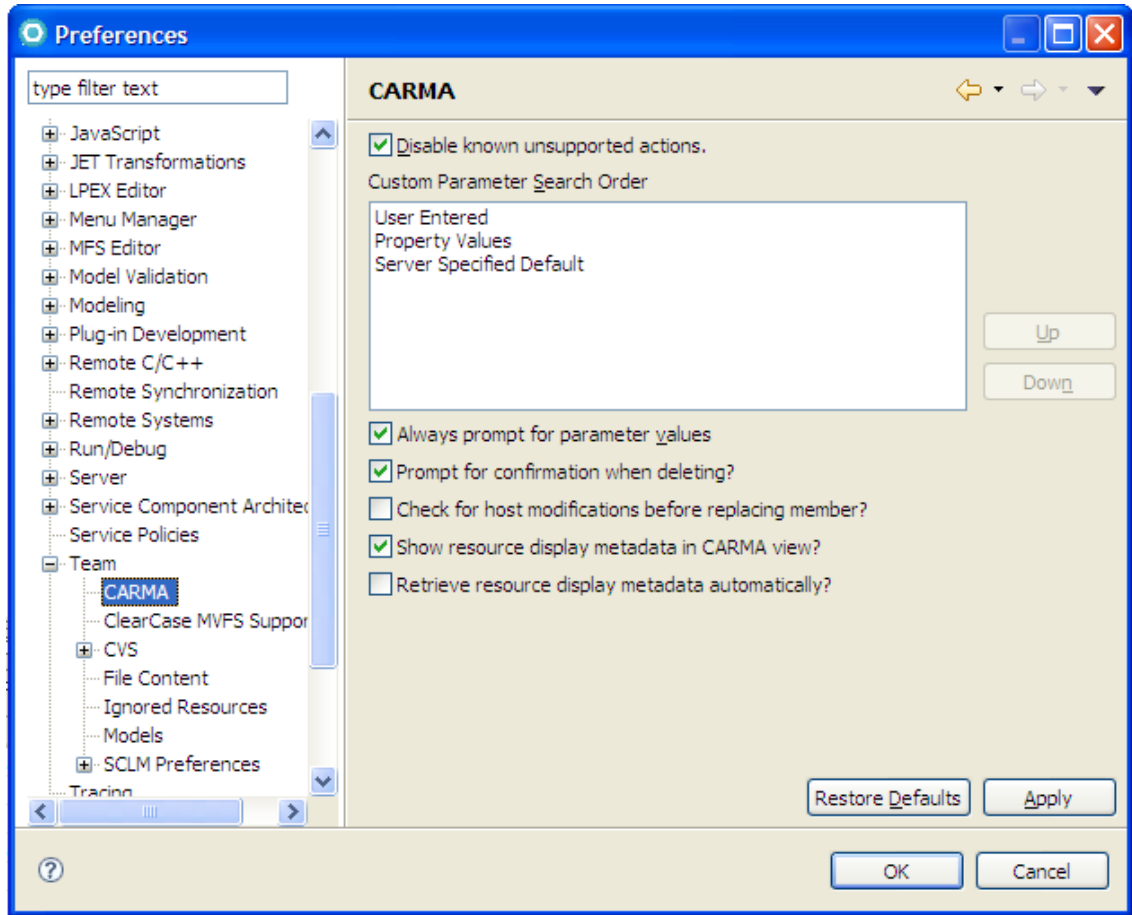
Figure 20. Example of element types displayed as an extension

There are two ways to display the element type as the extension.

1. To use the CARMA preferences page, select **Window** -> **Preferences** -> **Team** -> **CARMA** and then selects "**Retrieve resource display metadata automatically?**", as shown in figure 21.

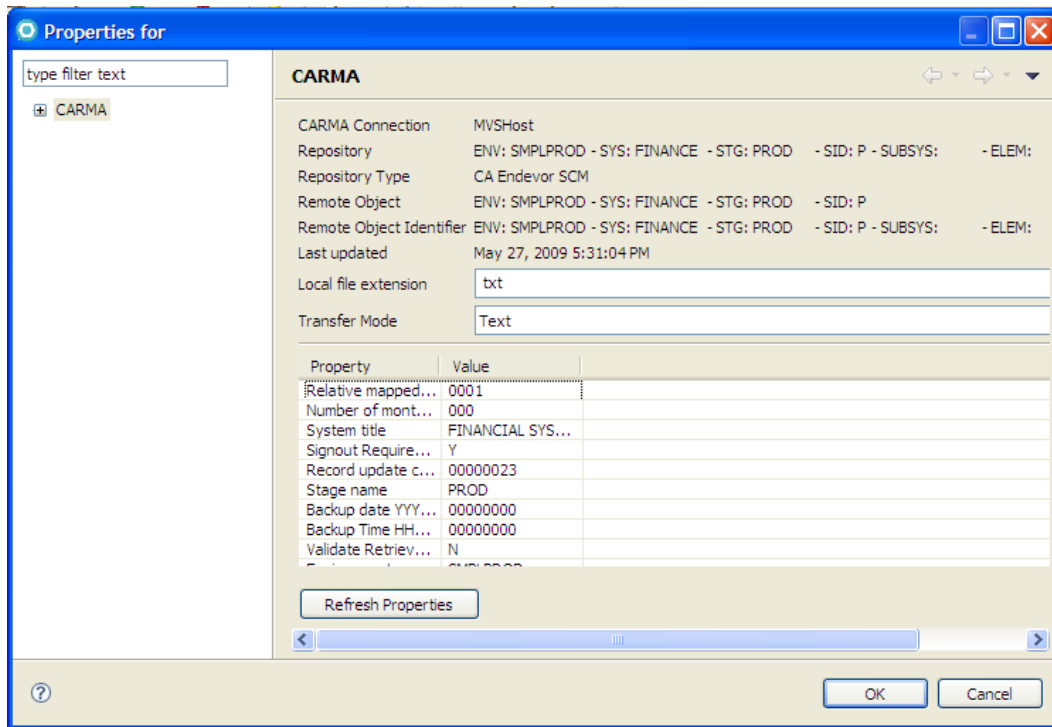*Figure 21. Example of element types displayed as an extension*

2. To force a particular extension, change it in the properties of the Subsystem tree item

Figure 21. Properties for SubSystem
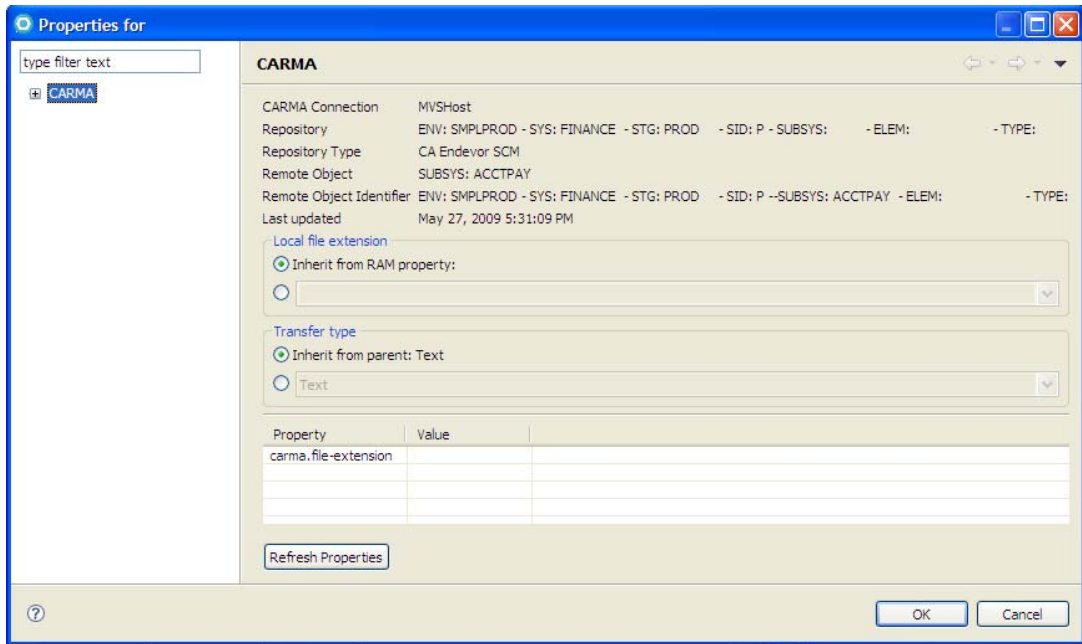
or the Environment/System/Stage tree item.
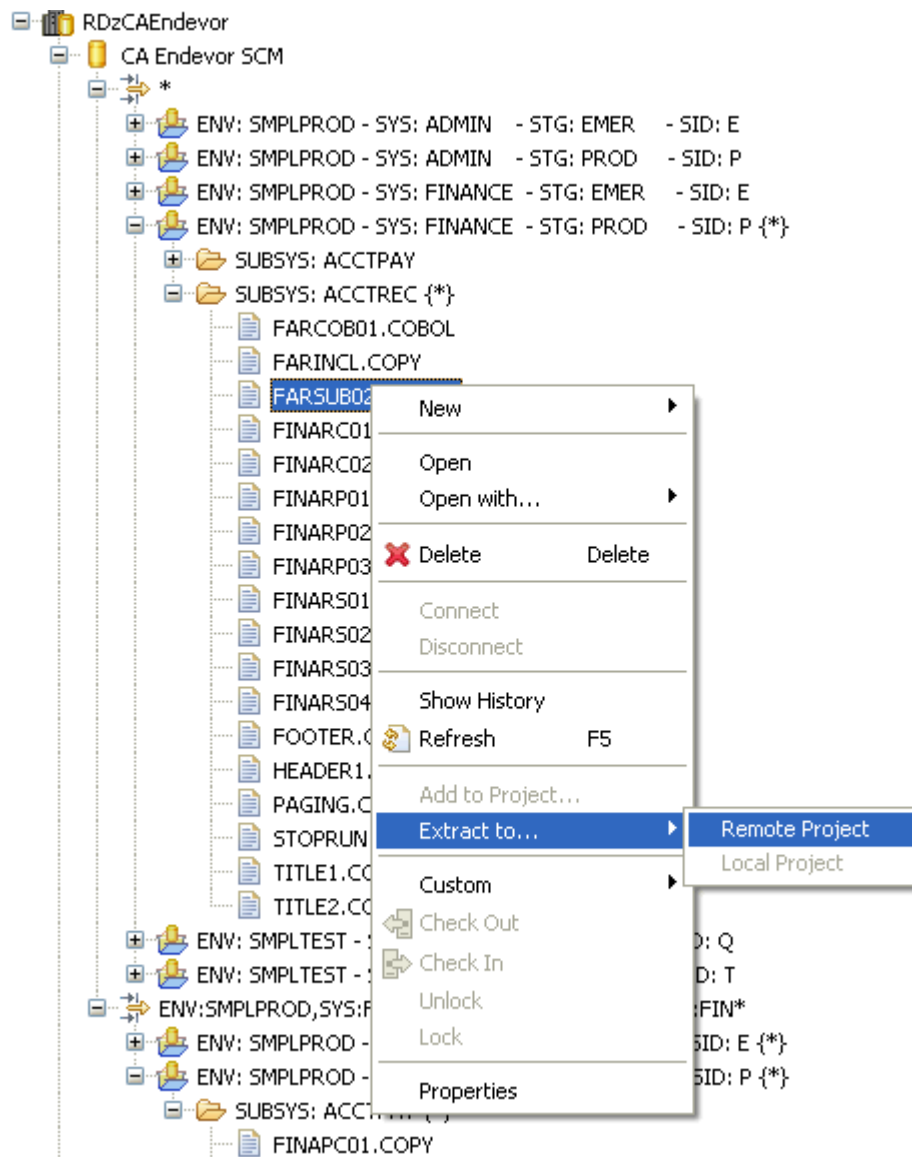
Figure 22. Properties for Environment/System/Stage

Retrieving an element from a CA Endevor® SCM to a PDS

There are two ways to retrieve an element from a CA Endevor® SCM repository to a PDS.

1. To use the Extract to a remote project option, right-click on the element and select **Extract to...** > **Remote Project**.

Figure 23. Extract and element to a remote project

Extracting to a remote project retrieves the element into a z/OS Project and subproject. You can create a z/OS Project and subproject, if one does not exist.

2. To use the Retrieve element option, right-click on any of the items for the CA Endevor® SCM and select **Custom** > **Retrieve element**. Using Retrieve element provides more flexibility than extracting to a Remote project.

Figure 23. Retrieve an element
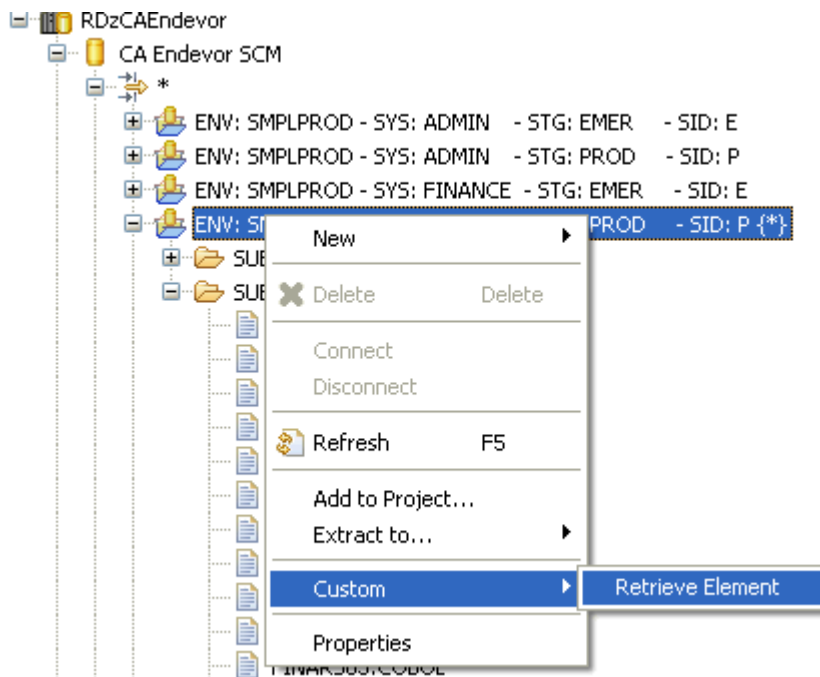
Specify values for the parameters in the Retrieve element dialog and click **OK**. Developer for System z then extracts the element to a PDS.

The PDS to which the element is extracted does not have to be a z/OS project and subproject. To use Developer for System z capabilities, add the PDS to a z/OS project.