IBM WebSphere Developer for zSeries Version 6.0

IBM

Common Access Repository Manager User's Guide

IBM

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Contents

About this book

This book explains how to access and utilize software configuration managers (SCMs) using Common Access Repository Manager (CARMA) from within WebSphere® Developer for zSeries® (WD/z). It includes the following topics:

- How to establish a connection to an SCM
- How to extract repository content to a project
- How to perform common SCM tasks with CARMA

You can use this document as a guide or reference to these tasks.

Who should read this book

This book is intended for WD/z users who would like to learn how to use CARMA from within WD/z.

To use this book, you need basic knowledge of or experience with SCMs.

Chapter 1. CARMA concepts

Many mainframe user organizations store their source code in proprietary software configuration management systems, also known as software configuration managers (SCMs). The source code is locked in the SCM, in a native format that WD/z cannot access in an integrated manner. The Common Access Repository Manager (CARMA) toolkit for WD/z facilitates customer access to SCMs from within WD/z by providing a common interface for accessing SCMs.

To leverage this common access framework, a CARMA client (such as the one integrated into WD/z) must connect to a CARMA host, which manages SCM access using repository access managers (RAMs). RAMs are plug-ins that help the CARMA host communicate with individual SCMs. In order to access a given SCM through CARMA, the CARMA host must first have the appropriate RAM installed on it. CARMA currently ships with only one RAM, which provides access to partitioned data sets (PDSs). Access to other SCMs through CARMA can be achieved if the appropriate RAM is obtained or developed.

CARMA host

A CARMA host is a host machine that runs a CARMA server. CARMA hosts have a set of repository access managers, which define the types of repository connections the host is capable of making.

Repository access manager

A repository access manager (RAM) provides connections to a specific type of SCM, such as SCLM.

Repository instance

A repository instance (RI) represents a project or component that exists in an SCM. The connection to each repository instance is based on a RAM. In the following illustration, there are four RIs (each representing a PDS data set in this example) that use the PDS RAM to define their connections.
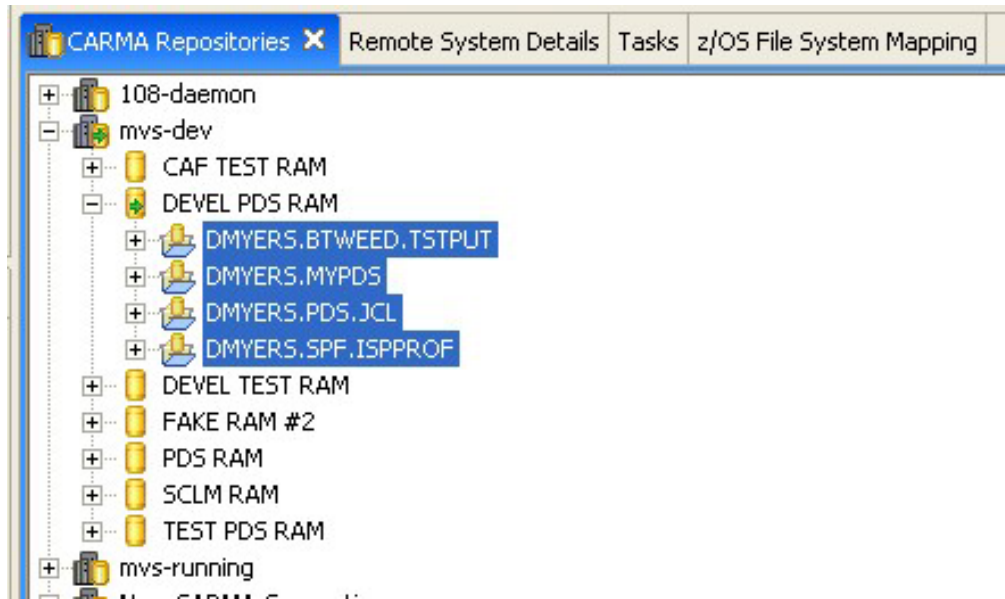
Figure 1. Repository instances

You can perform the following actions on repository instances:

- Extract a repository instance to a project
- Add a repository instance to project

  Related information

  "Extract" on page 16

  "Add to Project" on page 17

Repository content

Repository content represents members held by an SCM. Content can be individual files or containers that contain other content. The nature of repository content depends on the SCM it originates from and the RAM used to connect to the SCM. For example, for the PDS RAM shown in the illustration below, the repository content is consists of individual PDS members.
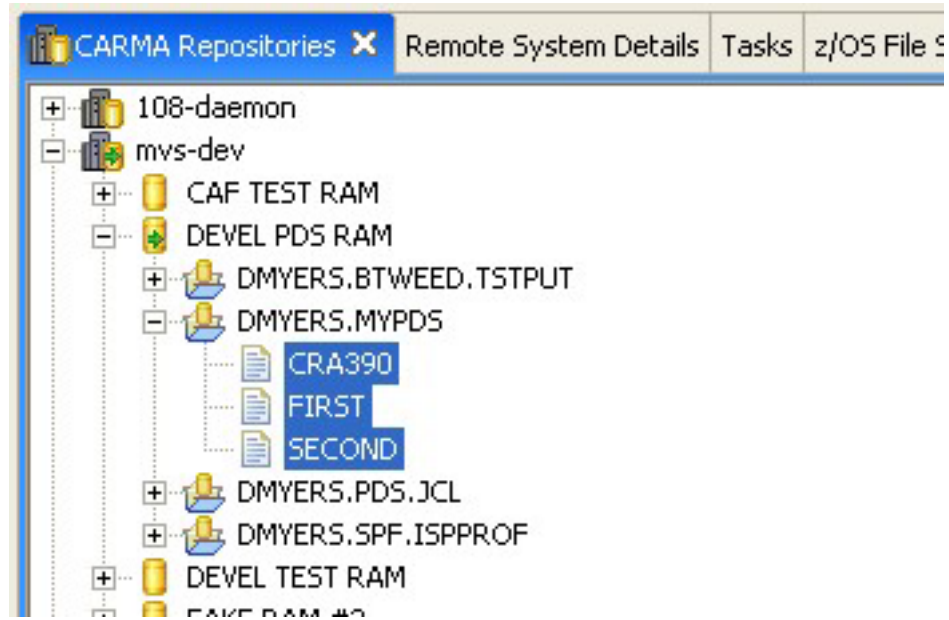
Figure 2. Repository content

You can perform the following actions on repository content:
- Refresh the content
- Lock the content to prevent access by other users
- Unlock the content to allow access by other users
- Check the content into the repository
- Check the content out of the repository

   Related information

   "Refresh" on page 15

   "Lock" on page 17

   "Unlock" on page 18

   "Check In" on page 18

   "Check Out" on page 18

Chapter 2. CARMA actions

CARMA actions are available in the context menus for the CARMA Repositories view as well as for WD/z projects that have been extracted from CARMA repositories (see ""Extract" on page 16").

Opening the CARMA Repositories view

Users access the CARMA system in WD/z from the CARMA Repositories view. In order to access CARMA, it is necessary to create a connection to the CARMA host. Once the host connection is established, users can view the available repository access managers, repository instances, and repository content.

To open the CARMA Repositories view, follow these steps:

1. From the Window menu, click **Show View > Other**. The Show View dialog opens.
2. In the Show View dialog, expand the CARMA folder, select **CARMA Repositories**, and click **OK**.
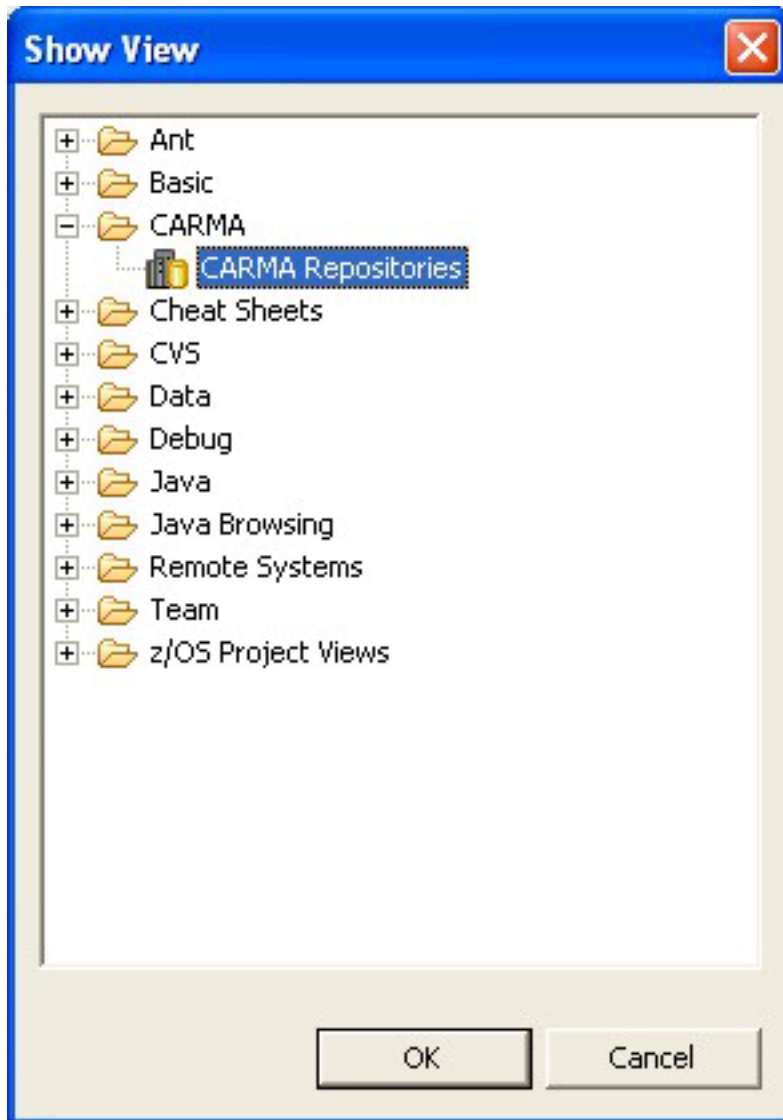
Figure 3. Selecting the CARMA Repositories view

The CARMA view opens in the lower-right corner of the current perspective. This view lists the existing connections to CARMA hosts and can be included in any perspective available within WD/z.
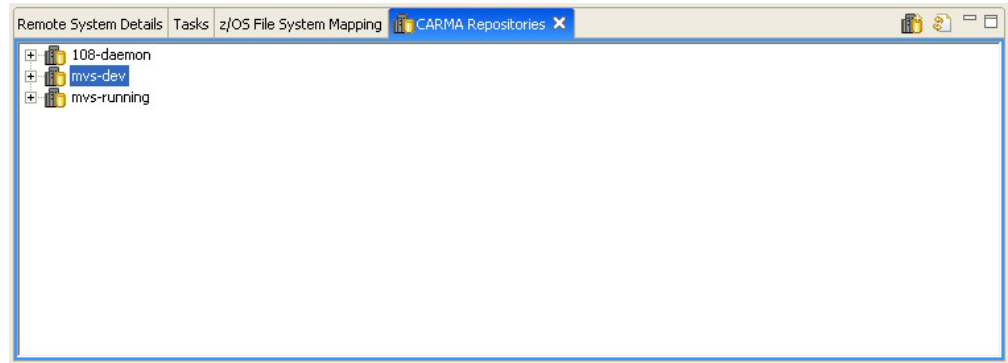
Figure 4. CARMA Repositories view

Connecting to CARMA

CARMA requires a connection to a CARMA host in order to retrieve SCM information from the host. CARMA uses the connection services of the WD/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:
   - Click the **New Connection** button .
   - Right-click inside the view and click **New Connection**.

   The New CARMA Connection wizard opens.
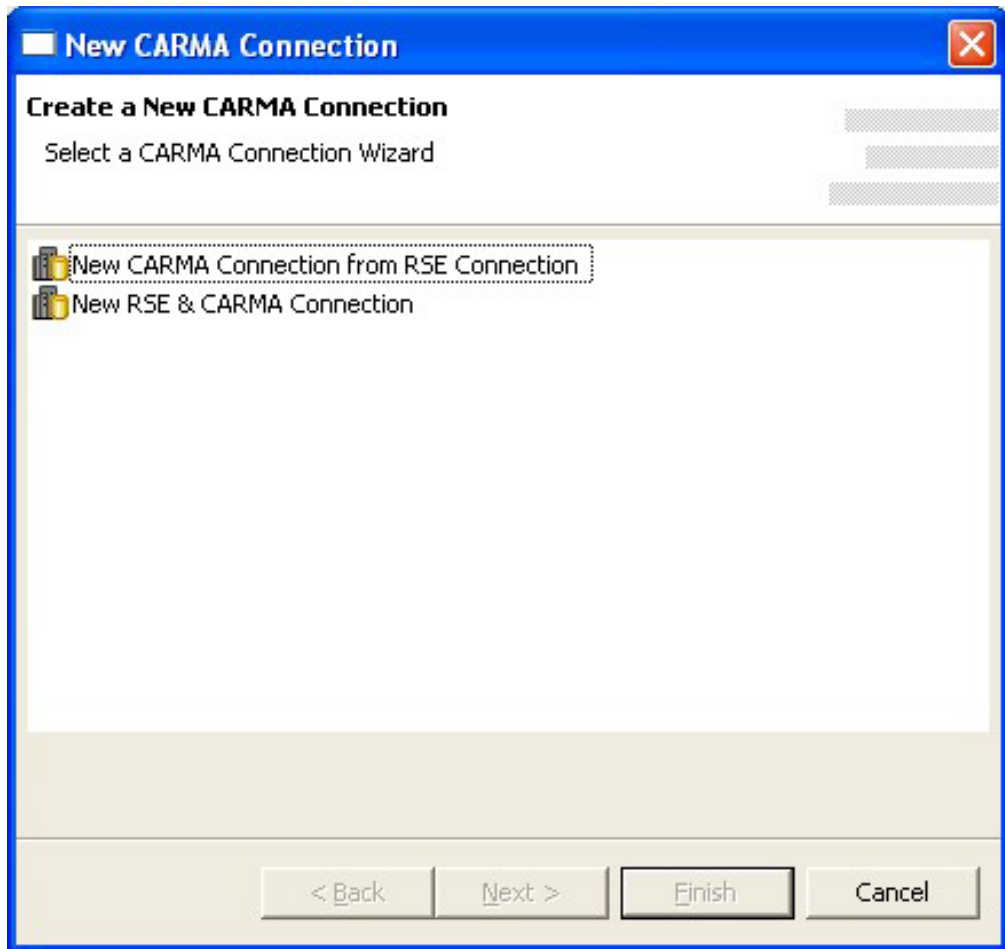
Figure 5. New CARMA connection wizard

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:
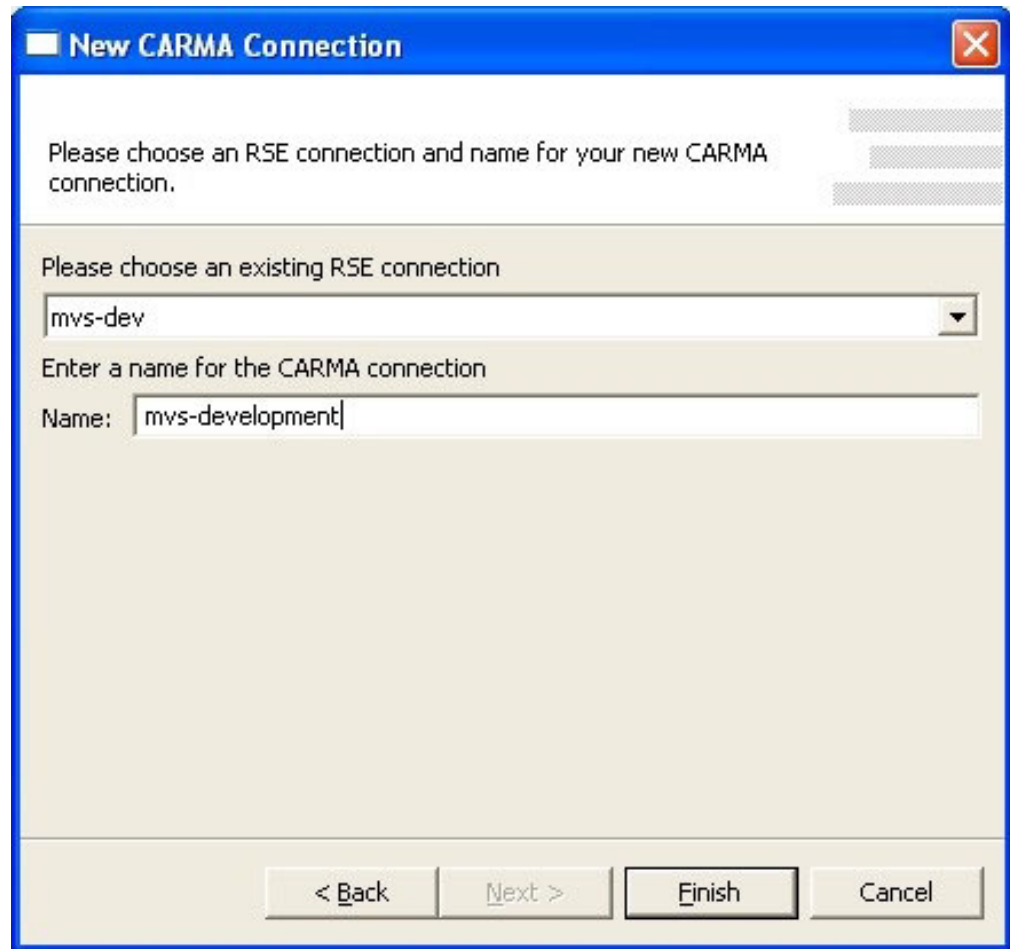
Figure 6. New CARMA connection wizard

> 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.
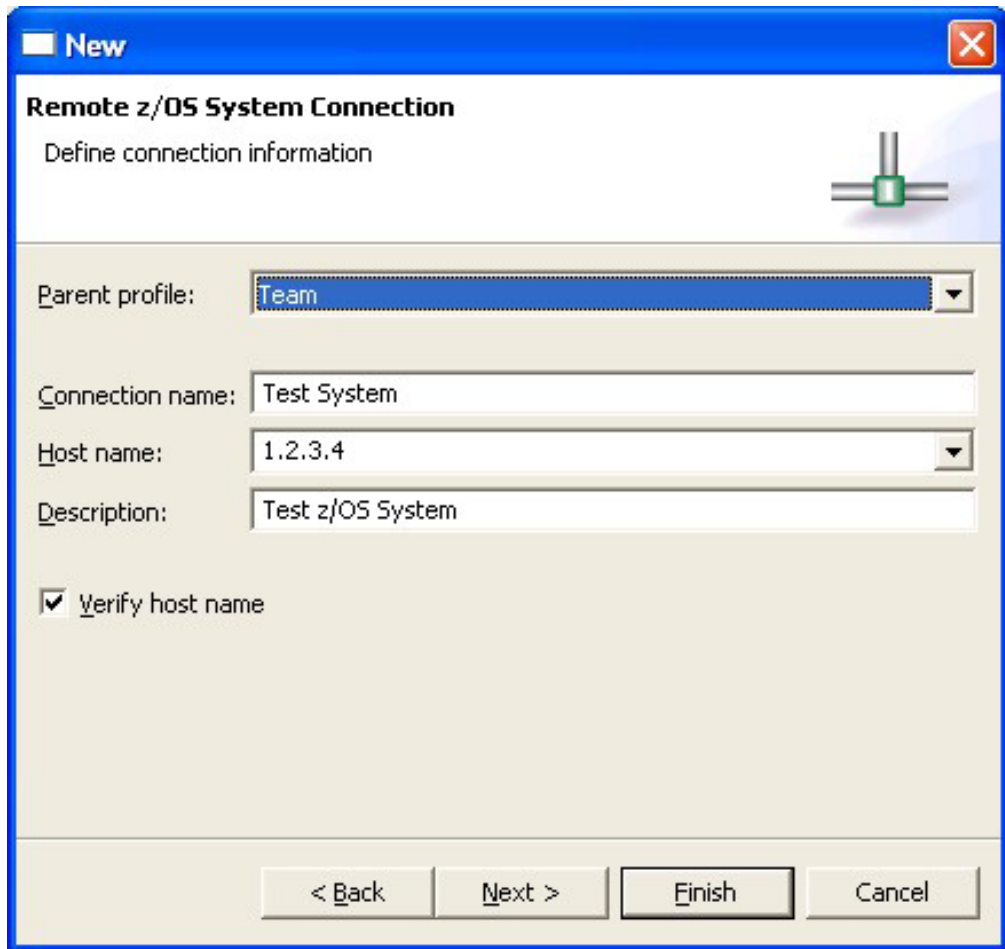
Figure 7. New connection dialog

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:
   - If you don't need to configure any JES or USS files subsystem properties,
     skip to step 8.
   - Click **Next** to proceed to the JES SubSystem Properties page.

Figure 8. JES subsystem properties dialog

    In the JES tab:
    a. In the JES Job Monitor Port field, type the port on which the Remote Job
       Monitor is listening.
    b. 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 dataset.
7. Do one of the following:
   - If you don't need to configure any USS files subsystem properties, skip to
     step 8.
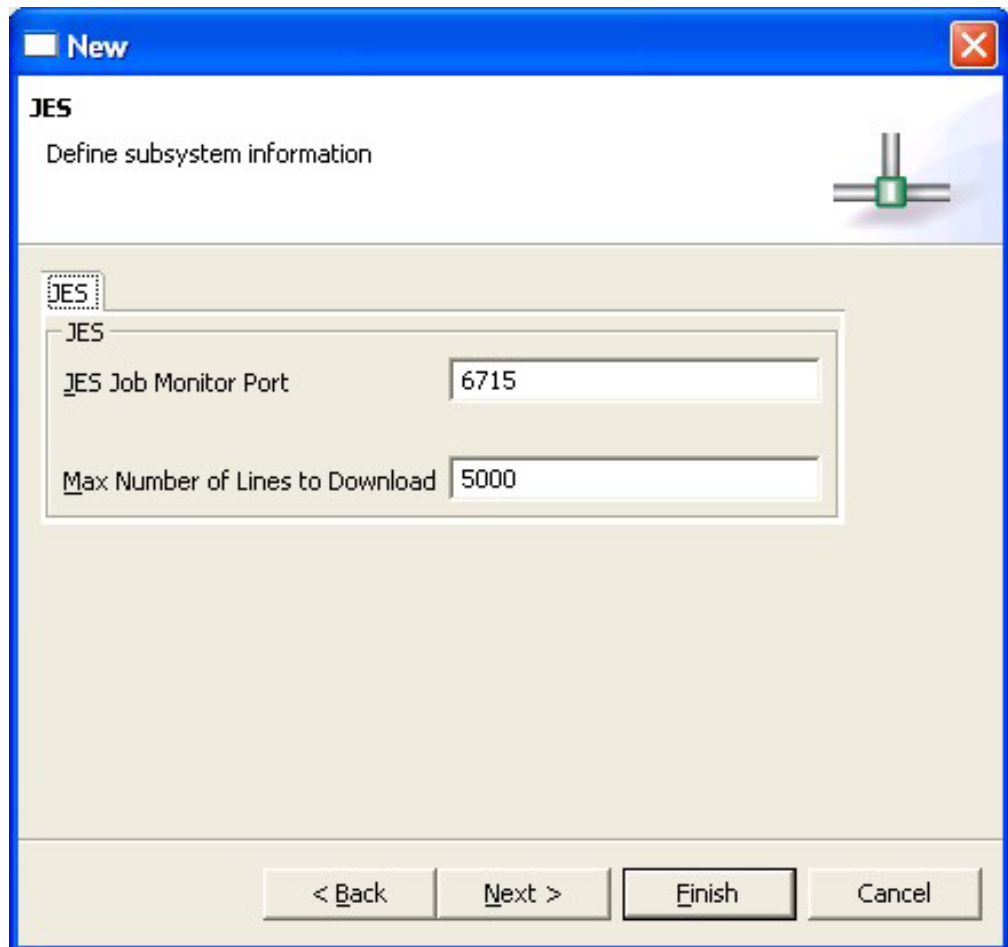   - Click **Next** to proceed to the USS Files SubSystem Properties page.
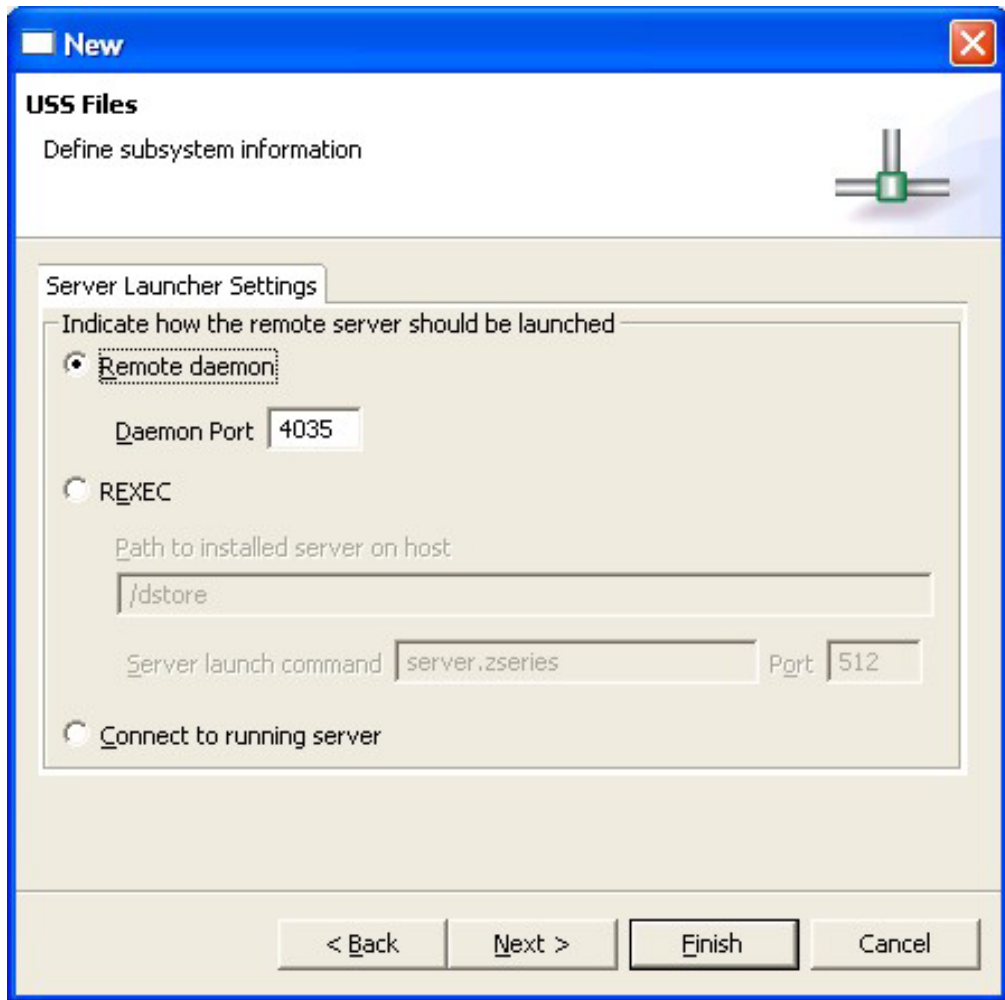
Figure 9. USS files subsystem properties dialog

In the Server Launcher Settings tab, 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.

     Note: You must start the server daemon using the root user ID. If you
     do not start the server using the root user ID, it cannot authenticate
     users who are trying to connect to the server.

  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.

– To automatically start the RSE host server using an REXEC command:

  a. Click the **REXEC** radio button.

  b. In the Path to installed server on host field, type the path where the
     RSE host server is installed on the remote host. You can specify a
     path that is relative to the directory where you run the REXEC
     command or the full path to the location where the server is installed.
     For example, dstore or /usr/bin/dstore.

  c. In the Server launch command field, type the name of the script file
     to run when you use the REXEC command to start the RSE host

server. By default, server.zseries appears; this is the sample script file that is shipped with IBM TPF Toolkit for WebSphere Studio to start the RSE host server.

  d. In the Port field, type the port number that is used by the REXEC daemon on the remote host. By default, port 512 appears.

– 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 REXEC 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:

    1) Switch to the RSE perspective.

    2) In the Remote Systems view, double-click the z/OS connection to expand it and reveal the USS Files subsystem.

    3) Right-click the USS Files node and select Properties from the pop-up menu to open the Properties for USS Files dialog box.

    4) In the left navigation pane, click Subsystem to open the Subsystem properties page.

8. Click **Finish** to create the new CARMA connection and add it to the CARMA Repositories view.
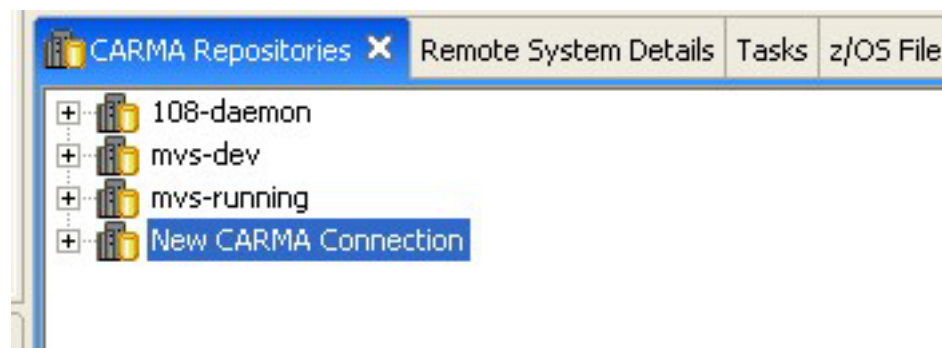
Figure 10. New CARMA connection

9. To activate the connection, do one of the following:
   - Right-click on the connection and select the **Connect** menu item.
   - Alternatively, you can activate a 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.

10. In the Enter Password dialog, type a valid user name and password and click **OK**. A list of repository access managers (RAMs) appears under the CARMA host in the CARMA Repositories view.
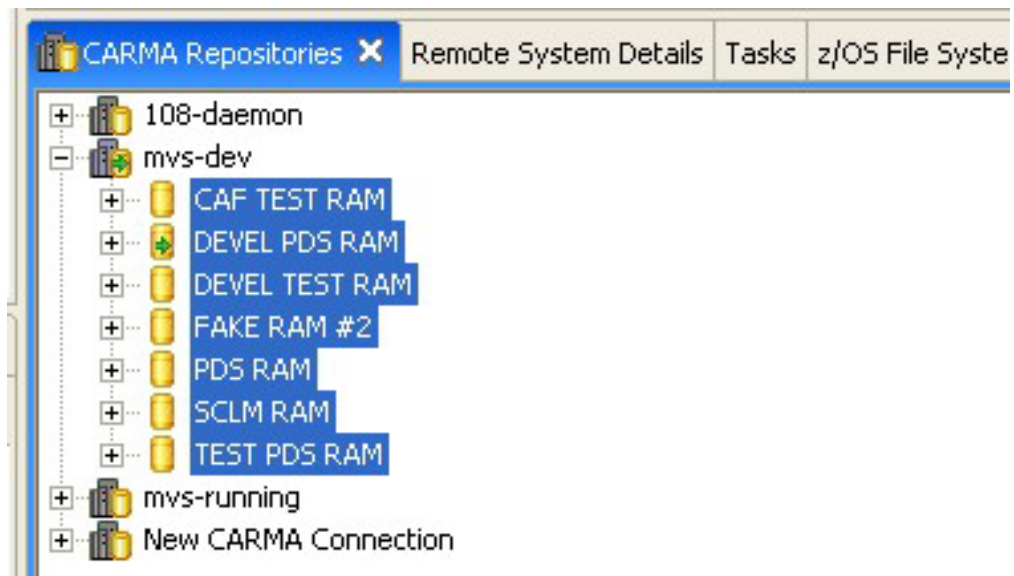
Figure 11. Repository access managers

Related information

"Disconnecting from CARMA"

"Connecting to a RAM" on page 15

"Disconnecting from a RAM" on page 15

Disconnecting from CARMA

It is possible to disconnect from a CARMA host after connecting to it. To disconnect from a CARMA host, follow these steps:

1. Right-click on the CARMA host in the CARMA Repositories view.
2. Click **Disconnect** in the context menu. The icon next to the CARMA host name should change to ![icon].

   Related information

   "Connecting to CARMA" on page 7

   "Connecting to a RAM" on page 15

   "Disconnecting from a RAM" on page 15

Deleting a CARMA connection

To delete a CARMA connection, do one of the following actions from the CARMA Repositories view:

- Select the connection you want to delete and press the **Delete** key.
- Right-click the connection name and click **Delete**. The connection is removed from the CARMA Repositories view.

Connecting to a RAM

Before you can perform actions on repository content, you must connect to the RAM used to access that repository content. The CARMA system will attempt to automatically connect to the appropriate RAM whenever an operation on repository content is performed. Alternatively, you can explicitly connect to a RAM by following these steps:

1. Right-click on the RAM in the CARMA Repositories view.
2. Click **Connect** in the context menu. If you are not already connected to the CARMA host for the RAM, the Enter Password dialog opens.
3. In the Enter Password dialog, type a valid user name and password and click **OK**.
4. The icon next to the RAM name should change to .

   Related information

   "Connecting to CARMA" on page 7
   "Disconnecting from CARMA" on page 14
   "Disconnecting from a RAM"

Disconnecting from a RAM

It is possible to disconnect from individual RAMs within a CARMA host. To disconnect from a RAM, follow these steps:

1. Right-click on the RAM in the CARMA Repositories view.
2. Click **Disconnect** in the context menu. The icon next to the RAM name should change to .

   Related information

   "Connecting to CARMA" on page 7
   "Disconnecting from CARMA" on page 14
   "Connecting to a RAM"

Refresh

Users can refresh any item displayed in the CARMA Repositories view. The Refresh task contacts the CARMA host to obtain the most recent information relating to:

- List of RAMs
- List of RIs
- New respository content

The Refresh task adds and removes any content that has been changed in the SCM by other users since the last refresh action, and refreshes the names and properties of the content.

Extract

Repository instances can be extracted to a WD/z project to provide a copy of the RI content that users can manipulate locally without updating host contents. To extract a repository instance to a WD/z project follow these steps:

1. Right-click the repository instance in the CARMA repositories view.
2. Click **Extract** on the context menu.

   The Extract dialog opens.

Figure 12. Extract dialog

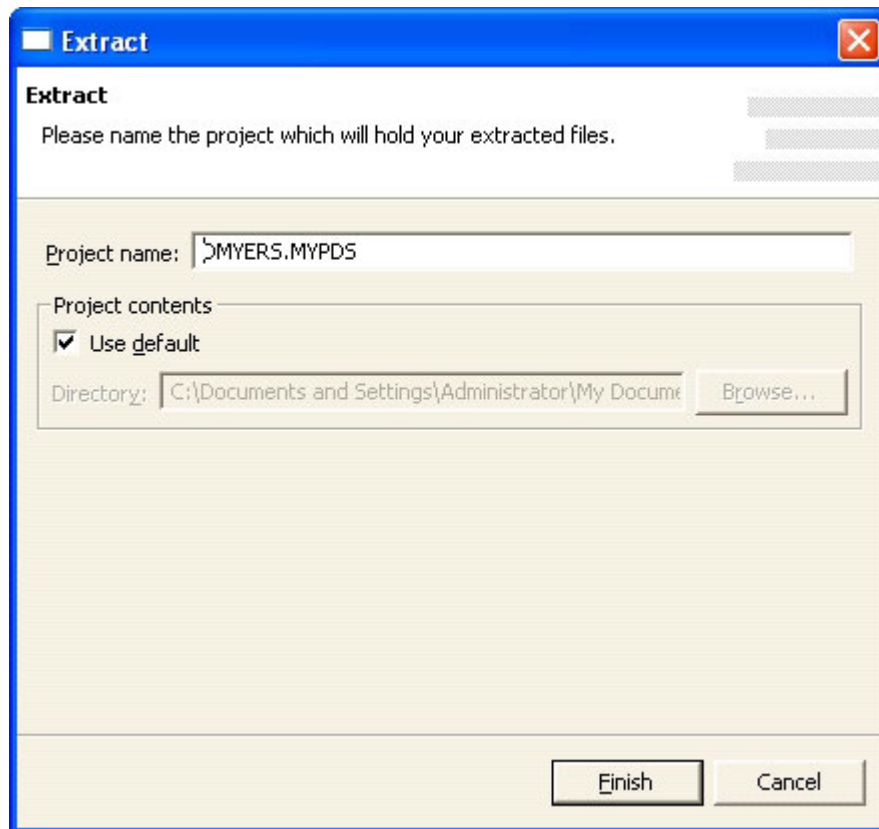3. Type the name of the project to create and the directory in which the files will be stored locally.
4. Click **Finish**.

   The directory structure and file contents are copied to the local file system. The WD/z project containing the newly downloaded repository content is available in the WD/z Navigator view.

The PDS RAM currently supports extracting files with a record format of "Fixed Block".

Add to Project

Repository instances can be added to an existing WD/z project to provide a copy of the repository instance content that users can manipulate locally without updating host contents. To add a repository instance to a WD/z project follow these steps:

1. Right-click the repository instance in the CARMA repositories view.
2. Click **Add to Project** .

   The Add to Project dialog opens.
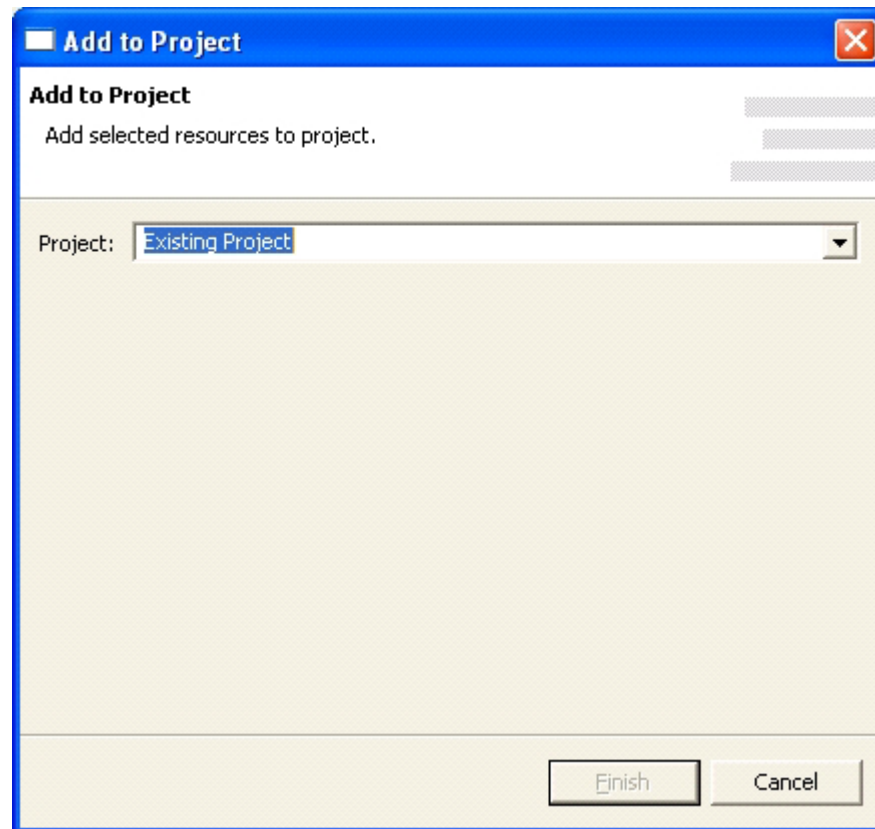
Figure 13. Add to Project dialog

3. Select the project to add the repository content to from the drop-down list.
4. Click **Finish**.

   The file hierarchy structure and file contents are copied to the local storage location for the specified WD/z project. The WD/z project containing the newly downloaded repository content is available in the WD/z Navigator view.

Lock

The Lock task makes repository content read-only for all users except for the user who locked the content. To lock repository content, follow these steps:

1. Right-click the content to be locked.
2. Click **Team > Lock**.

   The lock task is sent to the CARMA host and a request is submitted to the repository to lock the selected content.

The PDS RAM currently does not support the Lock task.

Unlock

The Unlock task makes repository content editable for all users. The Unlock task is only available for repository content that is locked by the user. To unlock repository content, follow these steps:

1. Right-click the content to be unlocked.
2. Click **Team > Unlock**.

    The Unlock task is sent to the CARMA host and a request is submitted to the repository to unlock the selected content.

The PDS RAM does not currently support the Unlock task.

Check Out

The Check Out task downloads content from the CARMA repository, marks the content as checked out of the repository, and prevents other users from checking out that content. The Check Out task is only available for repository content that is not checked out by the user. To check out repository content, follow these steps:

1. Right-click the content to be checked out.
2. Click **Team > Check Out**.

    The Check Out task is sent to the CARMA host and a request is submitted to the repository to check out the selected content.

The PDS RAM does not currently support the Check Out task.

Check In

The Check In task updates content in the CARMA repository, marks the content as checked into the repository, and allows other users to check out that content. The Check In task is only available for repository content that is checked out by the user. To check in repository content, follow these steps:

1. Right-click the content to be checked in.
2. Click **Team > Check In**.

    The Check In task is sent to the CARMA host and a request is submitted to the repository to check in the selected content.

The PDS RAM does not currently support the Check In task.

Upload Local File

The Upload Local File task updates the selected content in the CARMA repository. The Upload Local File task is available on any repository content that has been extracted from CARMA. In order to upload repository content:

1. Right-click the content to be uploaded.
2. Click **Team > Upload Local File**.

    The local contents are sent to the CARMA host and stored in the associated repository.

The PDS RAM currently supports uploading content with a record format of "Fixed Block".

Replace Local File

The Replace Local File task updates the selected content in the local workspace. The Replace Local File task is available on any repository content that has been extracted from CARMA. to replace the local version of repository content, follow these steps:

1. Right-click the content to be replaced.
2. Click **Team > Replace Local File**.

   The repository content is retrieved from the CARMA host and overwrites the local version of the selected content.

The PDS RAM currently supports replacing files with a record format of "Fixed Block".

Member information (metadata)

CARMA allows you to query the CARMA repository for metadata related to members. To view metadata properties related to repository content, follow these steps:

1. Right-click the content.
2. Click **Properties** .
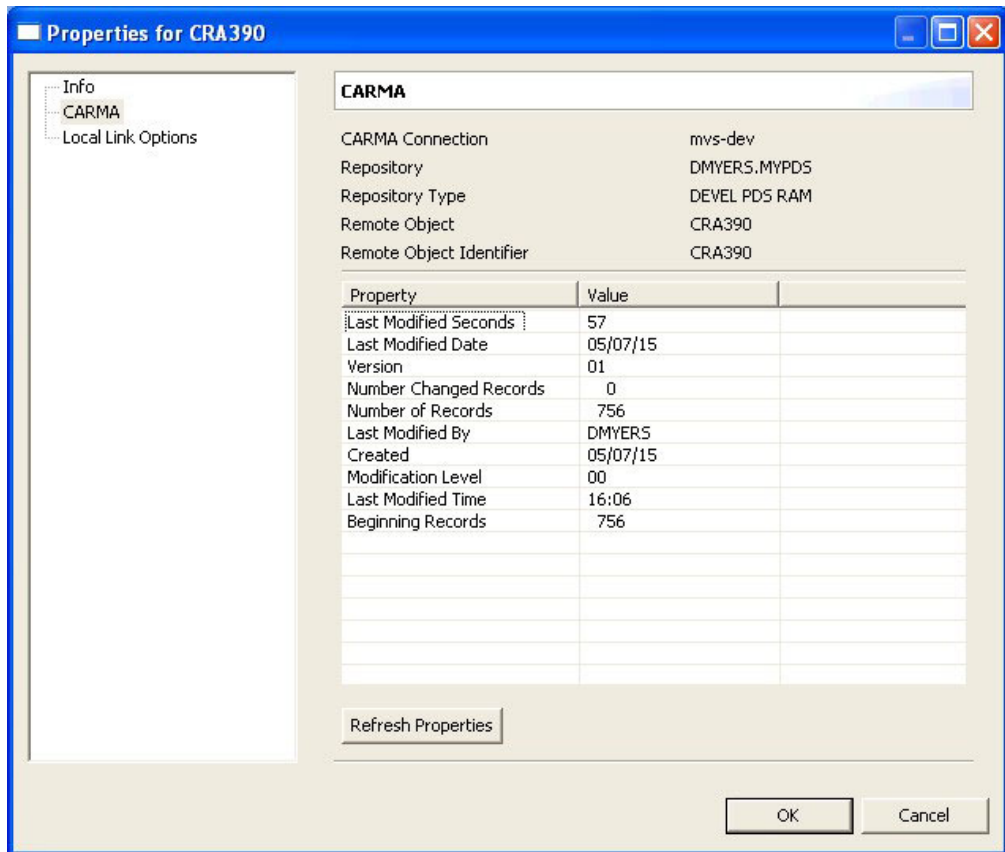
   The Properties dialog opens.

Figure 14. Properties dialog

3. Optional: To retrieve the most recent property values from the repository, click on the **Refresh Properties** button.

Disabling unsupported actions

Certain SCMs, due to their limitations, may not support all the actions offered by CARMA. When users attempt to perform one of these actions, a dialog will open, providing the option of disabling that action for that specific RAM. The example dialog that follows is the result of attempting to execute the Lock action on a PDS data member. Since the Lock action is not supported by the PDS RAM the following dialog opens, offering the choice of disabling the action in the future.
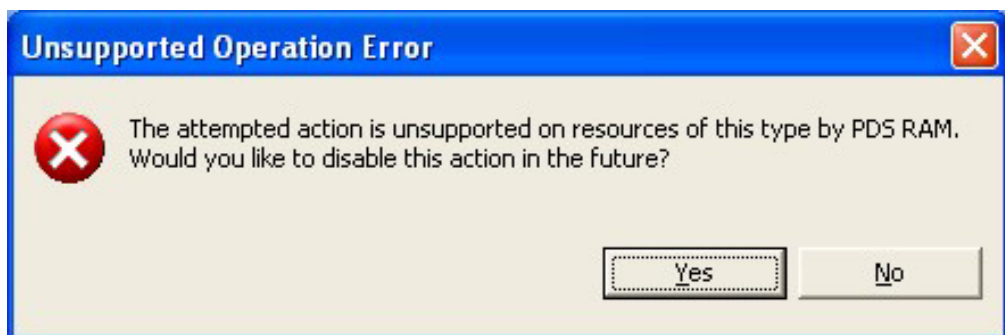

Figure 15. Disable action dialog for the PDS RAM

Clicking **Yes** in the example dialog above would disable the Lock action for all repository instances that use the PDS RAM. The Lock action will still be displayed in CARMA context menus for PDS RAM content, but it will be disabled.

Related information

"Re-enabling disabled unsupported actions"

Re-enabling disabled unsupported actions

It is possible to re-enable unsupported actions once they have been disabled. Follow these steps to enable those actions that have been disabled:

1. From the Window menu, click **Preferences**. The Preferences dialog opens.
2. In the list on the left, click **Team > CARMA**.

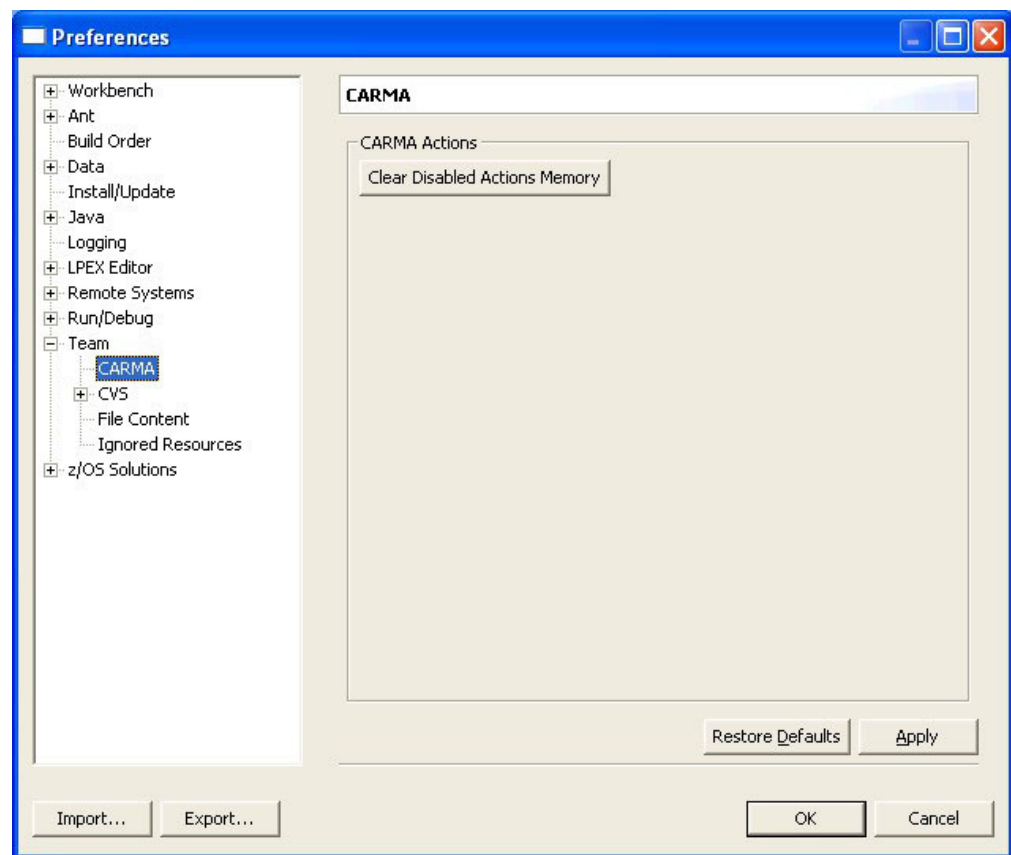   The CARMA preferences pane is displayed on the right.

Figure 16. CARMA preferences dialog

3. Click on the **Clear Disabled Actions Memory** button.

   Related information

   "Disabling unsupported actions" on page 20

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Publication No. SC31-6913-00

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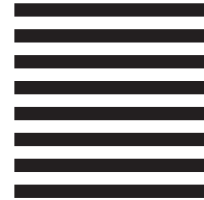Fold and Tape   **Please do not staple**   Fold and Tape

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