



Enterprise Sync 2.0

Installation and Configuration Guide

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Contents

Introduction	4
Enterprise Sync Data	5
Components	6
Installation and Configuration	7
AccuRev Configuration	7
Define AccuRev User	7
Define AccuRev Depot	7
Define AccuRev Stream Structure	8
Stop AccuRev Services	9
Modify the acserver.cnf File	9
Using the AccuRev WebUI	9
Installing Mainframe Access Server	10
Installing Enterprise Sync	10
Installing the AWM Endeavor Model	11
Configuring Sync Rules	11
Configuring Enterprise Developer for Enterprise Sync	15
Getting started with Enterprise Developer	16
Troubleshooting	26
Reviewing Log Files	26
Resetting Mappings	26

Introduction

Enterprise Sync is a bundle of products that allows you to connect your mainframe Endeavor system to an AccuRev system to synchronize the files between the systems. Using AccuRev, you will have file history, visual representations of files navigating through the development process, easy to generate *differences* reports between file versions, etc.

The bundle is comprised of and requires the following products, some of which must be installed separately:

Server Componets

Micro Focus Mainframe Access Server

Mainframe Access Server is a mainframe server component that communicates with Endeavor.

Enterprise Sync Server

The Micro Focus Enterprise Sync Server components synchronize sources and meta data between the SCM on the mainframe and sources managed on a distributed platform. The server components that make up Enterprise Sync include:

Mainframe Access Client

Communicates with Mainframe SCCM through the MFA Server.

AccuRev Client

End-users and client programs perform operations on the AccuRev client. Operations can take place from the command line, AccuRev GUI, Web UI, or through an IDE Plugin. The client process is installed as part of the installation and communicates with the server process.

Micro Focus Connect

Manages and performs the synchronization process.

AccuRev Server

AccuRev is a centralized version control system which uses a client/server model. The AccuRev Server maintains all the source and metadata within a data repository. The data repository is built around a database technology that is transaction-based and manages the tables as append-only. There is a server process installed as part of the AccuRev Server that manages the AccuRev repositories and handles all communication between the server and the AccuRev clients.

Micro Focus Workflow Manager Endeavor Attachment

An Application Workflow Manager model that provides integration to Endeavor and AccuRev tools and processes directly from an Enterprise Developer Eclipse project. Refer to the Enterprise Developer documentation for more details.

Client Components

AccuRev Client

Windows based GUI to allow developer to access version controlled source assets managed in the AccuRev Server.

AccuRev Eclipse Plugin

Provides access to version controlled source assets directly from the Enterprise Developer Eclipse IDE.

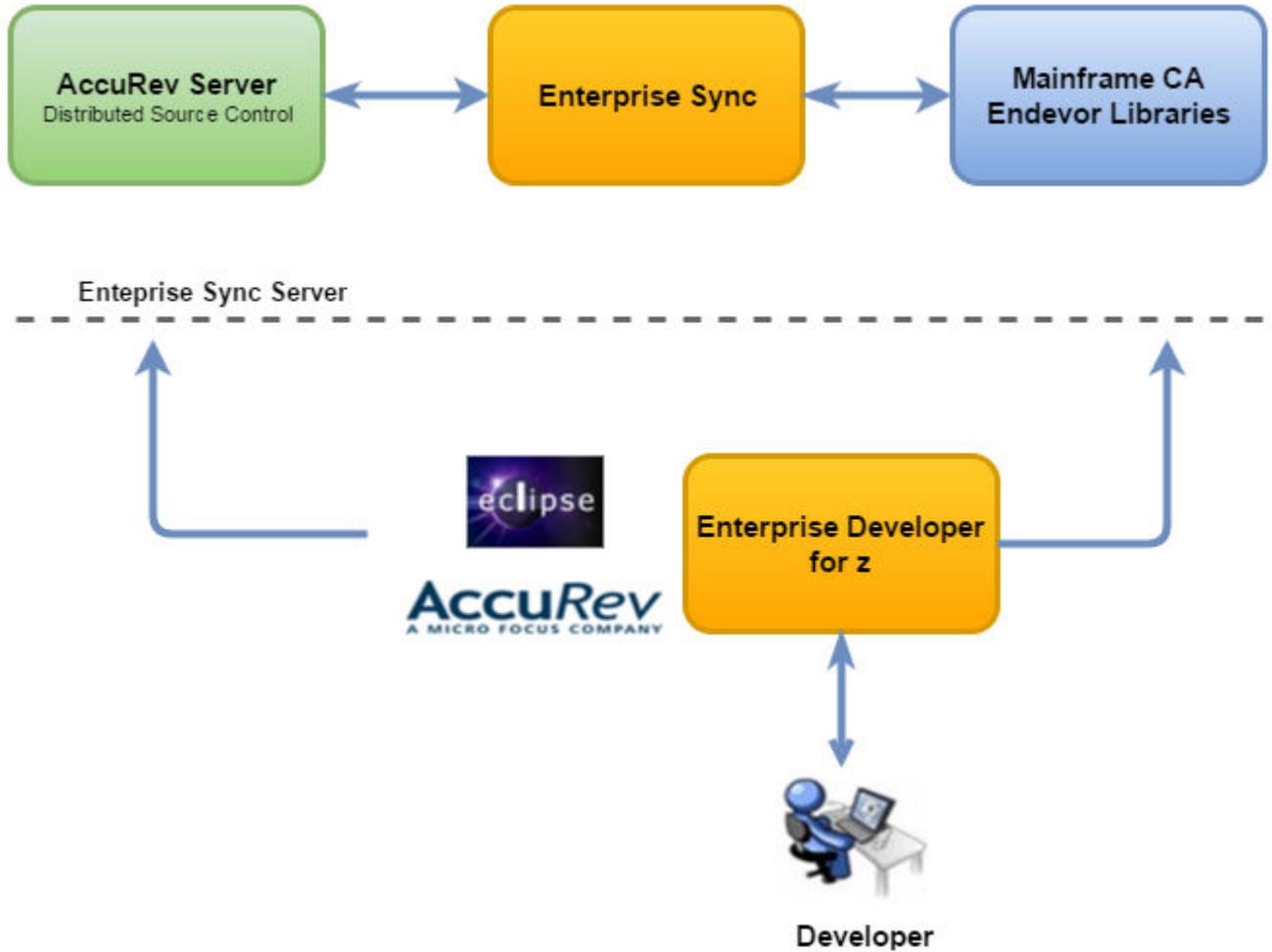
Enterprise Sync Data

Enterprise Sync is a synchronization tool capable of mapping data between SCM systems.

Enterprise Sync syncs data to and from CA Endeavor libraries on the IBM mainframe and source libraries maintained on a distributed system. This allows developers to take advantage of modern tools for managing source change in parallel with efficient source merging and retrofitting of changes but having these changes automatically synchronized with the main source streams maintained on the mainframe.

Components

The components in the Enterprise Sync solution communicate with each other in the following manner:



Installation and Configuration

The topics in the section will walk you through configuring your systems and installing the required components. It is important to follow these procedures in the order that they are listed.

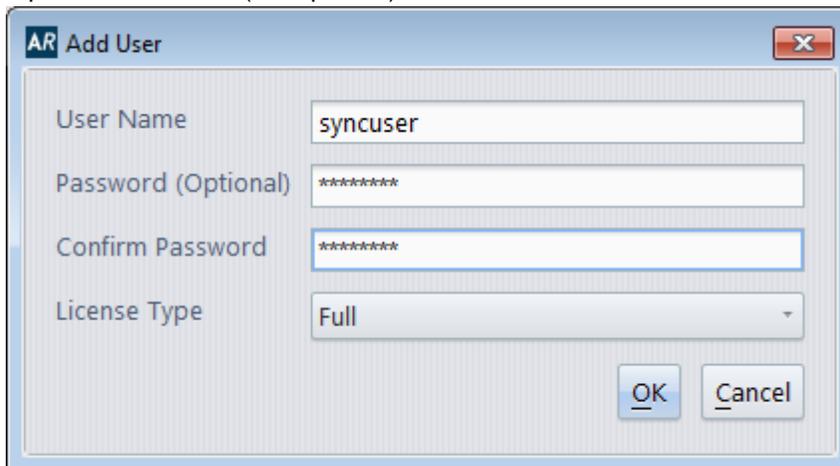
AccuRev Configuration

Enterprise Sync works with the AccuRev 6.2.3 release. For full installation/configuration procedures for the AccuRev client and server, refer to the *AccuRev Installation and Release Notes*: <https://supportline.microfocus.com/productdoc.aspx>.

The following sections are required to configure AccuRev with Enterprise Sync.

Define AccuRev User

Define an AccuRev user that will be used later during the synchronization process. This user must have a password defined (not optional).

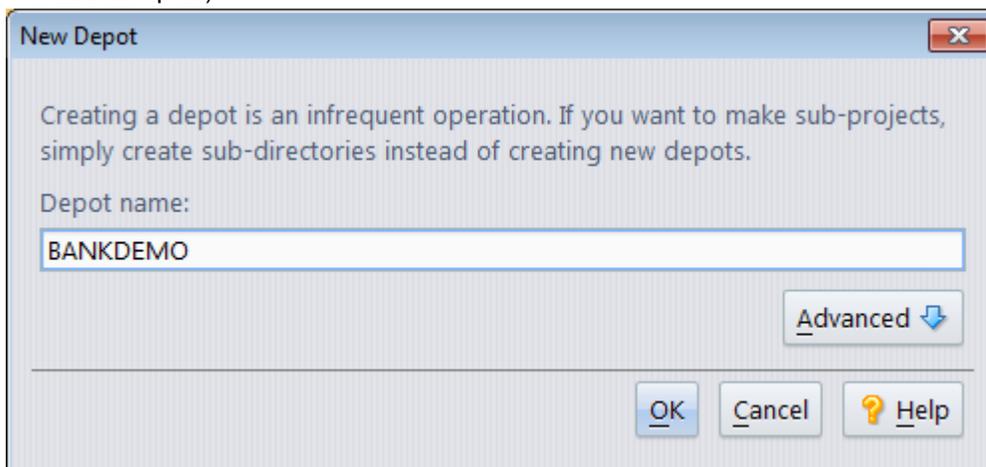


The screenshot shows a dialog box titled "AR Add User". It contains the following fields and controls:

- User Name:** A text box containing "syncuser".
- Password (Optional):** A text box containing "*****".
- Confirm Password:** A text box containing "*****".
- License Type:** A dropdown menu with "Full" selected.
- Buttons:** "OK" and "Cancel" buttons at the bottom right.

Define AccuRev Depot

Define at least one depot used as a target for synchronizing Endeavor elements (we will use BANKDEMO in these samples).



The screenshot shows a dialog box titled "New Depot". It contains the following fields and controls:

- Text:** "Creating a depot is an infrequent operation. If you want to make sub-projects, simply create sub-directories instead of creating new depots."
- Depot name:** A text box containing "BANKDEMO".
- Buttons:** "Advanced" (with a downward arrow), "OK", "Cancel", and "Help" (with a question mark icon) at the bottom.

Define AccuRev Stream Structure

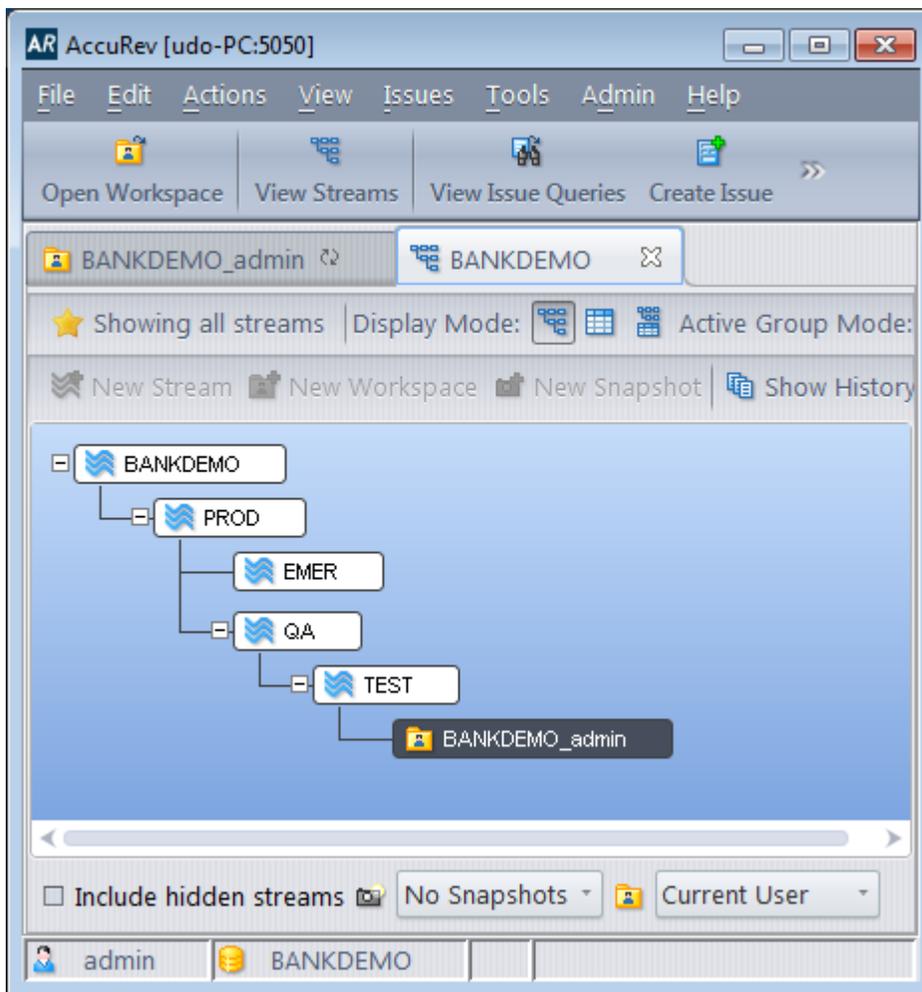
The Bankdemo sample uses the streams PROD, EMER, QA and TEST structured as shown in the image below. It is assumed that the corresponding Endeavor installation contains two Endeavor environments: environment SMPLPROD with the stage 1 EMER and stage 2 PROD and environment SMPLTEST with stage 1 TEST and stage 2 QA.

Important: All streams used for synchronization must be defined in AccuRev and must be empty before running the first synchronization. Also note: We do not recommend using the root entry bankdemo as stream used for synchronization of the Endeavor production stage.

The screenshot shows a 'New Stream' dialog box with the following fields and options:

- Name:** TEST
- Basis:** QA
- Stream Type:** Dynamic stream, Snapshot, Pass-through stream, Gated stream
- Basis Time:** None, Now, As transaction # [text box], Specified [calendar widget]

Buttons at the bottom: **OK**, **Cancel**, **Help**



Stop AccuRev Services

1. Close the AccuRev GUI.
2. Stop the AccuRev Server (use the **Services** panel and then right click **Stop** on the AccuRev Server entry).

Modify the acserver.cnf File

1. Edit the `acserver.cnf` file and add a `CC_USER` line referencing the defined synchronization userid (syncuser in our sample).

```
# Enterprise Sync User
CC_USER = syncuser
```



Important: The `CC_USER` and the user configured in the AccuRev data source in Micro Focus Connect must be the same.

2. Save and close the file.
3. Return to the **Services** panel and restart the AccuRev Server.

Using the AccuRev WebUI

These optional steps allow you to use the AccuRev WebUI within Enterprise Developer:

1. Stop the AccuRev Tomcat server.
2. Create a settings file, `settings.xml`, in the following directory: `C:\Program Files\AccuRev\storage\site_slice\dispatch\config`.
3. Add the following content to the file:

```
<settings>
<webui url="http://###.###.###:####/accurev"/>
</settings>
```



Note: Replace the numbers with the IP Address followed by the port number.

4. Restart the AccuRev Tomcat server.

Installing Mainframe Access Server

Follow the steps at the following location to install the Mainframe Access Server: <http://documentation.microfocus.com/help/topic/com.microfocus.eclipse.infocenter.enterprisedeveloper.eclipsewin/GUID-AEE9760E-7A58-4162-A180-E0DB2FBDF886.html>

Installing Enterprise Sync

You will need the AccuRev Host Name/IP Address and Port during this installation.

Use the following steps to install Enterprise Sync.

1. Using Administrator credentials, double click the installation media (`enterpriseSync.exe`) to start the install.
2. Click **Next** on the Introduction screen.
3. Read the license agreement and check the **I accept the terms of the license agreement** checkbox.
4. Click **Next**.
5. On the Choose Install Folder screen, either accept the default location or choose another one. Click **Next**.
6. On the **AccuRev server parameters** page, enter the **Host Name** and **Port** of the AccuRev server. Click **Next**.
7. On the **Choose Shortcut Folder**, enter the location for the product icons. Click **Next**.
8. Review the **Pre-Installation Summary** page and click **Install** to install the components.
9. When the wizard is finished, click **Done**.

Two Enterprise Sync Services were started automatically: Enterprise Sync Web Service and EnterpriseSyncConnect.

To verify the installation:

1. Open the page `http://localhost/ConnectWeb` in your browser.
2. Enter user Administrator and password Administrator.
3. Use the DefaultAuthenticator.
4. Click **Login**.

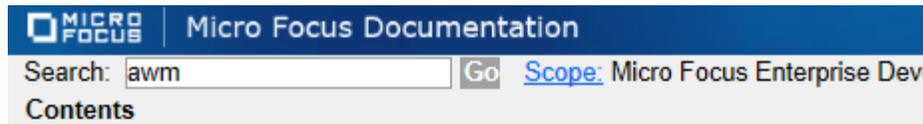


Note: User name and password are case sensitive.

Installing the AWM Endeavor Model

The Workflow Manager (AWM) Endeavor Attachment must be installed and configured. The specific AWM model NDVACONF - which is part of the Endeavor Attachment - has to be used to support the client access to the AccuRev server and to Endeavor.

Find the Enterprise Developer 2.3 Update 1 for Eclipse product documentation for details how to install and to configure this feature (<http://documentation.microfocus.com/help/index.jsp>).



Scope Micro Focus Enterprise Developer 2.3 Update 1 for Eclipse: [Show all](#)

- [-] Enterprise
 - [-] Micro Focus Enterprise Developer 2.3 Update 1 for Eclipse
 - [-] Welcome
 - [-] Developing Applications in the IDE
 - [-] Programming
 - [-] General Reference
 - [-] Application Workflow Manager
 - [-] Compatibility and Upgrades
 - [-] Workflow Manager Modeling Guide
 - [-] Workflow Manager ChangeMan Attachment
 - [-] Workflow Manager Endeavor Attachment
 - [-] Introduction
 - [-] Installation
 - [-] The Endeavor Attachment
 - [-] Customization

<http://documentation.microfocus.com/help/topic/com.microfocus.eclipse.infocenter.enterprisedeveloper.eclipsewin/GUID-C1553D93-753E-4B7D-9DD0-E66F025E11CE.html>

Configuring Sync Rules

This topic will walk you through mapping your Endeavor environment to your AccuRev environment using the Micro Focus Connect UI. However, the following must be complete before continuing this procedure:

- AccuRev server** Must be installed. You will need the AccuRev server address and port, the AccuRev user/password and the depot and stream names during the configuration.
- Enterprise Sync server** Must be installed.
- MFA server** Must be installed on the mainframe. You will need the mainframe hostname or IP Address and the MFA port during the configuration and the mainframe userid/password used to connect to the mainframe.



Note: A connection to the mainframe is already required during the configuration, not only when running the synchronization.

1. On the machine where Enterprise Sync is installed, type the following into your browser: `http://localhost/ConnectWeb`. This opens Micro Focus Connect.

2. Enter **User Administrator** and **Password Administrator**. User name and password are case sensitive.
3. For the **Authenticator**, use the `DefaultAuthenticator`.
4. Click **Login**.
5. Click **Actions**  and then select **Settings**. The **Global Settings** screen appears.
6. In the **Sync Settings** group, enter 1 for the **Maximum Number of Threads**.
7. Click **Save**.
8. Click on the **Data Source** tab, then click **Create New Data Source**.
9. Enter a **Name** for the AccuRev data source. For example: `AccuRevDS`.
10. Select `AccuRev` as the **Data Source Product**.
11. Click **Add Data Source**.
12. Select the added data source for AccuRev on the left side of the page and then enter the AccuRev specific connect parameters.

Note the following:

Exclude List This is a colon separated string that does pattern matching against files and can be used to exclude files from sync operations. If you add a directory named `source` in AccuRev and you don't want it to sync, the exclude list would include `source`. If there was a specific file in `source` you don't want, for example, `source\readme.txt` you would include that in the string. So multiples would look like:
`source:docs\readme.txt:bin`

This would exclude elements at the root of your AccuRev streams and workspaces `source`, `bin` and the file `docs\readme.txt`.

Full Path to AccuRev executable If AccuRev is not installed separately on this machine, you will find the path to the AccuRev executable in a sub directory of the Enterprise Sync installation path, by default here: `C:\Program Files (x86)\Micro Focus\Enterprise Sync\connectors\accurev\accurev`.

Time OffSet You can leave this blank.

User Name This field must match the `CC_USER` name described in [Modify the `acserver.cnf` File](#).

Update data source property values (* indicates value is required)	
<div style="display: flex; justify-content: space-between;"> Save Changes Cancel Changes </div>	
Property Name ↑	Property Value
AccuRev Port *	5050
AccuRev Server *	localhost
Depot Name *	BANKDEMO
Exclude List	
Full Path to AccuRev executable *	C:/Program Files/AccuRev/bin/accurev
Password *	*****
Time OffSet	
User Name *	syncuser

13. Click **Save Changes**.
14. Click **Create New Data Source** again.
15. Enter a name for the data source. For example: `EndevorDS`. Select the **Data Source Product** `Endevor`.
16. Click **Add Data Source**.
17. Select the added data source for `Endevor` on the left side of the page and then enter the `Endevor` specific connect parameters:

Update data source property values (* indicates value is required)	
<input type="button" value="Save Changes"/> <input type="button" value="Cancel Changes"/>	
Property Name ↑	Property Value
Endevor Node *	10.24.11.231
Endevor Port *	3141
Endevor Server *	csimvs
Extensions File	
Include SubSystem in Path *	true
Password *	*****
Time OffSet	
User Name *	MFIUPH

Note the following:

- Endevor Node** Enter the mainframe IP address in the field.
- Endevor Port** Enter the MFA port
- Endevor Server** Must contain a unique server name for this connection (any unique value).
- Include SubSystem in Path** Select `True` if you want to include `Endevor` subsystem names in the synchronization path. Normally you would select `False` if an `Endevor` system has exactly one subsystem, and the subsystem name is not relevant in this context.
- Extensions File** The format of the file content will follow: `java.util.Properties`:

```
KEY=VALUE, PROCESSOR-GROUP
COBOL=CBL, *NOPROC*
COPY=CPY, CICS
EXE=EXE
TRS=TRS
ASM=asm
BMS=asm
JCL=jcl, CICS
JCLPROC=jcl, CICS
```

Put the full path and name. For example: `C:\TEMP\endevorExtensions.properties`.

- KEY** A valid `Endevor` Type
- VALUE** A file extension which is added to the `Endevor` element name when synchronizing files to `AccuRev`.

Processor Group The Processor group is optional, if not supplied, the default *NOPROC* will be used.

For example: COBOL=cb1

An Endeavor COBOL element COB0001 is synchronized as COB0001.cbl

Time OffSet You can leave this blank.

18. Click **Save Changes**.

19. Click the **Connections** tab and then click **Add**.

20. On the **Create Connection Wizard** page enter a name for the new connection (for example, NDV2ACC) and select the Endeavor data source as the Master and the AccuRev data source as the Target. Then click **Next**.

21. On the **Types and Fields** page select `From Master` as the **Default Sync Direction** and then click **Add Type Mapping**.

22. Select `ChangeSet` for both AccuRev and Endeavor Types, ignore all other entries, and click **OK**.

23. Click **Next** on the **Types and Fields** tab.

24. On the **Projects** tab click **Add** for each required mapping from Endeavor to an AccuRev stream. In our `BANKDEMO` sample we will synchronize from Endeavor to AccuRev the `BANKDEMO` subsystem in the stages `PROD`, `EMER` and `QA`. Therefore we will have to define the following three mappings.

Do not define the mapping for stage `TEST` in this dialog because you will need a bi-directional mapping for stage `TEST`. After all relevant mappings have been added click **Save** to save this connection and to leave this connection wizard.

Selected Projects

Click the **Add** button to specify which projects are mapped using the current Connection settings.

Add

AccuRev Project (Target)	Mapped to	Endeavor Project (Master)
PROD	↔	env=SMPLPROD:stage=PROD:sys=MFIUPH:sub
EMER	↔	env=SMPLPROD:stage=EMER:sys=MFIUPH:sub
QA	↔	env=SMPLTEST:stage=QA:sys=MFIUPH:subsys

25. Repeat the previous steps and define the required bi-directional mappings. In our sample, this is the mapping of subsystem `BANKDEMO` from the Endeavor stage `TEST` to stream `TEST`.

26. The initial status is `New connection` but will change to `Disabled`. Use the refresh button on the right side of the page to update the status fields.

27. To start the sync, click the **Start** button. Depending on the number of elements to synchronize the initial synchronization process will take a while.

The icon changes if the synchronization is running.

You can stop the synchronization process, if required. Use the **Refresh** button to see the current status.

When the initial synchronization process is running the status is `Restarting`.

Micro Focus Connect will begin running regular synchronizations based on the duration configured in the **Synchronization Frequency** setting. You can change this in **Global Settings**.

Configuring Enterprise Developer for Enterprise Sync

The following must be configured before continuing this procedure:

Enterprise Sync Installation must be complete and configured successfully for the synchronization process. All required initial syncs running successfully. See [Configuring Sync Rules](#).

Enterprise Developer 2.3 Update 1 HotFix 1 installed. An Enterprise Developer for z Systems license or an Enterprise Developer Connect license is required (see Enterprise Developer 2.3 Update 1 for Eclipse product documentation for details how to install and to configure this product).

Scope Micro Focus Enterprise Developer 2.3 Update 1 for Eclipse: [Show all](#)

- [-] Enterprise
 - [-] Micro Focus Enterprise Developer 2.3 Update 1 for Eclipse
 - [-] Welcome
 - The Micro Focus Community
 - Overview of application development in Eclipse
 - [-] Introduction to Eclipse
 - Remote mainframe development and Application Workflow Manager
 - [-] Enterprise Developer Editions and Licenses
 - [-] New Features
 - Significant Changes in Behavior or Usage in This Release
 - Enterprise Developer Tutorials
 - [-] Product Information
 - Installation**
 - Managing Licenses

AccuRev Eclipse Plugin installed into Enterprise Developer Use the installation process via an Eclipse Update Site: In Enterprise Developer select **Help > Install New Software** and follow the installation steps described in [AccuRev Plug-In for Eclipse -Installation and Release Notes - Version 2015.1.](#)

Workflow Manager (AWM) Endeavor Attachment Must be installed and configured. See [Installing the Endeavor Model](#).

1. Start Enterprise Developer and open the **Team Developer Perspective** and load the application `Enterprise Sync V2.0 Endeavor Application` in the **Team Developer** tree. If this application is not visible make sure that the Workflow Manager Endeavor Attachment has been fully installed and configured.
2. Click **File > Import**. Select `AccuRev` and then `Project` from `AccuRev`.
3. Select the correct AccuRev server and add your login credentials and then click **OK**.
4. Select the stream for which you would like to create a new AccuRev workspace. For our `BANKDEMO` sample we will select stream `TEST`.
5. Enter an appropriate **Workspace name** and location and then click **Next**.
6. Select the **Check out a project using the new project wizard** option. Enter a project name and click **Next**.
7. Select **General > Project**, then click **Next** and then **Finish**. This creates the Eclipse project with the AccuRev workspace entries

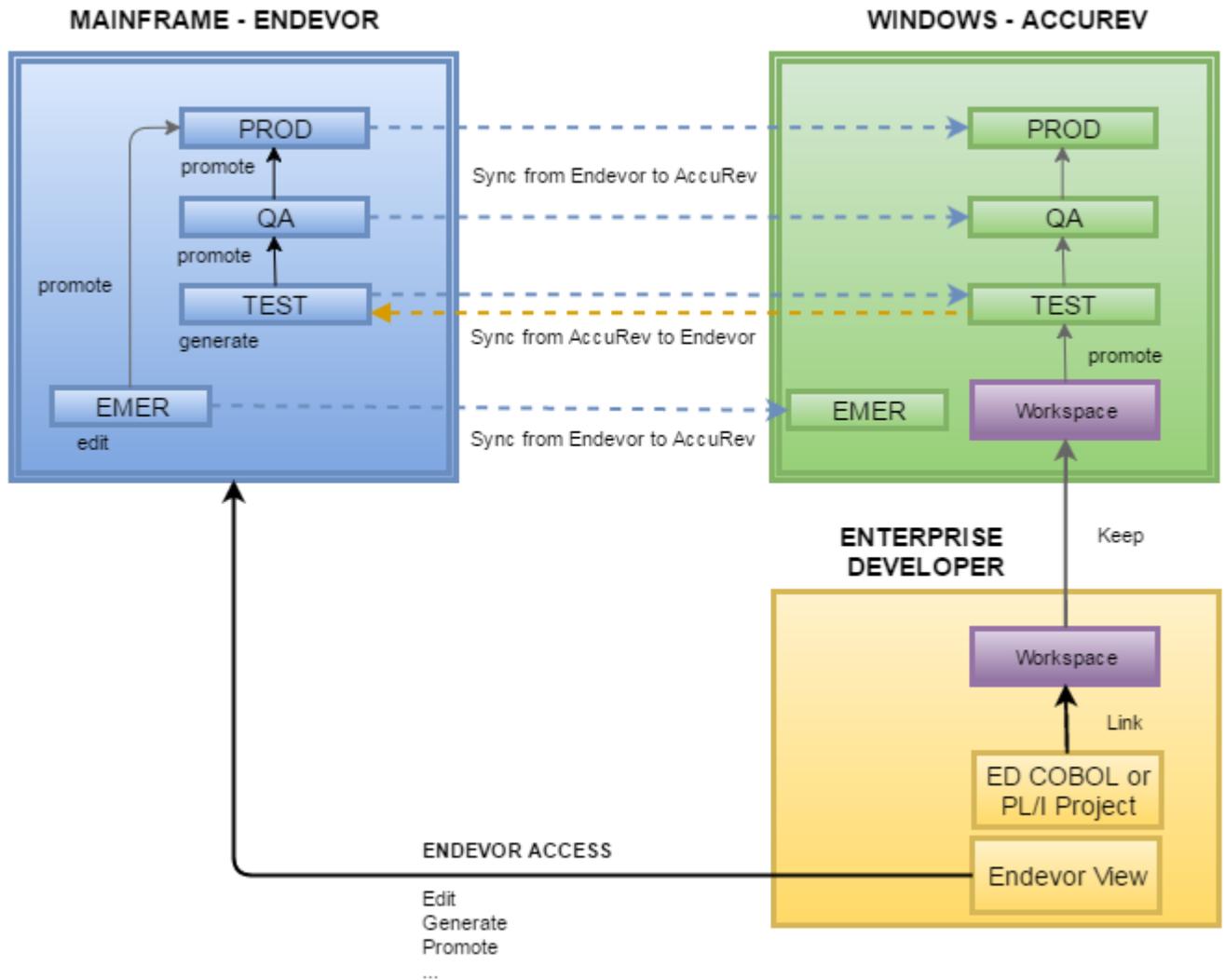
8. You can now directly access the AccuRev workspace and the AccuRev team actions from the **Team Developer** tree. Expand the loaded application, then expand the entry **Workspace**, navigate to one of the sources and find all relevant AccuRev actions on the **Team** context menu.
9. To test the Endeavor mainframe access expand the Endeavor entry on the loaded application a few times until your subsystem is listed under stage `PROD`. Then select **Show all elements** from the context menu of the subsystem.
10. The Endeavor element list is opened in the **Team Developer** Table view and the context menu of an Endeavor element supports the corresponding Endeavor actions.
11. To test the integration with Enterprise Developer projects we define a new Mainframe COBOL Project named `BANKDEMO` with an empty `COBOL` folder. Selecting the `COPY` folder in the AccuRev workspace and selecting the `BANKDEMO` project via **New > Folder > Link Folder to Project** creates a link of the AccuRev folder into the ED project.
Same could be done with other folders, but we could also decide to link files explicitly to an ED project using **New > File > Link File to Folder**.
12. After setting the Enterprise Developer projects properties correctly (build path and directives) the programs are compiled successfully and the COBOL editor supports full smart edit capabilities.

Getting started with Enterprise Developer

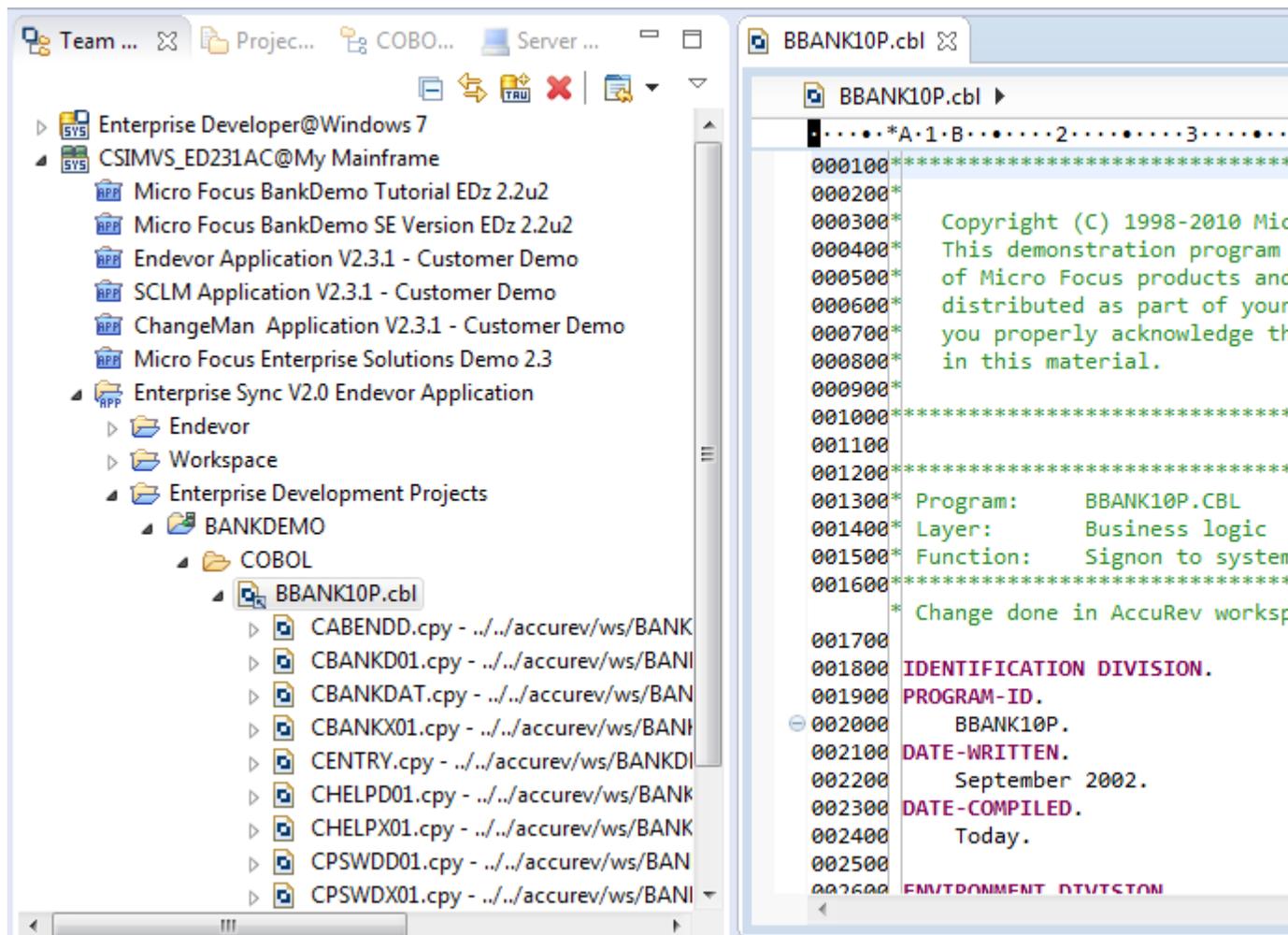
The following are required before proceeding with this procedure:

- Enterprise Sync installed and configured.
- AccuRev server installed and configured.
- Enterprise Developer installed with AccuRev plug-in.
- AWM Endeavor attachment installed and configured.
- AccuRev workspace created in EDz and mapped to an Eclipse project.
- Enterprise Developer mainframe COBOL project `BANKDEMO` created with link to the COBOL source `BBANK10P` and link to the Copybook folder.

Sample Environment Stream Mapping



1. Start Enterprise Developer, open the **Team Developer Perspective** and load the application Enterprise Sync V2.0 Endevor Application in the **Team Developer** tree.
2. Expand the COBOL folder in the BANKDEMO project and edit BBANK10P.cb1. Make a small change. For example, add the comment Change done in AccuRev workspace and then save and close the file.



3. The COBOL program is compiled automatically. You would now be able to test and debug this module using the integrated Enterprise Server features.

```
cobol.compile.cfg.New_Configuration:
  [cobol] Compiling BBANK10P.cbl...
  [cobol]
  [cobol] Compilation complete with no errors.

cobol.link.cfg.New_Configuration:
[cobollink] Linking BBANK10P.dll...
[cobollink] Micro Focus COBOL - CBLLINK utility
[cobollink] Version 2.3.1.55 Copyright (C) Micro Focus 1984-2016. All rights reserved.
[cobollink]
[cobollink] Microsoft (R) Incremental Linker Version 11.00.61030.0
[cobollink] Copyright (C) Microsoft Corporation. All rights reserved.
[cobollink]
[cobollink] BBANK10P.obj
[cobollink] cbllds000000D7C.obj
[cobollink]   Creating library BBANK10P.lib and object BBANK10P.exp
[cobollink] Microsoft (R) Manifest Tool version 6.2.9200.20789
[cobollink] Copyright (c) Microsoft Corporation 2012.
[cobollink] All rights reserved.
[cobollink] Link complete with no errors
[cobollink]

os.init:

os.init.windows:

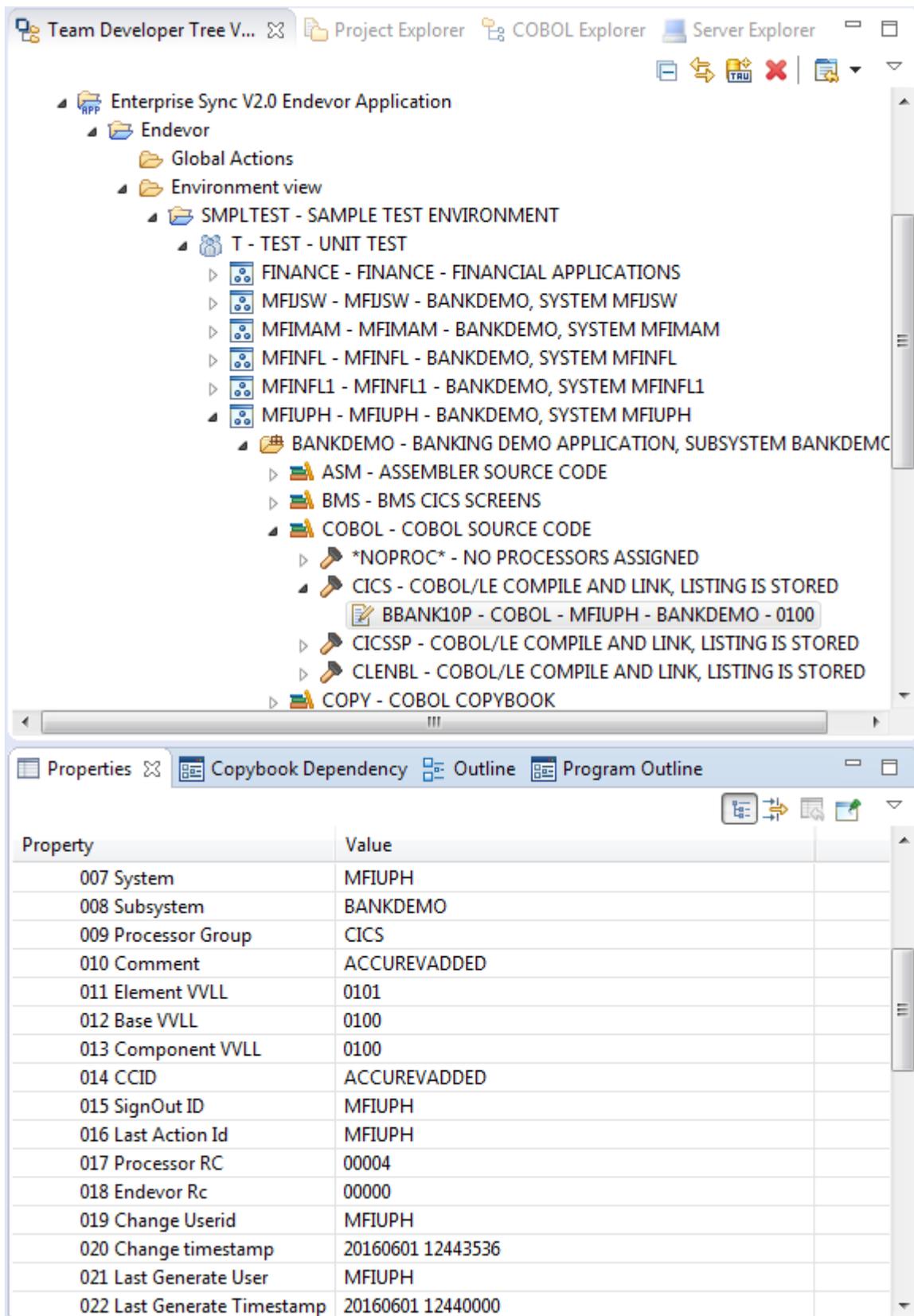
os.init.unix:

init:

post.build.cfg.New_Configuration:

BUILD SUCCESSFUL
Build finished with no errors.
```

4. Assuming the test was successful, navigate to the workspace entry and promote the program to the TEST stream. Right click BBANK10P.cbl, select **Team > Promote**. The **Promote** dialog box appears.
5. Enter a comment, for example, Test ACC2NDV, and click **OK**.
6. After the promote to stream TEST the file is automatically synchronized to Endeavor. Navigate to the Endeavor BANKDEMO subsystem in stage TEST to find this element in Endeavor. The file was also generated successfully in Endeavor. Thus, an integration test could be executed on the mainframe.

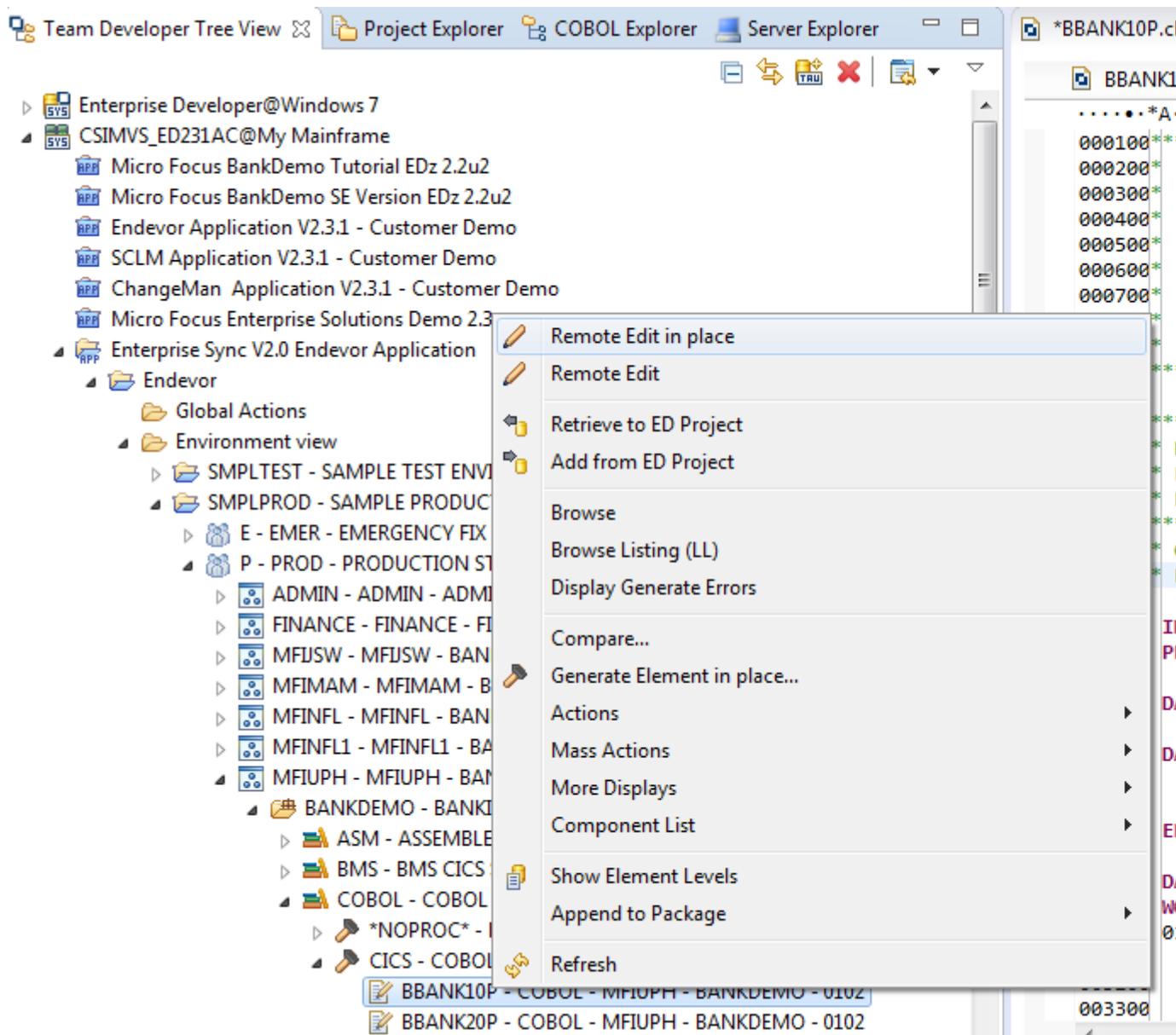


- Assuming the integration test was successful, promote this file in Endeavor from the TEST to the QA stage. Right click the BBANK10P item, then select **Actions > Move Element** . The **Move an Element** dialog box appears.

8. Enter a **CCID** and a **Comment** and click **OK**.
9. After the *Move* is done in Endeavor, this promote function is automatically synchronized in AccuRev. You can verify this in Enterprise Developer using **Show History**. Right click the item in the tree, select **Team > AccuRevHistory**.
10. The move from QA to stage PROD is supported in the same way, navigating to the Endeavor file in stage QA, moving the file in Endeavor to the PROD stage. After repeating steps 7-9 you can verify that this promote is synchronized as well.

#	Action	Time	Virtual Version	User	Comment
501	promote	01.06.2016 19:19:57	PROD/2	syncuser	promoting MFU
502	keep	01.06.2016 19:19:57	accWsNDV2ACCPRODSy...	syncuser	MOVE FROM QA
503	promote	01.06.2016 19:19:57	PROD/3	syncuser	MOVE FROM QA
498	promote	01.06.2016 19:05:01	QA/1	syncuser	promoting MFU
499	keep	01.06.2016 19:05:01	accWsNDV2ACCQAAsync...	syncuser	MOVE FROM TE
500	promote	01.06.2016 19:05:01	QA/2	syncuser	MOVE FROM TE
494	keep	01.06.2016 18:46:46	BANKDEMO_TEST_WS_a...	admin	Test ACC2NDV
495	promote	01.06.2016 18:46:46	TEST/1	admin	Test ACC2NDV
489	promote	01.06.2016 17:33:22	PROD/1	syncuser	initial sync chan
488	add	01.06.2016 17:33:21	accWsNDV2ACCPRODSy...	syncuser	INJECTION initia

11. Now we will do an emergency change directly in Endeavor using the remote **Edit** action on the PROD level of the element.



12. After saving and closing the file it is stored in Endeavor stage `EMER` and automatically synchronized to the AccuRev stream `EMER`.

13. Promote this change to the `PROD` stage which synchronizes this change with AccuRev.

Element History - BBANK10P.cbl

#	Action	Time	Virtual Version	User	Comment
511	keep	01.06.2016 19:35:54	accWsNDV2ACCPRODsy...	syncuser	MOVE FROM EM
512	promote	01.06.2016 19:35:54	PROD/6	syncuser	MOVE FROM EM
510	promote	01.06.2016 19:35:53	PROD/5	syncuser	promoting MFIU
509	promote	01.06.2016 19:31:46	EMER/2	syncuser	EMERGENCY CH
508	keep	01.06.2016 19:31:45	accWsNDV2ACCEMERsy...	syncuser	EMERGENCY CH
506	keep	01.06.2016 19:31:20	accWsNDV2ACCEMERsy...	syncuser	EMERGENCY CH
507	promote	01.06.2016 19:31:20	EMER/1	syncuser	EMERGENCY CH
504	keep	01.06.2016 19:26:27	accWsNDV2ACCPRODsy...	syncuser	MOVE FROM QA
505	promote	01.06.2016 19:26:27	PROD/4	syncuser	MOVE FROM QA
501	promote	01.06.2016 19:19:57	PROD/2	syncuser	promoting MFIU
502	keep	01.06.2016 19:19:57	accWsNDV2ACCPRODsy...	syncuser	MOVE FROM QA
503	promote	01.06.2016 19:19:57	PROD/3	syncuser	MOVE FROM QA
498	promote	01.06.2016 19:05:01	QA/1	syncuser	promoting MFIU
499	keep	01.06.2016 19:05:01	accWsNDV2ACCQAsync...	syncuser	MOVE FROM TE
500	promote	01.06.2016 19:05:01	QA/2	syncuser	MOVE FROM TE
494	keep	01.06.2016 18:46:46	BANKDEMO_TEST_WS_a...	admin	Test ACC2NDV
495	promote	01.06.2016 18:46:46	TEST/1	admin	Test ACC2NDV
489	promote	01.06.2016 17:33:22	PROD/1	syncuser	initial sync chan
488	add	01.06.2016 17:33:21	accWsNDV2ACCPRODsy...	syncuser	INJECTION initia

14. On the AccuRev workspace entry, compare the workspace file with the emergency changes done on the mainframe.

#	Action	Time	Virtual Version	User	Comment
512	promote	01.06.2016 19:35:54	PROD/6	syncuser	MOVE FROM EMER TO PROD/bcTransactionType:A
511	keep	01.06.2016 19:35:54	accWsNDV2...	syncuser	MOVE FROM EMER TO PROD/bcTransactionType:A
510	promote	01.06.2016 19:35:53	PROD/5	syncuser	promoting MFIUPH/BANKDEMO/COBOL/BBANK10
509	promote	01.06.2016 19:31:46	EMER/2	syncuser	EMERGENCY CHANGE/bcTransactionType:APPLY
508	keep	01.06.2016 19:31:45	accWsNDV2...	syncuser	EMERGENCY CHANGE/bcTransactionType:APPLY
507	promote	01.06.2016 19:31:20	EMER/1	syncuser	EMERGENCY CHANGE/bcTransactionType:APPLY
506	keep	01.06.2016 19:31:20	accWsNDV2...	syncuser	EMERGENCY CHANGE/bcTransactionType:APPLY
505	promote	01.06.2016 19:26:27	PROD/4	syncuser	MOVE FROM QA TO PROD/bcTransactionType:APP
504	keep	01.06.2016 19:26:27	accWsNDV2...	syncuser	MOVE FROM QA TO PROD/bcTransactionType:APP
503	promote	01.06.2016 19:19:57	PROD/3	syncuser	MOVE FROM QA TO PROD/bcTransactionType:APP
502	keep	01.06.2016 19:19:57	accWsNDV2...	syncuser	MOVE FROM QA TO PROD/bcTransactionType:APP
501	promote	01.06.2016 19:19:57	PROD/2	syncuser	promoting MFIUPH/BANKDEMO/COBOL/BBANK10
500	promote	01.06.2016 19:05:01	QA/2	syncuser	MOVE FROM TEST TO QA/bcTransactionType:APPI
499	keep	01.06.2016 19:05:01	accWsNDV2...	syncuser	MOVE FROM TEST TO QA/bcTransactionType:APPI
498	promote	01.06.2016 19:05:01	QA/1	syncuser	promoting MFIUPH/BANKDEMO/COBOL/BBANK10
495	promote	01.06.2016 18:46:46	TEST/1	admin	Test ACC2NDV
494	keep	01.06.2016 18:46:46	BANKDEMO...	admin	Test ACC2NDV
489	promote	01.06.2016 17:33:22	PROD/1	syncuser	initial sync change set/bcTransactionType:INITIAL_

Text Compare

Present File: BBANK10P.cbl	Repository file: BBANK10P.cbl
001500* Function: Signon to system to identify user	001500* Function: Signon to sy
001600*****	001600*****
* Change done in AccuRev workspace	* Change done in AccuRev wo
001700	* Emergency cahnge done in
001800 IDENTIFICATION DIVISION.	001700
001900 PROGRAM-ID.	001800 IDENTIFICATION DIVISION.
002000 BBANK10P.	001900 PROGRAM-ID.
002100 DATE-WRITTEN.	002000 BBANK10P.
002200 September 2002.	002100 DATE-WRITTEN.

15. The Merge action can be used to merge the emergency changes into the workspace file.

Text Compare

Present File: BBANK10P.cbl

Workspace File: BBANK10P.cbl, Versi

* Change done in AccuRev workspace

```

001700
001800 IDENTIFICATION DIVISION.
001900 PROGRAM-ID.
002000     BBANK10P.
002100 DATE-WRITTEN.
002200     September 2002.
002300 DATE-COMPILED.
002400     Today.
002500
002600 ENVIRONMENT DIVISION.
002700
002800 DATA DIVISION.
002900 WORKING-STORAGE SECTION.
003000 01 WS-MISC-STORAGE.
003100     05 WS-PROGRAM-ID           PIC X(8)
003200         VALUE 'BBANK10P'.
003300     05 WS-INPUT-FLAG           PIC X(1).
003400         88 INPUT-OK            VALUE '0'.
003500         88 INPUT-ERROR         VALUE '1'.
003600     05 WS-RETURN-FLAG         PIC X(1).
003700         88 WS-RETURN-FLAG-OFF VALUE LOW-VAL
003800         88 WS-RETURN-FLAG-ON  VALUE '1'.
003900     05 WS-RETURN-MSG          PIC X(75).
004000         88 WS-RETURN-MSG-OFF  VALUE SPACES.
004100     05 WS-DEF-FLAG            PIC X(1)

```

* Change done in AccuRev workspace

```

* Emergency cahnge done
001700
001800 IDENTIFICATION DIVISION.
001900 PROGRAM-ID.
002000     BBANK10P.
002100 DATE-WRITTEN.
002200     September 2002.
002300 DATE-COMPILED.
002400     Today.
002500
002600 ENVIRONMENT DIVISION.
002700
002800 DATA DIVISION.
002900 WORKING-STORAGE SECTION.
003000 01 WS-MISC-STORAGE.
003100     05 WS-PROGRAM-ID           PIC X(8)
003200         VALUE 'BBANK10P'.
003300     05 WS-INPUT-FLAG           PIC X(1).
003400         88 INPUT-OK            VALUE '0'.
003500         88 INPUT-ERROR         VALUE '1'.
003600     05 WS-RETURN-FLAG         PIC X(1).
003700         88 WS-RETURN-FLAG-OFF VALUE LOW-VAL
003800         88 WS-RETURN-FLAG-ON  VALUE '1'.
003900     05 WS-RETURN-MSG          PIC X(75).
004000         88 WS-RETURN-MSG-OFF  VALUE SPACES.
004100     05 WS-DEF-FLAG            PIC X(1)

```

Troubleshooting

Use the topics in this section to troubleshoot common issues.

Reviewing Log Files

Do the following to locate the log files:

1. Open `<install path>\Micro Focus\Enterprise Sync\local.properties`.
2. Find the `USER_DIRECTORY=` entry. It will be something similar to:

```
c:/users/Administrator/AppData/Local/Micro Focus/Enterprise Sync
```

3. Open that directory and you will find a `logs` directory.

Changing the Logs to Debug Level

If you require more detailed log file information, change the logging level to `DEBUG`:

1. Open the `local.properties` file.
2. Locate the `# debug=HIGH` entry.
3. Uncomment the line by removing the `#`.
4. Save and close the file.
5. Find and open for editing the `log4j.xml` file in the `Enterprise Sync` directory.
6. Locate the `<logger ...>` elements. There are many. They each contain a `<level>` element. One full entry will look similar to:

```
<logger name="stderr" additivity="false">  
  <level value="INFO"/>  
  <appender-ref ref="DEFAULT"/>  
  <appender-ref ref="ERROR"/>  
</logger>
```

7. Change the `value="INFO"` to `value="DEBUG"`.
8. Save and close the file.
9. Re-start the `EnterpriseSyncConnect` service.

Resetting Mappings

Use the following procedure to restart with an initial sync:

Reset All Mappings

 **Note:** Find referenced files in `C:\Users\<user>\AppData\Local\Micro Focus\Enterprise Sync`.

1. Stop Micro Focus Connect.
2. For all mapped AccuRev streams, perform a **Revert to Basis** for all elements:
 - a. In the AccuRev UI, open a stream.
 - b. Select **Mode: Outgoing**.
 - c. Turn on the **Stranded** filter.
 - d. Select all elements in the main panel.

e. Click Revert To Basis.

The stream is empty and ready for an initial sync.

- 3.** Delete the file `Connect.MostRecentSync.xml`.
- 4.** Restart Micro Focus Connect. Initial syncs from Endeavor to AccuRev will be performed.

Index

A

- Accurev server configuration 7
- AccuRev WebUI 9
- acserver.cnf file 9
- AWM Endeavor Attachment installation 11

C

- components 6
- configuring Enterprise Developer 15
- configuring sync rules 11

D

- data synchronization 5
- define a stream in AccuRev 8
- define AccuRev depot 7
- define AccuRev user 7

G

- getting started with Enterprise Developer 16

I

- installation 10

- installation and configuration 7
- introduction 4

L

- log files
 - change to DEBUG 26
 - location 26

M

- Mainframe Access Server installation 10

R

- resetting mappins 26

S

- stop AccuRev 9

T

- troubleshooting 26