MICRO FOCUS

Enterprise Analyzer 9.0

EA Web

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Contents

Installing EA Web

The following steps assume you have created a workspace. See *Getting Started* for more information.

Typically, EA Web is installed together with Enterprise Analyzer, by selecting the **Web Client** option in the installer. If you have already installed Enterprise Analyzer but did not installed EA Web, then perform the following steps to install EA Web:

1. Install Java Runtime Environment (JRE) 8 or later. The product comes with `AdoptOpenJDK_8.0.msi`.
2. Install Apache Tomcat. The product comes with `apache-tomcat-9.0.71.exe`. Follow the screen prompts and accept the defaults, except:

    - On the **Choose Components** screen, expand the **Tomcat** option and check **Service** to have Tomcat start automatically.

3. Stop the Apache Tomcat service from **Windows Control Panel** > **Administrative Tools** > **Services**.
4. Copy `EAWeb.war` from the `Web Client` folder in the Enterprise Analyzer installation directory to `C:\Program Files (x86)\Apache Software Foundation\Tomcat 9.0\webapps`.
5. Start the Apache Tomcat service from **Windows Control Panel** > **Administrative Tools** > **Services**.

Deploying EA Web

After installing EA Web, perform the following steps to deploy:

1. Open **Windows Control Panel** > **Administrative Tools** > **Services**.

    This opens Windows Service Manager.
2. Start the Apache Tomcat service.
3. While you are still in Windows Service Manager, right-click the **Micro Focus Enterprise Analyzer Web** service, and then click **Properties**.
4. Click the **Log On** tab.
5. Check **This account** and type the username and password of a user that has access to EA and its workspace.

    Note: The logon user for the Micro Focus Enterprise Analyzer Web service is significant because the user preferences for this user will impact the types of repository and Hypercode objects that will be returned in a search. Diagrams displayed in EA Web will also use options set for this user.
6. Restart the Micro Focus Enterprise Analyzer Web service.
7. Open Enterprise Analyzer Administration and click **Administer** > **Configure Web Service**.

    This opens the **Configure Web Service** dialog box.
8. Click **Add** and navigate to the workspace `.rwp` file you require. The workspace that you check will be the default workspace that is used with EA Web.
9. Click **Save**.
10. In a browser, type the following into the search bar `http://servername:8080/EAWeb`.

    For example, `http://localhost:8080/EAWeb`

Deploying Micro Focus Enterprise Analyzer Web API

The following steps will enable the Enterprise Analyzer REST API:

1. Open **Windows Control Panel** > **Administrative Tools** > **Services**.

   This opens Windows Service Manager.

2. Right-click **Micro Focus Enterprise Analyzer Web API**, and then click **Properties**.

   This opens the **Properties** dialog box.

3. Click the **Log On** tab, check **This account** and type the username and password of a user that has access to Enterprise Analyzer and its workspace.

   > **Note:** The logon user for the Micro Focus Enterprise Analyzer Web service is significant because the user preferences for this user will impact the types of repository and Hypercode objects that will be returned in a search. Diagrams displayed in EA Web will also use options set for this user.
   >
   > In addition, to be able to run the Source Synchronization process the specified username must be a master user for the workspace.

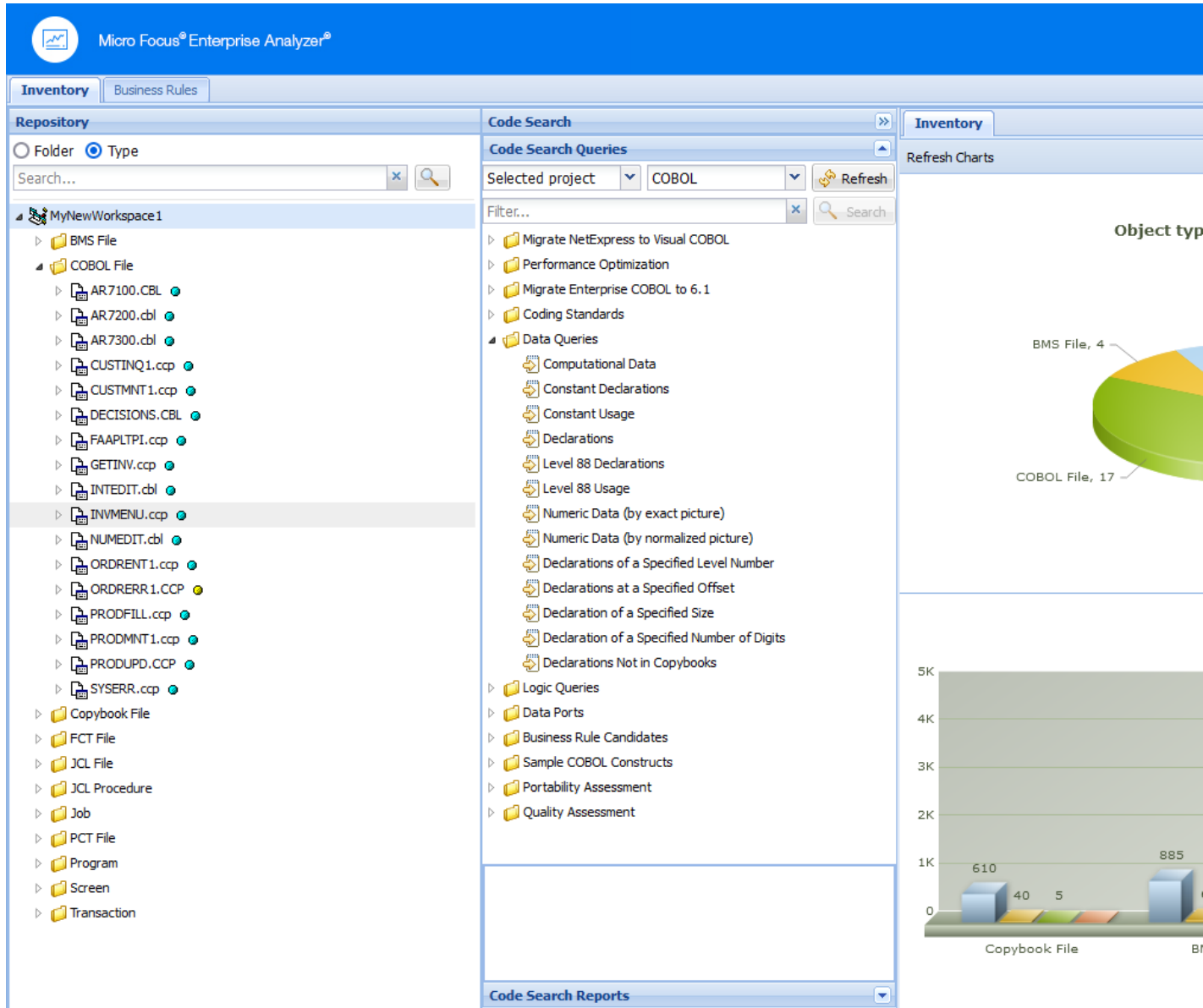4. Restart **Micro Focus Enterprise Analyzer Web API** service.

See *REST API and Jenkins Plugin* for more information.

Troubleshooting

- Mozilla Firefox and Google Chrome might work better than Internet Explorer. With Internet Explorer you might need to click **Search** to actually execute the search instead of just pressing **Enter**.

- Do not use Compatibility View when using EA Web in Internet Explorer. It might cause problems with the **Go to source** feature.

- If you are unable to access the site, try re-deploying the `EAWeb.war` following these steps:

    1. Stop the Apache Tomcat service.
    2. Delete the EA Web folder from: `C:\Program Files (x86)\Apache Software Foundation \Tomcat 6.0\webapps`. Leave the `EAWeb.war` file.
    3. Delete all the files found in the following folders:

        - `C:\Program Files (x86)\Apache Software Foundation\Tomcat 6.0\webapps`
        - `C:\Program Files (x86)\Apache Software Foundation\Tomcat 6.0\temp`
        - `C:\Program Files (x86)\Apache Software Foundation\Tomcat 6.0\work \Catalina\localhost`

    4. Start the Apache Tomcat service.
    5. If you still cannot access the site from the server, check the Apache Tomcat Java configuration and make sure it is using JRE version 7 or higher.

- You might have to configure the Apache Tomcat service to use a user account that has access to EA and the workspace. To do so:

    1. Right-click the Apache Tomcat service and choose **Properties**.
    2. Go to the **Log On** tab, choose **This account** and enter your username and password.
    3. Restart the service.

- If you still do not see data on the site try the following in this order:

    1. Restart the Micro Focus Enterprise Analyzer Web service.
    2. Delete the browser's temporary Internet files.

- If searches or queries are returning no results, refresh the Web page to check the connection status. If the status is Disconnected, you need to restart Micro Focus Enterprise Analyzer Web service. To do so:

    1. Right-click the service and choose **Properties**.
    2. In the **Recovery** tab choose **Restart the Service** for the first, second, and subsequent failures.
    3. Click **OK** and restart the service.

Getting Started with EA Web

The EA Web home page consists of a banner and two main tabs, **Inventory** and **Business Rules**. On the **Inventory** tab the page is split into a number of panes, **Repository**, **Code Search**, **Code Search Queries**, **Code Search Reports**, and **Inventory** pane:

Banner

The banner bar enables you to specify the workspace and project that you want to use. You can change the default workspace by selecting from the **Workspace** list. You can then select an appropriate project for that workspace from the **Project** list. Click **About** to see the EA Web version number.

The choices you have depends on the workspace you have configured in Enterprise Analyzer Administration. In Enterprise Analyzer Administration, click **Administer** > **Configure Web Service** and modify as required.

Repository Pane

The **Repository** pane displays the contents of the repository for the current workspace. It has two views, **Folder** and **Type** which you can toggle between using the radio buttons:

Folder Displays the content of the repository in the same folder structure as the one they have in the host environment. This enables elements with the same name (homonyms) to be loaded and displayed.

Type Displays the content of the repository by project, object type, and object relationship.

The **Folder** and **Type** views both consists of the following elements:

Browser Displays the objects in the repository of the current workspace in a tree structure. Depending on the view you have selected in the **Repository** pane, the contents are displayed by type or by folder.

Search Enables you to execute searches in the repository of the current workspace.

To expand a node in the **Repository** pane tree, click ▷ . By drilling down through the nodes you can find programs called by or called to, copybooks used, data accessed, screens used, and so forth. These elements are different depending on the element chosen. They are all relationships at object level between programs, files, database tables, copybooks, screens, JCLs and so forth.

> **Note:** Unlike the Enterprise Analyzer IDE, the EA Web Repository Browser can not expand relationships recursively for the root object. For example, expand a JCL file that uses a control card, then expand the **Used By** relationship for the control card. The starting JCL is displayed, but it cannot be expanded to see its relationships again.

Double-click an object and the source code is displayed in the pane on the right as a new tab alongside **Inventory** pane.

Right-click an object, and a context menu with the following menu items is displayed:

Query Repository Displays all the queries available for the selected source type:

- Related Java Packages.
- Boundary Points (potential) - Points that could lead to requests resources outside of Java.
- Boundary Points (resolved) - Points that lead to requests resources outside of Java.
- Is Invoked By
- Related Java Files
- Dependent Sources
- Direct References (outgoing)
- Direct References (incoming) - This makes references to usage directly. A program is called through a Program Entry Point so this will not return the list of Called Programs, but the includes and copies.
- Is Called By
- Is CRUD By
- Used Data Stores
- Used Sources

Diagrammer Creates a small graph. The information on the graph depends on the requested type of graph. For example, Call Map will display all the links between programs. The following list gives the Diagrammer scopes:

Call Map	Program to program calls.	
CICS Flow	Interactions between transactions, programs, and screens.	
Job Flow	Process to program to data port to data store.	
Screen Flow	Program to screen send/receive.	
AS/400 Flow	DBFile links.	
Data Flow	Program to data.	
IMS Flow	Interactions between transactions, programs, screens, and segments.	
Job Executive Report	Job to program, sys-program, and data store.	
Natural Flow	Natural links between programs, screens, and so forth.	
Program Executive Report	All links coming from a program.	
Source Dependencies	Links between sources, like copies, includes, and so forth.	
Unisys Flow	Unisys links.	

Open	Opens the source file.

Code Search

From the **Code Search** pane you can execute queries. By default, the queries are the same as in Enterprise Analyzer but you can create your own queries in the tool and add them to the **Code Search** tab.

In this pane you have two different views **Code Search Queries** and **Code Search Reports**. From **Code Search Queries** you can execute queries defined in **Code Search** in EA and from **Code Search Reports** you can execute pre-defined reports such as Quality Assessment, Performance Optimization, Portability Assessment, and various migration reports.

The **Code Search Queries** pane lets you filter by selected files or project and the language of the sources.

Click **Refresh** to update the list depending on your choices.

All query results appear in a new tab on the **Inventory** pane.

Inventory

When you start EA Web, this pane displays three different types of charts:

Object types in the workspace	Displays the types and number of elements in the workspace.
Inventory report	The verification results for each type of element.
Complexity report.	Displays information on the number of source lines, comment lines, blank lines, and include statements split by source.

When you execute a query, the results from it appear in a new tab in the Inventory pane. You can double-click an element to see its source code which will be displayed in a new view in this pane.

You can also right-click a variable and create an **Impact trace** for the variable. The impact trace displays how the data flows to and from other variables, files, screens, and so forth.

Business Rules

The left-hand portion of the **Business Rules** pane displays the business functions in your workspace in tree form:

- The **Grouping** tab lists rules in the order you created them manually, organized by business function and rule set.
- The **Triggering** tab lists rules in a hierarchy of triggers, in which each triggering rule can be a parent to triggering rules that depend on it in program logic.

The right-hand pane displays the attributes and other characteristics of the business function, rule set, or rule selected in the left-hand pane.

See the *Extracting Business Rules* chapter for more information.

EA Web Reports

There are several reports that you can create and export from the Web Client. All report exports are started from the buttons at the bottom of the Results pane.

Export Table (Generic XML)   Exports the query results table in an XML format.

Export to Eclipse/Visual Studio   Exports the Code Search results in an XML format to be used by Enterprise Developer in Eclipse and Visual Studio.

Export to CSV   Exports the results to CSV format.