Micro Focus COBOL Server SOA 2.1

Release Notes

2012-09-18

Contents

Micro Focus COBOL Server SOA Release Notes

These release notes contain information that might not appear in the Help. Read them in their entirety before you install the product.

Note: This document contains a number of links to external Web sites. Micro Focus cannot be responsible for the contents of the Web site or for the contents of any site to which it might link. Web sites by their nature can change very rapidly and although we try to keep our links up-to-date, we cannot guarantee that they will always work as expected.

Installation

Note: If you are installing on Solaris, please read *UNIX Installer Issues* first.

Installing on Windows

System Requirements for COBOL Server SOA for Windows

Hardware Requirements

The disk space requirements are:

*   42MB for the Sentinel RMS license server.
*   About 170MB for COBOL Server SOA.

    Note: This includes the space needed to cache information locally so that you can modify the installation without the original source media.

Operating Systems Supported

The following platforms are supported:

*   Windows XP 64-bit SP2
*   Windows XP 32-bit SP3
*   Windows Vista SP1 32/64-bit
*   Windows 7 32/64-bit
*   Windows 8
*   Windows Server 2003 SP2 32/64-bit
*   Windows Server 2003 R2 32/64-bit

Software Requirements

Note: If you use the Micro Focus Web Installer to install this product, it checks your system and installs the missing prerequisite software.

Before installing this product, you must have the following software installed on your computer:

*   A version of the Microsoft .NET Framework that is targeted by your applications:

    *   Microsoft .NET Framework 2 - if your applications use the ILCLR(2) Compiler Directive or if they target the .NET Framework versions 2, 3 or 3.5. You might need to download these installers depending on the .NET Framework you are targeting.

        To download the Microsoft .NET Framework 2 *click here*.

        Microsoft .NET Framework 2 or later is also required for the Micro Focus License Manager.
    *   Microsoft .NET Framework 4 is required if your applications use the ILCLR(4) Compiler Directive or if they target the .NET Framework 4.

        To download the Microsoft .NET Framework 4 *click here*.

Note:

- If you do not target a specific version of the Microsoft .NET Framework, Micro Focus recommends that you install version 4.
- .NET Framework 3 is provided with Windows Vista, Windows Server 2008.
- .NET Framework 3.5 is provided with Windows 7, Windows Server 2008 R2

- Microsoft's Visual C++ 2010 Redistributable Package:

  - To download Microsoft's Visual C++ 2010 Redistributable Package (x86) *click here*.
  - To download Microsoft's Visual C++ 2010 Redistributable Package (x64) *click here*.

  Note: If, when you install COBOL Server SOA, the machine does not have Microsoft Visual C++ 2010 Redistributable Runtime already installed, it will be installed as required by COBOL Server SOA. The installation of Microsoft Visual C++ 2008 Redistributable Runtime will add a number of `.dll` files, without digital signatures, into the `winsxs` directory.

- Microsoft's Web Platform Installer 2.0 if your application targets ASP.NET 4. This installs and sets up ASP.NET. To download the installer *click here*.

- The Java Development Kit (JDK) is required for compiling Java. The JDK is downloadable from *www.oracle.com*. After installing the JDK, you must put the tools.jar file for the JDK on your classpath, using a command similar to:

  ```
  set classpath=jdk-install-directory\lib\tools.jar
  ```

- A Web browser, such as Microsoft Internet Explorer 6.0 or Netscape Navigator 6.1, is required for Enterprise Server Administration in COBOL Server SOA.

  To use your Web browser offline, you need the dial-up networking feature of Windows installed. Otherwise you might have TCP/IP errors such as being unable find "localhost" or the numeric equivalent (127.0.0.1).

- To use Enterprise Server Administration, scripting or JavaScript support must be enabled in your browser. This is on by default in Internet Explorer in most Windows operating systems, apart from Windows Server 2003. Also, active content must be allowed and not blocked. To enable both these in Internet Explorer:

  1. Click **Tools** > **Internet Options**.
  2. On the **Security** tab, click **Custom Level**. In the **Scripting** section, under **Active Scripting**, click **Enable**.
  3. On the **Advanced** tab, scroll down the list to the **Security** section, and ensure the item **Allow active content to run in files on My Computer** is checked.

- Enterprise Server Help requires the Java Runtime Environment on some Windows systems to enable the Search facility to work.

Important: This release requires version 10000.2.990 or later of the Micro Focus licensing software. For local servers, you do not need to install it separately, as the setup file installs a new Visual COBOL SOA client and a new licensing server on the same machine.

If you have a network server, you must update the license server before installing the product as the client is not able to communicate with license servers of versions older than 10000.2.660. On Windows, you can check the version of your license server by clicking **Help > About** in the Micro Focus Licensing System Administration tool. To check the version of the license server on UNIX, run `/var/microfocuslicensing/bin/mfcesver` or `/var/microfocuslicensing/bin/cesadmintool.sh`.

You can download the new version of the license server software from the Micro Focus SupportLine Web site: *http://supportline.microfocus.com/websync/SLM.aspx*.

Installing COBOL Server SOA

Installation Restrictions and Requirements

Before starting the installation, you should consider the following:

- Visual COBOL SOA and COBOL Server SOA cannot co-exist on the same machine.
- If you are installing this as an upgrade, make sure that none of the product files are in use when you start the installation.
- You need to be logged in with a user-ID that has write access to the registry structure under HKEY_LOCAL_MACHINE, HKEY_CLASSES_ROOT, and HKEY_CURRENT_USER so the installation software can set the environment appropriately. You also need to be logged on with Administrator privileges.
- Before installing this product , make sure that any existing Micro Focus Directory Server (MFDS) or CCITCP2 Windows serviceprocess from an existing product is stopped and uninstalled. Do this as follows:

  1. Stop the service, using either the Windows Service Management Console GUI or from a command line prompt by typing: `net stop mf_ccitcp2` Only one instance of the MFDS or CCITCP2 service can run on a Windows machine.
  2. Uninstall the MFDS or CCITCP2 service.

     For MFDS, from a command line prompt enter: `mfds -u`

     For CCITCP2: `ccitcp2 -u`

  To run an earlier version of MFDS as a service after you have installed a later version:

  1. Stop and uninstall the MFDS service, as described above.
  2. Reinstall the earlier version, as follows:

     a. Open aEnterprise Developer command prompt.
     b. Install the service. Enter the following command: `mfds -i`
     c. Start the service. Enter the following command: `net start mf_ccitcp2`

     📝 **Note:** The two versions use different paths for environment and registry values, so the list of configured Enterprise Servers might be different depending on which version has been started, since, by default, different MFDS data repositories are used.

  MFDS 5.1 and later are able to import or use Enterprise Server configuration data generated by earlier versions of MFDS, but 5.0 or earlier versions of MFDS might not be able to read data generated by later versions.

  It is possible to run MFDS from a command prompt ("mfds") rather than as a service, but by default the "mfcobol" port is used (86) and this can only be used by one process at a time

Downloading the Product

1. Use the download links in your Electronic Product Delivery email.

   For more information follow the links for the install instructions and the End User License Agreement.

Installing

To use the Web Installer:

1. Double-click the `EnterpriseServer21_webinstaller.exe` file.
2. Click **Start** in the Web Installer dialog and follow the instructions to install the prerequisite software and the product.

Alternatively, you can use the setup file and install the product as follows:

1. Run the `EnterpriseServer21.exe` file and follow the wizard instructions to complete the installation.

✎ **Note:**

- If you are installing onto a machine that has an existing Micro Focus product that uses an older Sentinel RMS License Manager, you might be prompted to remove it and install the Micro Focus License Manager. By doing this you maintain the existing Sentinel RMS license files while adding the Micro Focus License Manager. If you are unsure about existing licenses on your computer or removing the Sentinel RMS License Manager, consult your System Administrator. If you want to proceed, remove Sentinel RMS License Manager by using Windows **Add or Remove Programs** and rerun the installation file.
- Trial licenses cannot be used with remote desktop services. If you want to use your product in this way, please contact Micro Focus SupportLine to obtain a relevant license.
- We recommend that you install any updates for the .NET Framework that are available at the *Microsoft Download* site.
- If you install JDK you might be prompted to install the latest update. The latest update is not required for use with Visual COBOL SOA but you can install it if you wish.

Installing as an Upgrade

This release does not work concurrently with earlier releases and installing it uninstalls previous versions of the product.

Before installing, check *Installation Restrictions and Requirements*.

After Installing

To open the help, select **Start > All Programs > Micro Focus Enterprise Server > Documentation** from the Windows Taskbar. From the left hand pane, select .

Repairing

If any product files, registry settings or shortcuts are accidentally removed at any point, you can perform a Repair on the installation to replace them.

To repair your installation on versions of Windows Vista or later:

1. From the **Control Panel**, click **Uninstall a program** under **Programs**.
2. Right-click your Micro Focus product and select **Repair**.

Uninstalling

To uninstall the product, you cannot simply delete its files from your hard disk. To uninstall the product:

1. Log in with the same user-ID as you used when you installed the product.
2. Click **Uninstall a program** under **Programs** (or **Add/Remove Programs** on older versions of Windows) in **Control Panel**.
3. On older versions of Windows such as Windows XP, ensure that **Show Updates** (at the top of the Add or Remove Programs dialog) is checked, so that any hot fixes or WrapPacks are listed.
4. On versions of Windows Vista and later, click **View installed updates** in the left-hand pane.
5. Select the product and click **Remove** or **Uninstall**, respectively.

When you uninstall, the only files deleted are those that the installation software installed. If the product directory has not been removed, delete any unwanted files and subdirectories within it using Windows Explorer.

✎ **Note:** The installer creates separate installations for Micro Focus COBOL Server SOA and Micro Focus License Manager. Uninstalling only COBOL Server SOA does not automatically uninstall the Micro Focus Licensing Manager or any of the prerequisite software.

To completely remove the product you must uninstall the Micro Focus Licensing Manager as well.

You can optionally remove the prerequisite software. For instructions, check the documentation of the respective software vendor.

Installing Mainframe Access Server

Introduction

The installation process for Mainframe Access Server uses a single FTP operation to transfer all of the mainframe software into a partitioned data set that you pre-allocate. When this transfer is complete, the remaining installation activities are all done on the mainframe. You customize and submit the pre-built FRESTORE job to restore the product data sets from the uploaded files and then continue with customization steps to create an operational Mainframe Access Server.

Requirements

- IBM TCP/IP 4.0, or Interlink TCP/IP 3.1 or higher
- two APPLIDs, two TCP/IP ports
- APF security authorization support personnel availability
- Access to a network share with acceptable space for source and data, as well as the ability to access the IP address and ports used to access MFA
- The following installation-specific variable information:

Variable	Description
drive	
userid	TSO user-ID for FTP to your mainframe
pswd	TSO password for the FTP user-ID
your.mainframe.name	TCP/IP host name or IP address of your mainframe
prodhlq	A NEW high level qualifier that will be assigned for all Host Connectivity data sets when the new Mainframe Access product is installed. These are NOT existing product data sets, but rather brand new files that you will be creating for this base version.

⚠️ **Important:** The installation of a new version creates new product run-time data sets before the upgrade is applied. Any existing Host Connectivity 3.01 libraries remain intact, and can be used for fallback. If you prefer to retain your former production library names and re-use your existing prodhlq then rename your old libraries beforehand.

Make a note of the maintenance level of your current Mainframe Access Server. Messages MFM0001I and MFM0014I on the syslog and XDBOUT sysout data set show the maintenance level at startup. You may need to know what level you are upgrading from when you complete post-installation customizations for this upgrade.

Install Mainframe Access Server

In the instructions that follow, the information that you must provide is shown as one of the variable names from the table of information in the previous section. For example, if your high-level qualifier (*prodhlq*) value is MY.MFA, then substitute MY.MFA for *prodhlq*.

Follow these steps to load Mainframe Access Server:

1. Download the installation file from the link in your Electronic Product Delivery email and extract its contents to a directory on the PC.

2. On the mainframe, allocate a new partitioned data set named *prodhlq*.UPLOAD to receive the uploaded files. Use the following data set characteristics for this upload library:

```
DSORG=PO                     <=== PDS (partitioned data set)
RECFM=FB                     <=== record format fixed and blocked
LRECL=80                     <=== 80 character record size
BLKSIZE=3120                 <=== 3120 character block size
SPACE=(3120,(3500,500,50))   <=== allocate blocks (BLKS) size 3120
                                  3500 primary blocks
                                  500 secondary blocks
                                  50 directory blocks
```

3. On the PC, issue the following FTP commands. The actual text of the FTP prompts and responses that you see may differ slightly from those shown in this example.

   a. Start FTP:

   ```
   C:\>ftpyour.mainframe.name
   Connected to your.mainframe.name.
   220-FTPD1 IBM FTP CS/390 VxRy at YOUR.MAINFRAME.NAME, hh:mm:ss
   220 Connection will close if idle for more than 5 minutes.
   User (your.mainframe.name:(none)): userid
   331 Send password please.
   Password: pswd
   230 userid is logged on. Working directory is "userid.".
   ```

   b. Change the working directory on the mainframe to be the upload library that you allocated:

   ```
   ftp> cd 'prodhlq.UPLOAD'
   250 The working directory "hlq.UPLOAD" is a partitioned data set.
   ```

   c. Set file transfer type to binary:

   ```
   ftp> binary
   200 Representation type is Image
   ```

   d. Set FTP prompting off to transfer all files without interruption:

   ```
   ftp> prompt
   Interactive mode Off.
   ```

   e. Transfer all files from the extracted \Upload directory to members in the *prodhlq*.UPLOAD library:

   ```
   ftp> mputdrive:\upload\f*
   200 Port request OK.
   125 Storing data set prodhlq.UPLOAD(Fxxxxxxx)
   250 Transfer completed successfully.
   ftp: xxxx bytes sent in x.xx seconds (xxx.xx Kbytes/sec)
   .
   .
   .
   ```

   f. When mput has transferred all files the ftp> prompt appears. End the FTP connection:

   ```
   ftp> quit
   221 Quit command received. Goodbye.
   ```

   g. On the mainframe, verify that all files transferred successfully and that for each Fxxxxxxx file in the \Upload directory there is a corresponding member in the *prodhlq*.UPLOAD data set. There should be 10 members, F1 through to F9 and FRESTORE.

4. On the mainframe, edit member FRESTORE in the upload library, *prodhlq*.UPLOAD. Follow the instructions in that member to customize the JCL and then submit that job to restore the product libraries from the uploaded files and populate your new product runtime libraries.

5. Start Mainframe Access Server.

After installation

Since the program libraries can change between versions, it is necessary to either create new procedures, or back up the old procedures, and at least modify the DSNQUAL=*prodhlq* within your MFA sample started task procedures as provided by Micro Focus. The *prodhlq*.LOADLIB and *prodhlq*.SASC.LINKLIB must both be authorized.

Verify successful maintenance application by checking the Mainframe Access Server startup message:

```
MFM0001I: Mainframe Access V4.00 (BASE ) is active
```

The "(BASE)" indicates the product maintenance level. Also check for "V4.00" in the Mainframe Access Data Connect server startup message:

```
MFA303I MFA/DATACONNECT V4.00 - BASE COPYRIGHT (C) 1987-2012 MICRO FOCUS...
```

When you are satisfied with the new version installation you may delete the UPLOAD data set from your system.

New parameters and members in the CNTL samples data set

The following updated members are found in the CNTL data set.

MFA	sample MFA started task
MFAS	*new* sample MFAS started task for Data Connect
MFAAS	sample MFAAS application server started task
MFAVTAM	sample MFA VTAM definitions
PARMS	sample PARMS for MFA started task
PARMSAS	sample PARMSAS for MFAAS started task
SERVERS	sample SERVERS configuration for MFA
UPQUICK	configuration notes

If you are migrating from Host Connectivity 3.01 WebSync 10 or earlier, you may want to retain your existing CNTL members from your current version as an installation test. You can simply copy the existing MFA started task JCL and change the STEPLIB to reference the new product libraries. You will however be required to modify the MFAS started task JCL since the module names for Data Connect have been changed to allow co-residence within the same authorized library as MFA.

Review the Change Log in each of the new members. Read the documentation for any new parameters in the Readme and in the updated Mainframe Access Administrator's Guide. Add these new parameters and other changes to your working copies. If necessary, customize the new parameters for your installation.

Once you are satisfied with the operation of Mainframe Access, you can consolidate the configuration settings into the new high-level qualified CNTL members.

Installing on UNIX

System Requirements for COBOL Server SOA for UNIX

Hardware Requirements

The disk space requirements are:

- Between 26MB and 54MB for the Sentinel RMS license server depending on the platform.
- Between 146MB and 350MB for COBOL Server SOA.

    Note: The installation requires extra disk space that equals the size of the product you install.

Operating Systems Supported

- AIX POWER 6.1/7.1 - 32/64-bit

- x86-64 running Red Hat Linux 5.5/5.7/6.1 - 32/64-bit
- Oracle Linux 6 Update 2 with Unbreakable Enterprise Kernel Release 2
- SPARC running Solaris 10 - 32/64-bit
- x86-64 running SuSE SLES 11/11 SP1 - 32/64-bit
- HP IA 11.31 - 32/64-bit

COBOL for JVM is supported on the following platforms:

- HP IA 11.31 - 32/64-bit
- x86-64 running Red Hat Linux 5.6/6.1 - 32/64-bit
- SPARC running Solaris 10 - 32/64-bit
- x86-64 running SuSE SLES 11/11 SP1 - 32/64-bit

Software Requirements

Before installing this product, you must have the following software installed on your computer:

- Before installing on Red Hat 6.1, you must have the 32-bit operating system libraries installed:

    GNU Standard C++ Library - libstdc++(i686 version)
    The object files for development using standard C libraries – glibc-devel (i686 version)

    Check the *Red Hat Web site* for more information.
- To use the Web installer on Red Hat Enterprise Linux 6.1, you must have the following bug fix updates for Red Hat installed:

    glibc-2.12-1.25.el6_1.3.i686.rpm
    openldap-2.4.23-15.el6.i686.rpm
    nss-pam-ldapd-0.7.5-7.el6.i686.rpm
    zlib-1.2.3-25.el6.i686.rpm
    nss-3.12.9-9.el6.i686.rpm
    nss-util-3.12.9-1.el6.i686.rpm
    cyrus-sasl-lib-2.1.23-8.el6.i686.rpm

    You do not need these updates if you use the full product setup file to install the product.

1. Java Platform Standard Edition (Java SE) 6 Update 27 or Java 7 is required to execute COBOL JVM code and for native COBOL and Java interoperability.

    Note: On AIX 6.1 v2, the minimum required version is Java 6.0 SR10.

    You can download Java SE from *www.oracle.com* and install it anywhere on your machine.

    Important: This release requires version 10000.2.990 or later of the Micro Focus licensing software. For local servers, you do not need to install it separately, as the setup file installs a new Visual COBOL SOA client and a new licensing server on the same machine.

    If you have a network server, you must update the license server before installing the product as the client is not able to communicate with license servers of versions older than 10000.2.660. On Windows, you can check the version of your license server by clicking **Help > About** in the Micro Focus Licensing System Administration tool. To check the version of the license server on UNIX, run `/var/microfocuslicensing/bin/mfcesver` or `/var/microfocuslicensing/bin/cesadmintool.sh`.

    You can download the new version of the license server software from the Micro Focus SupportLine Web site: *http://supportline.microfocus.com/websync/SLM.aspx*.

Before you start the installation, you need to set the environment as follows:

- Set the LANG environment variable to pick up localized messages. The LANG settings are English and Japanese only.

- The Java Development Kit (JDK) is required for compiling Java. The JDK is downloadable from *www.oracle.com*. After installing the JDK, you must put the tools.jar file for the JDK on your classpath, using a command similar to:

```
set classpath=jdk-install-directory\lib\tools.jar
```
- JavaScript or scripting support must be enabled in your browser, so that Enterprise Server Administration is usable. Also, active content must be allowed and not blocked.

Installing COBOL Server SOA

Downloading the Product

1. Use the download links in your Electronic Product Delivery email.

   For more information follow the links for the install instructions and the End User License Agreement.

Installing

To use the Web Installer:

1. Give the Web installer file execute permissions once it downloaded:

```
chmod +x webinstaller_visualcobol_server_2.1_platform
```
2. Run the installer with superuser permissions:

```
./webinstaller_visualcobol_server_2.1_platform
```

   If you don't run this as superuser, you will be prompted to enter the superuser password during the install.

Alternatively, you can use the setup file and install the product as follows:

1. Give execute permissions to the setup file:

```
chmod +x setup_visualcobol_server_2.1_platform
```
2. Run the installer with superuser permissions:

```
./setup_visualcobol_server_2.1_platform
```

   If you don't run this as superuser, you are prompted to enter the superuser password during the install.

   If you set COBDIR to an already installed product, the installer will back up the existing installation and will install this release in the location COBDIR points to. If COBDIR is not set, the installer does a fresh install.

   The COBOL environment is installed by default into `/opt/microfocus/VisualCOBOL`.

   To install in a different location use the `-installlocation="Location"` parameter to specify an alternative directory location. For example:

```
./webinstaller_visualcobol_server_2.1_platform -installlocation="full path
of new location"
```

   or

```
./setup_visualcobol_server_2.1_platform -installlocation="full path of new
location"
```

   You can see details about which additional parameters can be passed to the install script if you enter the `-help` option.

   You can use the following options to configure the Enterprise Server installation: `[ -ESsysLog="location" ] [ -ESadminID="User ID" ] [ -CASrtDir="location" ]`, where:

-ESsysLog Specifies a location in which the build will create the Enterprise Server System log file - for example, `-ESsysLog="/home/esuser/logs"`. The default location is `/var/mfcobol/logs`.

-ESadminID Sets the Enterprise Server System Administrator Process User ID from the command line - for example, `-EDadminID="esadm"`. The default user ID is the one that runs the installer.

-CASrtDir Specifies the location were the Enterprise Server run-time system files are placed - for example, `-CASrtDir="/home/esuser/casrt/es"`. The default location is `/var/mfcobol/es`.

> **Note:**
>
> - The installation of this product could affect the SafeNet Sentinel licensed components running on your machine. During installation licensing is shutdown to allow files to be updated. To ensure the processes running on your machine are not affected, you need to use the –skipsafenet option, which skips the installation of SafeNet:
>
>   ```
>   ./setup_visualcobol_server_2.1_platform -skipsafenet
>   ```
>
> - To protect the SafeNet Sentinel installation from accidental updating you can create an empty file named `SKIP_SAFENET_INSTALL` in `/var/microfocuslicensing/` as follows:
>
>   ```
>   touch /var/microfocuslicensing/SKIP_SAFENET_INSTALL
>   ```
>
>   While the file is present, the SafeNet installer does not make changes to the installation or shutdown the running license daemons. If later licensing needs to be updated, remove the file and install Sentinel RMS server manually.

After Installing

When you have installed the product, you need to set the environment as described below.

1. To set up your product, execute:

2. To verify that your product is installed, execute:

   ```
   cob -Version
   ```

> ⚠ **Important:** These commands set the environment only for the current shell. You need to execute them for each new shell that you start.

   To avoid having to run cobsetenv for every shell, add these commands to the shell initialization files (`etc/profile`, `etc/bashrc`, etc.)

Installing as an Upgrade

This release works concurrently with version R4 of Visual COBOL SOA, so you do not need to uninstall it. There are two options for installing the latest version in this case:

- Move the R4 installation to a different location and install the latest version to the default install location, `/opt/microfocus/VisualCOBOL`.

  This ensures you do not need to change your environment. To move the existing older installation to a different location:

  1. Execute the following command:

     ```
     [ as root ] mv /opt/microfocus/VisualCOBOL /opt/microfocus/VisualCOBOLR4
     ```

  2. Install the latest version as described in the section *Installing*.

- Install the latest version in a different location and set the environment to point to it. To do this, run the Visual COBOL SOA 2.1 installer with the –installlocation option:

1. Execute the following command:

```
./InstallFile -installlocation="/opt/microfocus/VisualCOBOL2.1"
```

2. Execute cobsetenv to set the environment and point to the new install location:

```
. /opt/microfocus/VisualCOBOL2.1/bin/cobsetenv
```

UNIX Installer Issues

License Infrastructure Installer

On some Solaris platforms, you can receive the following error message when SafeNet license server needs to be installed or upgraded on your machine:

```
tar: /safenet.tar: No such file or directory
```

To resolve this issue, wait for the installation to complete and then perform the following:

1. Navigate to the `safenet` directory in the COBDIR location.
2. With superuser permissions execute: `./MFLicenseServerInstall.sh`

License Server

On UNIX, you need to configure the computer hostname to ensure the license server will start properly.

To avoid performance issues, "localhost" and the computer hostname must not both be mapped to IP address 127.0.0.1. You should only map "localhost" to IP address 127.0.0.1.

The following is an example of how to specify these entries correctly in the etc/hosts file:

```
127.0.0.1 localhost.localdomain localhost
IP machinelonghostname machineshorthostname
```

where *IP* is the unique IP address of the computer in xx.xx.xx.xx format.

Repairing

If a file in the installation of the product becomes corrupt, or is missing, we recommend to reinstall the product.

Uninstalling

✎ **Note:** Before you uninstall the product, ensure that the Enterprise Server Regions and the Micro Focus Directory Service (MFDS) are stopped.

To uninstall this product:

1. Execute as root the Uninstall_VisualCOBOL21.sh script in the `$COBDIR/bin` directory.

✎ **Note:** The installer creates separate installations for the product and for Micro Focus License Manager. Uninstalling the product does not automatically uninstall the Micro Focus Licensing Manager or the prerequisite software. To completely remove the product you must uninstall the Micro Focus Licensing Manager as well.

To uninstall Micro Focus License Manager:

1. Execute as root the `UnInstallMFLicenseServer.sh` script in the `/var/microfocuslicensing/bin` directory.

   The script does not remove some of the files as they contain certain system settings or licenses.

You can optionally remove the prerequisite software. For instructions, check the documentation of the respective software vendor.

Licensing Information

> **Note:**
> - This release uses the license keys for the Visual COBOL SOA R4 release.
> - This release requires the latest version of SafeNet licensing software. See *Software Requirements* in this document for more details.
> - If you are unsure about what your licensing policy is or what sort of license you require, consult your System Administrator or Micro Focus SupportLine to obtain a valid license.

Windows Use the Authorization Code, supplied with your delivery notice, to license your product. To do this:

1. Click **Start** > **All Programs** > **Micro Focus License Manager** > **License Management System**.

   The dialog box for the Micro Focus License System Administration Tool will be displayed.
2. Click the **Authorize** tab.
3. Enter your Authorization Code and click **Authorize**.
4. Close the Micro Focus License System Administration Tool.

If you wish to install the license silently, execute the following after the product has been installed:

```
start /wait <install-dir>\bin\cesadmintool –term activate
AuthorizationCode
```

UNIX The Micro Focus Licensing System is installed into the `/var/microfocuslicensing` directory.

To license your software:

1. Run the Micro Focus Licensing Administration utility:

   ```
   sh /var/microfocuslicensing/bin/cesadmintool.sh
   ```

   > **Note:**
   > - You need permissions to write to the license file which normally means you need to log in as root.
   > - Make sure Java is on the PATH before you run the utility. See *System Requirements* for more information.
2. Select an option as appropriate and press **Enter**:

   If you have access to the Internet:

   Select **Online Authorization**. You will be prompted to enter the Authorization Code supplied with your delivery notice.

   If you do not have access to the Internet:

   You need the license strings. In order to obtain them, you need your Authorization Code, your Machine Id and a machine with access to the Internet.

   a. Choose **Get Machine Id** and press **Enter**.
   b. Make a note of the information which is displayed.
   c. On the machine which is connected to the Internet, open *http:// supportline.microfocus.com/activation/* in a browser.
   d. Follow the instructions to obtain the license strings and save them to a text file.

    e. Copy the text file to the first machine on which you are installing the product.

    f. At the command line, select **Manual License Installation** from the licensing options and enter the full name of the file containing the license strings.

Known Issues

Please, refer to the *Known Errors and Restrictions* topic in the *Product Information* section of your product Help.

In addition, please note the following:

COBOL Watchpoints	The debugger ignores a COBOL watchpoint that is hit if there is no statement following the statement that modifies the data on which that watchpoint is set.
ICETOOL Emulation	ICETOOL emulation for managed code is not available in this release.
Enterprise Server	On versions of Windows Vista and later, Enterprise Server listens only on the IPv4 loopback address (127.0.0.1). As a result, an attempt to connect to localhost with a TN3270 emulator such as RUMBA may fail. To work around this issue, in your emulator's configuration use 127.0.0.1 in preference to localhost or your host machine's name.
JCL VSE	When running Enterprise Server applications on HP Itanium in 32-bit mode, if you receive an error such as "CASCD1057S JES Initiator for Server ... abended by signal 00004", you need to set the environment value COBMAINSTACK to a value greater than 500000 to increase the default stack size.

Resolved Issues

The resolved issues that customers have reported are listed in this section. The numbers that follow each issue are the Reported Problem Incident number followed by the Customer Incident Numbers (in parentheses). RPIs that have numbers only (and no text) are included to confirm that the RPIs have been fixed, since no further information is required.

- *.NET Compiler*
- *.NET ESQL Support*
- *CAS Security*
- *CAS XA Switch modules*
- *CCI TCP/IP*
- *Compiler*
- *Documentation*
- *File Handling - External File Handler*
- *File Handling - Fileshare*
- *File Handling - Sort / JCL Sort*
- *JVM Compiler*
- *JVM Run-Time System*
- *MF Directory Server*
- *MVS REXX Emulation*
- *Run-Time System*
- *SQL: COBSQL*
- *SQL: DB2 ECM*
- *SQL: OpenESQL*
- *Vision File System*
- *XDB DCLGEN Utility*
- *XDB Server*
- *XML syntax support runtime*

.NET Compiler

- When compiling for managed code, you can no longer use the ALTER, ON or EXHIBIT CHANGED statements in class programs. You can only use these statements in procedural COBOL programs (i.e. programs specified with the PROGRAM-ID header).

  1084928 (2581987)
- When compiling to managed COBOL, we no longer produce an error for MOVE statements in which the source is a PIC N field and the target is an object reference of type string.

  1084133 (2572679)
- In managed COBOL, using the EXIT PARAGRAPH and NEXT SENTENCE statements in the same paragraph could lead to bad control flow.

  1084070 (2572411)
- When compiling to managed code, the ASSIGN TO DISK FROM data-name clause (of the SELECT statement) is now working correctly.

  1085027 (2582960)
- A write to a record of a file defined in a class could result in the generation of a bad code if that record was not referenced in your code.

  1083955 (2570957)

- The use of extended ACCEPT or DISPLAY statements in Windows applications (ilsubsystem"2") now produces error COBCH1634: Extended ACCEPT/DISPLAY not allowed with a Windows GUI executable (ILSUBSYSTEM"2"). Remove the syntax or change the output type of your application to 'Console Application'.

  1084365 (2575702)
- The directive NOIOCONV no longer causes the compiler to produce system errors when compiling for managed code.

  1071930 (2359629)
- When a pic x item is passed as a parameter to a method that is expecting a character (System.Character or char in C#), conversion from the current locale to the relevant Unicode character is performed. Previously, the conversion did not take place, causing corruption.

  1084595 (2577800)
- Access to indexers using zero-based indexing (e.g. display simpleIndexer[2]) is now working correctly.

  1084699 (2579210)

.NET ESQL Support

- The OpenESQL pre-compiler no longer converts underscores in COBOL host variables in EXEC SQL statements to dashes.

  1085254 (2585445)
- The default setting of SQL(BEHAVIOR) is MAINFRAME for versions of Visual COBOL and Enterprise Developer 2.0 and later. If you are upgrading existing applications that support ADO.NET, use Mirosoft SQL Server, and depend on cursors that are not explicitly declared as forward-only, read-only being implemented as ADO.NET datasets, ensure that in the latest version of the Micro Focus products they use the directive SQL(BEHAVIOR=UNOPTIMIZED), or update their code to declare cursors using the scrolloption 'dataset' that requires a dataset-based cursor.

  1084942 (2582082)

CAS Security

- The MLDAP ESM Module can now be configured to support an additional wildcard character, "+", which matches any one character in the resource, user, or group name. To enable this wildcard, set "plus-wildcard=yes" in the [Operation] section of the Security Manager configuration area.

  1083460 (2565125)

CAS XA Switch modules

- The XA build script has been updated to resolve an issue using the 64-bit DB2 XA switch module on x86-64 platforms running Linux.

  1083129 (2560501)

CCI TCP/IP

- CAS utilities such as cassub or casout, and COBOL Web Service clients, no longer timeout prematurely when used with an SSL-enabled connection.

  1082906 (2557202)

Compiler

- The DBCSSOSI directive now compiles correctly.

  590357 ( )

- DISPLAY MESSAGE BOX ... RETURNING syntax now returns an E-level error message stating that it is unsupported in this COBOL system.

  584600 ( )
- You can now configure the DATAMAP clause to output either addresses or offsets. DATAMAP(ADDR) or DATAMAP with no option shows addresses. DATAMAP(OFFSET) shows offsets. Compile managed COBOL code sets DATAMAP(OFFSET) at the end of directive processing as addresses are not available for managed code.

  1054182 (2093752)
- Compilation of ACU DISPLAY windowing syntax will no longer receive spurious internal error messages during a background syntax check.

  591227 ( )
- Compiling with a large number of ADDSYN directives specified now works as expected.

  1083917 (2567767)
- The maximum value for the PAGE LIMIT clause has been increased from 999 to 9999.

  1084391 (2576431)
- DISPLAY(CONSOLE) is a new directive available to override the behavior set by RM or ACU directives, so that standard DISPLAY syntax is processed as standard ANSI DISPLAYs, directed to CONSOLE. RM and ACU directives set DISPLAY(CRT) immediately, allowing you to set DISPLAY(CONSOLE) after either of those directives, if required.

  1084496 (2577799)
- A compiler bug that produced illegal int-code for "call ... returning pointer-item" under DIALECT(RM) has been fixed.

  1085375 (2586367)

Documentation

- When entering the path of the IBM MQ libraries for the ES_MQ_LIB and ES_MQ_LIB_XA environment variables, in AIX environments the library must be an object inside a shared object.

  1084692 (2578515)
- When you create or edit a CICS SIT resource in ESMAC, the paths of recoverable and non-recoverable temporary storage queues are now specified in separate fields, Path (rc) and Path (nr).

  1084877 (2578440)

File Handling - External File Handler

- Reading IDXFORMAT"9" records non-transactionally over fileshare no longer causes any issues.

  1083646 (2566578)
- When opening a mainframe file for input, the file is now not optional as per the mainframe.

  1082362 (2506971)
- When attempting to OPEN I/O a read-only file using the RM/COBOL File Handler, a 37, 07 error message is displayed if the program is running in ANSI85 mode. The error message is not displayed if the program is running in ANSI74 mode.

  1084329 (2573607)
- Cobfhrepro now works correctly when session id is specified.

  590271 ( )
- Invalid XML syntax in MF.MFFH.XML has been corrected.

  589406 ( )
- The maximum field length that MFSORT supports for PD summary fields is extended from 9 bytes to 18 bytes.

1084961 (2581353)

File Handling - Fileshare

- If you are accessing RM/COBOL files through Fileshare, the RETRYLOCK option is now working correctly.

  1084744 (2579930)
- Closing a file using FSVIEW now correctly removes the file from fileshare's open file table.

  587706 ( )
- The FSVIEW option 'stats get' gives the statistics for current users, peak users, file opens and peak file opens. The corresponding FSVIEW API is FSV-C-get-stats.

  1083664 (2567737)
- FSVIEW will no longer process the last command in a command file twice.

  589764 ( )

File Handling - Sort / JCL Sort

- The informational "Operand 'VLSHRT' Ignored" message has been removed from the sort sysout.

  1083225 (2562501)
- Using SYMNAMES sometimes caused SORT to use the wrong field position and lengths.

  1083320 (2563738)
- Data format FI is now supported in the OUTREC edit fields section.

  1083495 (2565051)
- SORT now works correctly when there are concatenated VB files with different record lengths in SORTIN.

  1084194 (2573990)
- SORT now gracefully handles the error when there is an INCLUDE/OMIT condition with invalid HEX/ Binary digit.

  1084231 (2574465)
- SORT now ignores the operand 'WORK' along with its value.

  1081023 (2533397)
- A sort using SORTTEMPSPACE no longer ever results in a COBRTS 252 error.

  1081943 (2546898)
- CENTWIN and Y2PAST are now supported as PARMS.

  1080717 (2531364)
- The MFSORT help screen now shows that OPTION is supported.

  590260 ( )
- SORT worked incorrectly for multiple fields to be converted in INREC/OUTREC/OUTFIL OVERLAY syntax.

  1084481 (2577157)
- The TOTAL field length calculation now works correctly when TOTALs are zeros.

  1082887 (2558079)
- Trailers are now included in the SYSOUT outfil record count.

  1084193 (2573272)
- Records following HEADER2 and HEADER3 will now be the correct length.

  590270 ( )

- Header lengths are now calculated correctly, taking line feeds into account instead of giving a SORT099I error. Headers will now be printed for outfiles that do not have any records.

  1083701 (2565909)
- SORT now works correctly when SYSIN is given as LSEQ PDS Member.

  1082529 (2550678)
- When using MFJTOOL with a VB input file, an appropriate error is thrown when the output file is not VB or has not worked successfully when the output file is VB. Previously, a COBRTS 139 error was thrown.

  1084567 (2577626)
- Sort now works correctly when OPTION COPY is given before the SORT FIELDS in SYSIN.

  1083679 (2565053)
- SORT caused different sort processing for large sort cards. This has been fixed so SORT now returns an error message and exits the sort processing when the sort card has more than 1024 INCLUDE/ OMIT conditions.

  1084065 (2571660)
- When using MFSORT, smaller records are padded to the size of the minimum record length of a VB file and the record length is changed to the minimum of sortout.

  1082943 (2554482)
- Sort now displays HEADER2 at the start and TRAILER2 at the end of each page.

  1083702 (2566545)

JVM Compiler

- Java verification errors or incorrect program flow occurring in very large JVM COBOL programs is now fixed. Previously, in very large programs, the compiler would process GO TO statement incorrectly, and could jump to the wrong program locations.

  1084569 (2578716)
- Some problems with the use of nested classes defined in COBOL have been resolved.

  1083183 (2561420)

JVM Run-Time System

- A stack overflow no longer occurs if you execute a call to a method inside a constructor and this method contains a COBOL statement. Previously, the runtime would jump back to the constructor and go into a loop, producing a stack overflow.

  1083181 (2561418)
- The JVM COBOL library routines CBL_DIR_SCAN_ now return the correct results when searching for directories.

  590261 ( )

MF Directory Server

- A problem with some of the security configuration pages in the Enterprise Server Adminstration HTML GUI not being displayed correctly in Mozilla Firefox Web browser has been resolved.

  592374 ( )
- When you used Enterprise Server Administration to create a new security resource entity, the initial ACL string value was displayed as an incorrect value.

  592375 ( )
- In Enterprise Server Administration, if a server listener has been defined to use SSL, the "Authorise" URL now uses a hostname instead of an IP address if the Communications Process Control Channel

listener has been defined using a hostname address. This avoids potential issues where the IP address might be invalid on a remote client because of NAT configuration.

1083989 (2563805)

- If MFDS_DNS_RESOLVE=Y is set in the MFDS process, you could get sign on errors. These was caused by the HTML GUI "Log On" menu option URL using the IP address and not the fully qualified hostname. These issues have now been fixed. As well as resolving the NAT address issues for remote clients, the HTML GUI "Log On" menu option also allows browser clients to connect to the GUI without receiving a certificate warning. This has been fixed in versions of the MFDS 1.14.27 and later.

1084209 (2573815)

- On Solaris platforms, attempting to access the Historical Statistics Facility for an Enterprise Server instance from the Enterprise Server Administration console causes the MFDS process to terminate.

592029 ( )

MVS REXX Emulation

- The DATE() function now formats the year correctly when converting between a Julian and a standard date format.

1083437 (2564240)

- The LISTDSI external function now correctly sets values for the SYSREFDATE and SYSMGMTCLASS variables.

1084902 (2581611)

Run-Time System

- The call MVS_REGISTER_DDNAME is an MFE-only call used by the IDE. FileHandler no longer calls this routine.

1083028 (2559292)

- IF NUMERIC validation of COMP-3 slack nibbles (when there is an even number of digits in the picture clause) is now done in a way that is compatible with that on the mainframe.

1083801 (2569340)

- The RUN program now accepts command line arguments of up to 1023 characters long.

1083215 (2561567)

- When running a full-screen application inside a terminal emulator on Linux, the actual size of the terminal is read at startup and reread when the terminal is resized. This behaviour is also supported on AIX, HP/UX, and Solaris. The Micro Focus vt220 terminfo entry now correctly describes a 24-line display. A vt220-25 terminfo entry is included for compatibility with the previous behaviour.

1084817 (2579335)

SQL: COBSQL

- The Cobsql preprocessor was updated to no longer misinterpret WORKING-STORAGE items whose definitions were spread across multiple source lines.

1080078 (2507684)

- The Cobsql preprocessor has been updated to correctly process variables defined as USAGE COMP after an EXEC SQL INCLUDE SQLCA when the CP preprocessor directive NOSQL is specified.

1084463 (2577593)

- The Cobsql preprocessor has been updated to correctly process Pro*COBOL-generated data items when the first WORKING-STORAGE variable in user code contains a VALUE clause with the literal value on a separate source line.

1084753 (2579264)

SQL: DB2 ECM

- The DB2 pre-compiler now generates GOBACK instead of STOP RUN at the end of program source, so that poorly coded programs do not fail when running under IMS or other transaction monitors.

  1083235 (2559616)

SQL: OpenESQL

- The OpenESQL preprocessor has been updated such that when a program or application is compiled with the SQL(DBMAN=ADO) compiler directive, the calls generated do not modify user data when a null value is returned.

  1083563 (2561563)
- The OpenESQL preprocessor no longer accepts singleton select statements that have no INTO clause, or host variables that are not preceded by a colon, apart from SQLDA references in dynamic SQL. In rare cases where a singleton select without an INTO clause is required, code it by placing the SELECT statement inside of a BEGIN/BEND block.

  1084430 (2576585)
- The ODBC Compiler did not identify specialized classes such as ENUMS, and incorrectly generated SQL interface code for them that caused Compiler errors. The ODBC Compiler has been enhanced so that it no longer generates SQL interface code for those classes.

  1083144 (2561349)
- Previously, the SQL pre-compilers did not always recognized the EXEC SQL INCLUDE statements during the syntax checking phase and returned incorrect error messages.

  1085057 (2582967)

Vision File System

- When you configure your application to return RM/COBOL file status codes, by setting COBFSTATCONV=rmstat, the codes returned are ANSI'85 codes.

  1082469 (2553438)

XDB DCLGEN Utility

- A protection violation sometimes occurred when you used the XDB Declaration Generator tool on 64-bit Windows platforms.

  591030 ( )

XDB Server

- Support has been added to enable the execution of DESCRIBE INPUT statements.

  1079821 (2508551)
- A mutex deadly embrace no longer results in a server hang.

  1085199 (2583889)

XML syntax support runtime

- An issue with the PREXML preprocessor has been resolved and it now does not truncate data names longer than 30 characters.

  1085342 (2586384)
- In previous releases, the documentation for XML Input/Output was missing from the online help. This documentation is now included in the online help.

1084119 (2572393)

Updates and SupportLine

Our Web site gives up-to-date details of contact numbers and addresses.

Further Information and Product Support

Additional technical information or advice is available from several sources.

The product support pages contain a considerable amount of additional information, such as:

- The WebSync service, where you can download fixes and documentation updates.
- The Knowledge Base, a large collection of product tips and workarounds.
- Examples and Utilities, including demos and additional product documentation.

To connect, enter *http://www.microfocus.com* in your browser to go to the Micro Focus home page.

> **Note:** Some information may be available only to customers who have maintenance agreements.

If you obtained this product directly from Micro Focus, contact us as described on the Micro Focus Web site, *www.microfocus.com*. If you obtained the product from another source, such as an authorized distributor, contact them for help first. If they are unable to help, contact us.

Information We Need

However you contact us, please try to include the information below, if you have it. The more information you can give, the better Micro Focus SupportLine can help you. But if you don't know all the answers, or you think some are irrelevant to your problem, please give whatever information you have.

- The name and version number of all products that you think might be causing a problem.
- Your computer make and model.
- Your operating system version number and details of any networking software you are using.
- The amount of memory in your computer.
- The relevant page reference or section in the documentation.
- Your serial number. To find out these numbers, look in the subject line and body of your Electronic Product Delivery Notice email that you received from Micro Focus.

On Windows, if you are reporting a protection violation you might be asked to provide a dump (`.dmp`) file. To produce a dump file you use the **Unexpected Error** dialog box that is displayed when a protection violation occurs. Unless requested by Micro Focus SupportLine, leave the dump setting as `Normal` (recommended), click **Dump**, then specify a location and name for the dump file. Once the dump file has been written you can email it to Micro Focus SupportLine.

Alternatively, you might be asked to provide a log file created by the Consolidated Tracing Facility (CTF) - a tracing infrastructure that enables you to quickly and easily produce diagnostic information detailing the operation of a number of Micro Focus software components.

On UNIX, you can use the Micro Focus UNIX Support Scan Utility, mfsupport, to create a log file that contains the details about your environment, product, and settings. The mfsupport script is stored in `$COBDIR/bin`.

To run mfsupport:

1. Start a UNIX shell.

2. Set COBDIR to the product with issues.
3. Execute `mfsupport` from a directory where you have write permissions.

   This creates a log file, `mfpoll.txt`, in that directory.
4. When the script finishes, send the `mfpoll.txt` file to your Micro Focus SupportLine representative.

   📝 **Note:**

   If COBDIR is set to a location which does not contain `etc/cobver`, the script outputs the contents of `/opt/microfocus/logs/MicroFocusProductRegistry.dat` which keeps a list of the installedMicro Focus products.

Creating Debug Files

If you encounter an error when compiling a program that requires you to contact Micro Focus technical support, your support representative might request that you provide additional debug files (as well as source and data files) to help us determine the cause of the problem. If so, they will advise you how to create them.

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