MICRO FOCUS

extend Interoperability Suite 10.3.1

Release Notes

Contents

extend 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 links to external web sites. Micro Focus cannot be responsible for the contents of the website or for the contents of any site to which it might link. Web sites by their nature can change very rapidly and although every attempt is made to keep links up-to-date, Micro Focus cannot guarantee that external links will always work as expected.

extend System Requirements

Note: This product includes software developed by the University of California, Berkeley and its contributors.

Hardware Requirements

extend software has the following requirements:

For Windows:

- The amount of disk space needed to install the ACUCOBOL-GT development system is typically less than 35 MB.
- AcuBench® requires at least 20 MB for installation.
- You need an additional 40 MB to install all of the other extend products.
- Use of .NET controls with the runtime and thin client requires .NET Framework 4.0.

For all other platforms:

- The amount of disk space needed to install all extend products is typically less than 35 MB.

Supported Operating Systems

Note: AcuBench no longer supports Windows XP or Windows Server 2003 (or any Windows platforms that pre-date these). This is because AcuBench utilizes a number of third-party libraries that have ceased to be supported on those platforms.

For this release, if you are running on the AIX 7.1 platform, the minimum requirement is version 7.1 Technology Level 4 (7100-04)), and if you are running on the AIX 7.2 platform, the minimum requirement is version 7.2 SP1.

For a full list of the supported operating systems, check the Product Availability section on the Micro Focus SupportLine Web site: *https://supportline.microfocus.com/prodavail.aspx*.

Additional Requirements

General requirements

Linux-based platforms require `glibc` version 2.5 or later.

AcuServer:

- Each server machine must be networked to UNIX, Linux, or Windows clients with TCP/IP. TCP/IP is not sold or supplied by Micro Focus.
- All servers must have a copy of the AcuServer license management file.
- Windows clients can run any TCP/IP software that uses a `WINSOCK2` compliant `ws2_32.dll`.
- Unless you have an unlimited license for AcuServer, all UNIX servers must run the current version of `acushare`, which is included on the AcuServer distribution media.
- All servers must have a copy of the license file activated by the product installation script. This file is named `acuserve.alc`.
- Client machines must have an ACUCOBOL-GT AcuServer-enabled runtime. All Windows runtimes Version 5.0 and later are AcuServer-enabled. To verify that your UNIX runtime is AcuServer-enabled, type `runcbl -v` in a Command prompt and look for this line.
  ```
  AcuServer client
  ```
- Servers being accessed by the ACUCOBOL-GT Web runtime must have a multiple-user ACUCOBOL-GT runtime license that accommodates each concurrent user that is anticipated. (If you anticipate 100

concurrent users of the Web runtime, you need a 100-user runtime license on the server in addition to the AcuServer license file. Alternatively, runtime users can install a local or network floating license for the runtime themselves.

AcuBench:

- Intel Pentium III CPU, 300 MHz; Intel Pentium IV, 2 GHz recommended
- 128 MB of RAM recommended
- 120 MB of available hard disk space recommended
- mouse
- 800 x 600 VGA display or better; 1024 x 768 VGA display recommended

AcuToWeb:

gcc versions

AcuToWeb requires the following gcc versions or later on the following platforms:

Platform	Minimum requirement
Aix6.1	GCC 7.1.0
Aix7.1	GCC 7.1.0
Aix7.2	GCC 7.1.0
HP 11.31 PA-RISC	GCC 4.3.1
HP 11.31 IA	GCC 4.2.3
Linux	GCC 4.8.0
Linux PPC	GCC 4.1.2-46
Sun Solaris 10	GCC 3.4.3
Sun Solaris 11	GCC 4.8.2

Linux-based platforms

For Linux-based platforms, the following packages must be added:

Debian-based	libc6:i386
	libstdc++6:i386
RHEL/Centos-based	libstdc++.i686
SUSE-based	libstdc++6-32bit

AIX and Solaris platforms

AIX and Solaris platforms require the Foreign Function Interface Library (libffi) is installed. More information and the installation packages can be found at the following:

AIX platforms

You can download an RPM package from:

http://www.bullfreeware.com/affichage.php?id=3638

And then install it using:

```
rpm -Uvh http://www.bullfreeware.com/download/bin/3638/
libffi-20170516-1.aix6.1.ppc.rpm
```

Solaris platforms

You can download the package from:

https://www.opencsw.org/packages/libffi6/

General information on libffi can be found at:

https://cffi.readthedocs.io/en/latest/installation.html

If you are running on the Solaris 11 platform, the minimum version required to run the AcuToWeb Gateway is version 11.3.

AcuSQL:

- Your COBOL application must run on a Windows system or a UNIX system supported by Micro Focus. Unless otherwise indicated, the references to Windows in this manual denote supported Windows operating systems. Where necessary, individual versions of those operating systems are referred to by their specific version numbers.
- AcuSQL must be installed with the ACUCOBOL-GT development system on your Windows or UNIX system.
- If using a database other than Microsoft SQL Server, you must have a working ODBC level 2 API connection to your database, including any required networking software support.
- For SQL Server, if running the AcuSQL interface to Microsoft SQL Server, you must have the SQL Server client software from Microsoft. Use the Query Analyzer to see if the SQL Server client software from Microsoft is on your system. For information on opening the Query Analyzer, see the SQL Server client documentation. If the Query Analyzer opens and you are able to connect to the database, the client libraries are most likely all present. Your SQL Server data source may be hosted on one or more of the supported server operating systems.
- If you are running the AcuSQL interface to MySQL, you must have the following software:

  - MySQL 5.0 Database Server Version 5.0.18 or later (Generally Available release). Testing was done with MySQL 5.0.18 Standard.
  - MySQL Connector/ODBC Version 3.51.11 or later (Generally Available release). Testing was done with the `libmyodbc3-3.51.12.so` library. This file is available from *http://dev.mysql.com*.

You can check the version of your server by connecting using `mysql`. The version prints upon connection. For example:

```
[testing ]: mysql
Welcome to the MySQL monitor. Commands end with ; or \g.
Your MySQL connection id is 29 to server version:
5.0.18-standard
Type 'help;' or '\h' for help. Type '\c' to clear the buffer.
```

Once in MySQL, you can also use the following:

```
mysql> select version();
+-----------------+
| version()       |
+-----------------+
| 5.0.18-standard |
+-----------------+
1 row in set (0.09 sec)
```

- If your application accesses DB2 data, IBM's DB2 Connect™ software is recommended. Access to DB2 databases has been tested with DB2 Connect. However, any vendor's properly configured ODBC level 2 API connectivity software should work. Your DB2 data source may be hosted on one (or more) of the supported operating systems.

Acu4GL (for ODBC) driver requirements:

Your ODBC driver must include the following functions:

- all Core ODBC driver functions
- the Level 1 function SQLColumns
- the Level 1 function SQLTables

Depending on the method of record locking you choose, your driver may also need to support some of the following function calls:

- SQLSetStmtOption
- SQLSetScrollOptions
- SQLExtendedFetch
- SQLSetPos

See A_ODBC_LOCK_METHOD in the extend online help for more information.

To test the capabilities of your ODBC driver, we have included a driver test program on your Acu4GL for ODBC installation disks. You can also consult your driver documentation to ensure that it meets these requirements.

Windows Installation

License Files for Windows

You may request a license file for one or more users. The number of users (user limit) is set in your license agreement with Micro Focus.

When you receive your products, the package includes product codes and product keys for every product you ordered. You must have the product codes and product keys to create the license file.

When you install or update your license file, place it in the appropriate directory for your version of Windows. The location is:

```
C:\ProgramData\Micro Focus\extend\x.x.x\x86\product-license.alc
```

(Where *x.x.x* is the product version number.)

> **Note:** This location is new to extend 9.0 and later, and differs from past versions of extend products. See *Appendix C - Changes Affecting Previous Versions* in the *ACUCOBOL-GT Appendices* manual for details.

When you have multiple users or products, you may copy the license file onto each machine containing the corresponding product or place the products and license file on a shared drive. Each product must be able to locate its license file in order to function.

> **Note:** The ACUCOBOL-GT Transaction Server runtime license file is named `wrun32.llc`. If you are using other *extend* products, the license files must be concatenated into a special file.

The Activator Utility

The Activator Utility automates the process of creating a license file.

During installation, select **Install License Activator** on the Installation Settings page to install the Activator Utility (`activator.exe`). It is installed in the `\AcuGT\bin` sub-directory of the installation directory.

> **Note:** Always use the version of the Activator supplied with the version of the product you have installed.

To create the required license files during installation, select **Launch License Activator** on the Installation Settings page. This will launch the Activator Utility when the selected products have installed, enabling you to enter the product code and key pairs required to create the license files.

You can also create license files after the installation by running the Activator Utility (`activator.exe`) from the location detailed above or from the Start menu.

During product installation, if the Activator detects the presence of an existing license file, the extension of the existing file is changed before a new license file is created. For example, `runcbl.alc` is renamed `runcbl.al!`. If the Activator is unable to rename the existing license file, it quits with an error message, and no new license file is created. If a license file with the back-up extension already exists, the Activator attempts to overwrite it. If that fails, the Activator quits with an error message and no new license file is created. On Windows platforms, file attributes such as Read Only are also preserved.

Changing or Updating a Windows License File

If you need to alter your license file information, contact your Micro Focus *extend* representative for updated product code(s) and product key(s). When you receive them, launch the Activator and enter the new information as prompted.

Note: If you have copied a license file to a non-default directory, remember to replace that file with a copy of the updated license file.

Installation on Windows Platforms

The Windows installation requires little interaction; the setup program copies the files into a directory you designate, or `C:\Program Files\Micro Focus\extend` *x.x.x* (where *x.x.x* is the version number) by default. On 64-bit machines, 32-bit executables are installed to `C:\Program Files (x86)`.

Before you run an installation, you should ensure that you have your product codes and product keys, and the product media to hand. Refer to the appropriate installation instructions below.

Also, you should ensure that you do not have another version of the extend Interoperability Suite referenced in the PATH system environment variable, as having more than one version specified may cause unexpected results.

After the installation is complete, if you have installed both the compiler and runtime, you can begin to compile and execute your COBOL programs. Basic compilation and execution techniques are described in *Compiling Your Programs* and *Running Your Programs*.

Note: If you move or delete any `.dll` files that have been installed, your products may not run as expected.

AcuBench and AcuXDBC™ must be installed locally (on the client). Server-side products such as AcuServer™, AcuXDBC™ Server and AcuConnect® are to be installed only on server machines.

Supported Windows Platforms

For a full list of the supported operating systems, check the Product Availability section on the Micro Focus SupportLine Web site: *https://supportline.microfocus.com/prodavail.aspx*.

Installation Steps

Attention: The installation is supplied in two formats: `.exe` and `.msi`. On the installation CD, the `.exe` is located in the top level folder, and the `.msi` is located in the `msi` folder. If you plan to install Xcentrisity Business Information Server, or start AcuServer or AcuConnect from the installer, you must run the installation with administrator privileges, from an account that is in the Administrator group.

If you install from the CD, it will automatically run the `.exe` version with administrator privileges. To run the `.msi`, you must run it from a command prompt that has administrator privileges. To run the `.msi` with administrator privileges, click **Start**, and in the **Search programs and files** field, type `cmd.exe`, then in the list displayed, right-click **cmd.exe** and select **Run as administrator**: this opens a command prompt with administrator privileges, where you can run the install by typing the full path name of the `.msi` file.

Follow these steps to install your products.

1. Insert the product CD, or use the provided link to download the installation package from the Micro Focus website.

   If you are using the CD, it runs the `.exe` version automatically.

2. If the `.exe` version does not start automatically, or you are using the downloaded installation package, do one of the following:

   - Navigate to the CD drive, then double-click the `.exe`.
   - Navigate to the location of the downloaded file, then double-click it. (See the above note if you are running the `.msi` version.)

   The installation starts.
3. On the Welcome page, click **Next**.
4. On the **End-User License Agreement** page, select **I accept the terms in the License Agreement**, then click **Next**.
5. On the **Select Installation Folder** page, click **Browse** and select installation directories for 32-bit and 64-bit (if applicable) products. Alternatively, you can accept the default location(s), then click **Next**.

   Restriction: If you specify a mapped drive, it must map to a local directory; remote mapped drives are not supported.
6. On the **Product Selection** page, select the required products, then click **Next**.

   You must have product codes and keys to activate each product; however, you can install all products now, and activate those products for which you do not have a license at a later date. (Be aware that if you attempt to use products for which you do not have a license, you may receive error messages indicating that no license file is available.)

   Note: Ensure you select **Documentation** on this page to install and access the product user guides.
7. On the **Installation Settings** page, select one or more of the following, then click **Next**:

Select	To
Install License Activator	Install a copy of the License Activator
Launch License Activator	Launch the License Activator at the end of the installation process
Start AcuServer	Start AcuServer as a service
Start AcuConnect	Start AcuConnect as a service

   Note: Starting either AcuServer or AcuConnect as a service will only occur if you have run the `.exe` or `.msi` version of the installer with administrator privileges (see note above). If a previous version of either product is already running on its default port, an additional prompt is displayed, asking you if you want to shut down that service; you must answer **Y** if the new version of AcuServer or AcuConnect is to start - see *Notes on AcuConnect and AcuServer Installation* for more details.

   If you selected **Launch License Activator** on the **Installation Settings** page, the **Activator Wizard** appears.

8. Type your first product code and key in the appropriate fields.

The License Activator is case-insensitive and displays only uppercase characters. It also ignores embedded spaces and separating characters. Product codes and keys do not contain the letters "O" or "I".

⚠️ **Caution:** If you have a license for both the Windows runtime (`wrun32.exe`) and an Alternate Terminal Manager (ATM) runtime (`run32.exe`) for the same machine, be aware that the Activator Utility creates a license file named `wrun32.alc` for each of them. To avoid a situation in which the Activator Utility overwrites the license file for the second runtime:

- Make a backup copy of the Windows runtime license file prior to creating (and renaming) the ATM runtime license.
- Create the ATM runtime license and rename it to match the executable (change `wrun32.alc` to `run32.alc`) before creating the Windows runtime license.

9. If you have more than one code and key pair to enter, select **More** after typing the first code/key pair. Repeat this process until you have entered all code and key pairs, then click **Finish**.

Each time you press **More**, the License Activator creates a separate license file for the product code and key you entered and returns you to the code and key entry screen.

10. Click **Finish** on the **Installation Complete** page to complete the installation.

🖉 **Note:** If license activation was successful, but you get a message during product startup indicating that the license file cannot be found, the license file may not be in the correct directory. The License Activator determines where to place the license file based on entries in the Windows registry. If no registry entry is found, the license file is placed in the same directory as the License Activator executable file, which is the `\AcuGT\bin` sub-directory of the default installation directory. If this is not the location of the product's executable file, move the license file to the directory containing the corresponding executable file; for example, move `wrun32.alc` to the directory containing `wrun32.exe`.

Silent Installation

On Windows platforms, you can perform a silent installation of the extend Interoperability Suite using the `msiexec` command, which requires that you use the `.msi` install package that is shipped with your product. This must be run from a command line prompt that has administrative privileges.

The syntax required is:

```
msiexec /i <msi-file> INSTALLDIR=<install-directory> [INSTALLDIR64=<64-bit-
install-directory>] ADDLOCAL=<product1,product2,...> [WINDOWSVERSION=<Win-
version>] /qn [/L*v <log-file>]
```

where:

<msi-file>

    The `.msi` installation file. This could be a 32-bit or a 64-bit version.

<install-directory>

    The directory in which the product will be installed.

    Restriction: If you specify a mapped drive, it must map to a local directory; remote mapped drives are not supported.

<64-bit-install-directory>

    The directory in which the 64-bit products will be installed. This is mandatory if you are using the 64-bit installer, because it installs both 32-bit and 64-bit versions of some products, using <install-directory> for the 32-bit versions and <64-bit-install-directory> for the 64-bit versions.

    Restriction: If you specify a mapped drive, it must map to a local directory; remote mapped drives are not supported.

<product1,product2,...>

    A list of products and services to be installed; see *Product Variables for Silent Installation* for the comprehensive list of options.

<Win-version>

    This is required for Windows versions 8 and later, in order to create the Extend Start menu. The only permissible value for `<Win-version>` is **PostWindows7**.

<log-file>

    The path and file name of a log file in which to log the installation details.

Examples

32-bit installation:

For example, the following command silently installs the ACUCOBOL-GT runtime, Acu4GL for MSSQL, and the AcuSQL runtime to the `C:\AcuInstallDir` directory, and (on Windows 8 and later) also creates the extend start menu in the Windows program list:

```
msiexec /i "extend(R) Version 10.2.0 x86.msi" INSTALLDIR=C:
\AcuInstallDir ADDLOCAL=Runtime,Acu4GLMSSQL,AcuSQLRuntime
WINDOWSVERSION=PostWindows7 /qn
```

64-bit installation:

For example, the following command silently installs the ACUCOBOL-GT runtime, Acu4GL for MSSQL, and the AcuSQL runtime to the `C:\AcuInstallDir` directory, and the 64-bit runtime, Acu4GL for MSSQL, and AcuSQL runtime to the `C:\AcuInstallDir64` directory:

```
msiexec /i "extend(R) Version 10.2.0 x64.msi" INSTALLDIR=C:
\AcuInstallDir INSTALLDIR64=C:\AcuInstallDir64
ADDLOCAL=Runtime,Runtime64,Acu4GLMSSQL,Acu4GLMSSQL64,AcuSQLRunti
me,AcuSQLRuntime64  /qn
```

Comments

You can also use the `msiexec` command to run the installation with a user interface: omit the ADDLOCAL parameter and substitute `/qn` for `/qf`.

You can also use the `msiexec` command to install the thin client `.msi` file that is supplied with your product: omit the ADDLOCAL parameter.

Product Variables for Silent Installation

The following table contains a list of possible arguments that you can use with ADDLOCAL when running a silent installation. Most argument names are self-explanatory; the Notes column explains those that are not.

Argument name	Notes
Acu4GLDB2	
Acu4GLDB264	
Acu4GLMSSQL	
Acu4GLMSSQL64	
Acu4GLODBC	
Acu4GLODBC64	
Acu4GLOracle	
Acu4GLOracle64	
AcuBench	
AcuConnect	
AcuConnect64	
AcuConnectDistributedProcessing	
AcuConnectThinClient	
AcuServer	
AcuServer64	
AcuSQLPrecompiler	
AcuSQLPrecompiler64	
AcuSQLRuntime	
AcuSQLRuntime64	
AcuToWeb	
AcuXDBC	
AcuXDBC64	
AcuXDBCEnterpriseEdition	The 32-bit and the 64-bit versions of AcuXDBCEnterpriseEdition are mutually exclusive; you may only specify one of these versions during the installation.

Argument name	Notes
AcuXDBCEnterpriseEdition64	
AcuxdbcsBat	
AcuxdbcsBat64	
AcuXDBCServer	The 32-bit and the 64-bit versions of AcuXDBCServer are mutually exclusive; you may only specify one of these versions during the installation.
AcuXDBCServer64	
BIS	
Compiler	
DevSys	The ACUCOBOL-GT Development System, which includes the following: Compiler, Runtime, WebRuntime, ThinClient, and WebThinClient.
ExtendStartMenu	The entry shown on the Windows program menu for Windows versions 8 and later. The 32-bit and the 64-bit versions of ExtendStartMenu are mutually exclusive; you may only specify one of these versions during the installation.
ExtendStartMenu64	
LicenseActivator	
LicenseActivator64	
OnlineDocumentationCHM	
Runtime	
Runtime64	
ThinClient	
VCRedist	Installs the Microsoft redistributable files, required by the extend products, if they are not already installed.
VortexJar	Required for AcuXDBCEE. The enterprise edition of AcuXDBC needs the vortex.jar file, which enables a Java client application to connect to your Vision database.
VortexJar64	
WebRuntime	
WebThinClient	

Examples

32-bit installation:

For example, the following command silently installs the ACUCOBOL-GT runtime, Acu4GL for MSSQL, and the AcuSQL runtime to the C:\AcuInstallDir directory,

and (on Windows 8 and later) also creates the extend start menu in the Windows program list:

```
msiexec /i "extend(R) Version 10.2.0 x86.msi" INSTALLDIR=C:
\AcuInstallDir ADDLOCAL=Runtime,Acu4GLMSSQL,AcuSQLRuntime
WINDOWSVERSION=PostWindows7 /qn
```

64-bit installation:

For example, the following command silently installs the ACUCOBOL-GT runtime, Acu4GL for MSSQL, and the AcuSQL runtime to the `C:\AcuInstallDir` directory, and the 64-bit runtime, Acu4GL for MSSQL, and AcuSQL runtime to the `C:\AcuInstallDir64` directory:

```
msiexec /i "extend(R) Version 10.2.0 x64.msi" INSTALLDIR=C:
\AcuInstallDir INSTALLDIR64=C:\AcuInstallDir64
ADDLOCAL=Runtime,Runtime64,Acu4GLMSSQL,Acu4GLMSSQL64,AcuSQLRunti
me,AcuSQLRuntime64  /qn
```

Windows 64-bit Installations

There are 64-bit versions of most extend products. These 64-bit versions are installed using a separate 64-bit version of the installer. The installation process follows the same steps as described in *Installation on Windows Platforms*, with the following notable exceptions.

When running the 64-bit installer, if no 64-bit version exists for a selected product (for example, AcuBench), the 32-bit version is installed.

Products such as AcuConnect and AcuServer have 32-bit and 64-bit versions, and both are installed if you select these products during installation. You can also decide which version of the product to start on completion of the installation.

The AcuXDBC product is broken down into three installations: for the Data Interface, you can install both the 32-bit and 64-bit versions; and for the AcuXDBC Server and Enterprise Edition, you must chose which version to install.

By default, all 64-bit product versions are installed in the `Program Files` directory, and 32-bit product versions (and any supporting non-64-bit tools) are installed in the `Program Files (x86)` directory; although, you can change these locations during the installation. All the 32-bit versions are fully supported and functional in a 64-bit environment.

🖊 **Remember:** When running the license activator after the installation, the 64-bit version of the Activator utility is run, which installs license files into both the 32-bit and 64-bit directories. When running the Activator utility from the command prompt, make sure you are using the 64-bit command prompt to ensure the correct licenses are generated and placed in the correct locations; otherwise, if the 32-bit Activator utility is run, only license files for 32-bit products will be generated.

Installation Notes

Debugging files

The Windows distribution media now contains `.pdb` debugging files to assist customer support in solving runtime issues on a customer's machine - `.pdb` files enable runtime stack information to be generated.

To setup this ability, copy the `.pdb` files from the 32-bit or 64-bit `Debug` directories on the distribution media to the 32-bit or 64-bit directory of the installation. 32-bit files on the media are located in `Debug\Win32\bin\*.pdb`, and 64-bit files on the media are located in `Debug\x64\bin\*.pdb`.

Once the `.pdb` files are copied, follow any instructions given to you by Customer Support.

AcuConnect and AcuServer

During the installation process, if you are installing AcuConnect or AcuServer, you can choose to automatically start those services as part of the installation process.

Those services can only be started if certain conditions are met. For example, the services will attempt to start on a default port (AcuConnect 5632, AcuServer 6523). If an existing installation is already using that port, that service must be stopped if the installation is to create and run the new service. If you do not stop the existing service, the installation can only create the new service; it cannot run it.
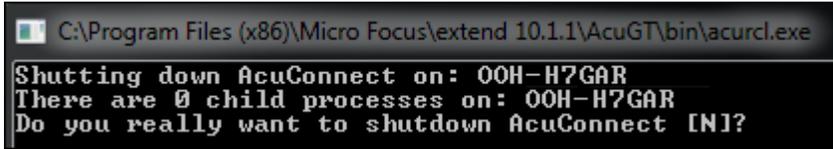
If there is no previous installation, a default `AcuAccess` file is only created (in its default location of `C:\etc`) when the service starts. If you configure the installation to not start the service, no `AcuAccess` file will exist until you start the products from their respective control panels (or command line equivalents). If a previous installation exists, the `AcuAccess` file already located in `C:\etc` is used.

Note: This file and directory are not removed when you uninstall a previous product.

BIN-REDIST and REDIST Installation Directories

The extend Windows distribution contains two directories: `BIN-REDIST` and `REDIST`.

`REDIST` contains thin client files that should be distributed along with the thin client.

`BIN-REDIST` contains Microsoft Redistributable files. These files are required in cases where the ACUCOBOL-GT `bin` directory and runtime are placed on a shared drive and users then map to that drive. The `BIN-REDIST` directory should be placed inside the shared `bin` directory.

Uninstalling or Modifying Your Installation

You can uninstall or amend your current installation in one of two ways: you can run the installer again, or use the Programs and Features section in Windows. Both enable you to run the Installation Wizard, where you can perform the following program maintenance:

Change   Enables you to add or remove products to and from your current installation. Any products that were already checked that you uncheck are uninstalled. Any additions are installed using the default installation path (`C:\Program Files\Micro Focus\extend` *x.x.x* - where *x.x.x* is the version number). There is no option to change to a non-default location, but you can overcome this with some products by copying the installed files from the default location to your preferred location. Note that this method will not work for AcuXDBC, AcuBench, and any server products that are registered as services.

Repair   Enables you to reinstall the currently installed products.

Remove   Enables you to remove all products of your installation.
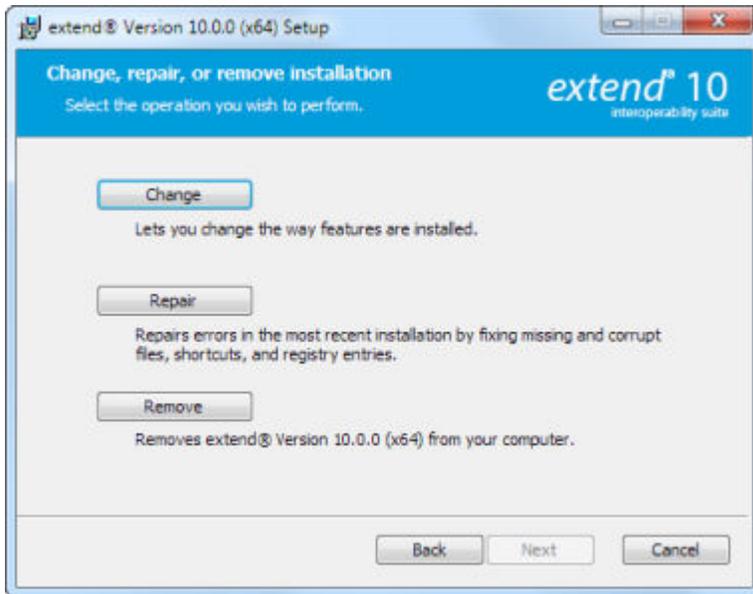
Launching extend Products on Windows 8 or Later

Since the introduction of Windows 8, the Windows program menu does not display programs in a hierarchical way. For the extend Interoperability Suite, this would mean that all the programs relating to AcuBench, ACUCOBOL-GT, AcuConnect, etc... would be displayed as a flat list, and it would be difficult to distinguish which programs were related to which products.

In order to show the programs grouped within the products they belong to, the extend Start Menu has been introduced. After installation of the extend Interoperability Suite, there will be one entry in the Windows programs menu - **extend x.x.x Start Menu** (where *x.x.x* is the version number of the installed product):
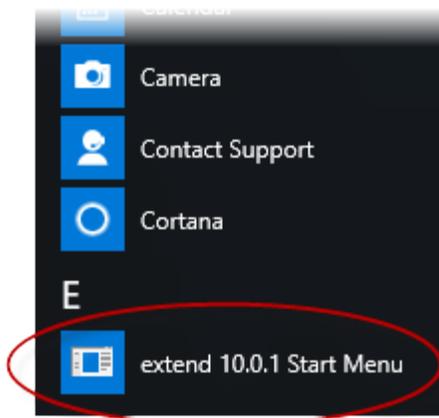
Launch this application to display a hierarchy that looks similar to the Windows program menus prior to Windows 8. Simply navigate the folders displayed in the left-hand pane to display shortcuts to the related programs in the right-hand pane. Select the required shortcut: at which point, the extend Start Menu closes and the program is launched.
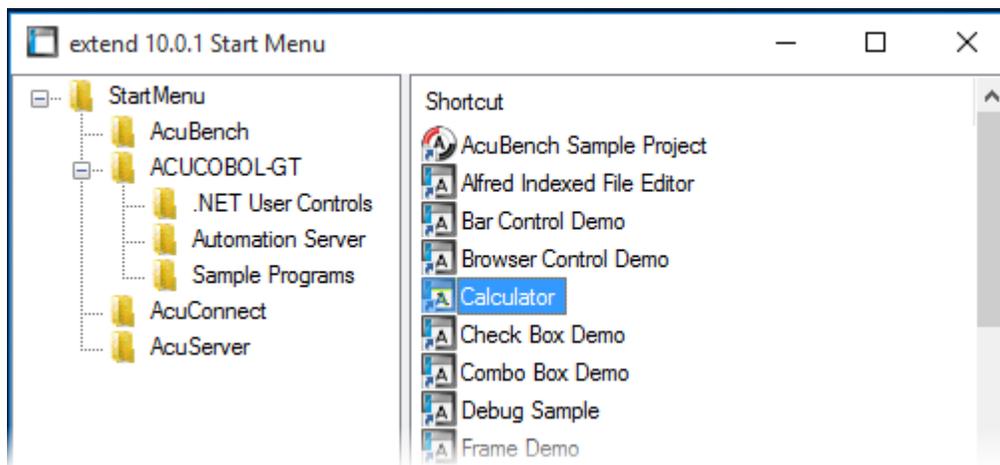
Compiling Your Programs

The ACUCOBOL-GT compiler is most easily used via AcuBench. However, it is also possible to compile from the command prompt or the Windows Start menu, to establish an association between your source files and the compiler executable, or to set up one or more icons to compile individual files. For information regarding creating file associations and setting up icons, see your Windows documentation.

When you compile, if the system returns "Bad command or file name," you did not add the location of the compiler to the PATH environment variable, or you have not rebooted since installing the software.

You can check the current definition of PATH by typing `path` and pressing **Enter** at the command prompt. The default path is `C:\Program Files\Micro Focus\extend x.x.x\AcuGT\bin` (or `c:\Program Files (x86)\...` for 64-bit installations). If you do not update PATH with this entry, you must type the full path and program name to the compiler each time you compile; alternatively, you can create a `.bat` file.

Once you have verified that the compiler is in your PATH (or you have decided that you will specify the full path every time you compile), you are ready to compile your programs. Refer to *ACUCOBOL-GT User's Guide > Compiler and Runtime > Using the Compiler* for a complete list of compile options. You can also display a complete list of options by running the compiler command:

```
ccbl32 -help
```

One commonly used option is `-o`. This option is used to specify the name of the output object file. Note that ACUCOBOL-GT uses the naming convention `.acu` to indicate an ACUCOBOL-GT object file. If `-o` is not used, the compiler will name the file *source-name*`.acu`. If your source includes COPY files, you can copy the COPY files to your current working directory, specify their location with the `-Sp` option followed by the complete path of one or more directories, or set the COPYPATH environment variable. A typical compilation command might look like:

```
ccbl32 -Sp c:\work\lib -o sample.cbx sample.cbl
```

Running Your Programs

After a successful compilation, the resultant object file is ready for immediate execution (no link step is required). To run your program, make a note of the full path to your object file and return to the Windows desktop.

There are a variety of ways to run your program under Windows. The basic methods are:

- Running a command from the **Start** menu.

- Placing an icon for each program in a Program Group or folder, and then starting the program by double-clicking its icon.
- Naming your COBOL object files with a common file extension and then associating the extension with the runtime. After the association is established, you can run a program by double-clicking on the name of the file as it appears in Windows.
- Using the **wrun32** (or **crun32** if you are using the console runtime) command at the command prompt.

This document describes how to run a program from the **Start** menu only (although, the command line option is almost identical). The advantage of this method is that it requires no special setup. However, it is more time-consuming (than other methods) because you must type the command line options every time you execute the program. For greater convenience, it is best to set up a program icon: to do this, or to create a file association to the runtime, please refer to your Windows documentation.

1. Click the **Start** button.
2. On the Start menu, in the entry field, type the name of your ACUCOBOL-GT Windows runtime.

   The default name is `wrun32.exe`. If you changed the name of the runtime executable, enter that name.
3. Following the name of the runtime, enter any runtime options required, followed by the path and name of the COBOL executable program you want to run.
4. After you have entered the complete command line, press **Enter** to execute the program.

   Note: If you did not add the `\bin` directory path to the PATH system environment variable (typically, that is: `c:\Program Files\Micro Focus\extend` *xxx*`\AcuGT\bin`), you will need to specify the full path to the runtime (`c:\Program Files\Micro Focus\extend` *xxx*`\AcuGT\bin` `\wrun32.exe`) each time in the command (and not simply `wrun32.exe`).

You can use the COBOL configuration variable DEFAULT_PROGRAM to specify the name of the program to execute when no program is specified on the command line. See *Appendix H* in the ACUCOBOL-GT documentation set for more configuration information.

Printing and Spooler Issues

ACUCOBOL-GT includes extended support for printing under Windows. In addition to the basic print spooler access procedures described below, the WIN$PRINTER runtime library routine provides easy access to extended Windows print spooler capabilities. See the entry for "WIN$PRINTER" in *ACUCOBOL-GT Appendices Guide > Appendix I*. Rules for printer handling are illustrated in the *ACUCOBOL-GT User's Guide > Compiler and Runtime > Filename Interpretation > Assigning Files to Printers.*

Under Windows, you may print directly to the printer by defining PRINTER in the configuration file as "-D PRN". Be aware that this does not prevent other programs from printing at the same time and as a result you may get intermixed pages.

You may also print using the Windows spooler, even if your reports have embedded control codes. The spooler allows many programs to create print files at the same time, and also allows the user to do other tasks while the report is being printed.

Note: The configuration variable WIN_SPOOLER_PORT allows you to divert printer output to a file or port through the Windows print spooler. For more information, see *ACUCOBOL-GT Appendices Guide > Appendix H* of the ACUCOBOL-GT manual set.

Before you assign your print file to the Windows spooler, you must decide whether you want to control the format of each page directly (with embedded control codes) or whether you want the print spooler to format the pages.

Spooler Formatting

There are two ways to use the Windows spooler to format your print file: "-P SPOOLER" and "-Q *printername*". See *Direct Control* for information on controlling the formatting yourself.

-P SPOOLER

If you want to use the default printer and font, simply assign your print file to "-P SPOOLER". For example, to assign "PRINTER1" to the spooler, enter the following line in your COBOL configuration file ("CBLCONFI"):

```
PRINTER1  -P  SPOOLER
```

By default, the runtime system assigns the "PRINTER" device to the spooler. You may change this in the configuration file by assigning "PRINTER" to some other name.

When the runtime opens a file assigned to "-P SPOOLER", it automatically initiates a job with the Windows spooler and constructs print pages in accordance with your program. The runtime uses the default printer and font. If the user looks for the job in the spooler, it is named with the current title of the ACUCOBOL-GT window.

> **Note:**
>
> The Windows spooler operates by drawing your report on each page. It constructs its own control codes to handle formatting. If you assign your print file to "-P SPOOLER" and your file contains device-dependent control sequences (such as those used to shift to a condensed font, or to print a form and then fill it in), the codes will be passed to the spooler as data and thus will not be interpreted correctly. If you have reports that depend on embedded control codes, you should print those directly to the device, or assign the print file to "-P SPOOLER-DIRECT," as described below.

-Q <printername>

If you want the Windows spooler to format the pages of your report, but you want to use a particular printer, assign your print file to:

```
PRINTER1 -Q \\printername
```

in the configuration file (CBLCONFI). *Printername* is the printer designation as given in the **Devices and Printers** screen. The name may be up to 80 characters long and contain embedded spaces. The name may not include the semicolon character (;) or be surrounded by single or double quotes. The pages are printed in the manner described in "-P SPOOLER", above. The sample programs graphprn.cbl and prndemox.cbl contain examples of these functions.

To determine a valid printer name, use the WIN$PRINTER library routine to obtain the name of the desired printer. (This is described in *Appendix I* under the WINPRINT-SET-PRINTER operation code in "Specifying a Printer".) Then add the following line to your code:

```
MOVE "-Q \\printername" TO WS-PRINTER-NAME.
```

When the runtime opens a file assigned to "-Q <printername>", it sets the Windows print spooler to use this printer. The printer driver must be installed on the computer from which you print. If *printername* is not recognized by the runtime, a dialog box allows you to choose a printer manually.

> **Note:**
>
> If you want to access a printer using a UNC path, you have to print directly to the printer by defining PRINTER as "-D PRN". If you use the UNC path, Windows formatting is not supported.

Direct Control

If you want to control the format of the printout yourself using embedded control codes, simply assign your print file to -P SPOOLER-DIRECT or to -Q <printername> using the DIRECT=ON option. For example, to assign the print job "PRINTER1" to the spooler and retain direct control over formatting, enter the following line in your COBOL configuration file (CBLCONFI):

```
PRINTER1  -P  SPOOLER-DIRECT
```

Or, use the following command to assign PRINTER1 to the spooler for printing to a specific printer while retaining direct formatting control:

```
PRINTER1 -Q printername;DIRECT=ON
```

Both of these methods cause the print job to be sent to the printer via the Windows spooler, but the program does not use the spooler to format the pages. You must use embedded control codes to handle formatting (much as you would under UNIX if you used the UNIX spooler).

When using the `-P SPOOLER-DIRECT` option, you may use the WIN$PRINTER library routine to choose a printer, but because you completely control the printer, the various options provided by WIN$PRINTER are ignored. For example, WIN$PRINTER does not set the page size, page orientation, or font. Information returned from WIN$PRINTER, such as number of lines and columns on the page, may not be accurate and should not be used. This subject is discussed in detail in Appendix I "*Library Routines*" of the ACUCOBOL-GT manual set.

Because some print drivers do not flush the last page, be sure to end your last page with a form-feed (for example, WRITE ... BEFORE ADVANCING PAGE). This ensures that all pages are printed. The ACUCOBOL-GT runtime ensures that no extra blank pages are printed at the end.

If you code WRITE...AFTER ADVANCING PAGE instead of WRITE...BEFORE ADVANCING PAGE, you might receive a blank last page. This is because a blank line written on the new page causes the Windows subsystem to flush the page for some print drivers. ACUCOBOL-GT ensures that entirely empty lines are not sent to the device (only the form-feed will be sent). But it is essential that:

- You have specified trailing space removal in your COBOL code (the default for print files).
- You have set the configuration option MIN-REC-SIZE to "0".

Your other option is to specify WRITE... BEFORE ADVANCING PAGE to avoid this potential problem.

If the user looks for the job in the spooler, it is named with the current title of the ACUCOBOL-GT window.

Printing Multiple Jobs Simultaneously

If you need to print multiple jobs at the same time, you must open multiple File Descriptors that point to "-P SPOOLER" or "-P SPOOLER-DIRECT" simultaneously. For example, you may have two simultaneous print jobs:

```
SELECT FIRST-FILE
      ASSIGN TO PRINTER "-P SPOOLER".

SELECT SECOND-FILE
      ASSIGN TO PRINTER "-P SPOOLER".

..PROCEDURE DIVISION.

..

      OPEN OUTPUT FIRST-FILE.
      OPEN OUTPUT SECOND-FILE.
```

and both will print to the default Windows printer without interfering with each other. You can call WIN $PRINTER USING WINPRINT-SETUP before one or both of the OPEN statements. Each file may have individual file status variables or may refer to a common file status variable.

This does not mean that you can open a single File Descriptor multiple times. For example, the following will return file status indicating that the file is already opened:

```
SELECT FIRST-FILE
      ASSIGN TO PRINTER "-P SPOOLER".

..

PROCEDURE DIVISION.
```

```
..

       OPEN OUTPUT FIRST-FILE.
       OPEN OUTPUT FIRST-FILE.
```

This is normal behavior and is consistent with the way file handling is implemented in COBOL and in other programming languages.

If you are using only the verbs OPEN, CLOSE, and WRITE, no further changes to your code are needed. If you are using WIN$PRINTER functionality (other than WINPRINT-SETUP) you will need to specify which print job is affected. This can be done in two ways:

1. The simplest way is to execute the WIN$PRINT operation immediately after an OPEN or WRITE statement on the intended job. Every execution of OPEN and WRITE sets the current job as the default so that subsequent activity using WIN$PRINTER is automatically directed to the job that was last accessed with an OPEN or WRITE statement.

    In this situation, if you have multiple jobs running, and you close one of them, the runtime switches to the next job in the list. For example, if you are printing jobs 1, 2, and 3, and you close job 2, the close command sets the current job to 3. If there is no job 3, the runtime attempts to set to the job that preceded the closed job (which in this case is job 1). If there are no jobs, the current job is initialized.

2. The other method is to use the WINPRINT-SET-JOB operation of the WIN$PRINTER library routine. This operation is described in *Appendix I* of the ACUCOBOL-GT manual set.

UNIX Installation

License Files for UNIX

UNIX users may request a license file for one or more users.

When you receive your product(s), the package includes product codes and product keys for every product you ordered. You require theses product codes and product keys to create license files.

The Activator Utility

The Activator utility automates the process of creating a license file. On UNIX platforms, the Activator utility operates through a command-line interface.

By default, the Activator utility program (`activator`) is placed in the same directory as the runtime and other binary executable files.

If you did not install the Activator utility with your other products, simply copy the file onto your computer and run it as you would any other executable.

Changing or Updating Your UNIX License Files

If you need to alter a license file, contact your Micro Focus *extend* representative for updated product codes and product keys. When you receive them, launch the Activator utility and enter the new product codes and product keys as prompted.

Installation Under UNIX

To install *extend* products on UNIX or Linux systems, you must have the product media, and the product codes and product keys for the products you intend to install. Your products are delivered via FTP.

Installation Process

1. Download the product from the Micro Focus SupportLine site.

   Note: Before running the installer, ensure that the `tar` utility in on your PATH.

2. Enter the following:

   ```
   /path/to/installer/installer-name [options]
   ```

   where *installer-name* will be something similar to `setup_acucob1010pmk59shACU`.

   The following options can be included:

Option	Description
`-d installation-path`	Specifies a new default install location offered during the installation. If not specified, the default location is the current working directory (.). Any specified directory must already exist.

Option	Description
	This option can be combined with the `-EULA` option, but if it is, it will specify the location of the extracted EULA, and not the location of the installed product.
`-EULA`	Extracts the EULA, in `.htm` format, to a location of your choosing. The product installation will not continue when using this option.
`-help`	Displays the available options that can be appended to the installation command.

> **Note:** If you install ACUCOBOL-GT as a shared object library and you don't install to the default location, you need to set an appropriate library path variable specifying the location of the shared objects. For example, on an AIX system, you would need to set the LIBPATH environment variable. Note that if you log in as root or a superuser, this variable must also be set in root's environment for ACUCOBOL-GT to start. Additionally, see *SHARED_LIBRARY_PREFIX configuration variable*.

After installation, you must use the Activator utility to license the products installed.

3. From the installation directory, enter the following command to run the Activator utility:

```
./bin/activator
```

4. At the prompt, type the product code and product key pairs that came with your product package, pressing **Enter** after each pair: this updates the license file. Repeat this cycle until the code/key pairs for each product you have ordered are entered.

> **Note:** Each product searches for its license file in the same directory in which its executable resides. If you move the product's executable to a new directory, you must move its license file to the same location.

5. To start the acushare license manager service, enter the following:

```
acushare -start
```

6. Navigate to the `sample` sub-directory of your installation directory and try compiling and running the **tour** program, using the following commands:

```
ccbl tour.cbl
runcbl tour.acu
```

7. If you get the message `Can't find entry for 'terminal' in 'term-lib`", you need to configure your terminal for ACUCOBOL-GT. See *Configuring Your Terminals.*

8. Once you have the sample program running, we recommend that you edit the `cblconfig` file supplied with ACUCOBOL-GT to meet the needs of your site. In particular, you should configure it to support the printers you have attached to your system.

9. If you are using shared memory, see the instructions for configuring acushare in *ACUCOBOL-GT User's Guide > Runtime Manual > Shared Memory > Acushare Utility Program*.

SHARED_LIBRARY_PREFIX Configuration Variable

If you install ACUCOBOL-GT as a shared object library and you don't install to the default location, you need to set an appropriate library path variable (LIBPATH or LD_LIBRARY_PATH) specifying the location of the shared objects. The SHARED_LIBRARY_PREFIX variable helps the runtime find `aclnt.so` (or `aclnt.sl`) in case the LIBPATH (or LD_LIBRARY_PATH) variable is not set. libclnt.so (or .sl) is needed for AcuServer and AcuConnect support.

If a shared library name is specified without any directory information and the system call fails to load the shared library, the runtime will try to load the shared library from each of the directories specified in the SHARED_LIBRARY_PREFIX configuration variable.

The default value for SHARED_LIBRARY_PREFIX is `/opt/acucorp/`*xxx*`/lib`: `/opt/acu/lib`. The format of the value of SHARED_LIBRARY_PREFIX is the same as FILE_PREFIX. You can set SHARED_LIBRARY_PREFIX in the configuration file or environment, or programatically with the SET verb.

Note that the runtime searches for and loads `aclnt.so` (or `aclnt.sl`) using the default value of SHARED_LIBRARY_PREFIX. This happens before reading the configuration file, environment, or running any COBOL code.

You can set SHARED_LIBRARY_PREFIX to an empty value if you do not want to use it.

Also, if the license is for AcuTSL, in a transactional server environment such as CICS, the runtime will add `/opt/acucorp/`*xxx*`/bin/runcbl.llc` and `/opt/acu/bin/runcbl.llc` to its list of license files to check. First the runtime checks `$ACUCOBOL/etc/license.acu`, then `/etc/license.acu`. If neither exists, the runtime will check `/opt/acucorp/`*xxx*`/bin/runcbl.llc` and finally `/opt/acu/bin/runcbl.llc`.

For cases in which users install ACUCOBOL-GT in the default location, `/opt/acucorp/`*xxx* or `/opt/acu`, and they have a license file, `runcbl.llc` in their bin directory, they will not need to copy the license to `/etc/license.acu`.

Configuring Your Terminals

ACUCOBOL-GT requires data about the video environment it is running in. On Windows machines, it directly examines the hardware and configures itself appropriately. On UNIX and VMS machines, you must provide a description of the terminal you are using. This section describes briefly how to provide that information. Additional details are provided in the *Terminal Manager* section of the *ACUCOBOL-GT User's Guide.*

On systems that do not configure themselves automatically, describing the terminal to ACUCOBOL-GT involves two steps:

1. First, identify the terminal by setting the "TERM" variable.
2. Second, ensure that the terminal's characteristics are accurately described in the terminal database file.

TERM Variable

ACUCOBOL-GT determines the type of terminal you are using by looking at the setting of the "TERM" variable. On UNIX and Linux machines, TERM is an environment variable; on VMS machines, it's a symbol. Samples for both UNIX and VMS are presented below.

TERM should be set to the name of one of the entries in the terminal database. You can examine the database file for valid names. The first field of each entry consists of a list of accepted names. Some common names are "vt100", "tv925", and "wy50" for VT100, Televideo 925, and Wyse 50 terminals, respectively.

Note that on most UNIX systems, the TERM environment variable is initialized as part of the login procedure. You will need to change this only if the name used is not one listed in the terminal database. On VMS systems, the TERM symbol defaults to "vt100" if it is not defined. Thus, you need to define the TERM symbol only if you want to use a terminal that is not VT100 compatible or if you want to use some advanced features of your terminal.

As an example, suppose you want to use a VT220 terminal. In the database, "vt220" is one of the accepted names for this type of terminal. On a VMS system, you would use the following command

```
TERM == "vt220"
```

On UNIX systems with the Bourne or Korn shell, the command would be:

```
TERM=vt200; export TERM
```

Using the C shell, the equivalent command is:

```
setenv TERM vt220
```

You may want to leave the TERM variable at its current setting to maintain compatibility with other software. If the setting is not correct for ACUCOBOL-GT, you can set the "A_TERM" variable instead. If both the

A_TERM and TERM variables are set, ACUCOBOL-GT uses the definition of A_TERM. This allows you to have different settings for ACUCOBOL-GT and your other software.

Terminal Database

ACUCOBOL-GT comes with a database of terminal descriptions. On UNIX machines, this is called "a_termcap". On VMS machines it is called "A_TERMS.DAT". This database contains encoded descriptions of many types of terminals. You need to select the terminal type in the database that most closely matches the terminal you are using. If you need to, you can add your own entries in the database.

By default, the terminal database should reside in a pre-selected directory on your machine. On UNIX machines, this is the "/etc" directory; on VMS machines, it is the "SYS$LIBRARY" directory. If you want to place your terminal database somewhere else, then you must define the variable "A_TERMCAP" to be the full name of the database file. For example, on a VMS system, you could place the database in the "SYS$LOCAL" directory with the following command:

```
A_TERMCAP == SYS$LOCAL:A_TERMS.DAT
```

On UNIX systems (using the Bourne shell), you might use the command:

```
A_TERMCAP=/usr/local/etc/a_termcap; export A_TERMCAP
```

The *ACUCOBOL-GT User's Guide* contains more information about setting up terminals and making full use of their capabilities, and selecting terminal types.

Resolved Issues

The following are resolved issues for the extend products.

ACUCOBOL-GT ECN List

This section includes the ECNs relating to ACUCOBOL-GT:

ECN-4637 Long double-byte characters are being erased, instead of truncated

Incidents: 3202615

RPI Number: 1117956

Product: ACUCOBOL-GT

Module: Runtime

Machines Affected: Windows

Known Versions Affected: 10.3.1

DESCRIPTION:

When using wide character sets, it is usually not correct to use the default size for an entry field. This is because most wide characters within these character sets will require at least 2 bytes to store their value. So an entry field that has a size of 5 (for example) should ideally use a data item that is at least pic x(10) in size to avoid truncation (and possibly end with a partial character). Where items are not sufficient in size, truncation should occur; however, in previous versions, the data would be returned as spaces rather than being truncated, in the case where the default size was used for an entry field.

ECN-4640 Thin Client automatic update TC_INSTALLER_TARGET_DIR has no effect

Incidents: 3208450

RPI Number: 1118458

Product: ACUCOBOL-GT

Module: Thin Client

Machines Affected: All Windows

Known Versions Affected: 10.0.0 through 10.3.0

DESCRIPTION:

The ACUCOBOL-GT always installed Thin Client updates to the default installation directory regardless of the value set for the TC_INSTALLER_TARGET_DIR configuration variable. In this version, Thin Client updates are correctly installed to the location specified by the TC_INSTALLER_TARGET_DIR variable.

ECN-4642 NetDefGen internal error - "Length cannot be less than zero"

Incidents: 3210070

RPI Number: 1118592

Product: ACUCOBOL-GT

Module: NetDefGen

Machines Affected: Windows

Known Versions Affected: All

DESCRIPTION:

If a .NET assembly used a reference that was a single name (such as `itextsharp`) other than `System` or `mscorlib`, NetDefGen reported an internal error when the copybook was generated. This has been corrected.

🖊 **Note:** The internal error was not associated with the methods or properties of the assembly.

ECN-4643 Scrollbars added to AUTO-RESIZE windows with a menu

Incidents: 3207303

RPI Number: 1118337

Product: ACUCOBOL-GT

Module: Runtime

Machines Affected: Windows

Known Versions Affected: 9.2.5 and later

DESCRIPTION:

A canvas with a menu attached and that used AUTO-RESIZE showed scrollbars when resized even when they were not required. This has been corrected to show scrollbars only when the canvas size requires them.

ECN-4644 HPDF-SaveToFile fails silently in thin client mode

Incidents: 3204621

RPI Number: 1118117

Product: ACUCOBOL-GT

Module: Runtime

Machines Affected: All

Known Versions Affected: 10.3.0 and later

DESCRIPTION:

When using HPDF-SaveToFile in Thin Client with a save file name using @DISPLAY syntax, the function fails silently.

ECN-4645 ISO-8859-1 data not being correctly written via C$XML

Incidents: 3204113

RPI Number: 1118075

Product: ACUCOBOL-GT

Module: Runtime

Machines Affected: All

Known Versions Affected: 10.2.0 and later

DESCRIPTION:

When using an ISO-8859-1 encoding with XML data, non-ASCII characters were not correctly written to the XML file. This has been corrected.

ECN-4646 NETmodule not saved when compiling with --netdll or --netexe

Incidents: 3210118

RPI Number: 1118612

Product: ACUCOBOL-GT

Module: Compiler

Machines Affected: Windows

Known Versions Affected: 10.3.0 and later

DESCRIPTION:

When compiling to .NET with `--netexe` or `--netdll`, the symbol information file `*.NETmodule` was deleted on exit. This has been corrected.

ECN-4647 INVALID HANDLE when modifying an ActiveX control

Incidents: 3127332

RPI Number: 1111566

Product: ACUCOBOL-GT

Module: Runtime

Machines Affected: Windows

Known Versions Affected: All

When you create an ActiveX control using DISPLAY rather than CREATE, the returned handle can now be used in a MODIFY statement. In earlier versions, this resulted in an INVALID HANDLE error.

ECN-4648 CXML-GET-DATA memory access violation with null value parameter

Incidents: 3214015

RPI Number: 1118943

Product: ACUCOBOL-GT

Module: Runtime

Machines Affected: Windows

Known Versions Affected: 10.1.0 through 10.3.0

DESCRIPTION:

Calling C$XML CXML-GET-DATA with a null string and zero length for the element data value sometimes resulted in a memory access violation. This has been resolved.

ECN-4649 Display with bitmap not showing

Incidents: 3204811

RPI Number: 1118131

Product: ACUCOBOL-GT

Module: Runtime

Machines Affected: Windows

Known Versions Affected: 10.3.0

DESCRIPTION:

When displaying a bitmap in a screen section, the bitmap did not show. This has been corrected.

ECN-4650 Compiler reports wrong line for missing terminator

Incidents: 3211380

RPI Number: 1118712

Product: ACUCOBOL-GT

Module: Compiler

Machines Affected: All

Known Versions Affected: 10.0.0 and later

DESCRIPTION:

When using the `-Wu` compiler option to report unterminated verbs, a COPYBOOK might cause the line and file to be misreported. This has been resolved.

ECN-4652 Creating a local ActiveX object modifies the server name

Incidents: 3215733

RPI Number: 1119117

Product: ACUCOBOL-GT

Module: Runtime

Machines Affected: All

Known Versions Affected: 10.3.0

DESCRIPTION:

When creating an ActiveX control using a server name prepended with `Local:`, the runtime modified the value of the variable used for that server name. This has been corrected.

ECN-4653 C$CHDIR with DISPLAY causes thin client to fail

Incidents: 3215057

RPI Number: 1119036

Product: ACUCOBOL-GT

Module: Thin Client

Machines Affected: All

Known Versions Affected: All

DESCRIPTION:

When calling C$CHDIR with a DISPLAY name directory, for example `@[DISPLAY]:C:\Temp`, the thin client sometimes failed when a random value was returned from an uninitialized variable. This has been corrected.

ECN-4654 Thin client hangs with .NET and 64-bit runtime

Incidents: 3215996

RPI Number: 1119138

Product: ACUCOBOL-GT

Module: Runtime

Machines Affected: Windows

Known Versions Affected: 10.3.0 and later

DESCRIPTION:

When creating a .NET component on a server running with thin client, and using a 64-bit runtime, the thin client sometimes hanged due to a crash of the remote runtime. This has been resolved.

ECN-4655 vutil running in quiet mode crashes on exit

Incidents: 3217491

RPI Number: 1119266

Product: ACUCOBOL-GT

Module: vutil

Machines Affected: All

Known Versions Affected: 10.3.0 and later

DESCRIPTION:

When vutil -extract (in quiet mode) reached end -of-file, it shut down before closing the vision file, causing vutil to crash. This has been resolved.

ECN-4656 C$COPY to remote AcuServer location in a called program causes a Memory Access Violation (MAV)

Incidents: 3203673

RPI Number: 1118072

Product: ACUCOBOL-GT

Module: Runtime

Machines Affected: All

Known Versions Affected: 10.1.0, 10.2.1, 10.3.0

DESCRIPTION:

Using C$COPY to copy a file from a client machine to a server machine sometimes resulted in a memory access violation, usually when the same program copied a set of files while multiple runtimes were running at the same time. For example, a memory access violation might occur while one program copied nine files per runtime with 50 runtimes running simultaneously. This has been corrected.

ECN-4657 .NET assembly crashes on load

Incidents: None

RPI Number: None

Product: ACUCOBOL-GT

Module: Runtime

Machines Affected: Windows

Known Versions Affected: All

DESCRIPTION:

When loading a .NET assembly, a failure to load sometimes caused an overwrite on an internal array, resulting in memory issues and other potential behavior problems. This has been corrected.

ECN-4660 WINPRINT-CURR-COPIES not set on call to WINPRINT-GET-CURRENT-INFO-EX

Incidents: 3217089

RPI Number: 1119338

Product: ACUCOBOL-GT

Module: Runtime

Machines Affected: Windows

Known Versions Affected: All

DESCRIPTION:

If the number of copies was set during printer setup, and a COBOL program attempted to query the number of copies, the runtime sometimes returned a 1 instead of the number set during printer setup. This has been corrected.

ECN-4661 Date-Entry control – FORMAT-VALUE 1 returns date incorrectly

Incidents: 3218231

RPI Number: 642657

Product: ACUCOBOL-GT

Module: Runtime

Machines Affected: Windows

Known Versions Affected: All

DESCRIPTION:

When setting the VALUE-FORMAT property of a date-entry control to 1 (DAVF_YYMMDD), the date returned had a 4-digit year. This has been corrected.

ECN-4663 Remove external tar dependency from UNIX installer

Incidents: 3219481

RPI Number: 1119508

Product: ACUCOBOL-GT

Module: All

Machines Affected: All UNIX

Known Versions Affected: 10.3.0

DESCRIPTION:

The UNIX installer depended on an external tar utility program to unpack its payload. The installer has been updated to no longer require the external tar utility program.

ECN-4664 Web-Browser control ignores SAVE-AS-NO-PROMPT

Incidents: 2876096

RPI Number: 1106829

Product: ACUCOBOL-GT

Module: Runtime

Machines Affected: Windows

Known Versions Affected: All

DESCRIPTION:

The inability to save an HTML page as a file without prompting the user is a long-standing restriction on Windows browsers. With this release, you can use the SAVE-AS-NO-PROMPT to circumvent this restriction. ACUCOBOL-GT uses a proprietary API to get the contents of the Web page.

Note: This functionality does not pick up data entered into the Web page by the user, for example, data in Web forms.

ECN-4667 Unexpected error 9E on OPEN OUTPUT with transactions

Incidents: 3222025

RPI Number: 1119738

Product: ACUCOBOL-GT

Module: Runtime

Machines Affected: Windows

Known Versions Affected: 10.3.0

DESCRIPTION:

When using transactions with a new transaction file, an OPEN failed to open the transaction file, causing an error on the OPEN. This has been corrected.

ECN-4668 Memory Access Violation (MAV) when using XML TRACE

Incidents: 3182570

RPI Number: 1116273

Product: ACUCOBOL-GT

Module: Runtime

Machines Affected: All

Known Versions Affected: All

DESCRIPTION:

When using XML TRACE with XML Extensions, the runtime issued a MAV unless it was running in the debugger.

ECN-4669 CGI runtime fails with Memory Access Violation (MAV) on ACCEPT of numeric-edited items

Incidents: 3222789

RPI Number: 1119754

Product: ACUCOBOL-GT

Module: Runtime

Machines Affected: All

Known Versions Affected: 10.1.0 and later

DESCRIPTION:

When the CGI runtime ACCEPTed an external form that containED numeric-edited items, it crashed with a Memory Access Violation.

ECN-4670 Opening a file on a read-only file system for input failed with 30,30

Incidents: 3227019

RPI Number: 1120204

Product: ACUCOBOL-GT

Module: Vision

Machines Affected: All UNIX

Known Versions Affected: 10.3.0

DESCRIPTION:

Changes applied to version 10.3.0 to resolve ECN-4607, which corrected some file and record locking issues in the Vision library on UNIX, caused a 30,30 error to be returned when opening a file on a read-only file system for INPUT. The change applied for this ECN (4670) corrects this.

Acu4GL ECN List

This section includes the ECNs relating to Acu4GL:

ECN-GL574 Redundant references to checkapi.o from inf_inst

Incidents: 3205347

RPI Number: 640943

Product: Acu4GL

Module: Informix

Machines Affected: all

Known Versions Affected: all

DESCRIPTION:

When relinking the runtime, in order to use Acu4GL for Informix, tThe `inf_inst` script no longer adds redundant references to `checkapi.o` to the link command. The script has been updated to only add the reference to `checkapi.o` if it is not already in the output of the `esql -libs` command.

ECN-GL576 Acu4GL for Informix MAV on OPEN

Product: Acu4GL

Module: Informix

Machines Affected: All UNIX

Known Versions Affected: 10.3.0 and later

DESCRIPTION:

Some restructuring of the Acu4GL interfaces caused an issue with Acu4GL for Informix, causing a MAV when opening any table. This has been corrected.

ECN-GL577 FY and RY encoded dates

Incidents: 3180249

RPI Number: 1116096

Product: Acu4GL

Module: All

Machines Affected: All

Known Versions Affected: All

DESCRIPTION:

When the DATE FORMAT includes the F or R operator (as in FYMMDD) to specify a special character for the decade, the compiler created an XFD that incorrectly treated the date as numeric, thus not accommodating expected non-numeric characters. This has been corrected.

To rectify affected programs, you must recompile them, and then regenerate their XFDs. If you are also using AcuXDBC, you must also load the regenerated XFD files into the catalog.

ECN-GL578 No option to install Acu4GL for Sybase

Incidents: 3223243

RPI Number: 1119787

Product: Acu4GL

Module: Sybase

Machines Affected: Windows

Known Versions Affected: 10.2.0 and later

DESCRIPTION:

After moving to using Visual Studio 2017 for building ACUCOBOL-GT, errors in building prevented us from building and distributing the Acu4GL for Sybase DLL. Microsoft has fixed those problems, and we are once again able to build and install the interface.

With Visual Studio 2017, Microsoft introduced a problem that caused errors when building ACUCOBOL-GT, which prevented Micro Focus from building and distributing the Acu4GL for Sybase DLL. Microsoft has fixed this problem, and as a result, Micro Focus now builds and distributes the Acu4GL for Sybase DLL.

AcuBench ECN List

This section includes the ECNs relating to AcuBench:

ECN-WB699 Multiline indent only indents a single line

Incidents: 3214286

RPI Number: 1118955

Product: AcuBench

Module: AcuBench.exe

Machines Affected: Windows

Known Versions Affected: 10.2.1 and later

DESCRIPTION:

When indenting multiple selected lines, only the first selected line was indented. This has been corrected.l

AcuToWeb ECN List

This section includes the ECNs relating to AcuToWeb:

ECN-AW134 acutoweb-gateway script on UNIX

RPIs:

636243
1119570

Product: AcuToWeb

Module: AcuToWeb

Machines Affected: All

DESCRIPTION:

The 10.3.0 UNIX builds did not provide a working `acutoweb-gateway` startup script. Version 10.3.1 UNIX builds provide a corrected `acutoweb-gateway` script. The `acutoweb-gateway` startup script on UNIX allows for custom configuration files.

```
acutoweb-gateway -start [-c config] |-kill| -info
```

If you do not specify the `-c` parameter, the default configuration file `gateway.conf` is used.

ECN-AW152 Display and Print issues

RPIs:

1108059
1118655
1118421
1118729
1118731
1118732
1118738
1118925
1118949
1118959
1118986
1119058
1119105
1119107
1119109
1119111
1119299
1119343
1119354
1119670
1119686
1119688
1119994
1119999
1120013
1120190
1120247
1120296

Product: AcuToWeb

Module: AcuToWeb

Machines Affected: All

DESCRIPTION:

The following display and print issues have been corrected:

* A bitmap radio button on a Toolbar froze the display
* Changing the SEPARATION Grid property had no effect
* Grid numeric columns were smaller than expected
* No event type was generated by right-clicking in an empty grid
* No event type was generated by right-clicking in a column header
* Records of a size different than that of the form grid size did not show
* The grid control active outline was missing
* A grid sometimes shifted left when entering data
* Clicking on the bottom of the grid did not invoke a scroll

- When navigating the grid, scrolling and the scrollbar were not synchronized
- The pop-up menu in the grid worked only on the second attempt
- Clicking **Cancel** after adding a grid row caused the program to hang
- A paged grid containing buttons of a different size sometimes showed those buttons as truncated on the bottom
- NUM-ROWS caused Paged Grid to hang
- Exiting edit of cell with TAB key causeed MSG_FINISH_ENTRY eventx2
- Paged Grid contents are reordered versus Thin Client
- When the tree view had focus, function keys did not work
- Print alignment was off
- WPRTDATA-LINES-PER-PAGE was not properly supported
- On a second print attempt, images were lost
- A checkbox on the toolbar generated an additional CMD-ACTIVATE event
- Menu shortcut letters did not work
- Menus without sub-menus did not generate an event
- Windows launched from a menu were positioned incorrectly
- On a mobile device, combobox values did not redisplay
- Calendar control did not show the correct date

ECN-AW153 reconnection feature not working with ATW Desktop

RPI: 642209

Product: AcuToWeb

Module: AcuToWeb

Machines Affected: All

DESCRIPTION:

When using the ATW Desktop, the reconnection system did not provide a reconnect. This has been resolved.

ECN-AW154 C$FILEINFO returns no information

RPI: 1119936

Product: AcuToWeb

Module: AcuToWeb

Machines Affected: All

DESCRIPTION:

When using the ATW Desktop, C$FILEINFO returned no information. This has been resolved.

ECN-AW155 New ATW reconnection variable PROBING_CONNECTION

RPI: 1120057

Product: AcuToWeb

Module: AcuToWeb

Machines Affected: All

DESCRIPTION:

The new PROBING_CONNECTION variable sets a wait time, in milliseconds, on the internal PING sent to verify that the connection is active. The default minimum value is `3000`.

The reconnection system is triggered when the waiting time expires.

When dealing with systems/networks that have higher latency, you might want to increase the default value.

AcuXDBC ECN List

This section includes the ECNs relating to AcuXDBC:

ECN-XD122 getColumnClassName: Not supported

RPI: 1118525

Product: AcuXDBC

Module: AcuXDBC

Machines Affected: All

DESCRIPTION:

When connecting to the database using iBatis with JDBC and AcuXDBC Enterprise, issuing a SELECT statement resulted in the following error: `SQL Exception : getColumnClassName: Not supported by VORTEXjdbc`. This has been resolved.

ECN-XD124 AcuXDBC date/time handling

RPI:

    1119203
    1119259

Product: AcuXDBC

Module: AcuXDBC

Machines Affected: All

DESCRIPTION:

The original implementation of 6-digit date support used the wrong header file on UNIX/Linux builds. This has been fixed.

Version 10.3.0 provided support for microseconds; AcuXDBC now supports microseconds.

When using `xdbcquery`, you must set a display date mask, such as: `/mYYYY-MM-DD HH:MI:SS.UUUUUU`

ECN-XD125 When using OEM_CHARACTER_SET, not all data is translated

RPI:1119479

Product: AcuXDBC

Module: AcuXDBC

Machines Affected: All

DESCRIPTION:

When the OEM_CHARACTER_SET configuration variable was set to ON, the ö character was not returned correctly when querying using Excel. The error was in the varchar handling, and has been fixed.

ECN-XD126 Binary sequential file duplicates

RPI: 1120065

Product: AcuXDBC

Module: AcuXDBC

Machines Affected: All

DESCRIPTION:

A problem that occurred when inserting a record into a binary sequential file caused the insertion of duplicate data from the prior record instead of data for the new record.

AcuXML ECN List

This section includes the ECNs relating to AcuXML:

ECN-XML032 Trailing spaces in data with some encodings

Incidents: 3208513

RPI Number: 1118453

Product: AcuXML

Module: Runtime

Machines Affected: All

Known Versions Affected: 10.1.0 and later

DESCRIPTION:

Depending on the state of uninitialized memory, XML that used a non-standard encoding, that is, an encoding other than ASCII, UTF, or ISO-8859-1, sometimes inserted trailing spaces in the data portion of the XML. This has been corrected.

Boomerang ECN List

This section includes the ECNs relating to Boomerang:

ECN-BMRG002 BMRG002 ECN-BMRG002 Boomerang compiler shows wrong line number or gives a memory fault

Incidents:

3133321
3133321

RPI Numbers:

1119524
1112069

Product: Boomerang

Module: Boomerang(server) and Compiler(client)

Machines Affected: All

Known Versions Affected: All

DESCRIPTION:

On some systems, when the Boomerang client sent a file to the Boomerang server for preprocessing, the Boomerang server sometimes produced a memory fault. This was due to some systems having a smaller stack space than others. The fix for this ECN changes how Boomerang works so that a small stack space is no longer an issue.

On other systems, if the original COBOL program contained an error, the compiler did not report the correct line number of the statement in error. This was due either to the Boomerang server incorrectly inserting the Boomerang line directives into the preprocessed file, or to the compiler erroneously reporting the line number for the statement just before the statement in error.

Updates and SupportLine

Our Web site provides up-to-date information 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 *Product Updates* section of the Micro Focus SupportLine Web site, where you can download fixes and documentation updates. Go to *Micro Focus Product Updates*
- The *Examples and Utilities* section of the Micro Focus SupportLine Web site, including demos and additional product documentation. Go to *https://supportline.microfocus.com/examplesandutilities/index.aspx*.
- The *Support Resources* section of the Micro Focus SupportLine Web site, that includes troubleshooting guides and information about how to raise an incident. Go to *https://supportline.microfocus.com/supportresources.aspx*

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

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When contacting Micro Focus SupportLine, please include the following information if possible. The more information you can give, the better Micro Focus SupportLine can help you.

- The name and version number of all products that you think might be causing an issue.
- Your computer make and model.
- System information such as operating system name and version, processors, and memory details.
- Any detailed description of the issue, including steps to reproduce the issue.
- Exact wording of any error messages involved.
- Your serial number or works order (WO) 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, or on the box in which the product was supplied, and on the red card supplied in the DVD case .

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