



# Web-to-Host 6.9.3

Administrator Guide

**Micro Focus**  
**The Lawn**  
**22-30 Old Bath Road**  
**Newbury, Berkshire RG14 1QN**  
**UK**  
<http://www.microfocus.com>

© Copyright 1984-2020 Micro Focus or one of its affiliates.

MICRO FOCUS, the Micro Focus logo and Rumba+ are trademarks or registered trademarks of Micro Focus or one of its affiliates.

All other marks are the property of their respective owners.

2020-09-02

# Contents

<b>Product Overview</b>	<b>5</b>
Features	5
Architecture	6
Security	7
Finding information	7
<b>Server Installation</b>	<b>8</b>
System requirements	8
Installing	8
Installing on a Web server running Windows	8
Installing on a Web server running Linux	10
Installing on an iSeries system	11
Installing on an unsupported non-Windows server	12
Installing an evaluation product	13
Directory structure	13
Session Configuration Manager	14
Troubleshooting	14
Session Configuration Manager is lost	14
Web server: Session Configuration Manager does not open	14
Uninstalling	14
Uninstalling from a Windows server	15
Uninstalling from a non-Windows server	15
<b>Creating and Migrating Client Profiles</b>	<b>16</b>
Migrating client profiles from a previous version	16
Migrating profiles after upgrading	16
Running the Conversion Utility	16
Creating client profiles	17
Creating or editing a client profile	17
Configuring client profiles	18
Start options	18
Multiple sessions	18
International client sessions	19
Defining password level caching policy	22
Publishing client profiles to users	22
<b>Web-to-Host Client Installation</b>	<b>24</b>
System requirements	24
Client operating system	24
Client browser	24
Client install and upgrade	24
Installing Pro	24
Installing the Host Access Web Launcher	25
Preparing to install the software	26
Installing the Web Launcher	26
Client uninstall	26
Uninstalling Pro using Control Panel	26
Uninstalling Pro manually	27
<b>Coexistence: Pro and Rumba+</b>	<b>28</b>
Coexistence requirements	28
Setting a custom install path	28
Upgrading Pro and Rumba+	29
<b>User Profile Configuration</b>	<b>30</b>

Rules defining Pro behavior .....	30
User configuration files in a distribution package .....	31
<b>User Data File Locations .....</b>	<b>32</b>
Roaming profile support for Pro sessions .....	32
Default paths for user data files .....	32
<b>Creating a Trace .....</b>	<b>33</b>
<b>Contacting Micro Focus .....</b>	<b>34</b>
Further information and product support .....	34
Information we need .....	34
Contact information .....	34
<b>MICRO FOCUS END USER LICENSE AGREEMENT .....</b>	<b>36</b>

# Product Overview

OnWeb Web-to-Host is a server-based Web application that publishes your existing legacy applications in intranet, extranet, and Internet environments. It includes host display, printer, and file transfer features that enable end users to work productively with host-based information in a familiar Windows or Web browser environment. Web-to-Host provides access to a broad range of host types, including IBM mainframe, IBM AS/400, DIGITAL VAX, UNIX, and HP systems.

System administrators can use the Session Configuration Manager tool to easily configure client sessions that can be published to end users.

Although it can be installed as a standalone product, Web-to-Host is part of Micro Focus Solutions, a common underlying framework that integrates host systems, desktops, browser-based systems, and wireless devices with new, Web-based solutions. This guide describes the Web-to-Host standalone version.

For more information on Micro Focus Solutions, visit the Micro Focus web site (<http://www.microfocus.com>).

## Features

Designed for use in an intranet environment, the Pro component offers the richest feature set and consists of ActiveX controls that give users access to mission-critical host applications and data. Pro provides these client session types:

- Mainframe Display, Mainframe Printer
- AS/400 Display, AS/400 Printer, AS/400 File Transfer
- UNIX Display
- HP Display

Pro client sessions include these advanced features and options:

- Mainframe file transfer (can include SimXfer tables)
- AS/400 File Transfer
- AS/400 batch file transfers
- Macros
- Hotspots
- User profile enhancements
- Restricted user support
- An MSI packaging utility for automatically installing Pro components
- A distribution utility
- A download and install service
- VBA-type scripting
- Customizable menus and toolbars
- End-user keyboard mapping
- Administrator keyboard mapping
- Tracing

Hotspots, a word or set of characters on the host screen, activate a function when clicked. Using the **Hotspots Configuration** dialog box, you can enable/disable, show/hide, create, and modify both default and user-created hotspots. Default hotspots are host commands displayed on-screen. User created hotspots are custom macros you assign to selected on-screen text. You can also use hotspots and macros to log on to and run host applications automatically. Any protected text on your host screen can be turned into a hotspot. In mainframe displays, you can also configure hotspots for non-protected text.

Pro AS/400 File Transfer moves files and data between the host and the PC using either the menu bar or toolbar options of the AS/400 display. A customized toolbar button activates a pre-configured FTX file and starts the AS/400 FTX application. A new AS/400 emulation type has been added to the Session Configuration Manager. It opens the AS/400 FTX application and loads an existing FTX configuration on the client. Your users can customize the file transfer session, configuring options such as the data format for sending and receiving, file locations, application behavior both during and upon completion of the transfer, security settings, and host connection.

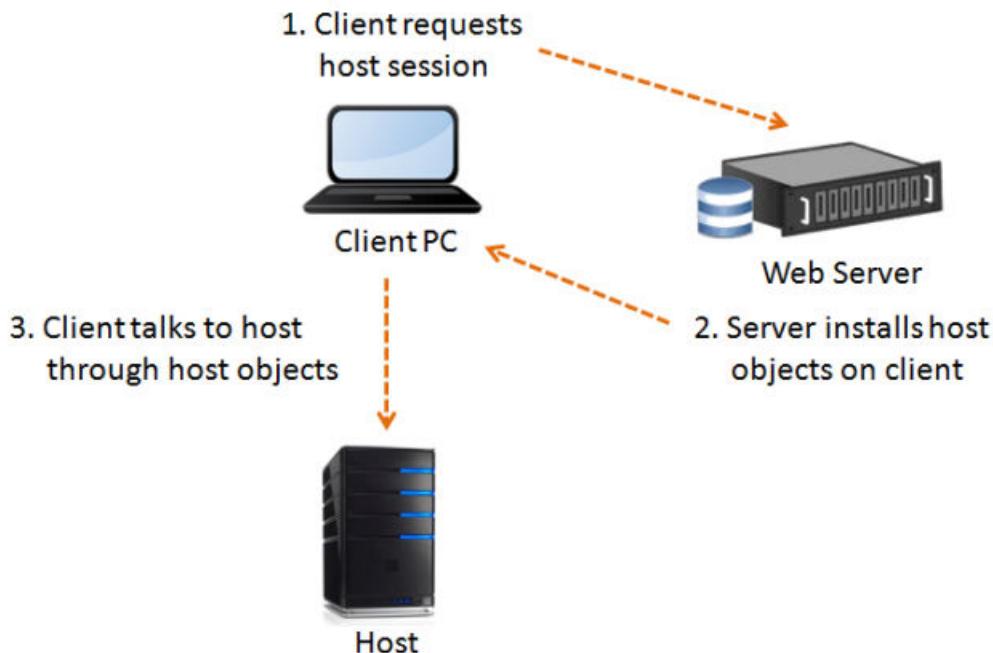
With enhanced user profiles, user configuration files (.cph) are no longer deleted automatically when changes are made in the HTML files for configurable options. For more information, see [User Profile Configuration](#).

Pro ActiveX components are downloaded to the client once, during the first login. A new download service is first installed on the client workstation. Once the service is installed on the client, all users (including restricted users) can work with the Pro ActiveX controls. The service handles all installs, upgrades, and downloads of Pro ActiveX components.

The Web-to-Host Distribution Packager enables you to bundle multiple Web-to-Host configuration and data files into a single, easily distributed package. Users can run sessions that include a complete work environment with components such as pre-defined scripts, macros, hotspots, custom toolbars, background images, icons, screen/font colors, AS/400 File Transfer and Batch File Transfer profiles. The Web-to-Host Distribution Packager helps you provide standardized functionality and a single look and feel for all users. For more information, see the online Help.

## Architecture

The figure below shows how Web-to-Host works once the system administrator has created the host sessions and published them to users. The following sections describe how this architecture is applied to each of the component types.



The ActiveX objects are downloaded to the client the first time a user opens a session. When you install updates on the server, they are downloaded automatically to the client the next time a user opens a session. This architecture enables the client to communicate directly with the host, as shown in the figure above.

# Security

Web-to-Host maintains persistent client-to-host sessions. It is important that users be aware of session persistence in relation to information security, especially when sessions are configured to run inside a browser window. In this mode, only one session is visible on the screen at a time, though other sessions could be running in the background.

Users who have access to sensitive information on host systems should consider running each session in a separate window to keep all concurrent sessions visible on the screen. Users can also ensure that all connections are severed by closing their browser when they leave their work area. For details on configuring sessions to run in a separate window, see [Start options](#).

Web-to-Host supports:

- SSL (Secure Socket Layer) for IBM mainframe, AS/400, and UNIX hosts.
- SSH (Secure Shell) for Pro UNIX display.
- Kerberos authentication for AS/400.

With this security support, users can securely access applications and transfer data between their desktops and mainframe, AS/400, and UNIX systems, encrypting the session data stream to a host capable of supporting these protocols.

# Finding information

Web-to-Host product documentation includes:

- This Administrator Guide, which explains how to install, uninstall, configure, and deploy the product.
- The Readme file, which contains information about new features, late-breaking changes, and known issues.

The **Help** page of the Session Configuration Manager contains links to the Readme file and this Administrator Guide.

- Context-sensitive Help for the Session Configuration Manager, a tool for configuring Pro client sessions.
  - User guide for Pro client. This Help for end users explains how to configure and run features and options in the client session.

# Server Installation

To deploy Web-to-Host, you must perform the following tasks:

1. Install the product on a Web server.
2. Run the Session Configuration Manager to create and configure (or migrate) session profiles.
3. Publish session profiles to clients.

Web-to-Host files are installed in a `w2hlegacy` directory (created during installation) that must reside in a Web-publishable directory on your server. The Web server can then publish Web-to-Host to client machines using HTTP.

## System requirements

- The Web server on which you install Web-to-Host can be any HTTP based server, such as a Windows Web server, a UNIX server, or an AS/400 (iSeries).
- You must configure this Web server to allow downloads of executable files to the client. If the Web server is a Microsoft Internet Information Server (IIS) or a Microsoft Personal Web server, execute permissions must be switched off for the server directories that contain the Web-to-Host client .exe files. See your Web server documentation for instructions.
- You should install Web-to-Host in the root publishing directory of the Web server, or in a subdirectory configured on the Web server. Otherwise, the product will not function. For details, consult your Web administrator or your Web server documentation.
  - For Microsoft IIS, this directory is usually:  
`c:\Inetpub\wwwroot`
  - For Apache Server, this directory is usually:  
`c:\Program Files\Apache Group\Apache2.2\htdocs`
- For non-Windows servers, the installation of this version of Web-to-Host requires Oracle Java VM 1.6 and higher.

## Installing

This section describes how to install and remove OnWeb Web-to-Host as a standalone product on your Web server.

### Installing on a Web server running Windows

#### Using Setup

Follow these steps to install Web-to-Host on a Web server running one of the following:

- Windows Server 2003 (SP1 and above)
- Windows Server 2008
- Windows Server 2012 R2
- Windows Server 2016
- Windows Server

1. Navigate to the Micro Focus Web-to-Host 6.9.3\bin folder.
2. Double-click Web-to-HostSetup.exe.
3. Read the introductory information, then click **Next**.
4. Read the Software License Agreement, select the option to accept the terms of the license agreement, then click **Next**.
5. Enter the license key for your Web-to-Host product, then click **Validate**.
6. Specify the Web root directory (this can be the root publishing directory of your Web server or any subdirectory under the Web root), then click **OK**.
  - For IIS Web servers, the Web Root Directory defaults to:  
C:\InetPub\wwwroot\
  - For Apache Server, the root publishing directory defaults to:  
C:\Program Files\Apache Software Foundation\Apache2.2\htdocs
  - For other Web servers, browse to the root publishing directory of the Web server.

The setup program creates a new w2hlegacy directory under the root publishing directory (or the destination directory) and begins copying files to that directory.

To install to a subdirectory, select **Enable subdirectory support** and type the path in the box provided.

When finished, the **Installation Complete** screen appears. For an overview of what the correct installation should look like, see [Directory structure](#).

7. Click **Finish** to exit the installation.

## Using the console

Web-to-Host can also be installed using the console (known as console mode). The command line options you enter depend on whether you are installing to the default destination directory or to any other directory configured on the Web server.

If you need to change the license key, you must first uninstall Web-to-Host, then reinstall it with the new key. If you do not enter a license key, Setup installs a 30-day evaluation version.

### Installing to the default directory

To install to the default destination directory:

1. Enter:

```
Web-to-HostSetup.exe -DLicenseKey=<license_key> -i console
```

2. Follow the instructions that appear during the installation.

3. When installation is complete, you are prompted for a response. Press 3 to exit the installation.

For example, if the default directory is:

```
c:\Inetpub\wwwroot
```

then Web-to-Host is installed in:

```
c:\Inetpub\wwwroot\w2hlegacy
```

 **Note:** When you install Web-to-Host on either a Microsoft IIS or Apache Server, it is installed to their default directory. Otherwise, it is installed in the %PROGRAMFILES% directory as Web-to-HostSetup.exe.

## Installing to a non-default directory

When installing to a non-default directory, you must enter the Web root directory parameter. If you want to install to a subdirectory under the Web root, you must also enter the subdirectory parameter. However, this is optional.

### 1. Enter:

```
Web-to-HostSetup.exe -DWebRootDir=<directory_name> -  
DSubDirectory=<subdirectory_name> -DLicenseKey=<license_key> -i console
```

### 2. Follow the instructions that appear during the installation.

### 3. When installation is complete, you are prompted for a response. Press to exit the installation.

For example, to install Web-to-Host to the following directory:

```
c:\InetPub\wwwroot in subdirectory w2h6.9.3\install
```

you would enter:

```
Web-to-HostSetup.exe -DWebRootDir=c:\InetPub\wwwroot -  
DSubDirectory=w2h6.9.3\install -DLicenseKey=xxxx-yyyy-vvvv -i console
```



### Notes:

- When typing a subdirectory, always use the format:  
`<FolderName>\<FolderName>`
- Parameters that include a space must be enclosed in quotation marks ("), for example:  
`-DWebRootDir="c:\program files\wwwroot"`

## Installing on a Web server running Linux

The installation of this version of Web-to-Host requires Oracle Java VM 1.6 or higher.

## Using Setup

1. Navigate to the Micro Focus Web-to-Host 6.9.3/bin folder.
2. Run the setup.jar file as a Java executable.
3. Read the introductory information, then click **Next**.
4. Read the Software License Agreement, select the option to accept the terms of the license agreement, then click **Next**.
5. Type the license key for your Web-to-Host product, then click **Next**.
6. Specify the Web Root Directory (this can be the root publishing directory of your Web server or any subdirectory under the web root), then click **OK**.

For example, the Apache Server root publishing default directory might be one of:

```
/var/www  
/var/www/htdocs  
/var/www/html
```

For other Web servers, browse to the root publishing directory of the Web server.

The setup program creates a new w2hlegacy directory under the root publishing directory (or the destination directory) and begins copying files to that directory.

To install to a subdirectory, select **Enable subdirectory support** and type the path in the box provided.

When finished, the **Installation Complete** screen appears.

For an overview of what the correct installation should look like, see [Directory structure](#).

7. Click **Finish** to exit the installation.

## Using the console

Web-to-Host can also be installed using the console.

If you need to change the license key, you must first uninstall Web-to-Host, then reinstall it with the new key. If you do not enter a license key, Setup installs a 30-day evaluation version.

To install Web-to-Host:

1. Change to the directory where `setup.jar` resides.
2. Enter:

```
java -jar setup.jar -DWebRootDir=<directory_name> -  
DSubDirectory=<subdirectory_name> -DLicenseKey=<license_key> -i console
```

3. Follow the instructions that appear during the installation.

4. When installation is complete, you are prompted for a response. Press 3 to exit the installation.

For example, to install Web-to-Host to the following directory:

```
/var/www/htdocs in subdirectory w2h6.9.3/install
```

you would enter:

```
java -jar setup.jar -DWebRootDir=/var/www/htdocs -DSubDirectory=w2h6.9.3/  
install -DLicenseKey=xxxxx-yyyyy-vvvv -i console
```



### Notes:

- When typing a subdirectory, always use the format:  
`<FolderName>\<FolderName>`
- The following parameters are optional:  
`-DSubDirectory`  
`-DLicenseKey`
- Parameters that include a space must be enclosed in quotation marks ("").

## Installing on an iSeries system

Web-to-Host can be installed on any non-Windows server that has a Java run-time environment (JRE) and a Web server.

This section provides instructions for installing Web-to-host on an iSeries system.

## System requirements

To support Web-to-Host, the following software must be installed on your iSeries system:

- 5722-SS1 Option 12 - Host Servers
- 5722-DG1 - IBM HTTP Server (powered by Apache)
- 5722-JV1 JVM 1.5

## Installing the Java Virtual Machine

IBM Technology for Java Virtual Machine is included in licensed program 5722-JV1. Licensed program 5722-JV1 is shipped with the IBM system CDs. To access the **IBM Technology for Java** option, perform the following steps:

1. Enter the Go Licensed Program (GO LICPGM) command, then select **Option 10 (Display)**.

2. If you do not see this licensed program listed, then perform the following steps:
  - a. Enter the GO LICPGM command on the command line.
  - b. Select **Option 11 (Install licensed program)**.
  - c. Select **Option 1 (Install)** for licensed program (LP) 5722-JV1 \*BASE, then select **Option 8**.  
If **Option 8** is not displayed in the list, you can add it to the list by entering Option 1 (Install) in the option field. Enter 5722JV1 in the licensed program field and Option 8 in the product option field.
3. Add an environment variable. On the command line, enter the following command:

```
ADDENVVAR ENVVAR(JAVA_HOME) VALUE('QOpenSys/QIBM/ProdData/JavaVM/jdk50/32bit')
```

## Starting Web-to-Host installation

For best performance, use the installation directory specified in this procedure.

1. Using FTP or NetServer, place the /bin/setup.jar file from your electronic download in a temporary location on the iSeries. For example, /tmp.
2. Enter:

QSH

3. Change to the /tmp directory.
4. Enter:

```
java -jar setup.jar -DWebRootDir=<directory_name> -DSubDirectory=<subdirectory_name> -DLicenseKey=<license_key> -i console
```

For example, if you were using the APACHEDFT Web server, your command line would look similar to this:

```
java -jar setup.jar -DWebRootDir=/www/apachedft/htdocs -DLicenseKey=XXXXXX-XXXXXXXXXX -i console
```

5. Follow the instructions that appear during the installation.
6. When installation is complete, you are prompted for a response. Press **Enter** to exit the installation.

After installation, you are ready to run the Session Configuration Manager. For information on using the Session Configuration Manager, see [Creating and Migrating Client Profiles](#).

## Installing on an unsupported non-Windows server

To install the product on an unsupported non-Windows server, you must first install the product on a supported platform (this does not need to be a Web or file server), then copy the files manually to the correct location on the non-Windows Web server.

1. Use FTP to copy the w2h1legacy directory and its contents to the root publishing directory of your Web server. For the location of this directory, consult your Web administrator or your Web server documentation).
-  **Note:** When using FTP to transfer files to an IBM OS/390 Web server, be sure to FTP all files with file extensions .htm, .html, or .txt as text. Transfer all other files as binary. This is necessary because IBM uses the EBCDIC character set to store text files.
2. When you have copied all the files, the installation is complete. For an overview of what the correct installation should look like, see [Directory structure](#).

# Installing an evaluation product

This section explains how to install and migrate the Web-to-Host evaluation product. The evaluation product expires 30 days after you first install Web-to-Host. After 30 days, you can no longer run your session profiles. You should then contact your system administrator.

## Installing the evaluation product in graphic mode

To install the evaluation product on your Web server in graphic mode:

1. Follow the appropriate procedure above.
2. Instead of entering the license key, select **Evaluate**.

## Installing the evaluation product in console mode

To install the evaluation product on your Web server from the console:

1. Follow the appropriate procedure above.
2. Do not enter the following parameters:

`-DLicenseKey=<license_key>`

After installing the evaluation product (for all modes), you can create session profiles and begin your 30-day evaluation period by directing your browser to:

`<webserver>/w2hlegacy/config/hostwizard.html`

For information on creating and configuring profiles, see [Creating and Migrating Client Profiles](#).

## Upgrading to a licensed product

To upgrade to a licensed product:

1. Install the licensed version on top of your evaluation product. If you are running in console mode, first uninstall Web-to-Host, then reinstall it with the license key.
2. Evaluation profiles expire after the 30-day evaluation period. When upgrading to the licensed product, you must also run all profiles created with the evaluation product through the Conversion Utility in the Session Configuration Manager. See [To migrate profiles after upgrading](#).

## Directory structure

The installed product has the following directory structure within the `<webroot>\w2hlegacy\` root publishing directory:

Subdirectory	Description
<code>config\</code>	The configuration utility, <code>hostwizard.html</code> .
<code>data\</code>	The sub-directories into which keyboard maps, scripts, macros, distribution packages, AS/400 FTX configuration, and watermark files are copied for all clients.
<code>help\</code>	The online documentation (Help) files.
<code>images\</code>	The graphics used by Web-to-Host.
<code>javascript\</code>	The include files used for some JavaScript functions.
<code>pro\</code>	The download software for Pro client connections.

Subdirectory	Description
rss\	The software for secure connections.
utils\	The Java Uninstall utility, MSI Packager, OnWeb Demo Server utility, and other useful utilities.



**Note:** If you choose to place the user data files location outside the Web-to-Host server installation folder, you must copy the file web.config from w2hlegacy to the new location. This is because the web.config file contains declarations of the MIME types to be allowed by IIS7.

## Session Configuration Manager

After installing Web-to-Host on your Web server, the next task is to use the Session Configuration Manager to create, edit, and migrate client profiles. To run the Session Configuration Manager, direct your browser to the following URL:

<webserver>/<destination directory>/w2hlegacy/config/hostwizard.html

For information on using the Session Configuration Manager, see [Creating and Migrating Client Profiles](#).

## Troubleshooting

This section summarizes the most common problems encountered when installing Web-to-Host.

### Session Configuration Manager is lost

If after installing the product you cannot find the Session Configuration Manager, you may have installed the product to the wrong directory. If the product is correctly installed and you still cannot find the Session Configuration Manager, then search for the file hostwizard.html in the root publishing directory. When you find it, note the URL for the Session Configuration Manager for future use.

### Web server: Session Configuration Manager does not open

If you correctly installed the product and still cannot open the Session Configuration Manager in your browser, you may have a case-sensitive file system. Verify that all the directories and file names for Web-to-Host are in lowercase, enter the URL in lowercase, and try opening it again.

If you changed the product directory names from the default structure described in [Directory structure](#), the <OBJECT> tag's codebase property is incorrect and must be fixed in the HTPL files:

1. First, back up the HTPL files in the config\ directory.
2. Open each file with a text editor (such as Notepad) and edit the directory names.
3. Save each file as ASCII text.

## Uninstalling

When removing Web-to-Host from your network environment, you should also uninstall the product from all client machines. See [Client Uninstall](#).

## Uninstalling from a Windows server

1. Select Control Panel > Programs and Features.
2. Select Micro Focus OnWeb Web-to-Host 6.9.3, then click Add/Remove.
3. Follow the prompts to remove the application.

## Uninstalling from a non-Windows server

To uninstall from the default destination directory:

1. Navigate to:

```
<default_install_directory>\w2hlegacyuninst
```

2. Enter:

```
java -jar uninstaller.jar -i console
```

To uninstall from any destination directory and subdirectory:

1. Navigate to:

```
<webroot_directory>/<subdirectory>/w2hlegacyuninst
```

2. Enter:

```
java -jar uninstaller.jar -i console
```

## Uninstalling from the default installation directory

To uninstall from the default installation directory:

1. Navigate to:

```
<default_install_directory>\w2hlegacyuninst
```

2. Enter:

```
java -jar uninstaller.jar -i console
```

## Uninstalling from a non-default installation directory

To uninstall from a non-default installation directory:

1. Navigate to:

```
<webroot_directory>/<subdirectory>/w2hlegacyuninst
```

2. Enter:

```
java -jar uninstaller.jar -i console
```

# Creating and Migrating Client Profiles

After installing OnWeb Web-to-Host on your Web server, the next task is to create or migrate client profiles. You may also want to edit client profiles to configure new options, such as security, distribution packages, Pro toolbars and menus, and Pro watermarks.

This chapter explains how to use the Session Configuration Manager to create, edit, and migrate client profiles and how to deploy client profiles to your users. The procedures in this chapter apply to a standalone Web-to-host installation on any Web server.



**Note:** On a slow connection, the initial download for the Session Configuration Manager and the client session may take some time. Consequently, Web-to-Host may seem as though it is not responding when running the Session Configuration Manager or the client session for the first time.

## Migrating client profiles from a previous version

After updating Web-to-Host product by installing a new version or upgrade, you must migrate all session profiles created in the previous version by running the Session Configuration Manager in server mode. If you do not update the session profiles, Pro client sessions do not open. An error message appears, prompting you to contact your system administrator.

For details on running the Session Configuration Manager in server mode, see [Creating client profiles](#).

## Migrating profiles after upgrading

1. Run the Session Configuration Manager on the server by typing the following in the address bar of your browser:

```
http://<webserver_name>/<subdirectory>/w2hlegacy/config/hostwizard
```

2. Click the **Convert** tab.
3. Load sessions by clicking **Load Session**.
4. Click **Convert**

This ensures that your Web-to-Host installation incorporates the most recent version numbers in the session HTML files. Once new software is downloaded to the client workstations, the version numbers on client workstations and session files must match. If new parameters exist in the current product version that were not defined in the migrated profile, Web-to-Host uses the default values.

When the user opens a migrated profile, the browser displays a standard security dialog box asking if the user wants to install and run software from Micro Focus. Administrators should tell their users to click **Yes**.

## Running the Conversion Utility

1. Click the **Convert** tab.
2. Click **Load Sessions** to load Web-to-Host HTML sessions from previous versions.
3. Click **Convert**.

A result is shown for each file. If the conversion is successful, the converted file is added to a .zip file which is downloaded to your computer.

4. At the end of the conversion process, a .zip file containing the converted sessions will be downloaded to your computer.

# Creating client profiles

This section describes how to use the Session Configuration Manager to create a new Web-to-Host client session for your users. The Session Configuration Manager utility saves your client configuration settings in an HTML file that invokes a named Web-to-Host client session.

The standard method in which the system administrator creates and configures the session profiles is known as server mode. In this mode, the profiles must reside in a Web-published folder on the Web-to-Host server. When the user opens a profile on the server, the client session is delivered to the desktop through the browser.

To run the Session Configuration Manager, type the following in the address bar of your browser:

```
http://<webserver_name>/  
<subdirectory>/w2hlegacy/config/hostwizard
```

## Creating or editing a client profile

To use the Session Configuration Manager to create or edit client profiles:

1. Run the Session Configuration Manager on the server or on your local workstation.
2. Optional: For general instructions on using the Session Configuration Manager, click the **Help** icon at the top right of the screen. This menu also contains links to the *Readme* file and this *Administrator Guide*.
3. Click the **Create** tab, then do one of the following as needed:
  - Create a new session. Select the session type (**Pro host emulation** session type), then click **Create**.
  - Edit an existing session. Under **Open an Existing Session**, click **Open**, then specify the full path of the HTML session configuration file to edit. The **Browse** utility defaults to the location of the last saved configuration file.

The tabs for the selected host type appear.

4. Optional: Click each tab, click **?** at each section, then print the help pages for each tab.
5. Configure the settings on each page as needed:
  - For details on each field, see the online help. For details on configuring client start options, concurrent sessions, and multiple language support, see [Configuring client profiles](#).
  - The Session Configuration Manager displays an asterisk next to required settings, and provides many default settings. You need to enter only a few unique settings to make your connections work correctly. However, you should check each page to be sure you select the appropriate options for your needs./choice>
6. To save the profile, click **Create** the bottom of the Session Configuration Manager.

Web-to-Host generates the HTML file and instructs the browser to download the file to your computer.

The browser prompts you for the download location.

7. Specify an appropriate folder in which to save the profile.

In server mode, you must save the profile in a Web-published folder. Otherwise, client sessions do not receive automatic updates from the Web server.



**Note:** In previous versions of Web-to-Host, updates from the administrator deleted all user configurations. In this version, there are cases when administrator changes do not automatically delete the user's configuration (.cph) file. For more information, see [User Profile Configuration](#).

# Configuring client profiles

This section describes some of the common options you can configure when creating or editing client profiles in the Session Configuration Manager. For a list of options related to each technology, see the Session Configuration Manager Help .

## Start options

The following options are located on the **Session Options** page when creating or editing client profiles in the Session Configuration Manager:

### Run in a Separate Window

This option applies to Pro display profiles.

The **Run in a Separate Window** option opens the client session in a separate browser window.

You can also use this option to configure a Pro display profile to launch multiple standalone sessions using the same configured connection. For details, see [Multiple sessions](#).

The default is **Clear**. The host session runs inside the browser.

### Server URL

With this option, you have the ability to run sessions from a web server other than the default Web-to-Host server. The URL you enter indicates the location of the alternate Web-to-Host server.

### Enable Local Start

This option applies only to client profiles created by running the Session Configuration Manager in server mode. For information on server mode, see [Creating client profiles](#).

The **Enable Local Start** option allows users to run host sessions when the web server is unavailable. With this option, whenever the user opens a client profile stored on the web server, Web-to-Host copies that profile to the client workstation. The profile resides on the web server as an HTML file that is named after the client session:

```
%LOCALAPPDATA%\Micro Focus\Rumba\LocalStart
```

It is best to run client profiles from the server to ensure that users have the most up-to-date configuration and software.

When running Local Start profiles, help files are only available if, during configuration, the administrator selected **Install User Guide locally**. Auto macro files and keyboard map files configured by the administrator are cached on the client workstation when the session is downloaded from the server, so these local copies are accessible to the client session when the originating server is down. By default, Local Start is not selected.

## Multiple sessions

Users can run concurrent Web-to-Host sessions and switch between session windows to perform tasks. How users initiate multiple sessions and navigate between them depends on how you configure the session profiles. There are three scenarios:

- Multiple sessions running in separate browser windows

By default, users must open multiple instances of the browser to start multiple client sessions. Users can run concurrent host sessions and switch between sessions by clicking each browser window in turn.

- Multiple sessions running outside the browser

Administrators can configure Pro display profiles to run in a separate window outside the browser (see [Start options](#)). The user must open a new instance of the browser to launch another host connection but, once the new session is connected to the host, the browser can be closed without losing the connection.

- Multiple Pro standalone sessions

Administrators can configure a Pro display profile to launch multiple standalone sessions using the same configured connection. For example, a user can run two or more MyRumbaHost sessions, each in its own window.

With this configuration, a new session opens in a separate window outside the browser whenever the user accesses a session URL through the browser window. After launching one or more session windows, users can close the browser without losing the host connection.

#### **Configuring multiple Pro standalone sessions:**

1. Create or edit or the Pro session profile in the Session Configuration Manager, then click the **Session Options** tab.
2. Check **Run in a Separate Window** and **Allow Multiple Standalone Sessions**.
3. To save this configuration, click the check mark icon at the bottom of the page.

When you enable these two options, users can launch a new session window using any method that requests the session URL. For example, if your Web site includes a Pro display session called `Display.html`, users can open multiple sessions by:

- **Clicking a link on a Web page**

If the Web page includes a link to `http://<yoursite>/Display.html`, users can click this link to launch a new session window.

- **Refreshing the browser with the session URL listed in the address bar**

When the browser's address bar contains the session URL, users can click the **Refresh** (or **Reload**) button on the browser toolbar to launch a new session.

- **Typing the address in the address bar**

If users have browsed to another location after opening the session, they can enter the session URL in the address bar to launch another session window.

- **Recalling the address from history**

If users cannot remember the URL, they can open the browser's history list and then select the session URL to launch a new session window.

Users can switch between sessions by clicking each of the windows in turn, or by using the taskbar. If the browser closes, the session windows remain open.

## **International client sessions**

When using the Session Configuration Manager to create or edit client profiles, configure the following multi-lingual options to meet the language needs of your users:

You can set these options to use different languages if necessary. For example, you can set the user interface to English and set the keyboard map and host character set to German.

### **Host Character Set**

This option sets the host language (also known as the codepage). When configuring Pro and Java AS/400 and mainframe display or printer profiles, the option appears on the **Connection** page.

To specify the **Host Character Set**, select the language character set (or codepage) for the client session. If the host uses a non-English (United States) language, select the language used by the host.

The host character set includes commonly used marks, accents, letters, and symbols of a specific language. For example, if the host language is French, the host character set must also be French to ensure that French special characters are transmitted to the host correctly and that the characters received from the host display in the client session correctly.

The default setting is English (United States) - 37.

## UNIX character set options

### National Replacement Character Set

Replaces particular ASCII characters with characters of the specified language.

### Supplemental Character Set

Specifies the character set used by the host.

When configuring a Pro UNIX display, these options are located on the **Advanced Client Options** page.



**Note:** There are no configurable character set options for HP display sessions.

## Keyboard mapping options

These options set the country or custom keyboard map for Pro display sessions.

Web-to-Host supplies numerous country keyboard maps to accommodate the special characters and symbols used in various languages. You can deploy country keyboard maps in several ways. For example, you can:

- Standardize all the sessions on one country keyboard.
- Base the keyboard map on the client workstation's regional settings.
- Enable the user to specify their own keyboard mappings.

When using the Session Configuration Manager to configure Pro AS/400, mainframe, UNIX, and HP display profiles, the following options appear on the **Keyboard Map** and **Auto Macro** pages:

### Keyboard Map

You can select a standard country keyboard map or specify a custom keyboard map (.map file) for the client session. For information on how to do this, see the Help. The default keyboard map is **U.S.A.**

### Custom Keyboard Map

The default is blank.



**Note:** To enable users to specify their own Pro keyboard map files, which override the administrator-specified keyboard map, see the Session Configuration Manager Help on the **Client Options** page when configuring Pro display profiles.

## Client Locale

This option sets the language of the Web-to-Host client user interface for display and printer sessions.

When using the Session Configuration Manager to create or edit any profile, this option appears on the **Client Options** page.

For Pro sessions, the Client Locale specifies the language for the Web-to-Host client user interface, which consists of the session window (including tool tips and the status bar), dialog and message boxes, error messages, and Help.

The default value is English.

## Multiple language scenarios

When running client sessions, users may need to view applications on an international host, require a different country keyboard map, or require the Web-to-Host client user interface in another language. This can be done by configuring the **Host Character Set**, **Keyboard Mapping**, and **Client Locale** options.

Different companies have different international language environments and require different display and/or printer configurations. As such, it is impossible to provide a single procedure. This section lists possible multi-language scenarios to help you determine how to best configure the options for your international language environment.

In the following table, the first column lists the multi-lingual option, the second lists language scenarios, and the third lists the suggested Web-to-Host settings.



**Note:** There are multiple keyboard listings because Web-to-Host provides several keyboard mapping options. For information on individual settings, see the Help associated with the page in the Session Configuration Manager.

Option	If	Then
<b>Host language</b>	The host uses a language (codepage) other than English (United States).	In the <b>Host Character Set</b> option, select the language of the host.
<b>Keyboard</b>	All clients are localized on one language.  Clients are localized on different languages as indicated by different regional settings ( <b>Control</b> page) on the client workstations.  Users need or want control over their own keyboard maps.	In the <b>Keyboard Map</b> option, select the country keyboard map or specify the full path of the <b>Custom Keyboard Map</b> file.  Select <b>Use Client Regional Settings</b> from the <b>Keyboard Map</b> option  <b>Keyboard Locale</b> (default).  Each client uses the keyboard map based on its regional settings.  Enable end-user keyboard mapping. User-created keyboard maps override any country keyboard map specified in the <b>Keyboard Map</b> option.
<b>Client user interface</b>	The client user interface uses a language other than English and you want Web-to-Host to use the same language.	Select the appropriate language from the <b>Client Locale</b> option.



**Note:** Web-to-Host supports English, French, and German.

The following are some other multi-language environments and suggested configurations:

- Clients connect to a host using the German language (codepage) and their regional settings are set to German. In this scenario, you would set the client host character set, country keyboard map, and client user interface language to German.
- Clients connect to a host using the English (United States) language (codepage), but their regional settings are set to French (Canadian). In this scenario, you would set the client host character set to English (United States), but the country keyboard map and client user interface language to French (Canadian).
- Clients connect to a host using the English (United States) language (codepage), but some client regional settings are set to French (Canadian) and others to German. In this scenario, you would want to set the client host character set to English (United States), deploy a country keyboard map based on the client regional settings, and set the language of the client user interface to either French or German.
- Clients connect to a host using the Spanish language (codepage) and their localization settings are set to Spanish. In this scenario, you would set the Web-to-Host host character set and the country keyboard map to Spanish. However, because Web-to-Host does not provide a Spanish client user interface, the client user interface language must be set to English, French, or German.

# Defining password level caching policy

Password level caching is involved with the AS/400 display or AS/400 file transfer.

On AS/400 hosts, password protection capabilities can be set to different levels, such as short or long passwords. Client applications connecting to a AS/400 host must first query the password level set on the host. This slows down overall system performance, increasing both connection time and network traffic.

To save time, Web-to-Host caches password-level data, by default. The first time the password level is queried, the data is saved on the client PC. Afterwards, to avoid performance degradation, the cached password level value is used for each connection.

Cached data is host specific. Once the password level has been cached for a particular host, it is used by all sessions connecting to that host.

The following changes should be performed on the Java Script parts of the HTML session configuration files:

## AS/400 Printer Pro Client

Comment out the old `HostPwdLevel` property setting.

## AS/400 Display Pro Client

- Comment out the old `HostPwdLevel` property setting.
- Add the `this.ResolvePwdLevelPolicy` property setting to the `stAS400DisplayProps()` function:

Property setting	Description
<code>this.ResolvePwdLevelPolicy = 0</code>	Query and cache the password level value once and use it from now on. Default value.
<code>this.ResolvePwdLevelPolicy = 1</code>	Always query and cache the password level value on each connection.
<code>this.ResolvePwdLevelPolicy = 2</code>	Never query the host for the password level value and use the lowest password level value on each connection.

### Example:

```
function stAS400DisplayProps()
{
    this.SetMinFontSize = false;
    this.FontPointSize = 0;
    this.TypeAhead = true;
    this.AutoReset = false;
    this.StartupModelType = 2;
    // HostPwdLevel is now deprecated. It should be cleared from old
    sessions.
    //this.HostPwdLevel = false;
    this.SuppressDialogs = false;
    this.ResolvePwdLevelPolicy = 2;      // (0=Once, 1=Always, 2=Never)
}
```

# Publishing client profiles to users

You can use any usual Web publishing method to publish session profiles created by running the Session Configuration Manager in server mode to users. For example, you can:

- Provide the URLs of the session profiles for users to enter in the address bar of their browsers.
- Create an HTML page containing links to the sessions and organize these links by host type or other useful groupings.

# Web-to-Host Client Installation

This chapter describes procedures that users must follow when installing, updating, or removing Web-to-Host files on the client workstation. If Rumba+ is also installed on the client workstation, users should follow the procedures described in [Coexistence: Pro and Rumba+](#) instead, to ensure successful coexistence with Web-to-Host.

## System requirements

This section describes the minimum system requirements and configurations required for client workstations to run Web-to-Host components.

### Client operating system

Web-to-Host supports these client operating systems:

- Windows Vista
- Windows 7, 8.1, and 10

Microsoft Windows Installer (MSI), an installation and configuration service, must also be installed on the client PC before installing Web-to-Host Pro.

If no MSI is on the client workstation, an error message is displayed. Web-to-Host does not pre-install MSI. You can download the latest version from:

<http://www.microsoft.com/msdownload/platformsdk/sdkupdate/psdkredist.htm>



**Note:** Web-to-Host requires the Windows 10 Universal C Runtime update to be installed:

<https://support.microsoft.com/en-us/help/2999226/update-for-universal-c-runtime-in-windows>

### Client browser

Web-to-Host supports the 32-bit version of Internet Explorer 11 with these features enabled:

- ActiveX and VB Script
- JavaScript

## Client install and upgrade

This section describes how users install and update Web-to-Host when the client does not also have Rumba+ installed. Users must follow these procedures the first time they open a Web-to-Host session, and repeat these procedures each time Web-to-Host is updated.

Pro sessions are installed using the Service Manager.

### Installing Pro

Web-to-Host Pro components can be installed automatically using either the MSI Packager or the Service Manager.

The Web-to-Host MSI Packager is a utility for Pro Clients that replaces CD Image Creator and SetProInstallPath.exe. When integrated with the Service Manager, the MSI Packager provides complete local start capabilities. You create custom installations that can be deployed on restricted-user

systems. You can add all of the Pro emulation types, SimXfer tables for AS/400 file transfer, RSS Client security, a VBA-type script engine, localized client Help, and distribution packages. For more information on MSI Packager, see the online *MSI Packager User Guide* supplied with the product.

Service Manager is installed on client workstations by a user with administrator rights. Once the Service Manager has been installed, it downloads and installs all Pro components regardless of user rights. The rest of this section describes installation using this component. By default, all Pro files are installed in:

C:\Program Files\Micro Focus\Rumba



**Note:** Web-to-Host Pro is compatible with Rumba+ version 10.1 only. All other Web-to-Host components work with all versions of Rumba+. For details on co-existence restrictions for the Pro component and Rumba+, see [#unique\\_56/unique\\_56\\_Connect\\_42\\_GUID-FA993AB9-D7A6-4D5A-9B0E-95A61B116857](#) on page 28.

## Standard install procedure

1. From the browser, run the session HTML created by the Session Configuration Manager. As Web-to-Host downloads and installs, a progress dialog is displayed.
2. Depending on your browser security settings, the **Security Warning** dialog box may appear asking if you want to install the Service Manager. Click **Yes** to run the install. Once the Service Manager is installed, all necessary Pro ActiveX controls are installed and the session opens.



**Note:** There may be instances where a message appears in the browser window telling you to restart the computer. If it appears, click **OK**. After restarting, open Internet Explorer, click the extension you want to connect to, then proceed with your host session.

## Silent Install procedure: Pro

As mentioned above, the standard Web-to-Host Pro installation displays a progress dialog while downloading and installing. However, it is possible to run a silent installation. That is, an install and download with no progress dialog displayed. To do this:

1. Navigate to \w2hlegacy\config\productcfg.xml. This file contains component descriptions and version numbers.
2. In the <product\_info> section, change the silent\_install property to true. By default it is set to false. After editing, silent\_install should be:  
`<silent_install value="true" />`.
3. After making the necessary change to productcfg.xml, follow the standard installation procedure.

## Installing the Host Access Web Launcher

With the withdrawal of support for Internet Explorer 11 and ActiveX, together with the restriction of Java applets by modern browsers, the Host Access Web Launcher provides alternate means of running host sessions.

As well as Internet Explorer 11, the Host Access Web Launcher provides the new ability of running the same host sessions using Chrome, Edge, or Firefox. When you start a Web-to-Host session from a supported browser, the Web Launcher starts and opens the the Web-to-Host session itself.

### Supported browsers

- Google Chrome
- Microsoft Edge
- Mozilla Firefox



**Note:** If you use Internet Explorer 11, Web-to-host performs as normal, without the need to use the Web Launcher.

## Prerequisites

- Web-to-Host Server 6.9.3
- Microsoft .NET Framework 4.7.1

## Preparing to install the software

The following software needs to be installed on both client and server machines.

### Server

- Web-to-Host Server

### Client

Install the software in the following order:

1. .NET Framework 4.7.1 (if not already installed): Requires administrator rights.
2. Host Access Web Launcher
3. NMServiceManager (if not already installed): This service is installed when the first session is launched. Requires administrator rights.

## Installing the Web Launcher

Install the Host Access Web Launcher on each client machine:

1. Navigate to the following folder:

C:\inetpub\wwwroot\<W2H\_Installation\_Folder>\w2hlegacy\utils\hwalauncher\

2. Run the Host Access Web Launcher.msi.



**Note:** The installation process checks for the presence of .NET Framework 4.7.1. If it is not found, installation stops and you are prompted to select a link to install it. After installing .NET Framework 4.7.1, run the installation program again.

## Client uninstall

You may occasionally need to uninstall Web-to-Host components and reinstall them to reload lost files and correct other system problems. File and directory names and locations to which Web-to-Host components are installed vary by component, browser type, and version. As a result, the procedures for uninstalling Web-to-Host components are specific to each context, as described in the following sections.

## Uninstalling Pro using Control Panel

Before uninstalling you must first close any open windows. Use the following procedure to uninstall the Pro component.

1. From Windows Control Panel, double-click **Add/Remove Programs**. The **Add/Remove Programs Properties** dialog box appears.
2. From the **Install/Uninstall** tab, select **Micro Focus OnWeb Web-to-Host Pro Client 6.9.3**, then click **Add/Remove**.
3. From the **Web-to-Host Pro Client Uninstall** message box, click **OK** (to continue uninstalling the program). The program uninstalls and you return to the **Add/Remove Programs Properties** dialog box.

**4. Click OK.**



**Note:** You must delete one file manually.

1. Open C:\Windows\Downloaded Program Files\.
2. Right-click **Pro Client Persistent Session Control** and select **Delete**.
3. Click **Yes** to delete the file.

## Uninstalling Pro manually

To uninstall Pro without using Control Panel:

1. Close all instances of Internet Explorer.
2. Navigate to the following location: C:\Program Files\Micro Focus\NMServiceManager\Services\DownloadInstall\Uninstall
3. Double-click `uninstallprocontainer.exe` file
4. Delete the \Micro Focus folder from the following locations:

```
C:\Program Files (x86)  
%userprofile%\appdata\local  
%appdata%
```

# Coexistence: Pro and Rumba+

Rumba+, a traditional desktop host emulation application that runs on Windows clients, and Web-to-Host Pro have shared executable files. Consequently, certain conditions must be met for both products to coexist on the same client workstation.

Web-to-Host Pro 6.9.3 is completely compatible with Rumba+ 10.1. In most cases, there should be no problems when applying feature TMPs to Web-to-Host Pro and Rumba+.

By default, the Web-to-Host Pro installation writes all program files on the client workstation to:

```
C:\Program Files\Micro Focus\Rumba
```

User data files are written to locations that vary depending on the user's environment. For details, see [User Data File Locations](#).

## Coexistence requirements

The client workstation must meet these requirements for the Web-to-Host Pro component to coexist with Rumba+:

- The Rumba+ version must be version 10.1. The Pro software is currently not compatible with earlier versions.
- You must install both products in the same language.
- If an incompatible Rumba+ version is installed, you must remove it before installing the Web-to-Host Pro controls.

To determine the way Pro deals with different coexistence conditions, edit the following parameters in the `w2hservercfg.xml` file, located in the `config` folder on the Web-to-Host server.

- `CoExistProblemBehavior value="0 | 1".`

A value of 0 means that, when an incompatible version of Rumba+ is encountered, a message appears stating that the version is incompatible and that installation of Web-to-Host Pro has stopped. A value of 1 automatically uninstalls the incompatible version without notifying the user.

- `CoExistProblemMessage value=<message>.`

A default message informs the user that an incompatible version has been detected. However, you can customize the message. This is useful if you want to include extra information. For example, help desk contact information or the path to a compatible version of Rumba+. Changes you make to the `w2hservercfg.xml` file apply to all user sessions connecting to the server. User created files, such as macros and keyboard mappings, are not deleted when the incompatible version is uninstalled.

## Setting a custom install path

As mentioned previously, Web-to-Host Pro installation places all program files on the client workstation, by default, in:

```
C:\Program Files\Micro Focus\Rumba
```

By default, Rumba+ also places its program files in the same location. If Rumba+ is installed first, Web-to-Host Pro installs its program files to the same location and both products coexist. However, if Web-to-Host Pro is installed first, the destination path in the Rumba+ setup wizard is dimmed and cannot be changed.

To install Web-to-Host Pro first to a customized location, use the MSI Packager tool located in `\utils\MSIPackager`. For more information on MSI Packager, see the Help supplied with the tool.

## **Upgrading Pro and Rumba+**

When you install a new Web-to-Host version or Service Pack, the new Pro software automatically downloads to the client workstation when the user opens a Pro session. The start-up program compares the Pro and Rumba+ desktop versions. If the versions are not compatible, the user receives a message determined by the option configured in the `w2hsERVERCFG.xml` file.

# User Profile Configuration

There are two types of Pro configuration settings in Web-to-Host:

- Administrator settings - created by Web-to-Host administrators using the Session Configuration Manager and deployed to the users as HTML session files.
- User settings - stored in a local configuration file (.cph). If the administrator has enabled editing specific options in the Session Configuration Manager, users create their own customized local configurations settings for options, such as interface color, toolbars, menus, keyboard map or logon script.

In some previous versions of Web-to-Host, when the administrator made changes to Pro HTML session files, all user changes were reset (deleted).

Web-to-Host 6.9.3 provides a mechanism that preserves user changes. The SCM Wizard changes do not automatically delete the user's .cph file. Settings which only the user can set are not deleted when you, the administrator, change the HTML session files. This means users do not lose their customized environment with its colors, toolbars, and keyboard mappings.

This chapter lists the conditions that determine which configuration file takes precedence, if both an HTML session files and a user .cph file exist. It also explains how the configuration file is handled when included within a distribution package.

## Rules defining Pro behavior

This section lists the rules for determining the settings implemented - default settings in HTML session files or user customized .cph settings.

### No user configuration (.cph) file exists

The first time the user opens a session no user .cph file exists. Consequently, the user receives the options defined in the Session Configuration Manager.

### Existing user configuration (.cph) file

When a user .cph file exists, the following rules apply:

- If a .cph file exists, but no particular option is enabled, the user receives the default options set in the Session Configuration Manager. This is because you have not given the user permission to modify options. For example, if a user .cph file exists but you did not select **Enable Edit Options**, the user cannot create a customized configuration with features, such as word wrap or type ahead. The user is required to use the values set in the HTML session file.
- If a .cph file exists and a particular option is enabled, the user can customize the configuration. For example, if **Enable Edit Options** is selected, the user can create a personalized environment that allows features, such as word wrap, type ahead, and keyboard auto reset. In this case, if you make changes to the HTML session file including those features which the user has customized, the user .cph file is not deleted and the customized environment remains in effect.

To enforce the use of the default HTML settings, you should disable the relevant option, for example, **Enable Edit Options**. Then the HTML settings override user settings for those options only. All other user configurations remain in effect.

## User configuration files in a distribution package

As an administrator you can create a user .cph file from the session's HTML configuration and include it in a distribution package. This means the user starts with a customized, pre-configured session. It also means that you can provide the user with more configurable client options than you can assign using the Session Configuration Manager.

You can enable a particular client option, modify its settings using the option dialog, insert the session configuration file into a distribution package, then optionally disable the option (depending on whether you want to allow further user editing).

For example, selecting **Enable Edit Options** in the Session Configuration Manager allows you to open the **Edit Options** dialog box within a session and choose clipboard and parsing options that are not part of the Session Configuration Manager. The additional settings are added to the user .cph file. Then you can associate the session .cph file to a distribution package. If you want to maintain standardization, you can disable edit options.

In all cases, if you modify the distribution package, the new user configuration replaces the user's previous file, deleting all user settings.

# User Data File Locations

Web-to-Host stores user data on the client in a location specified by the user's environment. This location is determined by several environmental variables, such as the client operating system and browser, and whether roaming user profiles are enabled.

## Roaming profile support for Pro sessions

While normal Windows profiles store user environment settings on the client workstation, roaming user profiles store this information on their server. When a user logs on to the server, the roaming profile is downloaded to the client workstation. When the user logs off the server, the roaming profile (along with any changes) is uploaded back to the server. This scenario enables the user to work on different client workstations while using the same environment settings.

Web-to-Host supports roaming user profiles for Pro sessions. Users with roaming profiles can access their custom settings (such as keyboard maps and macros) when running Pro sessions on various workstations.

## Default paths for user data files

This section lists the user data file locations for Pro client workstations with a default Windows installation and using Internet Explorer.

If Rumba+ has been previously installed on the client workstation, Web-to-Host stores user data files in the same location. If not, these locations are read from the Windows registry.

Roaming path:

C:\Users\<user\_name>\AppData\Roaming\Micro Focus\Rumba

Local path:

C:\Users\<user\_name>\AppData\Local\Micro Focus\Rumba

You can use the MSI Packager to modify default user data file locations. For more information on the MSI Packager see the online help supplied with the utility.

# Creating a Trace

The Trace utility is a diagnostic tool for troubleshooting host communications and connectivity problems. With this utility you can trace activity within host software or other standardized components linked to OnWeb Web-to-Host. This section describes how to use the Trace utility to get a binary trace that can be sent to Micro Focus Technical Support for additional help troubleshooting your problems.

Pro uses the **Rumba+ Desktop Trace** Trace utility that comes with Rumba+ as standard. If Rumba+ is installed, use its trace utility.

If Rumba+ is not installed, you can download the Trace utility from the server hosting Web-to-Host. Type the following URL into the address bar of any Web browser.

`http://<servername>/w2hlegacy/utils/installrumbatrace.exe`



**Important:** Before starting the procedure, close all applications. If you are using Rumba+, ensure it is closed. Ensure there are no blue and red icons in the tray bar.

To take a correct binary trace:

1. Select **Start > All Programs > Micro Focus Rumba+ Desktop > Rumba+ Desktop Tools > Rumba+ Desktop Trace**.
2. On the menu bar, select **Options > Configuration**.
3. On the **API Selection** page, click **Select All**. After all entries have been selected, click **Reset All**.
4. On the **Output** page, in the **Formatted Output** section, select **Display**.
5. In the **Binary Output** section select **Binary File**. The box next to the option becomes available.
6. Enter the full path for the binary file being created (or browse to it). For example, you might assign the file the call log number, c368758.bin. All file names should end with the extension .bin.
7. Click **OK**.
8. Minimize the **Rumba+ Desktop Trace** window that appears.
9. Run the Rumba+ application that is causing the problem as you normally would, starting from the connection (for example, Rumba+ display, or printer). Let the program run until the problem appears (error message, session hanging, or any other problem).
10. Log off and disconnect from the host.
11. Maximize the **Rumba+ Desktop Trace** window, then select **File > Exit**.
12. Send the .bin file you created by email to Micro Focus Technical Support.

# Contacting Micro Focus

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 *Product Updates* section of the Micro Focus SupportLine Web site, where you can download fixes and documentation updates.
- The *Examples and Utilities* section of the Micro Focus SupportLine Web site, including demos and additional product documentation.
- The *Support Resources* section of the Micro Focus SupportLine Web site, that includes troubleshooting guides and information about how to raise an incident.

To connect, enter <https://www.microfocus.com/en-us/support> in your browser.



**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](http://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.

Also, visit:

- The Micro Focus Community Web site, where you can browse the Knowledge Base, read articles and blogs, find demonstration programs and examples, and discuss this product with other users and Micro Focus specialists.
- The Micro Focus YouTube channel for videos related to your product. .

## 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 this number, look in the subject line and body of your Electronic Product Delivery Notice email that you received from Micro Focus.

## Contact information

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

Additional technical information or advice is available from several sources.

The product support pages contain considerable additional information, including 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](#).

To connect, enter <https://www.microfocus.com/en-us/home> in your browser to go to the Micro Focus home page, then click **Support & Services > Support**. Type or select the product you require from the product selection dropdown, and then click **Support Login**.

If you are a Micro Focus SupportLine customer, please see the *Welcome to Customer Care* document that includes information about downloading and licensing your product, contacting Customer Care, and about reporting an incident. You can download it from our Web site. Support from Micro Focus may be available only to customers who have maintenance agreements.

# MICRO FOCUS END USER LICENSE AGREEMENT

RUMBA+ DESKTOP v10.1

RUMBA FTP v4.8

ONWEB WEB-TO-HOST v6.9.3

IMPORTANT: LICENSOR IS PROVIDING THIS LICENSED SOFTWARE TO LICENSEE (THE ORIGINAL PURCHASER EITHER AS AN INDIVIDUAL OR ON BEHALF OF ANOTHER LEGAL ENTITY AS ITS EMPLOYEE OR AUTHORIZED AGENT) FOR ITS USE SUBJECT TO LICENSEE'S AGREEMENT TO THE TERMS AND CONDITIONS SET FORTH BELOW. **THESE TERMS AND CONDITIONS MAY BE DIFFERENT FROM THE END USER LICENSE AGREEMENT(S) THAT ACCOMPANIED EARLIER RELEASES OF THE LICENSED SOFTWARE. PLEASE READ THEM CAREFULLY TO ENSURE FULL UNDERSTANDING BEFORE PROCEEDING, AS THEY MAY CONTAIN ADDITIONAL RESTRICTIONS ON YOUR USE OF THE SOFTWARE. PLEASE DIRECT ANY QUESTIONS TO THE MICRO FOCUS LEGAL DEPARTMENT AT [LEGALDEPT@MICROFOCUS.COM](mailto:LEGALDEPT@MICROFOCUS.COM).** IF YOU DO NOT AGREE TO THE TERMS AND CONDITIONS OF THIS LICENSE AGREEMENT, YOU WILL NOT BE AUTHORIZED TO USE THE LICENSED SOFTWARE. BY CLICKING THE ACCEPT BUTTON OR SIMILAR ACCEPTANCE MECHANISM DURING INSTALLATION, OR BY COPYING OR USING THE LICENSED SOFTWARE, LICENSEE ACKNOWLEDGES THAT IT HAS READ THIS LICENSE AGREEMENT, UNDERSTOOD IT, AND AGREED TO BE BOUND BY ITS TERMS AND CONDITIONS. THE LICENSED SOFTWARE IS LICENSED NOT SOLD.

For this End User License Agreement ("**License Agreement**") the following terms shall have the meanings given below:

**"Documentation"** means the Licensor user documentation that is included with the Licensed Software.

**"Licensee"** means the single legal entity or person that rightfully acquires the Licensed Software from Licensor or from a distributor or reseller of Licensor.

**"License Options"** means those license options set forth in Annex 1 to this License Agreement.

**"Licensor"** means the Micro Focus legal entity authorized to license the Licensed Software in the country in which Licensee acquires the Licensed Software.

**"Licensed Software"** means the object code version of the Licensor computer program(s) listed above, their Documentation, and other supplemental materials, as provided to Licensee by Licensor, including but not limited to any software security keys relating thereto. The Documentation may be delivered electronically and may only be available in the English language. The Licensed Software will be accompanied by a license key where required for activation and use of the Licensed Software. The Licensed Software shall also include, and this License Agreement shall govern the use of any update to the Licensed Software that Licensee receives pursuant to a separate support and/or maintenance purchase as described in Section 6 below, unless such update contains or comes with a different end user license agreement, in which case such end user license agreement shall supersede this License Agreement and govern the use of such software license without need for a mutually executed amendment to this License Agreement as set forth in Section 17 of this License Agreement. This License Agreement does not grant Licensee the right to any updates to the Licensed Software unless provided by Licensor under Section 6 and/or Section 7 below.

**"Product Order"** means a document that has been (i) executed by Licensee describing each Licensed Software license to be purchased, and (ii) accepted by Licensor. Licensor will accept the Product Order by either confirming Licensor's acceptance in writing or by delivering the Licensed Software to Licensee, whichever occurs first. A Product Order may also mean a written quote, or if referred to as such, a solution order, issued by Licensor describing each Licensed Software license purchased that is accepted by Licensee within the validity period of the quote either by Licensee executing and returning the quote or a

solution order, to Licensor, by Licensee issuing a purchase order or other written confirmation of acceptance to Licensor in conformance with the quote, and/or by Licensee paying to Licensor all fees set forth in the quote. Each Product Order shall constitute a separate agreement and shall incorporate therein this License Agreement. In the event of any conflict between the terms and conditions of this License Agreement and the terms and conditions of any Product Order, the conflicting terms and conditions of the Product Order shall govern. In no event shall any terms and conditions contained in a purchase order or similar document issued by Licensee in connection with this License Agreement or with a Product Order apply and any such document issued shall be only for the administrative purposes of identifying the Licensed Software ordered, the number of licenses, and the price to be paid and shall have no other legal effect. Licensor for purposes of this paragraph shall mean Licensor or, if applicable, one of Licensor's authorized resellers from whom Licensee purchases the Licensed Software, provided however that any conflicting or additional terms in a Product Order accepted by an authorized reseller of Licensor shall have no effect unless such terms have been agreed by Licensor in writing.

**"Warranty Period"** means a period of ninety (90) days from delivery of the Licensed Software to Licensee.

**1. GRANT OF LICENSE; LICENSE CONDITIONS.** For payment of the applicable non-refundable license fees identified on the Product Order and subject to Licensee's compliance with the terms and conditions set forth in this License Agreement, Licensor grants solely to Licensee, as an end user, a personal, perpetual (unless a subscription/term license has been purchased by Licensee), non-transferable, non-sublicensable and non-exclusive license to use the Licensed Software **solely for its own internal use and benefit**. Licensee's use and operation of the Licensed Software and the license grant provided to the Licensed Software is subject to Licensee being in possession of a valid license key where required for the Licensed Software to run. Licensee agrees that Licensor is not liable or responsible for lost or broken license keys or media or the provision of replacement license keys or media and/or new license keys or media unless Licensee is current on support and maintenance for the applicable license and then only to the extent set forth in the applicable annual support and/or maintenance agreement and only to the extent Licensor then has sufficient rights from any applicable third party suppliers, if necessary, to provide such replacement. If not current on support and maintenance for the applicable license, replacement or new license keys or media may be available for purchase at Licensor's then current list fees for applicable new licenses.

Different License Options are available from Licensor as set forth or referred to in Annex 1. The applicable License Option and license count to be purchased by Licensee for the Licensed Software shall be identified in the Product Order or otherwise identified in writing by Licensor. Licensed Software is also subject to additional terms and conditions as set forth in the "Specific Software Terms" located in Annex 2. Any conflicting terms and conditions shall be resolved according to the following order of precedence: Annex 2, Annex 1, and the main body of the License Agreement.

**2. USE RESTRICTIONS.** Except as may be otherwise specifically permitted in Annex 1 or Annex 2 to this License Agreement, Licensee agrees not to:

2.1 Copy and/or distribute the Licensed Software, in whole or in part, for internal use without paying Licensor the applicable additional fees required by Licensor, except (i) for making a reasonable number of archival back-up copies; or (ii) as expressly authorized by Licensor in writing; or (iii) for making a reasonable number of copies of the Documentation supplied to Licensee by Licensor in electronic form. Licensee shall reproduce and affix all copyright and other proprietary rights notices appearing in or on the Licensed Software, including notices of all third party suppliers.

2.2 Use the Licensed Software for timesharing, facilities management, outsourcing, hosting, service bureau use, or for providing other application service (ASP) or data processing services to third parties or for like purposes.

2.3 Modify the Licensed Software or provide any person with the means to do the same.

2.4 Create derivative works of the Licensed Software, or translate, disassemble, recompile or reverse engineer the Licensed Software or attempt to do so (except to the extent applicable law specifically permits such activity).

2.5 Alter, destroy, or otherwise remove any proprietary notices or labels on or embedded within the Licensed Software or Documentation.

2.6 Use the Licensed Software in a manner other than as specifically permitted in this License Agreement.

- 3. AUDITS.** Lessor or an Auditor (as defined below) has the right to verify Licensee's compliance with this License Agreement (and please see Micro Focus License Compliance Charter - <http://supportline.microfocus.com/licensing/licVerification.aspx>). Licensee agrees to:
- A. Implement internal safeguards to prevent any unauthorized copying, distribution, installation, or use of, or access to, the Licensed Software and associated support and maintenance, or breach of the terms or conditions of this License Agreement;
  - B. Take all necessary steps to destroy or erase all Licensed Software codes, programs and other proprietary information before disposing of any media containing the Licensed Software;
  - C. Keep records sufficient to certify Licensee's compliance with this License Agreement including serial numbers and license keys of the Licensed Software, hypervisor logs where applicable, and the location, model (including quantity and type of processor) and serial number of all machines on which the Licensed Software is installed or from which the Licensed Software is accessed, and the names (including corporate entity) and number of users that are accessing the Licensed Software, and, upon request of Lessor, provide and certify metrics and/or reports based upon such records and account for, among other things, numbers of copies (by product and version) and network architectures as they may reasonably relate to Licensee's licensing and deployment of the Licensed Software and associated support and maintenance;
  - D. Upon Lessor's request, Licensee shall furnish Lessor or an independent auditor chosen at Lessor's sole discretion ("Auditor"), within seven (7) days of the request, with a completed questionnaire provided by Lessor or the Auditor, and with a written statement, in a format required by Lessor, signed by a director of Licensee, certifying the accuracy of any information provided;
  - E. Allow a Lessor representative or an Auditor to inspect and audit Licensee's computers and records, during Licensee's normal business hours, for compliance with the licensing terms for Lessor's software products and associated maintenance. Upon Lessor's (and Auditor's if applicable) presentation of their signed written confidentiality statement form, Licensee shall fully cooperate with such audit and provide any necessary assistance and access to records and computers; and
  - F. In the event that Licensee has or at any time has had unlicensed installation, use of, or access to the Licensed Software or has otherwise breached the license granted (a "Non-Compliance"), without prejudice to any other rights or remedies Lessor may have, including without limitation injunctive relief, Licensee shall, within thirty (30) days, purchase sufficient licenses and or subscriptions and associated support and maintenance to cure the Non-Compliance, without benefit of any otherwise applicable discount, by paying Lessor's current (as of the date of such additional purchase) list license fees and 12-month support and maintenance fees to Lessor for such additional licenses, plus Lessor's current (as of the date of such additional purchase) list term license and support and maintenance fees and interest (compounded at 1.5% monthly or the maximum rate permitted by applicable law if lower) for such additional licenses for the time period from the commencement of the Non-Compliance until payment of the aforementioned fees. The aforementioned interest shall be payable even if an invoice was not issued at the time the Non-Compliance commenced. If a material license shortfall of 5% or more is found, Licensee shall also reimburse Lessor for the reasonable cost of such audit in addition to other amounts due. The obligations in this Section 3 shall apply to both Licensee's Non-Compliance and any third party's Non-Compliance.
- 4. DOCUMENTATION.** One (1) electronic copy of Lessor's standard Documentation, describing Lessor's recommended use and application of the Licensed Software, will be furnished or made available on Lessor's website free of additional charge to Licensee by Lessor with the Licensed Software. Printed copies of any Documentation may be available for purchase from Lessor or its authorized distributors. Additional copies of standard Documentation may be available on Lessor's website.
- 5. TERM OF LICENSE.** This License Agreement and Licensee's license for the Licensed Software is perpetual, unless a subscription/term license has been purchased by Licensee (in which case the term of the license shall be as set forth in the Product Order, specified in Annex 1 or Annex 2, or as otherwise agreed in writing between the Licensee and Lessor), and is subject to earlier termination as provided in this Section 5. If Licensee has purchased a subscription/term license, Licensee's license to the Licensed Software shall automatically terminate upon expiry of such subscription/term. Lessor may terminate this License Agreement and Licensee's license to the Licensed Software immediately by

giving Licensee written notice of termination in the event that either (i) Licensee breaches any term or condition of this License Agreement and Licensee has failed to remedy such breach within ten (10) days of the date of notice from Licenser to Licensee or (ii) Licensee is wound up, has a receiver appointed or has applied for or enters into liquidation or bankruptcy or analogous process or processes. Termination shall be without prejudice to any other rights or remedies Licenser may have. In the event of any termination Licensee will have no right to keep, access, or use the Licensed Software or any copy of the Licensed Software for any purpose and Licensee shall destroy and erase all copies of such Licensed Software in its possession or control, and forward written certification to Licenser that all such copies of Licensed Software have been destroyed or erased. Termination shall not entitle the Licensee to any refund or reimbursement of any kind of previously paid fees. The rights and obligations of the parties contained in Sections 3, 8, 9, 10, 11, 12, and 13, and other sections that by their nature are intended to survive, will survive the termination or expiration of this License Agreement.

- 6. SUPPORT AND MAINTENANCE.** Where Licensee purchases support and/or maintenance services, Licensee's initial support and/or maintenance term will begin upon delivery to Licensee of the Licensed Software and continue for one (1) year thereafter (or the length of the term if less than a year for any subscription/term license) unless otherwise specified in the applicable annual support and/or maintenance agreement, Product Order, or other written agreement executed between Licenser and Licensee. Where Licensee purchases support and/or maintenance for any Licensed Software, Licensee hereby agrees that it shall purchase such support and/or maintenance services for all of Licensee's licensed units of such Licensed Software product. Support and/or maintenance services provided by Licenser will be subject to Licenser's then current applicable standard annual support and/or maintenance agreement unless otherwise agreed by the parties in writing.
- 7. LIMITED WARRANTY.** Licenser warrants for the Warranty Period (i) that if the Licensed Software is supplied via media, then the media will be free from defects in materials or workmanship under normal use and (ii) that the copy of the Licensed Software delivered to Licensee conforms in all material respects to the Documentation. As the sole and exclusive remedy for not meeting part (i) of the above warranty, Licenser's sole obligation shall be to repair or replace free of charge any defective media on which the Licensed Software is delivered if the media is returned to Licenser by Licensee during the Warranty Period. As the sole and exclusive remedy for not meeting part (ii) of the above warranty, Licenser shall repair or replace the Licensed Software free of charge so that it conforms with the warranty or, if Licenser reasonably determines that such remedy is not economically or technically feasible, Licensee shall be entitled to a full refund of the license fee and any maintenance fee paid by Licensee with respect to that particular Licensed Software. Upon such refund Licensee's license to use such Licensed Software will terminate. The warranty set forth in this Section 7 shall not apply if the defect in the Licensed Software is the result of: (a) the Licensed Software not being used in accordance with the Documentation, this License Agreement or with the platform(s) for which the Licensed Software has been designed and licensed by Licenser; or (b) the Licensed Software having been altered, modified or converted by Licensee or any third party except as may be specified in the Documentation; or (c) the malfunctioning of Licensee's equipment; or (d) accident or abuse; or (e) service by any unauthorized person; or (f) other software used by Licensee which has not been provided by Licenser or for which the Licensed Software is not designed and licensed for operation; or (g) Third Party Software (as defined herein); or (h) any other cause occurring after initial delivery of the media to Licensee unless caused directly by Licenser. The foregoing states the complete and entire remedies that Licensee has under this warranty. Licenser shall have no responsibility for any warranty claims made outside of the Warranty Period. The foregoing warranty shall not apply to any free-of-charge Licensed Software including updates, though issues with such software may be eligible for support under applicable support terms and conditions.
- 8. DISCLAIMER OF WARRANTY.** The Licensed Software cannot be tested in every possible operating environment, therefore Licenser does not warrant that the functions contained in the Licensed Software will meet Licensee's requirements, that operation of the Licensed Software will be uninterrupted, or that the Licensed Software is error free. EXCEPT AS SET FORTH HEREIN AND TO THE EXTENT PERMITTED BY LAW, ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, STATUTORY OR OTHERWISE, INCLUDING, BUT NOT LIMITED TO, IMPLIED WARRANTIES OF MERCHANTABILITY, QUALITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE EXCLUDED ON THE PART OF LICENSOR AND ITS THIRD-PARTY SUPPLIERS. Licensee acknowledges that Licensee is responsible

for the selection of the Licensed Software to achieve Licensee's intended results and for the installation and/or use of, and results obtained from, the Licensed Software.

**9. LIMITATION OF LIABILITY.** ANY LIABILITY OF LICENSOR SHALL BE LIMITED IN THE AGGREGATE TO THE AMOUNTS PAID BY LICENSEE FOR THE LICENSED SOFTWARE GIVING RISE TO THE APPLICABLE CLAIM. THIS LIMITATION APPLIES TO ALL CAUSES OF ACTION, INCLUDING WITHOUT LIMITATION BREACH OF CONTRACT, BREACH OF WARRANTY, NEGLIGENCE, STRICT LIABILITY, MISREPRESENTATION AND OTHER TORTS. IN NO EVENT SHALL LICENSOR BE LIABLE FOR ANY INDIRECT, SPECIAL, INCIDENTAL, CONSEQUENTIAL, PUNITIVE OR SIMILAR DAMAGES NOR FOR ANY LOSS OF PROFITS, CONTRACTS, DATA, OR PROGRAMS, OR THE COST OF RECOVERING SUCH DATA OR PROGRAMS, EVEN IF INFORMED OF THE POSSIBILITY OF SUCH DAMAGES IN ADVANCE. LICENSOR'S LIMITATIONS OF LIABILITY ARE NOT CUMULATIVE. LICENSEE'S REMEDIES IN THIS LICENSE AGREEMENT ARE LICENSEE'S EXCLUSIVE REMEDIES.

NONE OF LICENSOR'S THIRD-PARTY SUPPLIERS SHALL BE LIABLE FOR ANY INJURY, LOSS OR DAMAGE, WHETHER DIRECT, INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL NOR FOR ANY LOSS OF PROFITS, CONTRACTS, DATA, OR PROGRAMS, OR THE COST OF RECOVERING SUCH DATA OR PROGRAMS, EVEN IF INFORMED OF THE POSSIBILITY OF SUCH DAMAGES IN ADVANCE.

LICENSEE AGREES THAT, IN ENTERING INTO THIS LICENSE AGREEMENT, EITHER IT DID NOT RELY ON ANY REPRESENTATIONS (WHETHER WRITTEN OR ORAL) OF ANY KIND OTHER THAN THOSE EXPRESSLY SET OUT IN THIS LICENSE AGREEMENT, OR IF IT DID RELY ON ANY REPRESENTATIONS, THAT IT SHALL HAVE NO REMEDY AGAINST LICENSOR IN RESPECT OF SUCH REPRESENTATIONS.

LICENSEE FURTHER ACKNOWLEDGES THAT THE LIMITATIONS OF LIABILITY IN THIS SECTION ARE AN ESSENTIAL ELEMENT OF THIS LICENSE AGREEMENT AND THAT, IN THE ABSENCE OF SUCH LIMITATIONS, THE PRICING AND OTHER TERMS AND CONDITIONS SET FORTH HEREIN WOULD BE SUBSTANTIALLY DIFFERENT.

NEITHER THIS LICENSE AGREEMENT NOR ANYTHING IN THIS SECTION 9 SHALL EXCLUDE OR RESTRICT THE LIABILITY OF LICENSOR OR ITS THIRD-PARTY SUPPLIERS TO ANY EXTENT NOT PERMITTED BY LAW.

**10. HIGH-RISK USES.** The Licensed Software is not fault tolerant, nor designed, manufactured or intended for use in hazardous environments requiring fail-safe performance (including, without limitation, the operation of nuclear facilities, aircraft navigation or communication systems, air traffic control, direct life support machines, or weapons systems) in which failure of the Licensed Software could lead directly or indirectly to death, personal injury or severe physical or environmental damage. Licensor and its suppliers shall have no liability for any use of the Licensed Software in any high-risk situations.

**11. OWNERSHIP.** Licensor (or its affiliates) and where applicable Licensor's third party suppliers have and will retain all ownership rights to the Licensed Software, together with any complete or partial copies thereof. Such ownership rights include without limitation all patent rights, copyrights, trademarks, trade secrets, service marks, related goodwill, and confidential and proprietary information relating thereto. This License Agreement does not convey any proprietary interest to Licensee with respect to the Licensed Software other than the license specified herein.

**12. THIRD PARTY SOFTWARE AND COMPONENTS.** The Licensed Software may come with and/or require certain named third party software programs that Licensee shall license directly from the third party subject to such third party's terms and conditions (for example Adobe Acrobat or Microsoft Internet Explorer) ("Third Party Software"). Any Third Party Software is provided by the licensor of the Third Party Software solely under a direct license between such third party and Licensee under such third party's terms and conditions. Therefore the obligations, duties and rights of Licensor and Licensee under this License Agreement do not apply to such Third Party Software. Additionally, Licensor has embedded in some Licensed Software certain run time or other elements provided by third party suppliers to Licensor ("Third Party Components"). Such Third Party Components may also be loaded on the Licensed Software media. Third Party Components are licensed to Licensee pursuant to this License Agreement. Third Party Components may also include open source software, details of which (where applicable) may be found (i) in a file accompanying the applicable Licensed Software or (ii) in the

applicable Documentation. Licensee may only access Third Party Components of the Licensed Software in the course of using the Licensed Software. Licensee may not make or attempt any direct access to any such Third Party Components other than with the Licensed Software. All limitations, restrictions and obligations applicable to the Licensed Software set forth in this License Agreement shall apply to Licensee's use of the Third Party Components. The Third Party Software and Third Party Components are the property of its respective third party supplier to Licenser. Such third party suppliers own all copies of the Third Party Software and Third Party Components, however made. Licensee agrees not to contest the ownership of the Third Party Software and Third Party Components nor use any trademark or service mark belonging to such third party suppliers. Licensee agrees that such third party suppliers are intended third party beneficiaries of all terms and conditions of this License Agreement intended to protect intellectual property rights in the Licensed Software (including the Third Party Components) and limit certain uses thereof. Nothing in this License Agreement shall restrict, limit or otherwise affect any rights or obligations Licensee may have, or conditions to which Licensee may be subject, under any applicable open source licenses to any open source code contained in the Licensed Software.

**13. NOTICE TO U.S. GOVERNMENT END USERS.** The Licensed Software and Documentation are deemed to be "Commercial Items," as defined at 48 C.F.R. §2.101, consisting of "Commercial Computer Software" and "Commercial Computer Software Documentation," as such terms are used in 48 C.F.R. §12.212 or 48 C.F.R. §227.7207, as applicable. Consistent with such sections, the Licensed Software and Documentation are licensed to U.S. Government end users (i) only as Commercial Items, and (ii) with only those rights as are granted pursuant to this License Agreement. Manufacturer is Micro Focus (US), Inc., 700 King Farm Blvd., Suite 125, Rockville, MD 20850 as or on behalf of Licenser.

**14. LICENSE FEES AND PAYMENT TERMS.** Licensee agrees to pay the applicable end user license fees for the Licensed Software within thirty (30) days of the date of invoice or such other date as agreed in writing by the parties. End user license fees are non-refundable except as provided in Section 7 above, or in the Specific Software Terms below, and shall be paid without deduction, including without limitation, of any withholding tax. End user license fees are exclusive of any applicable transportation charges, value added and other applicable taxes and duties and all such amounts shall be paid or reimbursed by Licensee. Outstanding past-due amounts shall accrue interest at the rate of 1.5% per month compounded or, if lower, the maximum rate allowed by applicable law. Licensee shall be liable for any such interest and all related collection costs, whether or not an action has been filed. Licensor may decline to enter into any additional Product Orders if any such past-due balance, interest and collection costs are not paid.

**15. RELATED SERVICES.** Licensee shall be responsible for obtaining and installing all proper hardware and support software (including operating systems) and for proper installation and implementation of and training concerning the Licensed Software. In the event that Licensee retains Licenser to perform any services with respect to the Licensed Software (for example: installation, implementation, maintenance, consulting and/or training services), Licensee and Licenser agree that such services shall be subject to Licenser's then current standard terms, conditions and rates for such services unless otherwise agreed in writing by Licenser.

**16. PRIVACY.** If the Licensed Software contains features that may allow Licensee to collect data from, control and/or monitor computers running the Licensed Software deployed by Licensee without notice to or knowledge by users of the Licensed Software, then: (i) Licensee is solely responsible for, and assumes all liability with respect to, the collection of data with respect to its users of the Licensed Software including, without limitation, notifying such users and complying with all data collection, privacy and other regulations, laws, industry standards and rights of others applicable to any such activity; and (ii) Licensee shall indemnify and hold Licenser harmless from and against any damages, claims, losses, settlements, attorneys' fees, legal fees and court costs and other expenses related to any such activities or any claims in connection therewith. To the extent permitted by law, by entering into this License Agreement, Licensee hereby expressly consents to (i) Licenser sending information to Licensee from time to time advertising the various products that Licenser provides, whether or not such products are provided under this License Agreement; (ii) the use of Licensee's name in Licenser customer lists, promotional materials and/or press releases; and (iii) the collection and use by Licenser of information about the computer system on which the Licensed Software is installed (e.g. product version, serial number) for internal security and licensing purposes; Licenser does not use this information to identify individuals utilizing such software.

**17. MISCELLANEOUS.** Lessor may assign this License Agreement (in whole or in part) to any member of Lessor's group of companies or to a purchaser of the intellectual property rights in the Licensed Software, but otherwise neither this License Agreement nor any rights hereunder may be assigned (any change of control merger, sale or other transfer of all, or substantially all, of the assets of Licensee shall be included in the meaning of an assignment) nor duties delegated by either party, and any attempt to do so will be void.

If Licensee acquires the Licensed Software in North America, the laws of the state of Maryland govern this License Agreement and the licenses granted hereunder and the parties hereto consent and agree that they shall be subject to the exclusive jurisdiction of the State and/or Federal courts sitting in the State of Maryland in any action based on this License Agreement or concerning the licenses granted, or the products licensed, hereunder. Each party waives any right it may have to object to such venue, including objections based on personal jurisdiction or forum non conveniens (inconvenient forum). The parties agree that the Uniform Computer Information Transaction Act or any version thereof, adopted by any state, in any form ("UCITA"), shall not apply to this License Agreement. To the extent that UCITA is applicable, the parties hereby opt out of the applicability of UCITA pursuant to the opt-out provision(s) contained therein. If Licensee acquires the Licensed Software in France, Germany or Japan, this License Agreement is governed by the laws of the country in which Licensee acquired the Licensed Software. In the rest of the world the laws of England govern this License Agreement. The aforesaid applicable law shall apply without regard to conflicts of laws provisions thereof, and without regard to the United Nations Convention on the International Sale of Goods. Other than for North American transactions, this License Agreement, the licenses granted hereunder, and the parties hereto, shall be subject to the exclusive jurisdiction of the courts of the country determining the applicable law as aforesaid. In the event of a dispute, the prevailing party shall have the right to collect from the other party its reasonable costs and necessary disbursements and attorneys' fees incurred in enforcing this License Agreement.

This License Agreement is in addition subject to any United States, United Kingdom or European Union laws, regulations and other restrictions regarding export or re-export of computer software and technology. Licensee agrees not to export or re-export any Licensed Software or derivative thereof in contradiction to any such applicable restriction. In particular but without limitation, Licensee acknowledges that Lessor's products and/or technology are subject to the U.S. Export Administration Regulations (the "EAR") and Licensee agrees to comply with the EAR. Licensee will not export or re-export Lessor's products, directly or indirectly, to: (1) any countries that are subject to US or applicable export restrictions; (2) any end user who Licensee knows or has reason to know will utilize Lessor's products in the design, development or production of nuclear, chemical or biological weapons, or rocket systems, space launch vehicles, and sounding rockets, or unmanned air vehicle systems; or (3) any end user who has been prohibited from participating in export transactions by any applicable agency of government. By downloading or using the Licensed Software, Licensee is agreeing to the foregoing and Licensee is representing and warranting that Licensee is not located in, under the control of, or a national or resident of any such country or on any such list.

Lessor may identify Licensee by name and/or logo as a licensee of Lessor for investor relations, analyst relations, and public relations purposes, and in online and printed sales and marketing materials. Any other use of Licensee's name or logo, or a description of Licensee's use of the Licensed Software, shall be subject to Licensee's prior consent. Within eight (8) weeks after installation of the Licensed Software, upon Lessor's written request Licensee will provide Lessor with input to a written description of Licensee's use of the Licensed Software including details of the business challenge, software solution, and results realised from the installation of the Licensed Software. The input shall be provided by a representative of Licensee (who is knowledgeable of the Licensed Software and its performance after installation) during a meeting with a representative of Lessor (at a reasonable time to be agreed by the parties). The meeting may be conducted by telephone. This input may be used internally within Lessor and in confidential sales situations. Any other use of this input shall be subject to Licensee's prior consent.

Except for the Product Order, this License Agreement is the complete and exclusive statement of agreement between the parties relating to the license for the Licensed Software and supersedes all proposals, communications, purchase orders, and prior agreements, verbal or written, including without

limitation prior end user license agreements in relation to the Licensed Software between the parties and end user license agreements embedded in such Licensed Software. No employee, agent, or representative of Licenser has the authority to bind Licenser to any oral representation or warranty concerning the Licensed Software. No representation or statement not expressly contained in this License Agreement nor any supplement, modification, or amendment of this License Agreement will be binding on either party unless executed in writing by a duly authorized representative of Licenser and Licensee (excluding any distributor or reseller of Licenser) to this License Agreement. No waiver of any right under this License Agreement will be effective unless in writing, signed by a duly authorized representative of the party to be bound (excluding any distributor or reseller of Licenser). No waiver of any past or present right arising from any breach or failure to perform will be deemed to be a waiver of any future right arising under this License Agreement. If any provision in this License Agreement is invalid or unenforceable, that provision will be construed, limited, modified or, if necessary, severed, to the extent necessary, to eliminate its invalidity or unenforceability, and the other provisions of this License Agreement will remain unaffected. Each party acknowledges that in entering into this License Agreement it has not relied on any representations, agreements, warranties or other assurances (other than those repeated in this License Agreement and the Product Order) and waives all rights and remedies which but for this section 17 would be available to it. Nothing in this section 17 excludes liability for fraudulent misrepresentation.

If Licensee is situated in Italy, by placing or executing a Product Order, Licensee declares to have read and to have explicitly approved the following clauses of the License Agreement: 5. Term of License, 6. Support and Maintenance, 7. Limited Warranty, 8. Disclaimer of Warranty, 9. Limitation of Liability, 10. High-Risk Uses, 16. Privacy, 17. Miscellaneous, Annex 1, and Annex 2.

## ANNEX 1, LICENSE OPTIONS

### DEFINITIONS

For this License Agreement, the following additional definitions shall apply:

**“Desktop Container”** means an isolated, resource controlled, and portable runtime environment which runs on a host machine or Virtual Machine.

**“Hard Partitioning”** means using hard physical partitioning to physically segment a single larger server or machine into separate and distinct smaller systems where each separate system acts as a physically independent, self-contained server or machine with its own CPUs, operating system, separate boot area, memory, input/output subsystem and network resources (each known as a “Hard Partition”). Examples of Hard Partitioning methods include: Dynamic System Domains (DSD) -- enabled by Dynamic Reconfiguration (DR), Solaris Zones (also known as Solaris Containers, capped Zones/Containers only), LPAR (adds DLPAR with AIX 5.2), Micro-Partitions (capped partitions only), vPar, nPar, Integrity Virtual Machine (capped partitions only), Secure Resource Partitions (capped partitions only), and Fujitsu’s PPAR.

**“Platform”** means a hardware chipset (e.g., PA-RISC, Itanium, x86, or SPARC) and operating system (e.g., Windows, Linux, Solaris, AIX, or HP-UX) combination.

**“Soft Partitioning”** means using an operating system resource manager to segment and limit the number of Cores, CPUs, or other processing devices utilized by the Licensed Software by creating areas where processor resources are allocated and limited within the same operating system (each such area known as a “Soft Partition”). Examples of such Soft Partitioning include: Solaris 9 Resource Containers, AIX Workload Manager, HP Process Resource Manager, Affinity Management, Oracle VM, and VMware.

**“Update”** means the definition for such term set forth in Licensor’s then current applicable standard annual support and/or maintenance agreement.

**“Upgrade”** means any change in the licensed Platform for the Licensed Software or a successor product to the Licensed Software.

**“Virtual Desktop Infrastructure”** means a desktop virtualization approach where the desktop operating system runs and is managed in a separate server instead of the client device. The desktop image is delivered over a network to an endpoint device, which allows the user to interact with the operating system and its applications as if they were running locally.

**“Virtual Machine”** means a software implementation that can run its own operating system and execute programs like a physical machine where the software running inside the virtual machine is limited to the resources and abstractions provided by the virtual machine.

## LICENSE OPTIONS

The following license types apply to Licensee's installation and use of the Licensed Software depending on which type of product licenses Licensee has purchased as set forth in the applicable Product Order. Licensee may only apply one license type to a deployment.

- 1. Workstation, Authorized User, or Basic PC License** Licensed Software provided under this License Option gives Licensee the right to install and use one copy of the Licensed Software on one stand-alone workstation or device per license. Licensee may not (i) install the Licensed Software on any networked workstation or device (e.g., a server) that allows more than one user to use a copy of the Licensed Software, (ii) use the Licensed Software in a Windows Terminal Services, Citrix Server, Virtual Desktop Infrastructure, Desktop Container, or similar environment, or (iii) use the Licensed Software other than on one stand-alone workstation or device at a time. The foregoing shall not prohibit installation and use of the Licensed Software in one Virtual Machine per license provided such Virtual Machine is running on one stand-alone workstation or device and is not connected to or running in a Windows Terminal Services, Citrix Server, Virtual Desktop Infrastructure, Desktop Container, or similar environment. Licensee may transfer the Licensed Software to another stand-alone workstation or device and reactivate it for use on such other stand-alone workstation or device provided that the Licensed Software is removed and all copies of it are deleted from the stand-alone workstation or device from which it is transferred. Such transfers may not be undertaken more often than once every 30 days. A license must be purchased (i) for each device (including Virtual Machines and portable-storage devices) on which the Licensed Software or any component of the Licensed Software is installed or loaded in the permanent or temporary memory of the device and (ii) for each additional end-user device (including Virtual Machines) through which a copy of the Licensed Software could be accessed for interactive use, regardless of use case including production, test, or disaster recovery.

**This license type does not permit the usage models (among others) commonly known as concurrent use or common image with activation.**

- 2. Processor License** Licensed Software provided under this License Option gives Licensee the right to install the Licensed Software on any number of devices, workstations, or servers (and connect any number of clients to such servers) for connection to a single Hard Partition or Soft Partition on a host system with the same type of processor specified for the license in the applicable Product Order (e.g., P10, P40, etc.).
- 3. Concurrent User License** Licensed Software provided under this License Option gives Licensee the right to install and use one copy of the Licensed Software on multiple devices, workstations, or servers for use by up to the maximum number of Concurrent Users set forth in the applicable Product Order for whom Licensee has paid the applicable license fee. Concurrent Users are individuals who are actively using any device or other software program that may access the Licensed Software either directly, or indirectly through any other software program, regardless of how such access occurs or if such user uses any hardware or software that reduces the apparent number of users who are using the Licensed Software, such as by using a terminal service. Licensee may connect any number of workstations and clients to the server(s); however, the total number of users who may access and use the Licensed Software at any given time is limited by the number of Concurrent Users expressly authorized by Lessor in the Product Order. Licensee must employ a method to control, monitor, and provide reports on concurrent usage, either by (i) using the Licensed Software in a Windows Terminal Services (sometimes referred to as “multi-user Windows”, “WTS”, or “Citrix Server”) environment that is configured to control, monitor, and provide reports on concurrent usage, (ii) using the Licensed Software’s Management and Security Server metering tool (or a tool that will provide equivalent data) to control, monitor, and provide reports on concurrent usage, or (iii) using another method approved by Lessor in writing to control, monitor, and report on such usage. Licensee agrees that should Licensee fail to comply with the foregoing, then without prejudice to any remedies available to Lessor, the licensing basis for the Licensed Software shall automatically revert to Workstation licensing at a ratio of 1:1 (i.e., one Concurrent User license will be converted to one Workstation license) commencing from the start of Licensee’s failure to comply.

- 4. Named User License** Licensed Software provided under this License Option gives Licensee the right to install and use one copy of the Licensed Software on multiple devices, workstations, or servers for use by up to the maximum number of named users set forth in the applicable Product Order for whom Licensee has paid the applicable license fee. A named user license must be purchased for each person who is able to access or use the Licensed Software. Licensee must monitor and control deployment so that all access to the Licensed Software is restricted to persons having a dedicated named user license. Named user licenses will be reassigned to other persons only in association with changes in staffing and/or business operations that are intended to be permanent, and all Licensed Software access available to the previous assignees will be effectively terminated. A named user license: (i) is not a concurrent-user license; and (ii) does not permit operation of the Licensed Software as middleware. Prohibition of operation as middleware means that the Licensed Software may not be deployed for the purpose of providing automated, unattended communications and/or services to other applications or devices.

Unless Licensee has obtained Licenser's prior written approval to use another method to control, monitor, and report on its named users' access to the Licensed Software, Licensee shall use Microsoft's Active Directory Users and Computers utility, together with the Citrix Access Management Console, to define user-based access control to the Licensed Software (which may be referred to by the vendors as "the application"). Within the Citrix Access Management Console, use of the Citrix User Selector and/or Citrix Access Gateway is allowed, as is direct integration with Microsoft Active Directory as the Directory Type. Licensee cannot use the "allow anonymous users" setting in Citrix in configuring access to the Licensed Software application. That is, access to the Licensed Software application must be configured using "Explicit Users" and not "Anonymous Users." For additional details on how to grant application access to "Explicit Users," please refer to the Citrix Administration documentation on Managing Delivery Options for Published Resources. Licensee's network architecture and controls must effectively block any network path to the Licensed Software that is not managed by the control mechanisms described in this paragraph.

With respect to its named user licenses, Licensee shall create quarterly reports including data and analysis materials as detailed below:

Data: The report must show all users and all groups who have had access to the Licensed Software in the reported quarter (regardless of whether or not they did access the Licensed Software). The report must provide details of the registered user ID's and for each the associated user name(s) and the Licensed Software products the user is able to access (identified by product name and version). The report must also include full detail of each user permission activation or de-activation event during the quarter. The report must also show all devices having a copy of the Licensed Software, and for each such device, all persons having access to the device.

Analysis: Licensee must analyze its own data and include the following materials as part of the report: (i) High-water count of individuals whose network permissions, or desktop-copy availability, would have allowed them access to the Licensed Software on any given day within the quarter. (ii) Explanation of the sources of any reported data not naturally obtained from the defined controls. (iii) Explanation of the logic applied to the raw data to support the conclusions above.

General: Licensee will retain quarterly reports for a period of four years, and will make the reports available to Licenser on request. The data portion of the report must be made available in Excel spreadsheet form. Licensee agrees that should Licensee fail to comply with the foregoing, then without prejudice to any remedies available to Licenser, the licensing basis for the Licensed Software shall automatically revert to Workstation licensing at a ratio of 1:1 (i.e., one Named User license will be converted to one Workstation license) commencing from the start of Licensee's failure to comply.

- 5. Robotic Process Automation License** Licensed Software provided under this License Option gives Licensee the right to install and use one copy of the Licensed Software in a fully automated, unattended scenario (with no human end-user) where a Robotic Process Automation (RPA) tool is leveraging the Licensed Software's automation interfaces (HLLAPI, VBA, .NET) to scrape data from a host/mainframe screen and then use this host data as the RPA tool orchestrates the exchange of data between various applications to automate a business process. No support is available for developing the automated application. The Licensed Software is intended for smaller scale applications and, hence, limited to a reasonable load being placed upon the client or server device.

- 6. Middleware License** Licensed Software provided under this License Option gives Licensee the right to install and use one copy of the Licensed Software solely for the purpose of providing automated, unattended communications and/or services to other applications or devices. This includes use of the Licensed Software as a Print Server. "Print Server" means a device with Licensed Software installed that is running multiple host printer emulation sessions to service print jobs from multiple terminal emulation sessions not concurrently running on that same device running the printer sessions (and, hence serving as a Print Server).

## **ANNEX 2, SPECIFIC SOFTWARE TERMS**

**Additional Restrictions.** Licensee agrees not to:

1. Copy and/or distribute the Licensed Software, in whole or in part, to third parties, or use the Licensed Software for the benefit of any third party, or permit use or access by any third party to all or part of the Licensed Software without first paying Licenser any applicable additional fees required by Licenser and entering into a separate distribution license agreement with Licenser. For the avoidance of doubt, third party(ies) include without limitation contractors, outsourcers, Licensee's customers and the public.
2. Transfer, ship or use the Licensed Software outside the continent in which it was originally licensed to Licensee without first paying Licenser any applicable additional fees required by Licenser. For purposes of the foregoing, "continent" shall mean North America, South America, Europe, Africa, Asia, Australia, or Antarctica.
3. Install, access or use the Licensed Software on a Platform other than the Platform for which the Licensed Software was originally licensed to Licensee. Additional licenses for use of the Licensed Software on a Platform other than the one set forth in the applicable Product Order may be available upon payment of an additional license fee.
4. Assign, sell, rent, lease, lend, sublicense, outsource or otherwise transfer the Licensed Software to any third party, or authorize or appoint any third party to do so, or otherwise allow a third party to directly or indirectly use or access the Licensed Software, without Licensee first paying Licenser the applicable additional fees required by Licenser.

**Developer License.** In the event the Product Order specifies the license as a Developer license, such license shall be equivalent to a Workstation License as set forth in Annex 1.

**Host Restriction.** In the event the Product Order specifies a type of host system (e.g, Mainframe, UNIX, AS/400), Licensee may connect the Licensed Software only to host systems that are the same as the type specified.

**Middleware & Robotic Process Automation.** Except as specifically stated above for a Robotic Process Automation License and Middleware License, none of the license types set forth in this License Agreement permit operation of the Licensed Software with Robotic Process Automation or as middleware. Prohibition of operation as middleware means that the Licensed Software may not be deployed for the purpose of providing automated, unattended communications and/or services to other applications or devices. By way of example only and without limitation, this restriction expressly prohibits use of the Licensed Software as a Print Server.

**Evaluation License.** An evaluation license gives Licensee a term license to use the Licensed Software within Licensee during the evaluation term specified in writing by Licenser, solely for evaluation and testing purposes on a single computer system and not for development, commercial, or production purposes. Licensee may not reproduce or distribute the Licensed Software. Licensee's results of benchmark or other performance tests run on or using the Licensed Software may not be disclosed to any third party without Licenser's prior written consent. At any time during the evaluation term or upon completion thereof, Licensee may, upon written notification to Licenser and payment of the applicable license fee, replace the evaluation license with a license to use the Licensed Software pursuant to one of the other applicable options listed in Annex 1. In the absence of such notification by Licensee, the evaluation license shall automatically terminate at the end of the evaluation term and Licensee shall return, or, if Licenser so directs, delete and destroy all such Licensed Software and provide Licenser with written confirmation of such deletion and destruction being completed. Licenser may, in its sole discretion, grant Licensee an extension to the evaluation term subject to receiving a written request and reasons for such request from Licensee prior to expiration of the evaluation term. Licenser will specify any such agreed extension in

writing to Licensee. Licensed Software provided by Lessor free of license fee charge shall be deemed to be an evaluation license unless otherwise agreed in writing. In the absence of any contrary period specified in writing by Lessor, the evaluation term shall be deemed to be thirty (30) days. In relation to any evaluation license, this section shall prevail over any contrary provisions set forth in this License Agreement.

**All-or-None Support and Maintenance.** Where Licensee purchases support and/or maintenance for the Licensed Software, Licensee hereby agrees that it shall purchase such support and/or maintenance services for all of Licensee's licensed units of such Licensed Software including all related development and deployment product licenses.

**Updates and Upgrades.** Upon delivery to Licensee of any Update and/or Upgrade, the license granted to such prior version and/or release being updated or upgraded shall terminate after a ninety (90) day transition period from such delivery and only the license to such Update or Upgrade shall continue unless (i) Licensee has paid to Lessor the applicable additional fees required by Lessor to use both versions, or (ii) in the case of an Update that is provided to Licensee at no additional charge from Lessor pursuant to support and/or maintenance for which Licensee has separately contracted, Licensee provides written notice to Lessor during the aforementioned transition period of its election not to use the Update but instead remain with the prior version and Licensee's de-installation and destruction of such Update.

**Bundles/Suites.** If the Licensed Software is licensed as part of a bundle or suite of multiple products, and the applicable Product Order specifies the License Option and license count for the bundle or suite (but not the individual product components of the bundle or suite), then each product in the suite or bundle shall share such license type and count. Individual products in the bundle or suite cannot be used by multiple users if only one user license is purchased (for user-based licenses) and cannot be installed on multiple workstations if only one workstation license is purchased (for workstation licenses).

**Academic Editions/Users.** Where Licensed Software is licensed under Lessor's Academic Program, in addition to the above terms and conditions:

- (i) Licensee shall not use the Licensed Software for any purpose other than for non-commercial education or academic research activities.
- (ii) Licensee shall not copy the Licensed Software, nor shall Licensee distribute, transfer or assign the Licensed Software without specific permission from Lessor.
- (iii) License management: If Licensee is the academic institution using the Licensed Software for teaching purposes, Licensee will manage all student licenses through a license server provided by Lessor in accordance with guidelines provided by Lessor. Licensee agrees to provide reports describing the number of licenses Licensee has issued in each period upon Lessor's request.

#### **Personal Edition Products.**

- (i) Licensee shall not use the Licensed Software for any purpose other than for personal educational and non-commercial activities. The Licensed Software may not be used for training or teaching purposes.
- (ii) Licensee shall not copy the Licensed Software, nor shall Licensee distribute, transfer or assign the Licensed Software without specific permission from Lessor.

**Java.** The Licensed Software may require Licensee to have the Java™ Platform, Standard Edition Development Kit (JDK) or Runtime Environment (JRE) installed, and in such event Licensee is solely responsible for obtaining and licensing the JDK or JRE directly from Oracle Corporation.

**PRE-EXISTING LICENSES. FROM COMMENCEMENT OF THIS LICENSE AGREEMENT, IF THE LICENSED SOFTWARE SUBJECT TO THIS LICENSE AGREEMENT IS THE MOST CURRENT VERSION OF THE LICENSED SOFTWARE LICENSED BY LICENSEE, THE "LICENSED SOFTWARE" SHALL ALSO INCLUDE, AND THIS LICENSE AGREEMENT SHALL APPLY TO, ANY PRE-EXISTING AND FUTURE LICENSES FOR ANY EARLIER VERSION OF THE LICENSED SOFTWARE LICENSED BY LICENSEE AND REPLACE ANY PRIOR END USER LICENSE AGREEMENTS APPLICABLE THERETO ("PRIOR EULA(S)"). NOTWITHSTANDING THE FOREGOING, IF THE EARLIER VERSION INCLUDES DIFFERENT COMPONENTS, ANY TERMS SPECIFICALLY APPLICABLE TO THOSE**

**COMPONENTS IN THE APPLICABLE PRIOR EULA SHALL CONTINUE TO APPLY TO SUCH COMPONENTS.**

ENDS