



**Waters**  
THE SCIENCE OF  
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# **Empower 3 Service Release 4 Hotfix 1**

Release Notes

715008211  
Version 00

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# General information

## Copyright notice

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## About these release notes

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This document contains information about the features and functions introduced, changed, or removed in this version of the product. It contains a list of major feature changes as well as

descriptions of known defects, fixed defects, and observed product behaviors (concessions) that Waters deems of importance to customers. This document does not include:

- An exhaustive list of all changes to this version of the product
- Descriptions of defects that were not known to Waters at the time of the product's release
- Descriptions of defects that cannot be reproduced by Waters
- Information about customer requests for enhancements to the product
- Specific details of changes to proprietary aspects of product components, features, computational algorithms, and software code

The changes listed in this document are relative to the previous version of the product. If you are updating an older version of the product, review the release notes for all the intervening versions to ensure that you understand the cumulative impact of the product changes.

Carefully review the information in this document before you install the product. If you have questions about how installing this product might affect your environment or if you need more information about this product, contact your Waters representative.

## Obtaining Waters software and software updates

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To digitally obtain the software application you purchased, use the Waters Digital Software Delivery and License Entitlement platform. For customers on a software maintenance plan, the platform provides email notifications of and immediate access to newly released software, including updates and hotfixes. This delivery platform allows you to securely search and share software entitlements, instrument drivers, release notes, and documentation.

To access the Digital Software Delivery and License Entitlement platform, contact the designated Software Manager at your organization. The Software Manager is typically a system administrator or someone responsible for implementing software and activating licenses, and they are the person responsible for the Waters digital entitlements (software and licenses) within your organization. From within the platform, the Software Manager can securely manage and grant access to software entitlements to others within your organization, providing organizational control of your software assets.

Access the software delivery and license entitlement platform through your Waters.com user profile at **Waters.com > My Account [Hello, *username*] > Profile > Download Software Entitlements**.

If you have not yet arranged for access to this platform, send your Software Manager's contact information to Waters at [customer\\_communication@waters.com](mailto:customer_communication@waters.com), or work with your Waters sales representative to begin the secure onboarding process.

## Contacting Waters

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Contact Waters with technical questions regarding the use, transportation, removal, or disposal of any Waters product. You can reach us through the Internet, telephone, fax, or conventional mail.

Contact method	Information
<a href="http://www.waters.com">www.waters.com</a>	The Waters website includes contact information for Waters locations worldwide.
iRequest	iRequest is a secure Web service form that allows you to request support and service for Waters instruments and software or to schedule a planned service activity. These types of support and services may be included as part of your maintenance plan or support plan. You may be charged for the requested service if you do not have appropriate plan coverage for your product.  <b>Note:</b> In areas managed by authorized distributors, iRequest may not be available. Contact your local distributor for more information.
Local office contact information	For worldwide locations, telephone, fax, and conventional mail information is available at the <a href="#">Local Offices</a> website.
Corporate contact information	Waters Corporation Global Support Services 34 Maple Street Milford, MA 01757 USA From the USA or Canada, phone 800-252-4752 or fax 508-872-1990.

## Customer comments

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Waters' Customer Experience and Knowledge Management organization invites you to report any errors that you encounter in this document or to suggest ideas for otherwise improving it. Help us better understand what you expect from our documentation so that we can continuously improve its accuracy and usability.

We seriously consider every customer comment we receive. You can reach us at [tech\\_comm@waters.com](mailto:tech_comm@waters.com).

## Updated information

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Refer to the Waters website ([www.waters.com](http://www.waters.com)) and click **Support > Support Documents and Downloads** for updates to this document.

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# Empower 3 Service Release 4 Hotfix 1

Empower 3 Service Release 4 Hotfix 1 (Empower 3 SR4 HF1) includes defect fixes that resolve nine customer-reported issues.

**Note:** To view Empower 3 SR4 known and resolved issues, refer to the *Empower 3 Service Release 4 Release Notes* (716006210). This document is available on [www.waters.com](http://www.waters.com).

## Compliance recommendations

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Any time you install, change, or uninstall software or system modules in a regulated environment, Waters recommends that you follow your organization's approved change control procedure.

You should assess the impact of the changes described in the release notes on the qualification status and validation for the intended use of your system, including any impact on personnel, methods, laboratory workflows, or connected equipment, and scale your activities accordingly.

## Antivirus considerations

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Some real-time virus scanners mistake normal data acquisition and instrument control for virus activity, and thus interfere with proper operations. Full-system scans and live updates can be network-intensive, disk-intensive, and CPU-intensive, and they can also interfere with normal data acquisition. Schedule scans and updates for idle times when data acquisition does not occur.

Certain antivirus program features such as "intrusion prevention", "tamper protection", and "heuristic analysis" can also interfere with normal operation. If you observe issues with the software, review and verify the antivirus logs. It may be necessary to white-list any affected components.

## Empower installations

For Empower software installations, exclude the Empower installation folder (usually *C:\Empower*) and its sub-folders.



## System and software requirements

Empower 3 Service Release 4 Hotfix 1 software supports Windows 7 Service Pack 1 (SP1) on LAC/E devices only, Windows 10 Pro and Enterprise (on Personal, Acquisition Client, and LAC/E devices), and Windows Server 2016 Standard (on database server and file server).

**Note:** Support includes English, Japanese, Simplified Chinese, and Korean installations of Empower software.

Specifically, Empower 3 Service Release 4 Hotfix 1 supports these platforms and operating systems:

Platform	Operating systems and components
Personal workstation	<ul style="list-style-type: none"> <li>Windows 10 Professional or Enterprise, 64-bit</li> <li>Oracle 18c<sup>a</sup></li> </ul>
Empower client	<ul style="list-style-type: none"> <li>Windows 10 Professional or Enterprise, 64-bit</li> <li>Oracle 18c<sup>a</sup></li> </ul>
Citrix environment	<ul style="list-style-type: none"> <li>Windows Server 2016 Standard (on the Virtual Delivery Agent (VDA) server)</li> <li>Citrix Virtual Delivery Agent (VDA) 7.15</li> <li>Citrix XenApp 7.15 LTSR CU2</li> <li>Citrix Receiver 4.9</li> <li>Citrix Workspace 2206</li> </ul>
Database server	<ul style="list-style-type: none"> <li>Windows Server 2016 Standard</li> <li>Red Hat Enterprise Linux Server 7.6</li> <li>Oracle 18c<sup>a</sup></li> </ul>
File server	<ul style="list-style-type: none"> <li>Windows Server 2016 Standard</li> </ul>
LAC/E device BC LAC/E device	<ul style="list-style-type: none"> <li>Windows 7 Professional or Enterprise with SP1, 64-bit</li> <li>Windows 10 Professional or Enterprise, 64-bit</li> <li>Oracle 18c<sup>a</sup></li> </ul> <p><b>Note:</b> LAC/E Acquisition Server Configuration 15 and LAC/E Acquisition Server Configuration 16 are supported with Windows 7 Professional (64-bit, for Windows Embedded Enterprise) SP1 and Windows 10 Enterprise 2016 LTSB (Long Term Service Branch) 64-bit.</p>
Virtualization technology	VMware vSphere ESXi 6.7 EP 04

a. Embedded Oracle versions are 18.4.0.0.0 for the Oracle database and 18.3.0.0.0 for the Oracle client. The Oracle version required for RedHat is 18.4.0.0.0. The Oracle database is installed on server and Empower Personal installations. Oracle clients are installed on Empower Personal, Empower client, and LAC/E installations.

**Important:** As of Empower 3 Feature Release 5, Windows Server 2008 and 2012 are no longer supported.

**See also:** The *Empower 3 Service Release 4 Release Notes* (716006210).

## Instrument support

To further align our products, following the release of Empower 3 Feature Release 5 Service Release 4, Waters no longer offers Empower defect corrections or enhancements related to IEEE control in any release of Empower. As a result, support for IEEE instrument control ceased in all versions of Empower subsequent to the release of Empower 3 Feature Release 5 Service Release 4. Furthermore, if you use IEEE instrument control beyond Empower 3 Feature Release 5 Service Release 4, be aware that it has not been tested.

## Driver compatibility

Empower 3 Service Release 4 Hotfix 1 was tested with Waters Driver Pack 2022 R1 Analytical (Jade) and Instrument Control Framework Support Layer 3.6.0 on Windows 10 and Windows 7 Professional SP1.

**See also:** For information on Waters drivers, refer to the following documents:

- *Waters Driver Pack 2022 R1 Release Notes (for analytical systems)* (715007517)
- *Waters Driver Pack 2022 Release 1 Installation and Configuration Guide* (715006278)
- *Instrument Control Framework Support Layer v3.6.0 Release Notes* (715007946)
- *Instrument Control Framework Support Layer v3.6.0 Installation Guide* (715007947)

**Recommendation:** For Empower 3 Service Release 4 Hotfix 1, Waters recommends using only instrument drivers that are compatible with Windows 10.

## NuGenesis SDMS LMS compatibility

Empower 3 Service Release 4 Hotfix 1 supports the same compatibility matrix as the Empower 3 Service Release 4 release.

See the *Empower 3 Service Release 4 Release Notes* (716006210) for details.

## Waters Data Converter compatibility

Empower 3 Service Release 4 Hotfix 1 supports the same compatibility matrix as the Empower 3 Service Release 4 release.

See the *Empower 3 Service Release 4 Release Notes* (716006210) for details.

# Deployment notes

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## Before you install the application

Before you install Empower 3 Service Release 4 Hotfix 1, back up all Empower software projects, library information, and databases, and restart the computer.

Obtain the Empower 3 Service Release 4 Hotfix 1 software from the Waters digital delivery platform as described in section [Obtaining Waters software and software updates \(Page iii\)](#).

**Upgrade path:** You must upgrade to Empower 3 Service Release 4 Hotfix 1 from Empower 3 Service Release 4. The complete upgrade path is Empower 3 Feature Release 5 > Empower 3 Service Release 4 > Empower 3 Service Release 4 Hotfix 1. If you are currently using a version of Empower other than Empower 3 Service Release 4, you must upgrade according to the upgrade path.

**See also:** The *Empower 3 Feature Release 5 Installation, Configuration, and Upgrade Guide* (715006184) and the *Empower 3 Service Release 4 Release Notes* (716006210) for complete installation instructions.

## Installing Empower 3 Service Release 4 Hotfix 1

You can install Empower 3 Service Release 4 Hotfix 1 by downloading it from the Waters digital delivery platform as described in section [Obtaining Waters software and software updates \(Page iii\)](#).

**Restriction:** You cannot roll back or remove an Empower 3 Service Release 4 Hotfix 1 installation. If you want to uninstall Empower 3 Service Release 4 Hotfix 1, you must uninstall Empower software.

**Note:** Empower 3 Service Release 4 Hotfix 1 makes no change to the database version and uses DB version 7.50.00.00.

### Requirements:

- You must upgrade to Empower 3 Service Release 4 Hotfix 1 from Empower 3 Service Release 4. The complete upgrade path is Empower 3 Feature Release 5 > Empower 3 Service Release 4 > Empower 3 Service Release 4 Hotfix 1.
- If you are currently using a version of Empower other than Empower 3 Service Release 4 Hotfix 1, you must upgrade according to the upgrade path described in the previous point.
- You must have local administrator privileges to install Empower 3 Service Release 4 Hotfix 1.

You can install Empower 3 Service Release 4 Hotfix 1 in the following ways, depending on your system configuration:

Computer configuration	Installation process
Single computer running a supported Windows operating system	<ul style="list-style-type: none"> <li>• Installation wizard</li> <li>• Silent installation (Command line interface)</li> </ul>
Multiple computers: Clients, LAC/E devices, or Citrix servers	<ul style="list-style-type: none"> <li>• Installation wizard</li> <li>• Silent installation (Command line interface)</li> <li>• Push installation (PsExec utility)</li> </ul>

## Performing a silent installation

You can install Empower 3 Service Release 4 Hotfix 1 by using command line options.

### To perform a silent installation from a command line:

1. In a Command Prompt window, if required, change to the directory that contains the file *Empower3SR4Hotfix1Setup.exe*.
2. At the command prompt, specify the following command, along with the required line options and any other options you want to use, as listed in the following table:

```
Empower3SR4Hotfix1Setup.exe /s /v" /qn"
```

**Full command line:** `Empower3SR4Hotfix1Setup.exe /s /v"WAT_RESTART=NO WAT_LOG_FILE_NETWORK_LOCATION="<SHARE>\e3_Logs" /qn"`

### Command line with language

**selection:** `Empower3SR4Hotfix1Setup.exe /s /L1033 /v"WAT_RESTART=NO WAT_LOG_FILE_NETWORK_LOCATION="<SHARE>\e3_Logs" /qn"`

**Table 1: Command line options**

Option	Description	Required	Default value
/s	Silent mode	Yes	
/L	Installer language: <ul style="list-style-type: none"> <li>• L1033 is English</li> <li>• L1041 is Japanese</li> <li>• L1042 is Korean</li> <li>• L2052 is Simplified Chinese</li> </ul>	Yes	
/v	Installer arguments. Passes one or more command line options to notification <i>services.msi</i> . When including multiple command line options, enclose them in quotation marks.	Yes	

**Table 1: Command line options (continued)**

Option	Description	Required	Default value
	<b>Rule:</b> Do not include a space between the /v and the command line option.		
/qn	Installs the software without displaying the user interface.	Yes	
WAT_LOG_FILE_NETWORK_LOCATION	Destination share for the installation log. This share must be writable by everyone.	No	None
WAT_RESTART	Restart system.	No	Do not restart

The `WAT_LOG_FILE_NETWORK_LOCATION` option copies the installation log to the network share. If the installation is successful, the name of the log file is `ERR_computername_datetime_empower3.log`. For example: `AS-27_2020-5-31_12-55-17-235_Empower3.log`. If the share is not accessible, the installation log file is created in the local Windows directory. If you do not supply the `WAT_LOG_FILE_NETWORK_LOCATION` option, the log is created locally.

3. After the installation finishes, restart the computer.
4. Log on to the computer, and then log in to Empower.

## Performing a push installation

When installing Empower 3 Service Release 4 Hotfix 1 on multiple computers (push installation), use the PsExec utility. You can download the latest version from <http://technet.microsoft.com>.

### Requirements:

- Install the PsExec utility on the system from which you execute the push installation. To install this utility, copy it to any file path.
- You must have administrator privileges for each client.
- You must use a domain user account that is part of the local administrator group.

### To perform a push installation of Empower 3 Service Release 4 Hotfix 1:

1. Create a text file and, within it, specify the name or IP address of each client computer or LAC/E device on a separate line, and then save the file.
2. Run the following commands from a Command prompt, or create a batch file containing the Empower 3 Service Release 4 Hotfix 1 upgrade push install options.

#### Using the administrator account: PsExec

```
@<PATH_A>\File.txt -u DOMAIN\USER -p PASSWORD
```

```
-d <PATH_B>\Empower3SR4Hotfix1Setup.exe /s /v" WAT_RESTART=NO
WAT_LOG_FILE_NETWORK_LOCATION="<PATH_C>" /qn
```

**Selecting a language:** PsExec @<PATH\_A>\File.txt -u DOMAIN\USER  
 -p PASSWORD -d <PATH\_B>\Empower3SR4Hotfix1Setup.exe /s /L1033 /v"  
 WAT\_RESTART=NO WAT\_LOG\_FILE\_NETWORK\_LOCATION="<PATH\_C>" /qn

PsExec command line options	Definition	Required
<i>PATH_A</i>	Path to the text file that contains the names or IP addresses of the clients or LAC/E devices.	Yes
<i>File</i>	Name of the text file that contains the names or specified IP addresses.	Yes
<i>PATH_B</i>	Path to the Empower 3 Service Release 4 Hotfix 1 media located on a network share.	Yes
<i>PATH_C</i>	Path located on a network share on which to copy the installation log.	Yes
<i>-p</i>	Password.	Yes
<i>-u</i>	Username.	Yes
<i>-d</i>	Do not wait for the process to terminate (non-interactive). This command launches installation on multiple machines simultaneously.	Yes

3. After the installation finishes, restart the computer.
4. Log on to the computer, and then log in to Empower.

### Push installation on multiple Empower Citrix servers

When installing Empower 3 Service Release 4 Hotfix 1 on multiple Empower Citrix servers, use the PsExec utility and the Waters command line interface and options. You can type the commands in a command window or in a batch file.

**Requirement:** Confirm that the default *admin\$* share is enabled on all Empower Citrix servers on which you plan to install Empower 3 Service Release 4 Hotfix 1.

**Requirement:** To perform a push installation, you must have a domain user with administrator privileges on each Empower Citrix server.

## To perform a push installation of Empower 3 Service Release 4 Hotfix 1 on multiple Empower Citrix servers:

1. From the following website, download the currently available version of the PsExec utility into any folder on a host machine: <http://technet.microsoft.com>
2. Using a text editor, create a text file (such as *filename.txt*), specify within it the name or IP address of each Empower Citrix server on a separate line, and then save the file.
3. To set the mode to install, use a text editor to create a batch file (such as *PushCitrix.bat*). Within this file, specify the following commands:

```
change user /install
```

```
<path_to_Empower_media>\Empower3SR4Hotfix1Setup.exe /s /  
v"WAT_RESTART=Yes  
WAT_LOG_FILE_NETWORK_LOCATION="<path_to_log_file>" /qn"
```

- For *path\_to\_Empower\_media*, specify a valid path to the Empower 3 Service Release 4 Hotfix 1 software media. This path must be accessible to the Empower Citrix server.
- For *path\_to\_log\_file*, specify a valid path to the location where the installation log files will be stored. This location must be on a share that is write-accessible to the domain users who will perform the push install and who have write access to the share.

**Tip:** The batch file described here is an example. The Restart command and the log file location are optional. If Restart is not included in the command line, users are prompted to restart the computer after installation. If the file location is not specified, the log file is created locally wherever Empower is installed. A message informs users that the file was created.

4. On the host computer, run the batch file using the following command line syntax:

```
PsExec @<path_to_filename.txt>\file -u domain\username -p password  
-h -d CMD /C <path_to_batch_file>\PushCitrix.bat
```

- For *path\_to\_filename.txt*, specify a valid path to the text file on the host machine that contains the Empower Citrix server names.
- For *path\_to\_batch\_file*, specify a valid path to the location of the share that contains the batch file.

5. Log on to each Empower Citrix server.
6. Log on to Empower.

## Configuring an Empower file server

An Empower file server allows you to store and retrieve Empower raw data on a computer other than the Empower database server. The Waters Service allows computers on which it is installed to act as a file server.

**Tip:** If you install an Empower client on the file server, the DCOM and firewall settings are automatically installed by Empower. You can verify these settings after installing the client.

**See also:** For details about configuring an Empower file server and DCOM settings, see the *Empower 3 Feature Release 5 Installation, Configuration, and Upgrade Guide (715006184)*.

## Verifying the installation

You can verify that Empower 3 Service Release 4 Hotfix 1 was installed successfully by running a utility called Verify Files. Running Verify Files creates a *checksum.txt* file that maintains a record of all Empower options and service packs installed on an Empower computer. The *checksum.txt* file also verifies the integrity of disk files by comparing their current CRC and sizes with original values recorded during installation of the base software and any installed option or service pack.

### To verify your Empower installation:

Click **Start > All Programs or All Apps > Empower > Verify Files**.

**Tip:** The *checksum.txt* file is created during the installation of Empower 3 Service Release 4 Hotfix 1. When you run the **Verify Files** utility after the installation of Empower 3 Service Release 4 Hotfix 1, the *checksum.txt* file includes a time stamp in the file name.

### To view the *checksum.txt* file for the Empower 3 Service Release 4 Hotfix 1 installation:

From Windows Explorer, navigate to the `\Empower\Script` directory on the Empower installation drive, and then double-click the *checksum.txt* file. Locate the file with the time stamp that contains the Empower 3 Service Release 4 Hotfix 1 installation time in the file name.

### To confirm that Empower 3 Service Release 4 Hotfix 1 is installed on the computer:

Click **Start > All Programs > Empower > Empower Installation Log** and search for lines similar to these:

```
=== Logging Started: 10-11-2021 16:10:40 - Empower 3 Service Release
4 Hotfix 1 ===
***** Product: Empower 3 Service Release 4 Hotfix 1
[16:10:40]: Empower 3 Service Release 4 Hotfix 1 Installer Setup was
initialized.
[16:11:45]: The setup has successfully completed installing Empower
3 Service Release 4 Hotfix 1 on this computer.
[16:11:46]: Empower 3 Service Release 4 Hotfix 1 Installer has
completed.
=== Logging Stopped: 10-11-2021 16:11:46 ===
```



## What's new?

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No new features were added to this release.

## Issues resolved in this release

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This section lists the problems resolved in this release. The numbers identify issues that Waters personnel monitor within a system change request tracking tool.

### INFEMP-24323 (CRI-2094)

Previously, in Citrix environments, when you saved a PDF copy of a report generated in Report Publisher to the destination folder, the PDF took longer to save than in previous versions of Empower.

Now, the Microsoft Print to PDF driver replaces the Waters UNIFY Printer in Empower and the time to save a PDF report to the destination folder in Citrix environments is reduced.

### INFEMP-24326 (CRI-1775)

Previously, in Citrix environments where the System Policy `Save Report (as PDF) after Signoff` was enabled, the creation of the PDF report could fail, resulting in an `Unable to store the PDF file in the database for result sign off ID: xxxx error` message. This issue occurred more frequently with large reports.

Signoff Results now works consistently in Citrix environments with larger PDF reports. The PDF is successfully created and stored in the Empower database.

### INFEMP-24328 (CRI-2555)

Previously, when you used the Empower Toolkit to create a new Sample Set Method and the Comment policy for Methods was set to **Unrestricted**, the comment you specified was not recorded in the Project Audit Trail. Also, when the Sample Set Method was versioned, the **Revision Comment** field from the Method Properties was empty.

Now, for all three types of policies that can be set for Comments (Silent, Unrestricted, and Restricted), the comments specified when you create or version a Sample Set Method are correctly displayed in the Project Audit Trail and in the Method Properties.

Also reported as PCS numbers 1829, 41186, 47915, 53027, and 52816.

## INFEMP-24329 (CRI-2707)

Previously, when you selected **Run Samples Using A Template** and clicked **Run Samples** in the Walk-Up window, Run Samples failed and Empower stopped responding.

Now, in the Walk-Up window, **Run Samples Using A Template** works as expected and Empower functions properly.

## INFEMP-24330 (CRI-2484, CRI-2679)

Previously, a Channel Status could incorrectly be Data Incomplete when the Injection Status was Complete, with the data available and the Verify Incomplete Data option unavailable.

Now, if a Channel Status is Data Incomplete, the acquisition data is not available, but the Verify Incomplete Data option is available and, after the channel is verified as complete, the status changes to Verified as Complete and the action is recorded in the Project Audit Trail.

## INFEMP-24331 (CRI-301)

Previously, if you specified a username and left the password field blank, and then attempted to log in to Empower, a failed login attempt was logged in the System Audit Trail and Message Center.

Now, if the password field is blank, the login attempt does not proceed and an error message reminds you to type your password.

**Note:** This is only relevant if a password is required based on your System Policy Settings.

Also reported as PCS 53324.

## INFEMP-24332 (CRI-996)

Previously, when you deleted a node from Empower, any system configured on that node was also deleted, but the system audit trail did not capture the deletion of other configured systems.

Now, when you delete a node in Empower, any system configured on that node is also deleted and both actions are registered in the system audit trail.

## INFEMP-24333 (CRI-2277)

Previously, when recovering from data buffering, a `SampleSet.dat` file could be corrupted. A corrupted `SampleSet.dat` file cannot be corrected or recovered. This was a rare event.

Now, when recovering from data buffering, the `SampleSet.dat` file is no longer corrupted.

## INFEMP-24335 (CRI-289)

In Empower 3 Feature Release 4, when a user with the Alter Any Project privilege, but without the Create Custom Field (CCF) privilege, cloned a project, all the custom fields were copied into the new project (both standard and user-created custom fields). Starting with Empower 3 Service Release 3, only the standard custom fields were copied into the new project. The same was true for creating a project and copying custom fields from a source project. This would cause some custom field-dependent data to be missing.

To successfully clone a project or create a new project, you must have the following privileges:

- Alter Any Project
- Create Project
- Create Project at the root (this is required only if you need to clone at the root)

To create a new project and copy custom fields, you must have the following privileges:

- Alter Any Project
- Create Custom Field

For additional details about the privileges required for certain actions, see the Empower online Help.

The issue with some missing custom field-dependent data is now fixed. Projects are cloned properly to include all custom fields in the resulting clone.

Also reported as PCS 56641, 56720, and 56722.

## INFEMP-25606

As a consequence of addressing CRI-289, selecting the **Copy to Project** function from within the Project Window, and copying a custom field into a target project where an identical custom field existed as locked, Empower allowed you to overwrite the locked custom field. Clicking **Yes** overwrote the locked custom field in the target project.

The **Save to Project** and **Edit** functions from within the Project Properties dialog correctly informed the user that the custom field is locked and cannot be modified.

Now, under identical circumstances, Empower correctly states that Custom Field '[custom field name]' is locked in the destination project. You cannot overwrite it.

## Known issues in this release

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At the time of this product's release, there were no related known issues requiring documentation.

## Program files modified in this release

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### Program Files

The following program files in the `Empower\Bin` directory were modified for Empower 3 Service Release 4 Hotfix 1:

File name	Description	File version	Product version
<i>Empower.exe</i>	Main Empower application	7.0.3471.915	7,0,3471,915.1
<i>InstrumentServer.exe</i>	Instrument Service application	7.0.3471.915	7,0,3471,915.1
<i>Mil0.dll</i>	Contains base objects that implement database connection, security, user and user type objects, and others	7.0.3471.915	7,0,3471,915.1
<i>Mil1.dll</i>	Contains base objects that implement higher-level objects such as methods, results, and others	7.0.3471.915	7,0,3471,915.1
<i>Mil2.dll</i>	Contains base objects that implement higher-level objects including data processing, integration, calibration, and others	7.0.3471.915	7,0,3471,915.1
<i>Mil3.dll</i>	Contains objects that implement higher-level objects such as reporting groups and display graphics	7.0.3471.915	7,0,3471,915.1
<i>MilTK.dll</i>	Contains basic Toolkit objects	7.0.3471.915	7,0,3471,915.1
<i>Open Access.exe</i>	Open Access application	7.0.3471.915	7,0,3471,915.1

### English language directory

The following English language files were modified for Empower 3 Service Release 4 Hotfix 1:

File name	Description	File version	Product version
<i>en\MilTkRes.dll</i>	Toolkit resources (English)	7.0.3471.915	7,0,3471,915.1

## Japanese language directory

The following Japanese language files were modified for Empower 3 Service Release 4 Hotfix 1:

File name	Description	File version	Product version
<i>ja\MilTkRes.dll</i>	Toolkit resources (Japanese)	7.0.3471.915	7,0,3471,915.1

## Korean language directory

The following Korean language files were modified for Empower 3 Service Release 4 Hotfix 1:

File name	Description	File version	Product version
<i>ko\MilTkRes.dll</i>	Toolkit resources (Korean)	7.0.3471.915	7,0,3471,915.1

## Chinese language directory

The following Chinese language files were modified for Empower 3 Service Release 4 Hotfix 1:

File name	Description	File version	Product version
<i>zh-chs\MilTkRes.dll</i>	Toolkit resources (Chinese)	7.0.3471.915	7,0,3471,915.1

## Test configurations

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This application update was tested on the following system configurations.

### Empower Server

#### Windows Server 2016 Standard

Microsoft Windows versions and hotfixes

Microsoft OS version	Microsoft hotfixes
10.0.14393 Build 14393	KB3186568,KB3192137,KB3199986,KB4035631,KB4049065,KB4091664,KB4093137,KB4132216,KB4465659,KB4485447,KB4486129,KB4498947,KB4509091,KB4535680,KB4540723,KB4541329,KB4562561,KB4565912,KB4576750,KB4589210,KB5001078,KB5001402,KB5005573,KB5005698,KB5012170,KB5013952,KB5014026,KB5014702,KB5016058,KB5016622,KB5017095

## Empower Client

### Windows 10 Enterprise 2016 Long Term Servicing Branch (LTSB)

Microsoft Windows versions and hotfixes

Microsoft OS version	Microsoft hotfixes
10.0.14393 Build 14393	KB4132216,KB4346087,KB4465659,KB4471331,KB4535680,KB4589210,KB5005698,KB5011495,KB5011570,KB5014026

### Windows 10 Professional

Microsoft Windows versions and hotfixes

Microsoft OS version	Microsoft hotfixes
10.0.18363 Build 18363	KB4497165,KB4513661,KB4516115,KB4517245,KB4521863,KB4535680,KB4537759,KB4541338,KB4552152,KB4559309,KB4560959,KB4561600,KB4569073,KB4574727,KB4576751,KB4576947
10.0.19043 Build 19043	KB4562830,KB4577586,KB5000736,KB5005260,KB5013624,KB5014032,KB5015895,KB5016616

## Empower Personal Workstation

### Windows 10 Enterprise 2016 Long Term Servicing Branch (LTSB)

Microsoft Windows versions and hotfixes

Microsoft OS version	Microsoft hotfixes
10.0.14393 Build 14393	KB4132216,KB4465659,KB4486129,KB4535680,KB4589210,KB5005698,KB5011570,KB5014026,KB5014630,KB5014702,KB5015808,KB5016058

### Windows 10 Enterprise Long Term Servicing Channel (LTSC)

Microsoft Windows versions and hotfixes

Microsoft OS version	Microsoft hotfixes
10.0.17763 Build 17763	KB4465065,KB4470788,KB4487038,KB4487044,KB4577586,KB4580325,KB4601558,KB5001404

## Windows 10 Professional

Microsoft Windows versions and hotfixes

Microsoft OS version	Microsoft hotfixes
10.0.19042 Build 19042	KB4562830,KB4580325,KB4601050,KB5003173,KB5003242,KB5005260,KB5013624,KB5013942,KB5014032
10.0.19043 Build 19043	KB4562830,KB4577586,KB5000736,KB5004331,KB5005033,KB5005260,KB5013624,KB5015895,KB5016616
10.0.19044 Build 19044	KB4562830,KB4577586,KB4589212,KB5003791,KB5005260,KB5007273,KB5009467,KB5009596,KB5009636

## LAC/E device

### Windows 10 Enterprise 2016 Long Term Servicing Branch (LTSB)

Microsoft Windows versions and hotfixes

Microsoft OS version	Microsoft hotfixes
10.0.14393 Build 14393	KB3186568,KB4033631,KB4049065,KB4049411,KB4054507,KB4486129,KB4520724,KB4524244,KB4535680,KB4577586,KB4589210,KB5001402,KB5005698,KB5011570,KB5012170,KB5013625,KB5013952,KB5014026,KB5016058,KB5016622,KB5017095

## Windows 10 Professional

Microsoft Windows versions and hotfixes

Microsoft OS version	Microsoft hotfixes
10.0.19042 Build 19042	KB4562830,KB5005260,KB5013624,KB5013942,KB5014032
10.0.19043 Build 19043	KB4562830,KB4577586,KB4580325,KB5000736,KB5005260,KB5007273,KB5009467,KB5009543

## Windows 7 Professional SP1

Microsoft Windows versions and hotfixes

Microsoft OS version	Microsoft hotfixes
6.1.7601 Service Pack 1 Build 7601	KB2305420,KB2393802,KB2425227,KB2476490,KB2479943,KB2484033,KB2488113,KB2491683,KB2492386,KB2503665,KB2505438,KB2506014,KB2506212,KB2506928,KB2507618,KB2507938,KB2508272,KB2509553,KB2510531,KB2511250,

Microsoft OS version	Microsoft hotfixes
	KB2511455,KB2515325,KB2518869,KB2522422,KB2524375,KB2529073,KB2530548,KB2532531,KB2533552,KB2533623,KB2534111,KB2534366,KB2536275,KB2536276,KB2539635,KB2541014,KB2544893,KB2545698,KB2547666,KB2552343,KB2555917,KB2556532,KB2560656,KB2562937,KB2563227,KB2563894,KB2564958,KB2567053,KB2567680,KB2570791,KB2570947,KB2572077,KB2574819,KB2579686,KB2584146,KB2585542,KB2586448,KB2592687,KB2603229,KB2604115,KB2616676,KB2619339,KB2620704,KB2621440,KB2631813,KB2639308,KB2640148,KB2647753,KB2653956,KB2654428,KB2655992,KB2656356,KB2660075,KB2667402,KB2670838,KB2676562,KB2685811,KB2685813,KB2685939,KB2690533,KB2691442,KB2698365,KB2699779,KB2705219,KB2706045,KB2709630,KB2709981,KB2712808,KB2718704,KB2719857,KB2726535,KB2727528,KB2729094,KB2729452,KB2731771,KB2732059,KB2732487,KB2732500,KB2736422,KB2742599,KB2743555,KB2750841,KB2756921,KB2757638,KB2758857,KB2761217,KB2763523,KB2770660,KB2773072,KB2785220,KB2786081,KB2786400,KB2789645,KB2791765,KB2798162,KB2799926,KB2800095,KB2803821,KB2807986,KB2808679,KB2813347,KB2813430,KB2813956,KB2820331,KB2830477,KB2832414,KB2833946,KB2834140,KB2834886,KB2835364,KB2836502,KB2836942,KB2836943,KB2839894,KB2840149,KB2840631,KB2841134,KB2843630,KB2844286,KB2845187,KB2846960,KB2847077,KB2847311,KB2847927,KB2849470,KB2849696,KB2849697,KB2852386,KB2853952,KB2855844,KB2857650,KB2861191,KB2861698,KB2861855,KB2862152,KB2862330,KB2862335,KB2862966,KB2862973,KB2863240,KB2864058,KB2864202,KB2868038,KB2868116,KB2868623,KB2868626,KB2868725,KB2871997,KB2872339,KB2875783,KB2876284,KB2876331,KB2882822,KB2884256,KB2887069,KB2888049,KB2891804,KB2892074,KB2893294,KB2893519,KB2893984,KB2894844,KB2898785,KB2898857,KB2900986,KB2901112,KB2904266,KB2908783,KB2909210,KB2911501,KB2912390,KB2913152,KB2913431,KB2916036,KB2918077,KB2918614,KB2919469,KB2922229,KB2923545,KB2925418,KB2926765,KB2928562,KB2929733,KB2929755,KB2929961,KB2930275,KB2931356,KB2937610,KB2939576,KB2943357,KB2952664,KB2957189,KB2957503,KB2957509,KB2961072,KB2961851,KB2965788,KB2966583,KB2968294,KB2970228,KB2971850,KB2972100,KB2972211,KB2972280,KB2973112,KB2973201,KB2973351,KB2976627,KB2976897,KB2977292,KB2977728,KB2978092,KB2978120,KB2978668,KB2978742,KB2979570,KB2980245,KB2984972,KB2984976,KB2984981,



Microsoft OS version	Microsoft hotfixes
	KB2985461,KB2991963,KB2992611,KB2993651,KB2993958,KB2994023,KB2999226,KB3000483,KB3001554,KB3002885,KB3003743,KB3004361,KB3004375,KB3005607,KB3006121,KB3006137,KB3006226,KB3006625,KB3008627,KB3008923,KB3009736,KB3010788,KB3011780,KB3013126,KB3013410,KB3013531,KB3014406,KB3019215,KB3019978,KB3020338,KB3020369,KB3020370,KB3020388,KB3021674,KB3021917,KB3022777,KB3023215,KB3025390,KB3030377,KB3031432,KB3032655,KB3033889,KB3033890,KB3033929,KB3035126,KB3035132,KB3037574,KB3039066,KB3040272,KB3042058,KB3042553,KB3045171,KB3045645,KB3045685,KB3045999,KB3046002,KB3046017,KB3046269,KB3046482,KB3048070,KB3048761,KB3054476,KB3055642,KB3057154,KB3059317,KB3060716,KB3061518,KB3063858,KB3064209,KB3065822,KB3065979,KB3065987,KB3067505,KB3067903,KB3068708,KB3069392,KB3069762,KB3070102,KB3070738,KB3071756,KB3072305,KB3072630,KB3072633,KB3074543,KB3074886,KB3075220,KB3075226,KB3075249,KB3075516,KB3075851,KB3076895,KB3076949,KB3078071,KB3078601,KB3078667,KB3079757,KB3079904,KB3080079,KB3080149,KB3080446,KB3084135,KB3086255,KB3087039,KB3092601,KB3092627,KB3093513,KB3097966,KB3097989,KB3099862,KB3100213,KB3101722,KB3102429,KB3107998,KB3108371,KB3108381,KB3108664,KB3108669,KB3108670,KB3109094,KB3109103,KB3109560,KB3110329,KB3112148,KB3112343,KB3115858,KB3118401,KB3121212,KB3121255,KB3121461,KB3121918,KB3122648,KB3123479,KB3124000,KB3124001,KB3124275,KB3126446,KB3126587,KB3127220,KB3133977,KB3137061,KB3138378,KB3138612,KB3138910,KB3139398,KB3139914,KB3140245,KB3147071,KB3150220,KB3150513,KB3155178,KB3156016,KB3156019,KB3159398,KB3161102,KB3161949,KB3161958,KB3163245,KB3170455,KB3170735,KB3172605,KB3177467,KB3179573,KB3181988,KB3184143,KB3185319,KB3192391,KB3197867,KB3205394,KB3210131,KB4012212,KB4014504,KB4014573,KB4014579,KB4015546,KB4019263,KB4019990,KB4020322,KB4022722,KB4025337,KB4034679,KB4038779,KB4040966,KB4040980,KB4041678,KB4048960,KB4051956,KB4054521,KB4093108,KB4095514,KB4103712,KB4284867,KB4338423,KB4338612,KB4338823,KB4343899,KB4344177,KB4457044,KB4457144,KB4457145,KB4462915,KB4467106,KB4470600,KB4471328,KB4474419,KB4480960,KB4483483,KB4486459,KB4486564,KB4489885,KB4490128,KB4490628,KB4491113,KB4493448,KB4495606,KB4495612,KB4496880,KB4499164,KB4499175,KB4501226,KB4503269,

Microsoft OS version	Microsoft hotfixes
	KB4506976,KB4507004,KB4507456,KB4507704,KB4516655,KB4519108,KB4532945,KB4532960,KB4534251,KB4534310,KB4536952,KB958488,KB971033,KB976002,KB976932,KB982018

## Citrix App Server

### Windows Server 2016 Standard (Citrix 7.15 LTSR CU2 - Virtual Delivery Agent v7.15)

Microsoft Windows versions and hotfixes

Microsoft OS version	Microsoft hotfixes
10.0.14393 Build 14393	KB3186568,KB3192137,KB3199986,KB4035631,KB4049065,KB4093137,KB4132216,KB4535680,KB4550994,KB5014026,KB5014702

## Citrix Presentation Server

### Windows Server 2016 Standard

Microsoft Windows versions and hotfixes

Microsoft OS version	Microsoft hotfixes
10.0.14393 Build 14394	KB3186568,KB3192137,KB3199986,KB4035631,KB4049065,KB4093137,KB4132216,KB4486129,KB4520724,KB4535680,KB4550993,KB4550994,KB4576750,KB4577586,KB4589210,KB5001078,KB5001402,KB5005698,KB5011570,KB5014026,KB5014630,KB5014702

## Citrix Client

### Windows 10 Enterprise 2016 Long Term Service Branch (LTSB) (Interface Citrix Workspace 2206)

Microsoft Windows versions and hotfixes

Microsoft OS version	Microsoft hotfixes
10.0.14393 Build 14393	KB3186568,KB4033631,KB4049065,KB4049411,KB4054507,KB4132216,KB4465659,KB4486129,KB4535680,KB4589210,

Microsoft OS version	Microsoft hotfixes
	KB5001402,KB5005698,KB5011570,KB5013625,KB5014026,KB5014630,KB5014702,KB5015808,KB5016058

## Windows 10 Professional

Microsoft Windows versions and hotfixes

Microsoft OS version	Microsoft hotfixes
10.0.19044 Build 19044	KB4562830,KB5003791,KB5005699,KB5007401,KB5011651,KB5013624,KB5014032,KB5014035,KB5014699