



Waters
THE SCIENCE OF
WHAT'S POSSIBLE.™

Empower 3.6.1

Release Notes

715007302
Version 01

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Updated information

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

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Empower 3.6.1

Updated sections in this document

The *Issues resolved in this release* section in this document was updated from the previous version and the following issues were added:

- INFEMP-7311 (CRI-1224)
- INFEMP-10908 (CRI-1552)
- INFEMP-10932 (CRI-1891)
- INFEMP-11890 (CRI-1423)
- INFEMP-12622 (CRI-2091)
- INFEMP-16174 (CRI-3359)
- INFEMP-16513 (CRI-2615)

GxP compliance requirements

When you install Empower Software for the first time, or when you uninstall the software, perform software qualification to meet GxP compliance requirements. Any time you install or uninstall software in a GxP environment, Waters recommends that you follow your company's management-approved standard operating procedures for changing software.

To confirm that the application update did not affect any data, reprocess a data set before and after you install the software, and then verify that the results are equivalent.

Run the Verify Files utility or the SystemsQT for Empower IQ, and review the resulting file for an entry that states "No installation changes were detected."

Anti-virus considerations

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 anti-virus program features like "intrusion prevention" and "tamper protection" can also interfere with normal operation. Disable them as well.

Empower installations

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

Naming convention

Starting with Empower 3.6.0, the naming convention for Empower releases is `Empower XX.YY.ZZ.QQ`, where:

- `XX` = Major Release version
- `YY` = Minor Release number
- `ZZ` = Maintenance Release number
- `QQ` = Hotfix Release

For example, Empower 3.6.0.1 is Major Release 3, Minor Release 6, Maintenance Release 0, Hotfix 1.

Supported platforms and operating systems

Empower 3.6.1 software supports Windows 10 Professional and Enterprise (Personal, Acquisition Client, and LAC/E devices), Windows Server 2016 (Standard) or Windows Server 2019 (Standard), and Red Hat Enterprise Linux Server 8.0.

Note: Support includes English, Japanese, Simplified Chinese, and Korean distributions of Empower 3.6.1 software.

Specifically, Empower 3.6.1 supports these platforms and operating systems:

Table 1: Supported platforms and operating systems

Platform	Operating systems and components
Personal workstation	<ul style="list-style-type: none">• Windows 10 Professional or Enterprise, 64-bit version 20H2 build 19042• Windows 10 Enterprise LTSB version 1607 OS build 14393• Oracle 19c^a

Table 1: Supported platforms and operating systems (continued)

Platform	Operating systems and components
Empower client	<ul style="list-style-type: none"> • Windows 10 Professional or Enterprise, 64-bit version 20H2 build 19042 • Windows 10 Enterprise LTSB version 1607 OS build 14393 • Oracle 19c^a
Citrix environment	<ul style="list-style-type: none"> • Windows Server 2016 Standard version 1607 build 14393 (on the Virtual Delivery Agent [VDA] server) <ul style="list-style-type: none"> • Citrix Virtual Delivery Agent (VDA) 7.15 • Citrix XenApp 7.15 LTSR CU2 • Citrix Receiver 4.9 • Windows Server 2019 Standard version 1809 build 17763 <ul style="list-style-type: none"> • Citrix Virtual Apps and Desktops 7 1912 Long Term Service Release (LTSR) CU2 • Citrix Workspace 2103
Database server	<ul style="list-style-type: none"> • Windows Server 2016 Standard version 1607 build 14393 or Windows Server 2019 Standard version 1809 build 17763 • Red Hat Enterprise Linux Server 8.0 • Oracle 19c^a
File server	<ul style="list-style-type: none"> • Windows Server 2016 Standard version 1607 build 14393 or Windows Server 2019 Standard version 1809 build 17763
LAC/E device	<ul style="list-style-type: none"> • Windows 10 Enterprise LTSB version 1607 OS build 14393 or Windows 10 Professional or Enterprise, 64-bit version 20H2 build 19042 <p>Note: Configuration 15 and Configuration 16 are both supported with Windows 10 Enterprise Long Term Service Branch (LTSB) build 1607.</p> <ul style="list-style-type: none"> • Oracle 19c^a <p>Important:</p>

Table 1: Supported platforms and operating systems (continued)

Platform	Operating systems and components
	<ul style="list-style-type: none">• Configuration 16 comprises both eLAC/E and cLAC/E.• Empower 3.6.1 supports Configuration 15 and Configuration 16 LAC/E devices.
Virtualization technology	Empower 3.6.1 was tested using VMware vSphere ESXi 6.7 EP 04.

a. Embedded Oracle versions are 19.7.0.0.0. for the Oracle database and 19.3.0.0.0 for the Oracle client. The Oracle version required for Red Hat is 19.7.0.0.0. The Oracle database is installed on server and Empower Personal installations. Oracle clients are installed on Empower Server, Personal, Empower client, and LAC/E installations.

Important: The installation of Empower LAC/E 3.6.1 is not supported on Windows 7.

See also: The *Empower 3.6.1 Installation, Configuration, and Upgrade Guide* (715007289).

Note: Due to known issue [INFEMP-13946 \(Page 35\)](#), Waters recommends using Adobe Reader DC to view reports.

Driver compatibility

Empower 3.6.1 supports Waters Driver Pack 2020 Release 1 and Instrument Control Framework Support Layer v3.5 on Windows 10.

See also: For information on the Waters drivers, refer to the following documents available on the Waters website (www.waters.com > Support > Support Documents and Downloads):

- *Waters Driver Pack 2020 Release 1 Installation and Configuration Guide* (715006278)
- *Instrument Control Framework Support Layer v3.5 Release Notes* (715007323)

For information on the compatibility with chromatography instruments and drivers from other vendors, refer to the release notes of those instruments and drivers.

Recommendation: For Empower 3.6.1, Waters recommends only using instrument drivers that are compatible with Windows 10.

NuGenesis SDMS LMS compatibility

Empower 3.6.1 is compatible with NuGenesis 9.1 LMS (NG 9.1) components as follows:

- The NuGenesis LMS base kit (SDMS) requires NuGenesis SDMS 9.1 HF1 for printing functionality.
- The NuGenesis LMS Option kit (ELN and Connectors) for NG SDMS 9.1 HF1 requires NG LMS 9.1, NG LMS 9.1 Empower Interface 2.1, or NG 9.1 LMS Connectors 2.1 HF1.
- The NuGenesis SDMS 9.1 Data Adapters Release 4 HF1 (NG SDMS 9.1 DAR4 HF1).

Note: You must apply NuGenesis SDMS 9.1 DAR4 HF1 for Empower 3.6.1 support.

See also: The *NuGenesis LMS 9.1 Release Notes (715006815)*, and the *NuGenesis LMS 9.1 Installation and Configuration Guide (715006816)* for complete information.

Note: When using Empower 3.6.1, SDMS users require the NuGenesis SDMS Win 10 Client on Windows 10.

Legend for the following tables:

T	Tested - Both software entries were tested and structurally validated as part of a software release. The test was performed by either the Empower or the NuGenesis program, depending on the software release.
I	Incompatible - The two software entries will not work together.
*	Supported under risk assessment based on our knowledge of the software changes made at each release. If you encounter compatibility issues, Waters provides support in accordance with the terms of the Licenses, Warranties, and Support Services agreement. To resolve compatibility problems, you might need to upgrade to a supported platform or install a newer version of Empower software.

Table 2: NuGenesis SDMS and Empower compatibility matrix

NuGenesis SDMS version	Empower version																	
	E2 F R5	E3	E3 S R1	E3 F R1	E3 F R2	E3 S R2	E3 F R3	E3 F R4	E3 F R4 Cl d 1.1	E3 F R4 Cl d 1.1	E3 S R3	E3 F R5	E3 S R4	E3 F R5 /S R4 Cl d 2.0	E3 SR 5	E 3.6 .0	E 3.6 .1	
NG8 SDMS/DAR0	T	*	I	T	I	I	I	I	I	I	I	I	I	I	I	I	I	I
NG8 SMDS SR1/DAR1	T	*	Data Adapters Hotfix available	T	*	*	I	I	I	I	I	I	I	I	I	I	I	I

Table 2: NuGenesis SDMS and Empower compatibility matrix (continued)

NuGenesis SDMS version	Empower version																
	E2 F R5	E3	E3 S R1	E3 F R1	E3 F R2	E3 S R2	E3 F R3	E3 F R4	E3 F R4 Cl d 1.1	E3 F R4 Cl d 1.1	E3 S R3	E3 F R5	E3 S R4	E3 F R5 /S R4 Cl d 2.0	E3 SR 5 .0	E 3.6 .0	E 3.6 .1
			ilable														
NG SDMS FR1/DAR2	T	*		*	*	T	*										
NG8 SDMS SR2/DAR2	T	*		*	*	*	T										
NG8 SDMS SR2/DAR3	T	*		*	*	*	T										
NG8 SDMS SR2 Win10/DAR3 HF1	T	*		*	*	*	*	T	T	T	*						
NG 8 SDMS SR2 Win10	*	*		*	*	*	*	T	*	T	*	T	T	*	*	*	
NG8 SDMS SR2 Win10/DAR3 HF2	T	*		*	*	*	*	T	*	T	T						
NG8 SDMS SR2 Win10/DAR3 HF3	*	*		*	*	*	*	T	*	*	T	Tes ted wit h Ser vic e Not e ^a	Tes ted wit h Ser vic e Not e ^a	*	*	*	
NG 9.0 SDMS	^b	*		*	*	*	T	*	*	*	T	T	T	*	*	*	

Table 2: NuGenesis SDMS and Empower compatibility matrix (continued)

NuGenesis SDMS version	Empower version																
	E2 F R5	E3	E3 S R1	E3 F R1	E3 F R2	E3 S R2	E3 F R3	E3 F R4	E3 F R4 Cl d	E3 F R4 Cl d 1. 1	E3 S R3	E3 F R5	E3 S R4	E3 F R5 /S R4 Cl d 2. 0	E3 SR 5	E 3.6 .0	E 3.6 .1
NG 9.0 DAR1	^b	To be tested in DAR-2 c		To be tested in DAR-2 c	To be tested in DAR-2 c	Tested with Service Note ^a	T	T	*	*	T	Tested with Service Note ^a	Tested with Service Note ^a	*	*	*	
NG 9.0 DAR2	^b	T	*	T	T	T	T	T	*	*	T	T	*	*	*		
NG 9.0 DAR3	^b	*	*	*	*	*	*	*	*	*	T	T	T	T			
NG 9.0 DAR4	^b	*	*	*	*	*	*	*	*	*	T	*	T	*	*	^d	
NG 9.1 SDMS	^b	*	*	*	*	*	T	*	*	*	*	*	*	*	T	T	*
NG 9.1 SDMS HF1	^b	*	*	*	*	*	*	*	*	*	*	*	*	*	T	*	T
NG 9.1 SDMS HF2	^b	*	*	*	*	*	*	*	*	*	*	*	*	*	*	T	*
NG 9.0-9.1 DAR4	^b	*	*	*	*	*	*	*	*	*	*	*	*	*	T	^d	^d

Table 2: NuGenesis SDMS and Empower compatibility matrix (continued)

NuGenesis SDMS version	Empower version																	
	E2 FR5	E3	E3 SR1	E3 FR1	E3 FR2	E3 SR2	E3 FR3	E3 FR4	E3 FR4 Cloud 1.1	E3 FR4 Cloud 1.1	E3 SR3	E3 FR5	E3 SR4	E3 FR5/SR4 Cloud 2.0	E3 SR5	E 3.6 .0	E 3.6 .1	
NG 9.0-9.1 DAR4 HF1	^b	*	*	*	*	*	*	*	*	*	*	*	*	*	*	T	T	T

- a. The remote data adapter included in NG 9.0 DAR1 requires a manual configuration step described in a service note.
- b. E2 FR5 operates on Windows Server 2003 and Windows XP, which are incompatible with NG LMS 9.0.
- c. These versions of Empower were to be supported by NG 9.0 DAR-1. As noted, they were not explicitly tested and there is an issue that will be corrected in NG 9.0 DAR2.
- d. The incompatibility is related to the DAR4 application because of the archiving functionality. The NG SDMS 9.0.2 and 9.1 are compatible with Empower 3.6.0, and the printing (manual and automatic) functionality works as expected.

Table 3: NuGenesis LMS and Empower compatibility matrix

NuGenesis LMS version	Empower version																
	E2 FR5	E3	E3 SR1	E3 FR1	E3 FR2	E3 SR2	E3 FR3	E3 FR4	E3 FR4 Cloud 1.1	E3 FR4 Cloud 1.1	E3 SR3	E3 FR5	E3 SR4	E3 FR5/SR4 Cloud 2.0	E3 SR5	E 3.6 .0	E 3.6 .1
NG LMS 8 SR2 and all hotfixes	*	*		*	*	T	T	* ^a	^b	^b	^c	^c		*			
NG LMS 8 Empower	*	*		*	*	*	T	* ^a	^b	^b	^c	^c		*			

Table 3: NuGenesis LMS and Empower compatibility matrix (continued)

NuGenesis LMS version	Empower version																	
	E2 F R5	E3	E3 S R1	E3 F R1	E3 F R2	E3 S R2	E3 F R3	E3 F R4	E3 F R4 Cloud 1.1	E3 F R4 Cloud 1.1	E3 S R3	E3 F R5	E3 S R4	E3 F R5 /S R4 Cloud 2.0	E3 SR 5	E 3.6 .0	E 3.6 .1	
Interface 1.1 HF2 and earlier releases																		
NG LMS 8 Connectors 1.1 HF1 and earlier releases						*	T	*a	^b	^b	^c	^c		*				
NG LMS 9.0	^d	*		*	*	*	T	*a	^b	^b	T	T	T	*	*	*	*	
NG LMS 9.1 HF1	^d	*	*	*	*	*	*	*	^b	^b	*	*	*	*	*	*	T	
NuGenesis LMS Empower-Interface 2.0	^d	*		*	*	*	T	*a	^b	^b	T	T	T	*	*	*	*	
NG LMS Connectors 2.0	^d					*	T	*a	^b	^b	T	T	T	*	*	*	*	
NG LMS 9.0.2	^d	*	*	*	*	*	*	*	^b	^b	T	T	T	T	T	*	*	
NG LMS Connectors 2.0.2	^d	*	*	*	*	*	*	*	^b	^b	T	T	T	*	T	T	*	
NG LMS Connectors 2.1	^d	*	*	*	*	*	T	*	^b	^b	*	*	*	*	T	T	*	

Table 3: NuGenesis LMS and Empower compatibility matrix (continued)

NuGenesis LMS version	Empower version																
	E2 FR5	E3	E3 SR1	E3 FR1	E3 FR2	E3 SR2	E3 FR3	E3 FR4	E3 FR4 Cloud 1.1	E3 FR4 Cloud 1.1	E3 SR3	E3 FR5	E3 SR4	E3 FR5/SR4 Cloud 2.0	E3 SR5	E 3.6 .0	E 3.6 .1
NG LMS Connectors 2.1 HF1	^d	*	*	*	*	*	*	*	^b	^b	*	*	*	*	T	*	T
NuGenesis LMS Empower-Interface 2.0.2	^d	*	*	*	*	*	*	*	^b	^b	T	T	T	*	T	T	*
NuGenesis LMS Empower-Interface 2.1	^d	*	*	*	*	*	T	*	^b	^b	*	*	*	*	T	T	T

- a. Supported on Windows 7 clients only.
- b. The NuGenesis LMS 8 SR-2 LMS Option kit is not included in the Empower cloud deployments.
- c. The NuGenesis LMS 8 SR-2 Option kit does not support Windows 10, therefore Empower versions deployed exclusively on Windows 10 clients are not compatible.
- d. E2 FR5 operates on Windows Server 2003 and Windows XP, which are incompatible with NG LMS 9.0.

Waters Data Converter compatibility

Empower is compatible with Waters Data Converter 2.1 HF2 (WDC 2.1 HF2) and Waters Data Converter 3.2 (WDC 3.2) as follows:

Table 4: Waters Data Converter and Empower compatibility matrix

WDC Version	Empower Version															
	E2 FR 5	E3	E3 S R1	E3 FR 1	E3 FR 2	E3 S R2	E3 FR 3	E3 FR 4	E3 FR 4 Cl d 1. 1	E3 FR 4 Cl d 1. 1	E3 S R3	E3 FR 5	E3 SR 4	E3 S R5	E 3.6 .0	E 3.6 .1
WDC 2.1 HF2	T	T	*	*	T	*	*	*	*	*	*	T	T	*	T	T
WDC 3.2	I	I	I	I	I	I	T	*	*	*	I	*	T	T	T	T

Legend:

T	Tested - Both software entries were tested and structurally validated as part of a software release. Empower, NuGenesis, or WDC Programs performed the test, depending on the software release.
*	Supported under risk assessment based on our knowledge of the software changes made at each release. If you encounter compatibility issues, Waters provides support in accordance with the terms of the Licenses, Warranties, and Support Services agreement. To resolve compatibility problems, you might need to upgrade to a supported platform or install a newer version of Empower software.

Requirement: When you install WDC 2.1 HF2 on Windows 10, you must run both the installer and the installation qualification *Check.bat* file using an account with System Administrator role.

Instrument support

Ethernet and serial instruments

Empower 3.6.1 supports Waters Driver Pack 2020 Release 1 and Instrument Control Framework Support Layer v3.5.

See also: For information on Waters drivers and the Instrument Control Framework Support Layer, refer to the following documents:

- *Waters Driver Pack 2020 Release 1 Installation and Configuration Guide (715006278)*
- *Instrument Control Framework Support Layer v3.5 Release Notes (715007323)*

Recommendation: For Empower 3.6.1, Waters recommends using only instrument drivers that are compatible with Windows 10.

To further align our products, after 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 after the release of Empower 3 Feature Release 5 Service Release 4. If you use IEEE instrument control beyond Empower 3 Feature Release 5 Service Release 4, it was not tested.

The instruments in the following table are no longer supported.

Table 5: Instruments no longer supported in Empower

Instrument	As of this release:
410 RI detector	Empower 3
486 TUV detector	Empower 3
996 PDA detector	Empower 3
474 fluorescence detector	Empower 3
Agilent 5890 gas chromatograph	Empower 3 FR3
Agilent 7673 automatic liquid sampler	Empower 3 FR3
Waters ZQ 2000 mass detector	Empower 3 FR3
Waters ZQ 4000 mass detector	Empower 3 FR3
Waters EMD1000 mass detector	Empower 3 FR3
Waters SQ mass detector	Empower 3 FR5
Waters TQ mass detector	Empower 3 FR5
Waters 3100 mass detector	Empower 3 FR5

Support for Agilent GC modules 6850, 6890, and 7890

Prior to Windows 10, the Agilent 6850, 6890, and 7890 GC modules were controlled by either an instrument driver built directly into Empower or by a legacy Instrument Control Software (ICS) driver. Additionally, the 6850 and 6890 used either RS-232 serial control or RS-232 serial/edgeport USB driver control. To control these modules in an Empower Windows 10 environment, Waters recommends installing the Agilent drivers available with our Instrument Control Framework (ICF) Support Layer version 3.0 and later, which uses Ethernet communication. To enable Ethernet communication with the 6850 or 6890 modules, install the Ethernet conversion kits available from Agilent. For more information on ICF Support Layer drivers, see www.waters.com > Support > Support Documents and Downloads, search for "ICF", and filter the search results by Content Type = Downloads.

Deployment notes

Before you install the application

You can install Empower 3.6.1 as a new installation on a system where no Chromatography Data System (CDS) is currently installed. You can also upgrade from Empower 3.6.0 to Empower 3.6.1.

Restrictions:

- In-place upgrade is available only for existing Empower 3.6.0 installations.
- When you migrate from an earlier version of Empower, you can move objects from your old installation to your new Empower installation using the system object export utility. You can only perform a system object export on a Windows-based Empower database server. Waters recommends using the system object export and import utilities. If you do not perform the system object export and the subsequent object import, you must manually recreate any objects you want to use with Empower 3.6.1 (such as systems, users, nodes, and so on).
- Empower Mobile is no longer supported.
- Sample Set Generator does not currently install on Windows 10.
- When you install Empower server, you can only perform a full installation, including Oracle software. If Oracle is already installed, the Empower server installer stops.

For information on restoring projects from previous versions of Empower, see the topic "Restoring projects" in the Empower Online Information System.

Review the *Empower 3.6.1 Installation, Configuration, and Upgrade Guide* (715007289) for complete installation instructions and the *Waters Ethernet Instrument Getting Started Guide* (71500074403).

Version information

You can view specific version information for Empower 3.6.1 in the following locations:

- Empower version (3.6.1)
 - **Help > About**
 - Information icon on the Empower login screen
- Empower Product version (7.0.3471.918)
 - Installation Log
 - **Control Panel > Add/Remove Programs > Empower**
 - **Settings > Apps & Features > Empower**
- Software Build version (Empower 3 Software Build 3471)

- Verify Files
- Installation Log
- **Settings > Apps & Features > Empower**
- Registry (*HKEY_LOCAL_MACHINE\SOFTWARE\WOW6432Node\Waters\Empower\SetupVersion*)
- Database version (7.61.00.00)
 - **Help > About**
 - Verify Files
 - Information icon on the Empower login screen
- Oracle Product version: server platforms run Oracle database version 19.7.0.0.0, and Empower Personal workstations, clients, and LAC/E devices run Oracle client version 19.3.0.0.0.

Default projects

A default project containing example data for training and troubleshooting purposes is included with the software media when you purchase Empower. Additional projects are also available on the Waters Marketplace (<https://marketplace.waters.com>).

New features and enhancements

Empower 3.6.1 includes the following new features and enhancements.

Segregation of Administrator Privileges

Empower 3.6.1 implements some changes in Administrator privileges.

Administrator User Type changes

When creating a new user type with Administrator privileges, it is now possible to remove any privilege pertaining to deleting (Delete Data, Delete Results, Delete Custom Fields, and so on) and the Method Validation Manager privileges from that user type.

When a user creates a new user type with Administrator privileges, they can enable privileges that are not enabled by default if they have those privileges assigned to them. Newly created Administrators cannot assign themselves disabled privileges.

Privileges for the built-in Administrator user type are not changed.

Group Administrator changes

The Group Administrator designation provides a user without full Administrator privileges the ability to administer specified user groups. The Group Administrator allows the specified user to maintain a specific user group and add and remove users to and from that user group. The Group Administrator can modify, create, and delete user accounts in the specified user group only if they have the Alter, Create, or Delete Users privilege, respectively.

Tip: Assigning a Group Administrator is optional.

A user defined as the Group Administrator for a user group can add and remove members from the user group via the Group Properties page of the User Group. The Group Administrator cannot add or delete users via the User Group Admin Properties tab or change the user status via the Group Properties page of the User Group unless that Group Administrator's user type contains the privileges required to perform the activities.

A Group Administrator cannot create a new user with Administrator privileges.

Deleting users is affected by the Enforce Unique User Account Names System Policy. With this system policy enabled, users cannot be deleted. Instead, when a Group Administrator clicks , the user is removed (deleted) from the user group but remains in the Empower system with the user status set to Removed.

Requirement: The Delete User privilege is required to perform this action.

Validation Administrator privilege changes

When the Validation Administrator privilege is assigned to a new user type, only the privileges associated with the Method Validation Manager are assigned by default.

Privileges for built-in Administrator and Validation Administrator users are not affected.

Access All Projects privilege added

There is a new privilege called Access All Projects. The Access All Projects privilege allows a user to access a project or projects according their User Type. A user created with this user type privilege can view and open all existing projects. To alter project properties, perform project-based tasks (such as clone, backup, or create), and manage project data, the user must have the appropriate user privileges and the Access All Projects user type privilege.

Note: The Access All Projects privilege is granted to the built-in Administrator user type by default.

The addition of the Access All Project privilege affects the following project properties:

- Access to projects:
 - Owner Only now includes owner of the project and users with Administrator or Access All Projects privileges.
 - Owner and Group now includes owner of the project, users with Administrator or Access All Projects privileges, and group members specified in the Allow Access to Groups list.
- Creating projects

- Owner only (default) now includes access only to the project owner and users with administrator or Access All Projects privileges.
- Owner and Group now includes access to the project owner, administrators, users with the Access All Projects privilege, and group members specified in the Allow Access to Groups list. If access is by Group, you can control the type of access through the Group User Type.

For more information, see the following topics in the Empower 3.6.1 online Help:

- Assigning and modifying user type privileges
- Creating projects
- Setting user access to projects

Note: After an in-place upgrade from Empower 3.6.0 or a System Object Import, the Access All Projects privilege is granted to user types with the Administrator privilege and can be assigned to other users.

Security update - Password required at log in

Starting with Empower 3.6.1, all users are required to type a password when logging in to Empower. If the Enforce Minimum Password Length system policy is enabled, users must type a password with at least the number of characters specified in the system policy.

If you upgraded from Empower 3.6.0 via in-place upgrade or from a previous version of Empower using System Object Import, passwords for users who previously had no password are set to the user's name. These users are required to change their password on first login.

Empower binaries are digitally signed

Empower binaries authored or copyrighted by Waters Corporation or NuGenesis Technologies have a Waters code signing certificate applied. Third party code is not signed. Waters continues to seek signed versions of third party files for future releases.

Issues resolved in this release

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-462

Previously, when you upgraded Empower, the installation of the Waters Database Manager failed if the passwords for the SYS and WATERS accounts did not match.

The issue is fixed.

INFEMP-3120 (CRI-1878)

Previously, when you ran the Verify Files utility on an Empower node, the Oracle Database Version displayed in the results log was `Oracle Database 19c Enterprise Edition Release 19.0.0.0.0`, which was the major version. The actual product version installed was `19.7.0.0.0`.

Now, when you run the Verify Files utility, both the Oracle Database Version and the actual product version display in the results log.

INFEMP-3976

Previously, when you uninstalled Empower Enterprise Server, the `C:\Program Files (x86)\Waters\WDM` directory was still present, but it was empty. Also, Waters Database Manager was still present in the Start menu.

Now, both are removed when Empower Enterprise Server is uninstalled.

INFEMP-5421 (CRI-265)

Previously, Empower Analytics sometimes failed to display the correct number of injections in the **Total Number of Injections by System by Month** tab. The issue occurred with injections acquired from the same sample set over a period longer than one day.

Now, the issue no longer occurs.

Also reported as: PCS 52394, 52653, and 54906.

INFEMP-5436 (CRI-372)

Previously, when you altered sample sets in the Review window, saved the alterations without closing the Review window, processed the data, and then saved the results, the Sample Set ID, Sample Name, or other sample and sample set fields were missing from the results.

Now, Sample Set IDs are no longer missing from the results in this instance.

Also reported as PCS 55326 and PCS 56424.

INFEMP-5644

Previously, for projects with the GPC, GPCV, and GPCVLS options selected, the g'SCB and g'LCB fields were duplicated in the list of the View Filter Editor fields for the Molecular Weight Distribution and Peaks types of filters.

The issue has been fixed.

INFEMP-6021 (CRI-582)

Previously, you could save a processing method with a Named Group containing duplicate peak names. This caused the group peak to include the duplicated peak twice when calculating the group.

Now, if a duplicate name is found when processing with an existing method, the duplicate is ignored and a Q75 processing code is added to the group peak indicating that the Named Group includes a duplicate name. Users can edit the Named Group to rename or remove any duplicates and save the method without error.

Also reported as PCS numbers 54441, 55718, 54846, and 45427.

INFEMP-6794 (CRI-1134)

Previously, after you installed Empower Personal on a workstation and attempted to log on to Empower or to the Waters Licensing Wizard, the log on could fail and the `Credential cannot be verified at this time` error message could appear. This occurred because the Oracle Listener Service did not start automatically.

Now, the start-up type of the Oracle Listener Service is Automatic (Delayed Start).

INFEMP-6970 (CRI-769)

Previously, you were able to restore projects at the root level without the Create Projects at the Root privilege.

The issue is fixed.

Also reported as PCS 56302 and 55509.

INFEMP-6994 (CRI-738)

Previously, a character from a Sample Set Name was occasionally missing from Empower reports when a Sample Set reporting group was used. The name appeared correctly in the report header.

Now, Sample Set Names appear correctly in the Sample Set report.

Also reported as PCS 56483.

INFEMP-6996 (CRI-429)

Previously, Mass Spectrometry (MS)-related fields (MS Ret Time Window, MS Ret Time Presearch, MS Search Depth) displayed in a report when the Processing Method Group was added, even if the Mass Spectrometry option was not enabled in the Project Properties.

Now, Mass Spectrometry-related fields no longer display in a report if the Mass Spectrometry option is not enabled in the Project Properties.

Also reported as PCS 53556, 54140, and 52976.

INFEMP-6998 (CRI-567)

Previously, some conditions set for the CField Id in the View Filter Editor did not work properly.

Now, conditions set for the CField Id work as expected.

INFEMP-7144 (CRI-1425)

Previously, in Empower Analytics, in the System Usage section, when you selected the Total Number of Injections by System by Month report, the number of injections and the total runtime reported in the table were incorrect.

Now, the issue is fixed.

Also reported as PCS 53049.

INFEMP-7159 (CRI-1438)

Previously, in Empower Analytics, in the Project Usage section, when you selected the Total Number of Injections by User report, if there were blank Sample Set Names, the injection by user values were incorrect. This happened because the system stopped counting the injections when it encountered a blank Sample Set Name.

Now, the issue is fixed.

Also reported as PCS 53940 and PCS 53012.

INFEMP-7165 (CRI-1446)

Previously, in Empower Analytics, with restored projects, not all the Acquisition Node names displayed in the System Usage reports. The same occurred when you copied injections from one project to another.

Now, Acquisition Node names display in all the System Usage reports.

Also reported as PCS 54204.

INFEMP-7195 (CRI-1460)

Previously, in the **3D Channel** tab of the MS Processing Method window, you could only type values between zero and 50 in the **Leading Spectra Extraction Point (%)** and **Combined Peak Spectra % Peak Height Threshold (%)** boxes.

Now, you can type values up to 100 in both boxes.

Also reported as PCS 54639.

INFEMP-7247 (CRI-1500)

Previously, RMAN backups failed if the database alias (WAT12 or WAT18 by default) was changed in the *tnsnames.ora* file located at `\Oracle\Oracle12c\network\admin` or `\Oracle\Oracle18c\network\admin`. An error code associated with the failure was recorded in the backup log file.

Now, RMAN backups no longer fail if the database alias is changed in the *tnsnames.ora* file.

Also reported as PCS 55824.

INFEMP-7250 (CRI-1503)

Previously, when you viewed a result in the Result Audit Viewer, the incorrect Purity (Vial) value was listed in the Sample Values Used in Calculations field. All other Purity (Vial) values were correct.

Now, the issue is fixed.

Also reported as PCS 56080.

INFEMP-7251 (CRI-1504)

Previously, when you acquired a new sample set using a previously acquired sample set containing altered samples, samples in the newly acquired sample set may also be marked as altered. No sample history was present for the samples marked as altered.

Now, when you acquire a new sample set using a previously acquired sample set containing altered samples, the newly acquired samples are not marked as altered.

Also reported as PCS 56111.

INFEMP-7311 (CRI-1224)

Previously, if you took multiple sample sets into Review and the first sample set had only one injection, when you clicked **Next Injection**, the first injection of the second sample set was skipped.

Now, clicking **Next Injection** has the expected results.

INFEMP-7316 (CRI-1308)

Previously, in Review, when you repeatedly performed manual integration on a result that was not part of a result set, the value of the **Sample Set ID** field was incorrectly set, which left the **SampleName** field blank and caused the result to be linked with the wrong sample set.

Now, the issue is fixed.

Also reported as PCS 54069.

INFEMP-8159 (CRI-1838)

Previously, the Revision History of a Sample Set method may not have shown the name of the user who saved that version of the method in the Revision History of the method. The Audit Trail correctly showed the name of the user who actually saved that version of the method.

This happened only when the Sample Set method open in the editor was the same version as the version associated with a sample set that was then brought into Alter Sample by a different user, and the second user then saved the changes to the method in Alter Sample.

Now, the issue is fixed.

INFEMP-9313 (CRI-1887)

Previously, when you closed the Run Samples window, unsaved changes to the sample set method were lost.

Now, when you close the Run Samples window, if you have unsaved changes to the sample set method, a message appears asking if you want to save the changes. If you click **Yes**, the modified sample set method can be saved by clicking the **Save** button in the Sample Set Method window. If the fields of the sample set are not filled in correctly, the window does not close and the tool tips suggest what must be corrected. If you click **No**, the changes are not saved and the window closes. If you click **Cancel**, the window stays open and the modifications made to the sample set method are not saved.

Also reported as PCS 53952.

INFEMP-10908 (CRI-1552)

Previously, in the Method Validation Manager, when an injection had the `Pre Empower3 SR3` status, an error message appeared stating that the sample set contained a bad injection and the Sample Set Status displayed a red x instead of a green check mark.

Now, the issue no longer occurs.

INFEMP-10932 (CRI-1891)

Previously, some details regarding access to functions in the Walk-Up interface and the appearance of the Pro user interface were incorrect or incomplete in the Help.

Now, the Help is updated to accurately reflect these interfaces.

INFEMP-11600 (CRI-2233)

Previously, for Gas Chromatography (GC) systems with headspace samplers, if the post runtime was greater than ten minutes in the **GC oven** tab, a `Timeout instrument failure error` appeared. This occurred because the Empower Instrument Server was set to wait for a maximum of ten extra minutes beyond the run time.

The issue is fixed.

INFEMP-11660 (CRI-2484)

Previously, a Channel Status could incorrectly be Data Incomplete when the Injection Status was Complete, with the data available and with 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-11857 and INFEMP-12180 (CRI-2505)

Previously, when you used an export method to export data in ASCII format, an extra # character (which shifts data to the right, causes incorrect placement of the report footer in the method table, and adds an extra new line to the report) was generated in the export file.

Now, the extra # character is no longer generated, the data is not shifted, and the header and footer are not included in the ASCII export files.

Also, if you exported a report method that contained a table with many rows in ASCII format, when you opened the report, a carriage return was added to a row and changed the alignment of the following row.

With the fix brought by INFEMP-11857, you can now edit the report method set with one or more of the following:

- Align the report method components inside the report method margins.
- Remove the chromatograms from the report method.
- Edit the tables and align column names in a single row.

Also reported as PCS numbers 56107 and 55510.

INFEMP-11881 (CRI-2555, CRI-1829)

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 Method Audit Trail. Furthermore, 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 Method Audit Trail and in the Method Properties.

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

INFEMP-11890 (CRI-1423)

Previously, two unnecessary database parameters were defined in the *settings.sql* file during the installation.

The two parameters were removed.

INFEMP-11987 (CRI-1198)

Previously, in the Review window, when you opened a channel with a **Broad Unknown** Sample Type and launched the Processing Method, the **Narrow** option was selected by default on the **Integration** tab of the Processing Method.

Now, in the same instance, the **Broad** option is selected by default.

INFEMP-12449 (CRI-2670)

Previously, some Empower installation scripts contained Oracle user passwords in readable format. Now, Oracle readable passwords have been replaced by parameters for the following users: Analytics user, MILLOGIN user, MILLENNIUM user, ACQUITY user, MILL_BIM user. The fillEmpowerDB and emptyEmpowerDB scripts create these users.

If you are installing Empower on a Red Hat OS where the fillEmpowerDB is run manually, contact Waters Technical Support to obtain the password values for the added parameters.

Note: The parameters must not be changed.

If you are installing Empower on a Windows OS, no action is required, because the installer correctly interprets and uses the fillEmpowerDB and emptyEmpowerDB scripts.

INFEMP-12611 (CRI-2678)

Previously, regardless of a user's privilege type, if the user was set as a user group administrator, in addition to being able to add or remove users from the user group, the user had access to the **Admin Properties** tab of the user group properties, which allows adding, modifying, and removing accounts and copying user preferences, even if those privileges are not included in the user type's privileges.

Now, user group administrators need specific privileges to delete, create, and modify users and, if they remove a user from the group by clicking **Delete user** in the **Admin Properties** tab, the remove user action is recorded in the System Audit Trail.

Also reported as PCS numbers 55532, 29292, and 54059.

INFEMP-12622 (CRI-2091)

Previously, not all Empower user accounts required passwords when logging in.

Now, all users are required to type a password when logging in to Empower. See [Security update - Password required at log in \(Page 22\)](#) for more details.

INFEMP-12628 (CRI-2277)

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

Now, when Empower loses the connection to the database server, the buffering and recovery work as expected and the `SampleSet.dat` file is no longer marked as corrupt.

INFEMP-12859

Previously, when Daylight Saving Time (DST) changes occurred, Empower users could not review backup logs in the Waters Database Manager application.

The issue is fixed.

INFEMP-14906 (CRI-3100)

Previously, with a parent project, when you used the **Copy to Sub-Projects** functionality from the **Access** tab of the Project Properties window, the Project Properties window became unresponsive and displayed (Not Responding).

Now, **Copy to Sub-Projects** works as expected.

INFEMP-15720 (CRI-3213)

Previously, Empower 3.6.0 was not compatible with 15×5 Series pumps.

The issue is fixed.

INFEMP-16174 (CRI-3359)

Previously, when you tried to create an instrument method and the system contained an Alliance instrument, an error message appeared and the Method Editor closed unexpectedly.

Now, the Method Editor functions as expected.

INFEMP-16513 (CRI-2615)

Previously, when you ran the SQT wizard with the Wavelength Accuracy SSM option selected, if a sample set method contained more than 20 Inject Standards lines, clicking **Run** caused an error message to appear and the application to close unexpectedly.

Now, sample set methods with more than 20 Inject Standards lines execute as expected.

INFEMP-16927

Previously, when the password for the SYS Oracle user account was changed, WDM backups failed to complete.

The issue is fixed.

INFEMP-16929 and INFEMP-16931

Previously, in Waters Database Manager (WDM) 4.0, you could not change the passwords for common Oracle users accounts and for the SYS Oracle user account.

Now, you can modify passwords for common Oracle user accounts and for the SYS user account in WDM.

Known issues in this release

This section lists the known issues and solutions for this release. The numbers identify issues that Waters personnel monitor within a system change request tracking tool.

INFEMP-6969 (CRI-474)

Editing a sample set custom field causes a new sample set ID to be created, as expected. If this is done post-acquisition, then the new sample set method does not include the history associated with the original sample set. In Preview, the edited sample set custom field history is available in the sample set report group, but it is not available in the sample set method report group. If the sample set custom field is edited during acquisition, the acquired data is also split between two sample sets.

Also reported as PCS numbers 56686, 54069, 53506, 53433, 54487, 54947, 54698, 55905, 56713, 56710, 56335, 55851, 56499, 53560, 56034, 56683.

INFEMP-6975 (CRI-609)

In Empower 3.6.1, Waters Database Manager (WDM) may optionally be set to back up the Empower Raw Data in addition to the Database. However, projects deleted from Empower are not automatically removed from the Raw Data backup location, which might result in unexpected disk capacity utilization. Appropriately trained administrators can manually remove the Raw Data from the backup location for projects removed from Empower.

INFEMP-6983 (CRI-904, CRI-1742)

Starting with Empower 3 Feature Release 4, when you perform a sign-off action, the `Unable to create PDF file for result sign off ID: ####. error` may appear. This occurs due to issues accessing the user temp folder where you create the PDFs.

Solution: For PDF creation, instead of the user temp folder, set up a central `ltemp` folder separate from the user temp folder, with **Full Control** permissions for **Everyone**.

INFEMP-7003 (CRI-1103)

Importing `.cdf` files fails with non-uniform data and can result in changes in retention time by one data point. Non-uniform data contains an inconsistent data rate throughout the data file. Data uniformity is controlled by the detector. Therefore, this problem may or may not occur, depending on the detector and the instrument method used to acquire the data.

INFEMP-7163 (CRI-1444)

When you reprocess a result set using an existing integration where the sample set method has bracketing with overlap, the results for the standards that were processed twice in the original result set end up being processed four times in the new result set.

This defect only causes duplicate standard results to be saved. It has no effect on the calibration curves or the unknown results because before a point is added to a calibration curve, if there is a point with the same channel id, it is removed.

In the calibration curves, the calibration points from the duplicated standard results replace the already added points that were produced the first time the standards results were reprocessed.

INFEMP-7782

In the Korean version of the About Pro window, the Installed Service Packs and the Installed Options boxes do not have scroll bars.

INFEMP-8221

In the Japanese version, in Run Samples, in the In-Needle Auto Additions editor, when a user specifies incomplete information in the Vial or InjVol column, the system correctly displays the `Entry in row %d is incomplete. Enter a valid location and a volume` message, but due to an error in translating the message, the `%d` value is not converted into the row number and is displayed as such.

INFEMP-8354 (CRI-1866)

When you bring more than 30 3D results into Report Publisher from different sample sets, the following messages appear in the Message Center: `Not enough storage is available to process this command` and `Chrom map view of file failed`. If you bring less than 30 results into Report Publisher, or if the report method does not include chromatograms or spectral plots, no error messages appear.

INFEMP-8492

In Run Samples, with a set service date that was reached, when you select a project, select the second system in the Chromatographic Systems box, and then click **Use Walk-Up interface**, a prompt appears indicating that the service date for the system was reached. If you select **No** at this prompt, an error message appears and the Walk-Up window fails to close automatically.

INFEMP-8498

In Review, with an ApexTrack processing method, when you click **Show Events**, right-click either the Start or the End vertical lines, and select **Modify Integration Event** or **Delete Integration Event** from the context menu, an `Encountered an improper argument` error appears.

Solution: Modify the event by repositioning the Start and End vertical lines on the plot.

Alternatively, you can also modify or delete the Start and End values in the **Integration** tab of the Processing Method window.

INFEMP-9122

When running Verify Files on a Windows 10 Pro machine, the `checksum` file incorrectly displays the operating system name as Windows Enterprise. Additionally, when you use Empower SystemsQT for Empower software reports that contain Software installation information, the operating system name is incorrectly displayed as Windows Enterprise.

INFEMP-9846 (CRI-1213)

Waters Database Manager (WDM) may not correctly delete obsolete backup sets and may leave orphaned folders at the backup location. This could result in unexpected disk capacity utilization.

Solution: Appropriately trained administrators can manually remove the backup sets and any orphaned folders from the backup location.

INFEMP-9895

When you perform Signoff 2 and enable lock channels, if a comment is required for locking channels, after signoff, you are prompted for a sample information comment associated with the

lock channels action. If you click **Cancel** in the comment prompt, Signoff 2 is applied to the results, but channels do not lock.

Solution: Do not click **Cancel**.

INFEMP-10911 (CRI-1768)

When more than one user is connected to a system, changes made during acquisition are logged in the Message Center for the user who initiated the Sample Set and not for the user who made the change. This provides a way to alert the user who started the acquisition that the acquisition was modified by a different user. However, the message in the Message Center seems to indicate that the user who initiated the Sample Set made the change.

The action is recorded in the project audit trail and attributed to the correct user.

INFEMP-10993

If you use a monitor with 4k resolution and set scaling over 100%, when you move a toolbar or control panel in Empower, you see a rectangle up and to the left of the toolbar or control panel you are moving.

Solution: To select where to move the toolbar or control panel, use the location of the cursor instead of the rectangle.

INFEMP-11383

On the **Import/Export** tab of the Waters Database Manager, when you select **Datapump Export > Schemas > Millennium > Finish**, no *Export.dmp* files are created and an error message appears when you attempt to view the log in the Datapump Job History. Even though the log and export files are not created, the Datapump Export is successful.

INFEMP-11560

The Waters Network Configuration Assistant default user account, System, cannot be used to set up a service name to run Empower.

Solution: Use another account defined in the Pluggable Empower Database to set up a service name.

INFEMP-11774

In the Chinese, Japanese, and Korean versions, when you launch the Waters Email Service installer, some text does not display correctly because of missing translations.

INFEMP-11990

When you edit a saved processing method in the method editor and delete a Named Group peak from the Components table, the method editor stops responding.

Solution: Delete the Named Group peak from the Named Group tab of the processing method.

Note: The same issue occurs when you delete a Timed Group peak or an Impurity Group peak.

INFEMP-12711

When you use the Japanese IME (Input Method Editor) and type a half-width (horizontally narrow) Japanese character not accepted by Empower, the cursor freezes.

Solution: When this issue occurs, change the IME mode to English and type an English character.

INFEMP-13017

When you type more than one Korean character in the New user group dialog field, the first letter of the second character overwrites the first character, and an error message appears.

Solution: Type the user group name in a text file, copy, and then paste the user group name into the New user group dialog field.

INFEMP-13946

In Report Viewer, if you use Adobe Reader XI to view reports, the report is correctly displayed but, after a few seconds, the content of the report is no longer visible because the Adobe Reader XI application closes.

Solution: Waters recommends using Adobe Reader DC to view reports.

INFEMP-15360 (CRI-3003)

When you use Japanese characters in the system name, the data acquisition fails.

Solution: Rename the system using English characters, and then perform the data acquisition.

INFEMP-15719 (CRI-3218)

In the User Analysis section of Empower Analytics, reports may fail to display a username.

INFEMP-16808

With AutoArchive enabled, when you attempt to manually archive a project in the Configuration Manager, the AutoArchive application fails to start.

Solution: To launch the AutoArchive application and have the Manual Archive option available, navigate to *X:\Empower\Bin*, where X is the drive where Empower is installed, and double-click **autoarchive.exe**.

INFEMP-16939

Passwords for Oracle user accounts can contain only the following characters: [a-z][A-Z][0-9][~!#*_+~{}:~?].

Test configurations

This application update was tested on the following system configurations.

Empower Server

Windows database server

Microsoft Windows Server 2016 Standard

Microsoft Windows Version

10.0.14393 N/A Build 14393

Microsoft Windows Hotfixes:

KB4049065,KB4535680,KB4550994,KB4562561,KB4565912,KB4576750, KB4589210,KB4601392,KB5001078,KB5001402,KB5001347,KB4494175,KB3186568,KB3192137,KB3199986,KB4035631,KB4091664,KB4093137,KB4132216,KB4465659,KB4498947,KB4509091,KB4540723,KB4541329,KB5003197,KB4485447,KB4520724,KB4598243

Windows Server 2019 Standard

Microsoft Windows Version

10.0.14393 N/A Build 14393

Microsoft Windows Hotfixes:

KB4601558,KB4462930,KB4494174,KB4523204,KB4535680,KB4537759,KB4558997,KB4561600,KB4562562,KB4566424,KB4570332,KB4577586,KB4577667,KB4580325,KB4587735,KB4589208,KB4598480,KB4601393,KB5000859,KB5001404,KB5001342,KB4601060,KB4549947,KB4601345,KB4049065,KB4494175,KB4550994,KB4562561,KB4565912,KB4576750,KB5001078,KB4598243,KB5000822,KB5000854

Windows Server 2019 Datacenter (AWS Workspace)

Microsoft Windows Version

10.0.17763 N/A Build 17763

Microsoft Windows Hotfixes:

KB4601555,KB4470502,KB4470788,KB4480056,KB4486153,KB4493510,KB4499728,KB4504369,KB4512577,KB4512937,KB4521862,KB4523204,KB4535680,KB4539571,KB4549947,KB4558997,KB4562562,KB4566424,KB4570332,KB4577586,KB4577667,KB4587735,KB4589208,KB4598480,KB4601393,KB5000859,KB5001404,KB5001342

Red Hat Linux database server

Red Hat Server Release 8.0

Red Hat Enterprise Linux Server 8.0 packages:

GConf2-3.2.6-22.el8.x86_64,ModemManager-1.8.0-1.el8.x86_64,ModemManager-glib-1.8.0-1.el8.x86_64,NetworkManager-1:1.14.0-14.el8.x86_64,NetworkManager-adsl-1:1.14.0-14.el8.x86_64,NetworkManager-bluetooth-1:1.14.0-14.el8.x86_64,NetworkManager-config-server.noarch-1:1.14.0-14.el8.x86_64,NetworkManager-libnm-1:1.14.0-14.el8.x86_64,NetworkManager-team-1:1.14.0-14.el8.x86_64,NetworkManager-tui-1:1.14.0-14.el8.x86_64,NetworkManager-wifi-1:1.14.0-14.el8.x86_64,NetworkManager-wwan-1:1.14.0-14.el8.x86_64,PackageKit-1.1.12-2.el8.x86_64,PackageKit-command-not-found-1.1.12-2.el8.x86_64,PackageKit-glib-1.1.12-2.el8.x86_64,PackageKit-gstreamer-plugin-1.1.12-2.el8.x86_64,PackageKit-gtk3-module-1.1.12-2.el8.x86_64,abattis-cantarell-fonts.noarch-0.0.25-4.el8.x86_64,accountsservice-0.6.50-6.el8.x86_64,accountsservice-libs-0.6.50-6.el8.x86_64,acl-2.2.53-1.el8.x86_64,adcli-0.8.2-2.el8.x86_64,adobe-mappings-cmap.noarch-20171205-3.el8.x86_64,adobe-mappings-cmap-deprecated.noarch-20171205-3.el8.x86_64,adobe-mappings-pdf.noarch-20180407-1.el8.x86_64,adwaita-cursor-theme.noarch-3.28.0-2.el8.x86_64,adwaita-gtk2-theme-3.22.3-4.el8.x86_64,adwaita-icon-theme.noarch-3.28.0-2.el8.x86_64,alsa-lib-1.1.6-3.el8.x86_64,alsa-plugins-pulseaudio-1.1.6-3.el8.x86_64,alsa-ucm-1.1.6-3.el8.x86_64,alsa-utils-1.1.6-2.el8.x86_64,anaconda-core-29.19.0.40-1.el8.x86_64,anaconda-gui-29.19.0.40-1.el8.x86_64,anaconda-tui-29.19.0.40-1.el8.x86_64,anaconda-user-help.noarch-1:8.0.9-1.el8.x86_64,anaconda-widgets-29.19.0.40-1.el8.x86_64,appstream-data.noarch-8-20180721.el8.x86_64,aspell-12:0.60.6.1-21.el8.x86_64,at-3.1.20-11.el8.x86_64,at-spi2-atk-2.26.2-1.el8.x86_64,at-spi2-core-2.28.0-1.el8.x86_64,atk-2.28.1-1.el8.x86_64,atkmm-2.24.2-6.el8.x86_64,attr-2.4.48-3.el8.x86_64,audit-3.0-0.10.20180831git0047a6c.el8.x86_64,audit-libs-3.0-0.10.20180831git0047a6c.el8.x86_64,augeas-libs-1.10.1-8.el8.x86_64,authselect-1.0-13.el8.x86_64,authselect-compat-1.0-13.el8.x86_64,authselect-libs-1.0-13.el8.x86_64,avahi-0.7-19.el8.x86_64,avahi-

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Empower File Server

Windows Server 2016 Standard

Microsoft Windows Version

10.0.14393 N/A build 14393

Microsoft Windows Hotfixes:

KB3199986,KB4049065,KB4485447,KB4494175,KB4520724,KB4535680,KB4537806,KB4550994,KB4562561,KB4565912,KB4576750,KB4589210,KB4601392,KB5001078,KB5001402,KB5001347

Empower client

Windows Server 2016 Datacenter (AWS WorkSpace)

Microsoft Windows Version

10.0.14393 N/A Build 14393

Microsoft Windows Hotfixes:

KB3176936,KB3186568,KB3192137,KB3199209,KB3199986,KB4013418,KB4023834,KB4035631,KB4049065,KB4089510,KB4093137,KB4132216,KB4465659,KB4485447,KB4498947,KB4503537,KB4509091,KB4512574,KB4520724,KB4521858,KB4535680,KB4540723,KB4550994,KB4562561,KB4565912,KB4576750,KB4589210,KB4601392,KB5001078,KB5000803

Windows Server 2019 Datacenter (AWS Workspace)

Microsoft Windows Version

10.0.17763 N/A Build 17763

Microsoft Windows Hotfixes:

KB4601555,KB4470502,KB4470788,KB4480056,KB4486153,KB4493510,KB4499728,KB4504369,KB4512577,KB4512937,KB4521862,KB4523204,KB4535680,KB4539571,KB4549947,KB4558997,KB4562562,KB4566424,KB4570332,KB4577586,KB4577667,KB4587735,KB4589208,KB4598480,KB4601393,KB5000859,KB5001404,KB5001342

Windows 10 Pro

Microsoft Windows Version

10.0.19042 N/A Build 19042

Microsoft Windows Hotfixes:

KB4601554,KB4562830,KB4570334,KB4577586,KB4580325,KB4589212,KB4598481,KB5000802,KB5000858,KB4578968,KB4586864,KB4598242,KB4601050,KB5001330,KB5001405,KB4586876,KB4601554 ,KB4593175,KB5003173,KB5003242,KB4584229,KB5001330,KB4598481

Microsoft Windows Version

10.0.18363 N/A Build 18363

Microsoft Windows Hotfixes:

KB4576484,KB4574727,KB4517245,KB4535680,KB4561600,KB4565554,KB4576751,KB4577586,KB4580325,KB4541338,KB4601395,KB5001028,KB4601056,KB4497165,KB4513661,KB4516115,KB4521863,KB4524569,KB4537759,KB4552152,KB4559309,KB4560959,KB4569073,KB4577670

Microsoft Windows Version

10.0.19041 N/A Build 19041

Microsoft Windows Hotfixes:

KB4586876,KB4561600,KB4577266,KB4580325,KB4586864,KB4586781,KB4601050,KB4534170,KB4537759,KB4545706,KB4557968,KB4560366,KB4570334,KB4598481,KB4601319,KB4576478,KB4566785,KB4571756

Microsoft Windows Version

10.0.18362 N/A Build 18362

Microsoft Windows Hotfixes:

KB4578974,KB4497727,KB4561600,KB4565554,KB4576751,KB4580325,KB4586863,KB4592449

Citrix Server

Citrix App Server

Microsoft Windows Server 2019 Standard (Citrix Virtual Apps and Desktops 7 1912 LTSR CU2 - Virtual Delivery Agent v1912.0.2000.2345)

Microsoft Windows Version

10.0.17763 N/A Build 17763

Microsoft Windows Hotfixes:

KB4601555,KB4462930,KB4486153,KB4494174,KB4523204,KB4535680,KB4537759,KB4558997,KB4561600,KB4562562,KB4566424,KB4570332,KB4577586,KB4577667,KB4580325,KB4587735,KB4589208,KB4598480,KB4601393,KB5000859,KB5000822

Microsoft Windows Server 2016 Standard (Citrix 7.15 LTSR CU2 - Virtual Delivery Agent v7.15.2000.291)

Microsoft Windows Version

10.0.14393 N/A Build 14393

Microsoft Windows Hotfixes:

KB3186568,KB3192137,KB3199986,KB4035631,KB4049065,KB4093137,KB4132216,KB4494175,KB4535680,KB4550994,KB4565912,KB4576750,KB4580325,KB5001078,KB4601318,KB5001402,KB4556813

Citrix Presentation Server

Microsoft Windows Server 2016 Standard

Microsoft Windows Version

10.0.14393 N/A Build 14393

Microsoft Windows Hotfixes:

KB3186568,KB3192137,KB3199986,KB4035631,KB4049065,KB4093137,KB4132216,KB4520724,KB4535680,KB4550994,KB4576750,KB4577586,KB4589210,KB5001078,KB5001402,KB5003197

Citrix Client

Microsoft Windows 10 Pro (Interface Citrix receiver 14.9.0.2539)

Microsoft Windows Version

10.0.18363 N/A Build 18363 (ver 1909)

Microsoft Windows Hotfixes:

KB4601056,KB4513661,KB4516115,KB4517245,KB4521863,KB4524244,KB4535680,KB4537759,KB4538674,KB4541338,KB4552152,KB4560959,KB4561600,KB4565554,KB4569073,KB4576751,KB4577670,KB4580325,KB4586863,KB4598479,KB4601395,KB5000908,KB5001205,KB5001406,KB5003155,KB5003244,KB5003169

Standalone/Personal Workstation

Microsoft Windows 10 Enterprise 2016 LTSC

Microsoft Windows Version

10.0.14393 N/A Build 14393

Microsoft Windows Hotfixes:

KB3186568,KB4033631,KB4049065,KB4049411,KB4054507,KB4503537,KB4509091,KB4520724,KB4535680,KB4577586,KB4589210,KB5001078,KB5001402,KB5001347,KB5000803

Windows 10 Pro

Microsoft Windows Version

10.0.19042 N/A Build 19042

Microsoft Windows Hotfixes:

KB4601554,KB4534170,KB4537759,KB4545706,KB4557968,KB4560366,KB4561600,KB4562830,KB4570334,KB4577266,KB4577586,KB4580325,KB4586864,KB4589212,KB4593175,KB4598481,KB5000802,KB5000858,KB5001330,KB5001405,KB4601050,KB4593175,KB4584229,KB5001405,KB5003173,KB5003242,KB4601050

Microsoft Windows Version

10.0.18362 N/A Build 18362

Microsoft Windows Hotfixes:

KB4580980,KB4497165,KB4537759,KB4541338,KB4561600,KB4565554,KB4576751,KB4577670,KB4580325,KB4586863,KB4586786,KB4552931,KB4513661,KB4516115

Microsoft Windows Version

10.0.18363 N/A Build 18363

Microsoft Windows Hotfixes:

KB4601056,KB4517245,KB4535680,KB4561600,KB4576751,KB4580325,KB4601395,KB5001028

LAC/E device

Windows 10 Enterprise 2016 LTSC

Microsoft Windows Version

10.0.14393 N/A Build 14393

Microsoft Windows Hotfixes:

KB3186568,KB4033631,KB4049065,KB4049411,KB4054507,KB4520724,KB4535680,KB4562561,KB4576750,KB4577586,KB4589210,KB5001078,KB5000803,KB4485447,KB4487038,KB4580325,KB5001402,KB5001347

Windows 10 Pro

Microsoft Windows Version

10.0.19042 N/A Build 19042

Microsoft Windows Hotfixes:

KB4601554,KB4562830,KB4570334,KB4577586,KB4580325,KB4589212,KB4598481,KB5001330,KB5001405,KB5003173,KB5003242

Microsoft Windows Version

10.0.18363 N/A Build 18363

Microsoft Windows Hotfixes:

KB4601556,KB4497727,KB4517245,KB4535680,KB4561600,KB4565554,KB4576751,KB4577586,KB4580325,KB4586863,KB4598479,KB4601395,KB5001028,KB4577670,KB4537759,KB4538674,KB4560959,KB4521863,KB4524569,KB4601056,KB4497165,KB4513661,KB4516115

Microsoft Windows Version

10.0.19041 N/A build 19041

Microsoft Windows Hotfixes:

KB4576478,KB4534170,KB4537759,KB4545706,KB4557968,KB4560366,KB4561600,KB4566785,KB4570334,KB4577266,KB4571756