

UNICORN™ OPC Server

Release Notes

1 Introduction

This document describes the major implemented changes, improvements, and corrected issues in the released versions of the UNICORN™ OPC Server.

Compatibility

For information about compatibility with different UNICORN software versions, refer to the *UNICORN Compatibility Matrix* at cytiva.com/UNICORNcompatibility.

2 Release 1.5 (build 1.5.0.221)

Installation instructions

UNICORN OPC Server 1.5 is compatible with UNICORN 7.13.

For information about the UNICORN OPC Server 1.5 installation, refer to the *UNICORN OPC Server 1.5 User Manual (29939016)*.

We recommend uninstalling your current UNICORN OPC Server software before installing the new version.

New functionality

UNICORN OPC Server has been updated to .NET 8.0.

An auto-connect feature has been added for when the connection between UNICORN OPC Server and the instrument server or OPC UA Client is interrupted.

High-priority defect fixes have been fixed.

Corrected defects

The following defects have been fixed in UNICORN OPC Server 1.5:

- The **BadNotConnected** error is displayed from the server after executing some instructions or events.
- The **Instruction** and **Event** tags are not retained in the OPC UA Client when you log off and log on again.
- When you disable any mode through **Settings** on the UNICORN **System Control**, the value in the corresponding tag in the OPC UA Client is not changed to zero. Conversely, when you disable any mode through the OPC UA Client, the corresponding **Mode** under **Settings** is not updated on the **UNICORN System Control**.
- When you restart UNICORN OPC Server, some folders under **HDA** are duplicated in the OPC UA Client.
- In a multi-system environment, the user in control is not released when a network cable is disconnected.
- UNICORN OPC Server does not automatically connect to the active ÄKTA process™ system when power resumes after powering off.
- The **BadNoDataAvailable** error is displayed if you install UNICORN OPC Server before installing UNICORN.
- The **BadAlreadyExists** error is displayed in the OPC UA Client when you log in through KEPServer and then attempting to connect with the OPC UA Client using the same user.
- The parameters of the **Peak** table in **HDA** do not sync with the UNICORN classic **Evaluation**.
- All log details from the UNICORN log entries are not retrieved in **Global logbook** in the OPC UA Client.
- The alarm list on the OPC UA Client does not match the alarm list on UNICORN during the restart of the instrument server.
- In a multi-system environment, the connection for ÄKTA pure™ does not resume when the instrument server is restarted, even when automatic reconnect is enabled.
- When any instrument server is down, whether in a multi-system or single system environment, the user cannot log in through the OPC UA Client. A timeout error is displayed, and the OPC server is stopped after some time.
- The number of tubes is not retrieved in the **Fraction Collector** tag under **HDA**.
- Some parameters of **Columns** are not retrieved in the **Columns** tag in under **HDA**.
- When multiple systems are connected, the **BadTimeOut** error is displayed during login.
- Saved projects are not retained when closing and reopening the OPC UA Client.
- In a multi-system environment, the connection does not resume after a network cable is disconnected and connected again.

- The **BadRequestNotAllowed** error is displayed when executing the **End** instruction during **Alarm and Error** state.
- An error occurs while retrieving **Evaluation logbook** tags from a result file in the OPC UA Client.
- The peak table from one result file is duplicated in other result files when you do a re-browse.
- In a multi-system environment, when auto-connect is disabled, the tags in the **Settings** folder are not loaded in the OPC UA Client.
- In the OPC UA Client, the timestamp for any alarm does not match the actual time of occurrence of the alarm.
- The **GettingBadUnexpected** error is displayed when expanding the **Peak** table folder with a specific result.
- In **HDA**, the **BadUnexpectedError** is displayed when expanding result folders if you are logged in as the `default` user instead of `Default`.
- After acknowledging the alarm from the OPC UA Client, the user cannot execute any instructions.
- Unable to execute the method when `Dapper.dll` is missing.
- Some of the methods display errors when retrieving data from Cogent or FactoryTalk Linx.
- The **Update** and **Repair** sections and their associated logic have been removed from the UNICORN OPC Server installer.

3 Release 1.4.1 (build 1.4.1.89)

Installation instructions

UNICORN OPC Server 1.4.1 is compatible with UNICORN 7.12.

Follow the same installation information from the *UNICORN OPC Server 1.4 User Manual* (29872189) to install UNICORN OPC Server 1.4.1.

We recommend uninstalling your current UNICORN OPC Server software before installing a new version of UNICORN OPC Server.

New functionality

Enable Method Browsing has been added under **General Settings** in the UNICORN OPC Server Configuration Tool; when selected, UNICORN OPC Server browses and includes method data or tags in **Address Space** of the OPC UA Client.

Clear **Enable Method Browsing** when you configure to load a large database that contains many methods, to avoid method performance tags in the OPC UA Client.

Enable System Setting Browsing has been added under **General Settings** in the UNICORN OPC Server Configuration Tool; when selected, UNICORN OPC Server browses and includes setting data or tags in **Address Space** of the OPC UA Client.

In the OPC UA Client, generic commands have been removed from other folders under **Instructions**, and they can now be executed using the command tag.

Corrected defects

The following defects have been fixed in UNICORN OPC Server 1.4.1:

- The alarm list on the OPC UA Client does not match the alarm list on UNICORN during the restart of the instrument server.
- The peak table from one result file is duplicated in other result files when you do a re-browse.
- When you restart UNICORN OPC Server, some folders under **HDA** are duplicated in the OPC UA Client.
- In the OPC UA Client, the timestamp for any alarm does not match the actual time of occurrence of the alarm.
- After acknowledging the alarm from the OPC UA Client, the user cannot execute any instructions.
- In **HDA**, the **BadUnexpectedError** is displayed when expanding result folders if you are logged in as the `default` user instead of `Default`.
- Some of the methods display errors when retrieving data from Cogent or FactoryTalk Linx.
- When the database server disconnects from UNICORN OPC Server and then reconnects, UNICORN OPC Server does not connect to the database server without a restart.

4 Release 1.4 (build 1.4.0.854)

Installation instructions

UNICORN OPC Server 1.4 is compatible with UNICORN 7.12.

For information about the UNICORN OPC Server 1.4 installation, refer to the *UNICORN OPC Server 1.4 User Manual (29872189)*.

We recommend uninstalling your current UNICORN OPC Server software before installing a new version of UNICORN OPC Server.

New functionality

The same user can initiate multiple connections from different client devices to the same system, and each session operates independently. If one session disconnects, the other active sessions of the same user are not affected.

The user can now enable or disable the user name from the node ID to enable the OPC UA Client, which does not support **Method Call/Method services**, to support a predefined configured tag in multi-user scenarios.

The user can now enable the automatic connection to the active system after logging on.

Automatic reconnection to the active system during a connection disruption such as a system power off or a shutdown.

Automatic reconnection to the active system during a connection disruption such as the Instrument server stopping and a network cable disconnecting between the instrument server and UNICORN OPC Server.

Update the OPC stack provided by the OPC Foundation to make sure that it is compatible with the latest version of the Compliance Test Tool (CTT).

Corrected defects

- Fixed HDA defects related to documentation tags like **FractionCollector**, **InstrumentConfigurationDetails**, and **PeakTable**.
- The **OPC** user has been restricted from logging into OPC UA Client.
- The **ClientUserID** value property has been corrected for the user who acknowledges an alarm from an appropriate source of alarms (digital, analog, or others).
- Fixed the defect related to the shutdown and start-up of the system in a multi-system/multi-user environment.
- Fixed the defect related to the session closing when a network disruption occurs between the UNICORN OPC Server and OPC UA Client.

5 Release 1.3 (build 1.3.0.857)

Installation instructions

UNICORN OPC Server 1.3 is compatible with UNICORN 7.11.

For information about the UNICORN OPC Server 1.3 installation, refer to the *UNICORN OPC Server 1.3 User Manual (29752660)*.

We recommend uninstalling your current UNICORN OPC Server software before installing a new version of UNICORN OPC Server.

New functionality

Support using UNICORN OPC Server for production clients (OPC UA Client does not support **Method Call / Method services**) without enabling the general settings from UNICORN OPC Server Configuration Tool.

The **Address Space** view in OPC UA Client can be viewed without connecting to the active system, defined in UNICORN. However, the user needs to manually connect the system to get the real-time tags data.

Corrected defects

- The OPC Configuration Tool has been updated with enhanced cybersecurity measures.
- Supporting log for the OPC Configuration Tool.
- Fixed the pause instruction functionality from OPC if the pause button is disabled from UNICORN.
- Support for UNICORN OPC UA raw data.
- Fixed **Test database connection** issues for SQL Server Enterprise DB, by adding UNICORN to the database name.
- Fixed defects related to **Batch ID**, **Start notes**, and **Result Name** for method tags.
- Fixed HDA defects with respect to **Documentation (Buffer Pro, Result Summary)** and parsing of tags in the system folder.

6 Release 1.3 (build 1.3.0.798)

Installation instructions

UNICORN OPC Server 1.3 is compatible with UNICORN 7.11.

For information about the UNICORN OPC Server 1.3 installation, refer to the *UNICORN OPC Server 1.3 User Manual (29752660)*.

New functionality

Support using UNICORN OPC Server for production clients (OPC UA Client does not support **Method Call / Method services**) without enabling the general settings from UNICORN OPC Server Configuration Tool.

The **Address Space** view in OPC UA Client can be viewed without connecting to the active system, defined in UNICORN. However, the user needs to manually connect the system to get the real-time tags data.

Corrected defects

- Supporting log for the OPC Configuration Tool.
- Fixed the pause instruction functionality from OPC if the pause button is disabled from UNICORN.
- Support for UNICORN OPC UA raw data.
- Fixed **Test database connection** issues for SQL Server Enterprise DB, by adding UNICORN to the database name.
- Fixed defects related to **Batch ID**, **Start notes**, and **Result Name** for method tags.
- Fixed HDA defects with respect to **Documentation (Buffer Pro, Result Summary)** and parsing of tags in the system folder.

7 Release 1.2.2 (build 1.2.2.45)

Installation instructions

UNICORN OPC Server 1.2.2 is compatible with the UNICORN 7.10 installation updated with UNICORN 7.10 SP1 (Service Pack 1).

For information about the UNICORN 7.10 SP1 installation, refer to the *UNICORN Database SP1 Release notes and installation instructions (29741666)*.

Follow the same installation information from the *UNICORN OPC Server 1.2.1 User Manual (29744019)* to install UNICORN OPC Server 1.2.2.

New functionality

Enable Method Browsing has been added under **General Settings** in the UNICORN OPC Server Configuration Tool; when selected, UNICORN OPC Server browses and includes method data or tags in **Address Space** of the OPC UA Client.

Clear **Enable Method Browsing** when you configure to load a large database that contains many methods, to avoid method performance tags in the OPC UA Client.

Corrected defects

The following defects have been fixed in UNICORN OPC Server 1.2.2:

- In the OPC UA Client, the timestamp for any alarm does not match the actual time of occurrence of the alarm.
- Loading all tags for a specific method structure is unsuccessful when Cogent is configured to load all tags.

8 Release 1.2.1

Installation instructions

UNICORN OPC Server 1.2.1 is compatible with the UNICORN 7.10 installation updated with UNICORN 7.10 SP1.

For information about the UNICORN 7.10 SP1 installation, refer to the *UNICORN Database SP1 Release notes and installation instructions (29741666)*.

For information about the UNICORN OPC Server 1.2.1 installation, refer to the *UNICORN OPC Server 1.2.1 User Manual (29744019)*.

Corrected defects

- The **Virtual Output** instructions can now be viewed from the UNICORN OPC Server via the OPC UA Clients.

- In the HDA server, the **Status Code** value for the attribute shown as **BadWaitingforInitialData** is corrected. The **Status Code** shows **Good** when the **HDA Tags** are selected.

9 Release 1.2

New functionality

- UNICORN OPC Server DLLs have been updated to be compatible with UNICORN 7.10.
- The following was updated for the UNICORN OPC Server Configuration Tool:
 - UNICORN OPC Server support to enable **Method call setting / Method service**.
 - **Database Name**, **UserName**, and **Password** fields added, to configure for **DataBase**.
 - **Network Adapter** and **Port** functionality added to check and configure port availability.
 - Automatic delay start for the OPC service added to ensure UNICORN OPC Server connection to UNICORN System.

Installation instructions

For information about installation, refer to the *UNICORN OPC Server 1.2 User Manual* (29736574).

Corrected defects

- Improved **Browse** functionality for methods in OPC Server (refer to the UNICORN OPC Manual, section 2.5).
- Fixed **Browse** and **Write** functionality for displaying and executing **Scouting** variables.
- How **Subscription** and **Monitoring** are handled, when values change after multiple users connect.
- Improved session close and disconnect.
- Fixed write functionality for **Column** type method variable input at **Method Run**.
- Fixed logon for a **User** if **User** is part of admin as well as another user group.
- Updated installation for OPC server **StartUp Type** to be **Automatic Delayed**.
- Fixed OPC Client not releasing control when component is removed from hardware.
- Fixed error seen while changing **Instructions** or system settings, if the system is in the **Performing a New Run** or **Saving Result** state.
- Fixed numeric and multiple choice question values not updating in the results when executing from OPC Server.

- Users are now able to execute methods without providing values to mandatory questions (which is not allowed in UNICORN).
- **Fraction Collector** details are now visible in the OPC Server.
- Synchronization of alarms handled in a multi-user and multi-system OPC server setup.
- Enhanced result data viewed in UNICORN OPC Server.

10 Release 1.1.0

New functionality

- UNICORN OPC Server has been updated from Microsoft .NET Framework to Microsoft .NET 6 to be compatible with UNICORN version 7.9.
- UNICORN OPC Server DLLs have been updated to be compatible with UNICORN version 7.9.

Installation instructions

For information about installation, see the *UNICORN OPC Server 1.1.0 User Manual* (29729362).

Corrected defects

- Defect for peak curves and **PeakTable** folder addressed.
- System control feature dependency is not there while connecting to the system, the user can connect to any number of systems.
- Fixed – Updated questions not reflecting through the OPC Server if done after a method run.
- Fixed – Only **RunData** value is being updated, and not **Picture Data**.
- Fixed – Value for **Batch ID** is blank for a method.
- Fixed display of **Result** name instead of **Method** name.
- Fixed – Address space objects not loaded properly when there is a disconnect with the instrument server.
- Fixed – Alarms queue not in synchronization with the instrument server after a disconnect and reconnect is done.
- Fixed – Not able to read curves in **Time**.
- Fixed – Not getting correct range and **Engineering Units** for **RunData**.
- Fixed – Error in the logs when method variables are expanded.
- Fixed – Error while viewing the method items from **Documentation** of different results.

- Fixed – OPC Configuration Tool does not run as administrator by default.
- Fixed – Questions with same title but different input type are not displayed through the OPC Server.
- Fixed – OPC clients always displays dummy calibration data from the OPC HDA server.

11 Release 1.0.1

Functionality

- UNICORN OPC Server software supports private security, that is, log-on using UNICORN user name and password to connect to UNICORN.
- Option to configure UNICORN OPC Server to connect and take control of the available systems.
- Multi-user support to connect and acknowledge events.
- Option to edit data parameters to prepare, start, and control (pause, hold, continue, and end) UNICORN method runs via UNICORN OPC Server.
- Option to edit scouting parameters to prepare, start, and control (pause, hold, continue, and end) UNICORN scouting method runs via UNICORN OPC Server.
- Option to view the method queues and to start the method queue runs via UNICORN OPC Server.
- Option to edit data parameters to prepare, start, and control (pause, hold, continue, and end) UNICORN manual runs via UNICORN OPC Server.
- Option to edit system settings values to prepare UNICORN methods or manual runs via UNICORN OPC Server.
- Option to receive and acknowledge UNICORN notifications regarding alarms and errors generated by the system in real time via UNICORN OPC Server.
- Option to receive UNICORN data to monitor UNICORN methods or manual runs via UNICORN OPC Server without controlling the system.
- Option to view and connect to multiple systems and to control and view UNICORN methods or manual runs.
- Option to receive event information from UNICORN OPC Server in order to view curve data, picture data, discrete data, and run data.
- Option to retrieve results or historical data from the UNICORN Database methods available via UNICORN OPC Server.
- Option to retrieve the UNICORN audit trail from the UNICORN Database via UNICORN OPC Server.
- UNICORN OPC Server logs all incoming requests, sent responses, and values.

- Option to send requests to the system via UNICORN OPC Server without controlling the system.
- Communication with UNICORN when installed in a standalone installation or in a network installation.
- Option to update UNICORN OPC Server configurations via the UNICORN OPC Configuration Tool to perform configurations such as database name, license server, port configurations, and security configurations.
- The OPC Foundation specifications are supported in the UNICORN OPC Server 1.0.1 release and this release is certified by an independent test lab.

Installation instructions

For information about installation, refer to *UNICORN OPC Server 1.0.1 User Manual (29721253)*.

12 Known defects

Known defects in release 1.5

Defect ID	Summary
24925	Users within Access Groups have access to all controls through the OPC UA Client, even for controls in System Control that are not specifically assigned.
27732	EnumValues in the Method Variable(s) tags are not sorted in ascending order in the OPC UA Client.
27753	The value of the mandatory questions in the Method Variable(s) tags is not reset to default values after the method ends.
26681	In the OPC UA Client, exported curve results are not displayed against volume units such as CV and ml.
29856	The user cannot execute virtual output instructions when the OPC UA client is in the view mode.
26864	The performance of the HDA server is slow while browsing the data.
28114	The user cannot view the updated value for the Injection tag located under Event → DiscreteData .
29186	The Datatype for the EnumValues of the PictureData tags is displayed as Float for the ÅKTA process system.
27868	The unit of Plates per meter in the peak table does not match the unit in Evaluation Classic .

Defect ID	Summary
30116	When folders of several results are expanded to the tag level in the HDA , the tags cannot be read after restarting UNICORN OPC Server, resulting in the BadUnexpected or BadNodeIdUnknown error.
30147	When multiple tags under Settings with the Mode tag are added in Data Access View , they may revert to previous values when changed.
30159	The Documentation folder within the results in HDA doesn't have the Start Protocol tag.
30156	When the login password for a user is disabled from UNICORN, then user in the OPC UA Client can log on by entering the Username without regards to case sensitivity. For example, both <code>Default</code> and <code>default</code> are acceptable.
30143	In a multi-system environment, the timestamp for any alarm does not match the actual time of occurrence of the alarm when time-zone differs between the database and the OPC UA Client system.
30163	The Created parameter under Integration Summary in the peak table displays an incorrect date and time.
30158	In HDA , some entries are not reflected in the Global Logbooks tags.
26738	System Setting Information: Operation Statistics and UV Cell Path length tabs information is displayed in HDA .
27724	In the OPC UA Client, the Block instruction is not displayed for executing manual instructions.
27951	In HDA , the incorrect date and time are displayed in the result tags.
27806	In HDA , the system tags under the System folder do not retrieve some values of the enabled components.
29852	A user can log on to two OPC UA Client applications on the same PC with the same Username .
30103	The result tags retrieve the incorrect data type for the CurveType values.
28948	Tags for Reference Curve have not yet been implemented in the OPC UA Client.
26896	In the OPC UA Client, all alarms are grouped into the Other folder for the ÅKTA process system.
28602	In the OPC UA Client, exported curve results are not displayed against volume units such as CV and ml.

Defect ID	Summary
30176	In HDA , scout tag values are not retrieved in one of the scout runs.
30178	In HDA , the Peak index tag displays an incorrect value when there is only one peak.
24923	Alerts of the type Messages from UNICORN are not received by the OPC UA Client.
26805	The tags for turning UV on or off are not available through the OPC UA Client.
30569	The BadNodeIDUnknown is displayed when a user acknowledges all alarms while being logged in simultaneously on two different computers.
30573	In HDA , the timezone information is not retrieved for tags listed under Method Items and Result Items .
30724	The datatype for Method Variable(s) and Instruction tags is not retrieved correctly.

Know defects in release 1.4.1

Defect ID	Summary
24925	Users within Access Groups have access to all controls through the OPC UA Client, even for controls in System Control that are not specifically assigned.
27732	EnumValues in the Method Variable(s) tags are not sorted in ascending order in the OPC UA Client.
27753	The value of the mandatory questions in the Method Variable(s) tags is not reset to default values after the method ends.
26681	In the OPC UA Client, exported curve results are not displayed against volume units such as CV and ml.
29856	The user cannot execute virtual output instructions when the OPC UA client is in the view mode.
26864	The performance of the HDA server is slow while browsing the data.
28114	The user cannot view the updated value for the Injection tag located under Event → DiscreteData .
29186	The Datatype for the EnumValues of the PictureData tags is displayed as Float for the ÄKTA process system.

Defect ID	Summary
27868	The unit of Plates per meter in the peak table does not match the unit in Evaluation Classic .
30116	When folders of several results are expanded to the tag level in the HDA , the tags cannot be read after restarting UNICORN OPC Server, resulting in the BadUnexpected or BadNodeIdUnknown error.
30159	The Documentation folder within the results in HDA doesn't have the Start Protocol tag.
30156	When the login password for a user is disabled from UNICORN, then user in the OPC UA Client can log in by entering the Username without regards to case sensitivity. For example, both <code>Default</code> and <code>default</code> are acceptable.
30163	The Created parameter under Integration Summary in the peak table displays an incorrect date and time.
30100	In a multi-system environment, when auto-connect is disabled, the tags in the Settings folder are not loaded in the OPC UA Client.
29791	An error occurs while retrieving Evaluation logbook tags from a result file in the OPC UA Client.
27349	Some parameters of Columns are not retrieved in the Columns tag in under HDA .
30283	In Cogent, not all Nodes are loaded when the Log level is set to ALL .
30573	In HDA , the timezone information is not retrieved for tags listed under Method Items and Result Items .
30724	The datatype for Method Variable(s) and Instruction tags is not retrieved correctly.

Know defects in releases 1.1.0 and 1.0.1

Defect ID	Summary	Workaround or further information
27839	XML data is not parsed for tags under the Systems folder in HDA.	Remove any curly braces ({ }) at the start and end of the XML data. <pre><?xml version="1.0" encoding="utf-8"?><Wave_reshu><SystemType> <BioReactor><SystemType><InstrumentConfiguration>WAVE 25 (2 .0.9.0)</InstrumentConfiguration><SystemIsActive> <ControlledByUNICORNInstrumentServer> </ControlledByUNICORNInstrumentServer></SystemIsActive> <InstrumentSerialNo>4</InstrumentSerialNo> <<ConnectionBasedOnSerial /></Wave_reshu></pre>

Defect ID	Summary	Workaround or further information
27828	When a run is started, the Batch ID , Start notes , and Result Name tags of different methods that are created for a system display the same value in the OPC UA client.	This does not overwrite or otherwise affect the results in UNICORN Database. These 3 tags can be ignored for other methods when a Method Run is occurring for a selected Method.
27780	OPC Client disconnecting from server after working for some time.	The user should log in again and reconnect the OPC client to the UNICORN OPC server.
27794	Bad UnExpected Error in HDA error if System Name is defined with a space.	Do not include a space in the System Name .
27579	BadNoDataAvailable error if you install OPC Server before installing UNICORN.	User needs to restart the OPC Server to identify the UNICORN Instrument Server .
27098	Disconnecting one user also disconnects the other user.	Avoid having multiple OPC UA client users (from the same computer, or different computers) connected to the same system. Log off the current OPC UA user and log in with the user that needs to view the data.
27130	Alarm synchronization is not happening after restart of instrument server.	Whenever the UNICORN instrument server or the system is restarted, wait 2 minutes before re-browsing the Connect folder to re-establish the connection between the UNICORN instrument server and UNICORN OPC Server.
27157	BadTimeOut exception on clicking connect button.	This is due to a delay in getting the required information. Perform the operation (re-browse) again after a few seconds.

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