

OPC UA C++ SDK Release Notes

March 2021

Version	Date	Release Note
V5.65	16.03.2021	New features: <ul style="list-style-type: none">• Improved access to array members of data type classes• Update to OpenSSL 1.1.1i• Support for Decimal Data Type• Convenience function to configure Client::Session Bug fixes: <ul style="list-style-type: none">• Changed behaviour of inserting nodes into address space.• Changed behaviour of Server::BaseNode::init.• Fixed possible crash in recursive invocation of BaseNode::removeTree()• Fixed vulnerability (missing type checks for decoding various PubSub data types)
V5.64.0	06.10.2020	New features: <ul style="list-style-type: none">• Support Role Permissions• Discontinued support for Visual Studio 2010• Convenience function to configure Client::Session
V5.63.0	04.06.2020	New features: <ul style="list-style-type: none">• Support for Visual Studio 2019• Update to OpenSSL 1.1.1g• Configurable discovery URL• Interface changes for host name resolution• Configurable operation limits• Added support for ARMv7, reduced Linux installer size Bug fixes: <ul style="list-style-type: none">• Corrected problems related to Nodeset2 import/export.• Trace enabled by default in all samples and tutorials.• Fix error handling on client side when republishing is enabled.• Corrected FileDirectory::addFile() to support files > 2GB.
V5.62.1	09.04.2020	Bug fixes: <ul style="list-style-type: none">• Fixed documentation issues.
V5.62.0	26.02.2020	New features: <ul style="list-style-type: none">• Support of Attribute DataTypeDefinition• Support of Structures with Optional Fields• Support of OptionSet data type• Support for Application Configuration Files• Control the Initialization and Deinitialization of Libxml2 via loadToolbox()• Validation of CVE-2019-19135 Method "disableSecurityChecks" replaces "ignoreMantis4545" and "ignoreMissingNonce"
V5.61.0	06.11.2019	New Features: <ul style="list-style-type: none">• Support of delta frames on publishing• Support for FileDirectory object type

		<p>Bug fixes:</p> <ul style="list-style-type: none"> • Fixed missing notifications in Application::handleMonitoingChange • Missing bad status code if Client::Session did not connect • Fix in Client::Session::getCustomDataTypelds • Fixed a missing publish response in case of session reconnect • Various bugs in PubSub implementation • Correct handling of NaN for floating point values
V5.60.0	08.08.2019	<p>New Features:</p> <ul style="list-style-type: none"> • Samples for PubSub applications • Support exposing of PubSub configuration in address space • Support to request and get PubSub MetaData information • Allow to Identify the source of PubSub subscribed data • Workaround for non-compliant UA applications <p>Bug fixes:</p> <ul style="list-style-type: none"> • Various bugs in PubSub implementation • Minor bugs in Nodeset2 XML import
V5.59.0	15.05.2019	<p>New Features:</p> <ul style="list-style-type: none"> • Support for Publisher and Subscriber based on UDP <p>Bug fixes:</p> <ul style="list-style-type: none"> • Correct handling of EnumRequestState_Pending in transaction classes
V5.58.0	29.01.2019	<p>New Features:</p> <ul style="list-style-type: none"> • Update to OpenSSL 1.1.1a • Endpoint can use PKI store configuration for user validation • Self-signed certificates can be created during runtime • New license keys <p>Bug fixes:</p> <ul style="list-style-type: none"> • Client::Session does not return from connect() or disconnect() under rare conditions with multiple sessions • Methods at types can be invoked without explicit HasComponent reference between object instance and method
V5.57.0	06.11.2018	<p>New Features:</p> <ul style="list-style-type: none"> • Generic validation of input arguments • Support of FileType • Samples for custom data types • New installer for Linux, Windows and VxWorks • Updated to OpenSSL version 1.1.0i <p>Bug fixes:</p> <ul style="list-style-type: none"> • Access pattern can be modified during runtime • Memory leak in rare conditions of parallel access • Minor bugs in client support of structured data types • CVE-2018-12087 See https://opcfoundation-onlineapplications.org/faq/SecurityBulletins/OPC_Foundation_Security_Bulletin_CVE-2018-12087.pdf
V5.56.0	07.08.2018	<p>New Features:</p> <ul style="list-style-type: none"> • Client support of custom data types • XML import creates custom data types

V5.54.0	15.05.2018	<p>New Features:</p> <ul style="list-style-type: none"> • Certificate Change Callback • Specific PKI store configuration for client sessions and server endpoints • Updated to OpenSSL version 1.0.2o • Windows Server 2016 Support <p>Bug-fixes and optimizations as customer feedback</p>
V5.53.2	11.08.2017	<p>Bug fixes:</p> <ul style="list-style-type: none"> • Clients based on .NET stack failed to connect. • CVE 2018-12086 See https://opcfoundation-onlineapplications.org/faq/SecurityBulletins/OPC_Foundation_Security_Bulletin_CVE-2018-12086.pdf
V5.53.0	21.06.2017	<p>New Features:</p> <ul style="list-style-type: none"> • Support of multi-dimensional arrays • Visual Studio 2017 project and solution files • Importing NodeSet2 XML works also when comments are included • Updated to OpenSSL version 1.0.2k • For Linux: Support for linking the Toolkit as a shared library <p>Bug-fixes and optimizations as customer feedback</p>
V5.52.0	30.09.2016	<p>New Features:</p> <ul style="list-style-type: none"> • IPV6 support for Windows and Linux versions • TranslateBrowsePathToNodeIds extended to find more than one NodeId • NodeSet Import adaptation to use OPC UA 1.03 schema <p>Bug-fixes and optimizations as customer feedback</p>
V5.51.0	03.08.2016	<p>New Features:</p> <ul style="list-style-type: none"> • MultiStateValueDiscreteType as described in part 8, chapter 5.3.3.4 of the OPC UA specification is now supported. • Model designer server backend component extended to export “virtual” nodes, nodes defined and served at application level only.
V5.50.0	02.05.2016	<p>New Features:</p> <ul style="list-style-type: none"> • Address Space Model Designer Interface added – UA compatible interface • NodeSet2 compatible files Import and Export capabilities added to Address Space Designer interface • Windows 10 Support • Basic256Sha256 security policy added • Server asynchronous service handling extended with subscriptions and session management services. • Use monotonic clock to calculate sampling and publishing interval • Client subscription can connect a list of monitored items • VxWorks 7 compatibility extensions added • Open SSL updated to 1.0.1s • Linux build scripts extended for cross compiling and share objects

		support
V5.41.1	27.10.2015	New features: <ul style="list-style-type: none"> • Support of asynchronous handling for deleting sessions • Visual Studio 2015 project and solution files • Support for VxWorks 7.0 • Updated to OpenSSL version 1.0.1p Bug-fixes and optimizations as customer feedback
V5.41.0	04.09.2015	New features: <ul style="list-style-type: none"> • Support of user-defined enumerations (server only) • Support of asynchronous handling for deleting subscription • HTTPS as transport layer for OPC UA
V5.40.0	15.07.2015	New Features: <ul style="list-style-type: none"> • Address space modelling: Server is now capable to export it's address space into an NodeSet2 XML file • Visual Studio 2013 support • Secure Channel sharing for Client::Sessions – Multiple sessions between one client and a server shares now the same Secure Channel respective TCP/IP resources. • Tracing (logging) mechanism was extended with the option of the application to hook in and receive the toolkit internally generated trace mechanism
V5.36.1	04.03.2015	OPC Foundation Lab certified version – Server for Linux Bug fixes <ul style="list-style-type: none"> • Adaptions and bug fixes for OPC UA 1.02 compliance
V5.36.0	19.12.2014	New Features <ul style="list-style-type: none"> • Server Endpoint Binding: the toolkit now supports restriction of a servers endpoint to a single IP interface. • Server Address Space Import: The import of address space via NodeSet2 XML files now supports extensions within the XML file. • Server Queuing Mechanism for Monitored Items changes: The monitored items at server store changed values in a queue for reporting to client. Only one value shall be stored for a sampling interval. In former toolkit versions the timestamp used for this comparison was the actual system time in the server; now the server timestamp of the DataValue is used for this calculation.
V5.35.0	03.11.2014	New Features <ul style="list-style-type: none"> • Support of custom structured data type for servers Licensing <ul style="list-style-type: none"> • The toolkit licensing model extended to source code
V5.30.2	19.09.2014	New Features: <ul style="list-style-type: none"> • Updated to OpenSSL version 1.0.0m • isCancelled method now detects timed out transactions and requests
V5.30.1	10.04.2014	New Features: <ul style="list-style-type: none"> • Support for native 64 Bit applications on Linux

		<ul style="list-style-type: none"> Support for asynchronous create, modify and delete for Monitored Items
V5.30.0	21.02.2014	<p>New features:</p> <ul style="list-style-type: none"> Support for native 64 Bit applications on Windows Import nodes to a server using a NodeSet2 XML file Address space validation to OPC UA conformance for servers Custom handling of Browse and TranslateBrowsePathToNodeId on servers Redundancy support for clients for working with redundant servers
V5.21.2	01.07.2013	<p>New features:</p> <ul style="list-style-type: none"> Linux versions now deliver static OpenSSL 0.9.8 library <p>Bug fixes:</p> <ul style="list-style-type: none"> Set an empty string array to a value does not work
V5.21.1	07.03.2013	<p>Bug fixes:</p> <ul style="list-style-type: none"> Diagnostic nodes are not always removed when disabling diagnostic Problems retrieving values of type Duration and UtcTime Crash in server in case of calling RefreshSubscription with an invalid subscription ID
V5.21.0	17.01.2013	<p>New Client and Server Features:</p> <ul style="list-style-type: none"> Support for HistoryRead Services Support for Query Services Support for Cancel Service Support for Node Registration Services Authentication with WS-Security Tokens General fixes and performance optimization <p>New Client Features</p> <ul style="list-style-type: none"> Auto-Reconnect Connection Watchdog <p>New Server Features</p> <ul style="list-style-type: none"> Support for Disabling Services Data Access Server Facet Condition Branches Server Diagnostics Language Support Support for SemanticChange events Support for ModelChange events Bulk Access to Cached Data Values Initial Values of Subscriptions <p>Notes</p> <ul style="list-style-type: none"> Source code version is available as Client & Server bundle in 3 flavors: Windows, Linux, VxWorks Product name changed to OPC UA C++ Toolkit The former .NET API is discontinued The VxWorks deliverables are available in zip format only
V5.10.03.6665	04.11.2011	<p>Bug fixes:</p> <ul style="list-style-type: none"> #408: Corrected marshalling of StatusCode.GetErrorText for .NET API #409: Memory Leak under very rare conditions

		<ul style="list-style-type: none"> • #419: Client session name is not passed to server
V5.10.03.6594	31.08.2011	Bug fixes: <ul style="list-style-type: none"> • #397: Crash due to wrong reference counting in MonitoredItem::getNode and MonitoredItem::getSubscription • #402: Crash "out-of-bounds" if context filter causes casting of an XML element • #403: Subscriptions of sub-ranges return complete array • #407: Memory leak in server if a client invokes a not supported history-Read or historyWrite service
V5.10.02.6340	20.06.2011	Bug fixes: <ul style="list-style-type: none"> • Memory leaks in OPC UA stack in specific error conditions • #377: Crash in event filter in specific circumstances • #380: Possible leak on removing nodes from address space under very rare timing circumstances • #382: Possible deadlock (Linux and VxWorks only) under very rare conditions (re-use of thread handle before thread is terminated) • #383: Client can remove wrong monitored item • #387: Some event filters do not work as expected • #388: Memory leak (server) when filter is modified • #391: Monitored items in triggered mode do not always report changes • #394: Client deadlock in synchronous browseNext with 0 continuation points • Correct initialization of ServerArray and NamespaceArray
V5.10.01.6067		New features: <ul style="list-style-type: none"> - Support for Linux Debian/Ubuntu and Scientific Linux Asynchronous Bug fixes: <ul style="list-style-type: none"> • #345: Improved performance in reference access • #369: Browse direction not correctly evaluated in TranslateBrowsePathToNodeId service • Potential crash on shutdown tracing module • Initial value reporting of monitored item
V5.10.01.5872	31.05.2011	Bug fixes: <ul style="list-style-type: none"> • #334: Tutorials 8 and 9 fixed • #346: Default install path adapted • #364: Fixed deadlock in removeEndpoint • #365: User access check for write variables fixed
V5.10.00	22.10.2010	New Features <ul style="list-style-type: none"> • Alarms&Condition added, • Support of VxWorks version 6.7.1.1 and 6.8.2 Server and Client: <ul style="list-style-type: none"> • #331: Memory leak (Windows only under very rare conditions) Server only: <ul style="list-style-type: none"> • Memory leak discovered on replay attack Client only: <ul style="list-style-type: none"> • #303: Memory leak (and possible crash) • #317: .NET client API support for A&C filters

V5.00.04	14.12.2009	First release of OPC Toolbox UA for Windows and VxWorks supporting UA Binary protocol and Data Access. There is no clear correspondence to Profiles and Facets, yet. There has not been available any Compliance Test Tool for OPC UA (UA CTT), yet.
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