

Quest® Unified Communications Analytics 8.6.1

Release Notes

February 2020

These release notes provide information about this Quest® Unified Communications Analytics release.

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About Unified Communications Analytics 8.6.1

UC Analytics was rebranded to Quest and the installation path changed to Quest as of release 8.4.1. If you are upgrading from a version prior to 8.4.1, the UC Analytics program files and binaries are installed in the Quest directory but your storage folder is not changed from its previous location.

Before you install or upgrade UC Analytics, disable any anti-virus software that is running against your storage folder. The anti-virus software locks files in the storage folder, causing issues when the installer attempts to upgrade your stored data or during normal operation, when your configured data collections attempt to update the stored data. You should exclude the storage folder from anti-virus scans.

Unified Communications Analytics (UC Analytics) 8.6.1 is a maintenance release, with enhanced features and functionality.

See [Enhancements](#) and [Resolved issues](#).

Upgrading from versions 8.1 or later

If you are upgrading from versions 8.1 or later, perform an in-place upgrade to ensure you maintain your collected data. Do **not** uninstall the previous version. If you uninstall the previous version, you will lose all the collected data.

During upgrade, program files and other binaries are moved to a Quest\UC Analytics folder. However, the storage directory is not moved and remains in the same directory as before upgrade.

Upgrading from 8.0 or 8.0.1

Unified Communications Analytics 8.6 does not support a direct upgrade from versions before 8.1. To upgrade from 8.0 or 8.0.1, the upgrade is a two-step process. First, you must upgrade to 8.2. At this point, you can upgrade from 8.2 to 8.6.

About custom settings in configuration files

Prior to release 8.5, if you had customized a data collection by modifying a .config file, when you upgraded to a new version, you had to manually reapply all the changes to that .config file.

As release 8.5, if you had a configuration file with custom settings, (such as job status interval time in the UC.Analytics.Insights.DataEngine.DataCollector.dll.config file), the existing configuration files were copied to a backup folder located at Quest\UC Analytics\Backup Config Files. You had to copy the customized files back into the installation after you upgraded.

As of release 8.6.1, if UC Analytics finds backup files in the Backup Config Files\Data Engine folder, it reads the custom values and automatically updates the custom settings in the following configuration files:

If upgrading from 8.4 or an older version:

- Dell.UC.Insights.DataEngine.DataCollector.dll.config
- Dell.UC.Insights.DataEngine.InsightLogic.dll.config
- Dell.UC.Insights.DataEngine.UserSessionManagement.dll.config

When upgrading from 8.4.1 or a newer version:

- UC.Analytics.Insights.DataEngine.DataCollector.dll.config
- UC.Analytics.Insights.DataEngine.InsightLogic.dll.config
- UC.Analytics.Insights.DataEngine.UserSessionManagement.dll.config

Verifying backup and restore script configuration after upgrade

If you previously configured the backup and restore scripts provided in UC Analytics, you should review the script configuration after upgrade to ensure that the correct paths are specified. As of version 8.4.1, UC Analytics was rebranded to Quest. During upgrade from a version earlier than 8.4.1, the UC Analytics program files and binaries are moved to the Quest installation path but the storage directory is still at the same location as before upgrade.

If you have created a Windows scheduled task to automatically back up the storage directory, verify the following parameters:

- In the backup.bat script, verify that the -storageDirectoryPath parameter contains the path to the correct storage location.
- In the scheduled Windows task that runs the backup, ensure the path to the backup.bat file points to the correct location.

For more information about configuring the backup and restore batch files, see Appendix E in the *UC Analytics Deployment Guide*.

New features

The following new features are available in this release:

- **A new Organizations / Delivery Time Threshold Summary insight is added.** You can now view a summary of the delivery times of messages in your organization. Delivery time is calculated as the difference between the message send date and receipt date for each recipient. If you collect only from the Exchange Tracking Logs data source, the Send Date for most messages is approximate. To collect the exact Send Date you must also collect from the Exchange (Online) Mailbox Contents data sources. To view data in the new insight, in **Admin Settings | Classifications | Threshold Classifications**, you must add a red threshold for Exchange Email Message Participant - Delivery Time.

As part of this new feature, UC Analytics now collects and stores the Organization attribute from Active Directory. After you upgrade, your historical data is unchanged and the value of "Organization" for previously collected data displays as <none>. Newly collected data will show the new Organization attribute for internal recipients. (172270)

- **Skype for Business 2019 supported.** You can now gather data and view information for Skype for Business 2019. (127704)
- **Filtering changes so that when you are filtering a sub-attribute of a collection field, you can filter for any or all values that meet the filter criteria.** Previously, when you filtered an insight for a sub-attribute of a collection field, the filter were applied as "Any" which sometimes gave different results than expected since the results would include values where only some members in the collection met the filter criteria. Now, when you filter collection fields, you can select multiple filters and specify All to ensure that only the results where all members in the collection meet the filter criteria are shown. For more information, see the section titled "Using Any or All to refine filtering" in chapter 3 of the UC Analytics User Guide. (167326)
- **New collection scope options are added to the Exchange Mailbox Contents and the Exchange Online Mailbox Contents data sources.** These options allow you to restrict the collection scope to the default folders (Inbox and Sent) in a mailbox. (171634)
- **Option to enable server side data calculation for data-intensive insights.** Customers with large amounts of data have had issues with the slow loading of some insights, receiving internal errors or even a browser crash because the insight response is too large. Insights that process large amounts of data include the Mailboxes / Mailbox Activity / Summary and the Mail Activity / Internal vs. External insights.

Additionally, some customers cannot use Chrome or another 64-bit browser. When they open an insight in 32-bit Internet Explorer, they have issues displaying an insight due to the Internet Explorer memory limitation of 2 GB.

To improve performance for data-intensive insights, a new option is provided to allow you to shift the data calculation from the client side (user interface web site) to the server side (Data Engine). If you select the **Calculate insight data on server side** option in the Admin Settings | Queries page, data aggregation is performed by the Data Engine for 93 data-intensive insights, For a list of the insights that are optimized by the server side option, see [Insights and views optimized by server-side data calculation for insights](#). Server-side calculations are more stable and much faster. (166868, 169825, 163642, 163346, 79667, 158465, 157150)

Limitation: However, for this release, if you enable server-side calculation, you cannot use sorting on field columns. For information about field columns and calculated (metric) columns, see the section title "What are the different types of columns?" in the *UC Analytics User Guide*.

Table 1. Insights and views optimized by server-side data calculation for insights

Insight name	Views optimized
ActiveSync - Server Activity	Details
ActiveSync - User Activity	Activity by User
Cisco - Activity	Peer-to-Peer Sessions by Caller, Conferences by Organizer
Cisco - Adoption	Users by Group
Cisco - Chargeback	Chargeback Amount by Group (Peer-to-Peer), Chargeback Amount by Group (Conferences)

Table 1. Insights and views optimized by server-side data calculation for insights

Insight name	Views optimized
Cisco - Inventory	Cisco CUCM Servers
Cisco Conferences - Activity	Conferences by Organizer, Conferences by Attendees
Cisco Conferences - Server Usage	Conferences by Server or Endpoint
Cisco Peer-to-Peer Sessions - Activity	Sessions by Caller, Sessions by Callee
Cisco Peer-to-Peer Sessions - External Activity	Sessions by Internal Participant, Sessions by External Number
Cisco Peer-to-Peer Sessions - Server Usage	Sessions by Endpoint or Server
Cisco Top External Numbers Dialed	Top Numbers Dialed
Corporate Exchange At A Glance	Summary
Distribution Groups / Group Access	Distribution Group Access
Distribution Groups / Inactive Groups / By Distribution Group	Inactive Distribution Groups
Distribution Groups / Top Groups	Top Distribution Groups
DLP Matches - Activity	DLP Matches by Type, DLP Matches by Message Sender
Email - Activity	Messages by Internal Senders, Messages by Internal Recipients
Email - Bi-Directional Activity	Messages by First Participant, Messages by Second Participant
Email - Chargeback	Chargeback Amount by Group
Email - Delivery Times	Delivery Times by Group
Email - File Attachment Activity	File Attachments by Sender, File Attachments by Receiver
Email - Response Time	Original Senders, Responders
Email - Size Distribution	Message by Sender
Email - System Activity	Message Senders, Message Recipients
Exchange - Adoption	Active Users by Group
Exchange ActiveSync / Users / Top Email Senders and Receivers	User Activity
Exchange Meetings - Summary	Meetings by Organizer
Executive Summaries / Financials	Storage Chargeback By Department Details, Chargeback By Department: Senders Volume, Chargeback By Department: Internet Senders Volume
Executive Summaries / Recipient Traffic Usage	Message Distribution Summary By Department, Top Senders By Messages Table, Top Receivers By Messages Table, Top Internet Senders By Messages Table, Top Internet Receivers By Messages Table
Groups - Summary	Groups by Owner
Groups - Usage	Groups, Used By
Internet / Top Internet Domains	Outbound Domains Detail, Inbound Domains Detail
Inventory / Chargeback / Mailbox Sizes	Chargeback By Mailbox Sizes
Inventory / DAGs	Inventory - DAGs
Inventory / Inactive Mailboxes	Inactive Mailboxes
Inventory / Summary	Inventory - Summary
Legacy Public Folders - Inactive	Inactive Public Folders
Legacy Public Folders - Inventory	Legacy Public Folder
Legacy Public Folders - Summary	Public Folders Replicas by Server

Table 1. Insights and views optimized by server-side data calculation for insights

Insight name	Views optimized
Mail Activity / Internal vs. External	Top 10 Internal User or Group Sent Mail Activity, Top 10 Internal User or Group Received Mail Activity, User or Group Participant Mail Activity Details
Mail Contacts - Usage	Mail Contacts, Used By
Mail Contacts / Top Contact Users	Top Mail Contact Users Detail
Mail Contacts / Top Contacts	Top Mail Contacts Detail
Mailboxes - Active and Inactive Summary	Mailboxes
Mailboxes - Activity Summary	Mailboxes
Mailboxes - Chargeback	Chargeback Amount by Mailbox Owner
Mailboxes - Mailbox Activity by Active Directory Group	Messages Sent - Grouped by AD Group, Messages Received - Grouped by AD Group
Mailboxes - Summary	Mailboxes by Owner
Mailboxes - Trend	Mailboxes by Owner
Mailboxes / Mailbox Activity / Daily	Mailbox Activity Details
Mailboxes / Mailbox Activity / Internal vs. External - Received Mail	Top 10 Internal User Received Mail Activity, Participant Mail Activity Internal vs. External Details
Mailboxes / Mailbox Activity / Internal vs. External - Sent Mail	Top 10 Internal Mailbox Sent Mail Activity, Mailbox Activity Internal vs. External Details
Mailboxes / Mailbox Activity / Summary	Mailbox Activity, Mailbox Activity Details
Mailboxes / Sizes And Quotas / Mailbox Quotas	Mailbox Quota Details
Mailboxes / Sizes And Quotas / Mailbox Sizes	Mailboxes
Mailboxes / Top Internet Senders and Receivers	Top Internet Senders Details, Top Internet Receivers Details
Mailboxes / Top Senders and Receivers	Top Senders, Top Receivers
Mail-Enabled Groups - Summary	Mail-Enabled Groups by Owner
Mobile Devices - Summary	Devices by Type, Devices by Owner
Office 365 User Licenses and Services	User Subscriptions, Licenses, Services
Organizations / Delivery Time Threshold Summary	Delivery Time Threshold Summary
Organizations / Departmental Reporting / Mailbox Activity	Mailbox Activity Details
Outlook on the Web (OWA) - Activity	Logons by User
Personal Archive Mailboxes - Summary	Mailboxes by Owner
Platforms - Activity	Activity by Group
Platforms - User Adoption	Users by Group
Public Folders - Inventory	Public Folders
Public Folders - Summary	Public Folders
Skype for Business / Lync - Chargeback	Chargeback Amount by Group (Peer-to-Peer), Chargeback Amount by Group (Conferences)
Skype for Business / Lync - Feature Adoption	Conferences by Participant Group, Peer-to-Peer Sessions by Participant Group
Skype for Business / Lync - Skype for Business Client Adoption	Users by Group
Skype for Business / Lync - User Adoption	Users by Group

Table 1. Insights and views optimized by server-side data calculation for insights

Insight name	Views optimized
Skype for Business / Lync / Enterprise Voice / Top Calls By User	Top Voice Calls By User Detail
Skype for Business / Lync / Instant Messages / Instant Message Usage	Instant Message Usage Detail
Skype for Business / Lync / Instant Messages / Top Internal Senders And Receivers By Messages	Top Internal Senders by Messages Detail, Top Internal Receivers by Messages Detail
Skype for Business / Lync / Organizational Summaries / User Activity	User Activity
Skype for Business / Lync Conferences - Activity	Conferences by Organizer, Conferences by Participant
Skype for Business / Lync Conferences - Server Usage	Conferences by Server or Pool
Skype for Business / Lync Enterprise Voice - Activity	Calls by Caller, Calls by Callee
Skype for Business / Lync Enterprise Voice - Chargeback	Chargeback Amount
Skype for Business / Lync Enterprise Voice - Server Usage	Calls by Pool or Server
Skype for Business / Lync Peer-to-Peer Sessions - Activity	Sessions by Caller, Sessions by Callee
Skype for Business / Lync Peer-to-Peer Sessions - External Domain Activity	Sessions by Internal Participant, Sessions by External Participant
Skype for Business / Lync Peer-to-Peer Sessions - Server Usage	Sessions by Pool or Server
Skype for Business / Lync Peer-to-Peer Sessions & Conferences - User Activity	User Peer-to-Peer Session Activity, User Conference Activity
Skype for Business / Lync QoE - Devices	Sessions by Device
Skype for Business / Lync QoE - Location	Sessions by Subnet IP Address, Sessions by Subnet Site, Sessions by Subnet Region, Sessions by Subnet Description
Skype for Business / Lync QoE - Network	Poor Calls by Group
Skype for Business / Lync QoE - Summary	Sessions by Group
Skype for Business / Lync Server At A Glance	Top Department Skype for Business / Lync Usage, Skype for Business / Lync Enterprise Voice Chargeback Summary, Skype for Business / Lync Usage Chargeback Summary, Skype for Business / Lync User Inventory Summary
Skype for Business / Lync vs. Cisco Conference Usage	Conferences by
Skype for Business / Lync vs. Cisco Peer-to-Peer Usage	Sessions by

Enhancements

The following is a list of enhancements implemented in UC Analytics 8.6.1.

Table 2. Installation, resource kit, and utilities enhancements

Enhancements	Issue ID
If you have a configuration file with custom settings that is backed up to the Backup Config Files\Data Engine folder, when you upgrade UC Analytics automatically updates the affected configuration files with the customized values. For more information, see About custom settings in configuration files on page 2.	86451
You can now create a support bundle that includes more than 30 log files for each job from UC Analytics Support\DataSourceLogs. In the Deployment Manager.exe utility, the Create Support Package option has been modified to allow you to specify the number of logs to be included in the support package. You can set the number of: <ul style="list-style-type: none"> logs per job days (UTC) of logs per job MB of logs per job 	180526

Table 3. Configuration and data collection enhancements.




Enhancement	Issue ID
To handle a situation in which a new data source must collect Exchange tracking logs or IIS logs that were previously collected, a new option called initialDataCollectionDays is added to the UC.Analytics.Insights.DataEngine.DataCollector.dll.config file to allow you to specify the number of initial collection days. For more information, see the <i>UC Analytics Deployment Guide</i> chapter titled “Making changes to your deployment”.	159855
The Exchange Tracking Logs data source can now collect recipient-status for each message recipient. In the Exchange Tracking Logs data source, you can select a new type of data to collect, Recipient Status, under Email Messages. If you decide to collect Recipient Status, the required disk space is significantly increased. If you collect this data, you can add a Recipient Status column and filter using Recipient Status in insights such as insights such as Email - Details. For example, you could add the column using the following steps: <ol style="list-style-type: none"> 1 Select the Customize icon  , 2 Click Manage field columns and select Show advanced fields. 3 Search for Status and select Recipients Recipient Status. 	121335
The Exchange Configuration, the Exchange Online Native/Hybrid User Configuration, and the Exchange Online Native/Hybrid Mailbox Configuration data sources now collect the ForwardingSmtpAddress attribute for mailboxes. You can add the Forwarding SMTP Address column to insights such as Mailboxes - Inventory or Mailboxes - Activity Summary or filter insights by Forwarding SMTP Address. For example, to add the column to the Mailboxes - Activity Summary insight, you would do the following steps: <ol style="list-style-type: none"> 1 Select the Customize icon  , 2 Click Manage field columns and select Show advanced fields. 3 Search for SMTP and select Exchange Mailbox Forwarding SMTP Address. 	152330
Significant performance improvements have been made to the Exchange Calculation data source collection. The Exchange Calculation job runs in the background and calculates recipient response times and message delivery times	173680

Table 3. Configuration and data collection enhancements.

Enhancement	Issue ID
<p>New parameters are added to the UC.Analytics.Insights.DataEngine.DataCollector.dll.config file to allow you to modify the EWS Timeout property. By default, the Microsoft Exchange EWS API sets the default value to 100000 ms (100 seconds). New default values are set separately for Exchange and Exchange Online EWS data collections to reduce data source collection timeouts for Office 365:</p> <p>The default value "ewsTimeoutSeconds = 100" is added for on-premises EWS job settings:</p> <ul style="list-style-type: none"> exchangeWebServicesJobSettings exchangeMailboxContentSummaryJobSettings exchangeCalendarJobSettings <p>The default value "ewsTimeoutSeconds= 1800" is added for online EWS job settings:</p> <ul style="list-style-type: none"> exchangeOnlineMailboxContentsJobSettings <p>The data sources affected by the new timeout default values are:</p> <ul style="list-style-type: none"> • Exchange Mailbox Contents • Exchange Online Mailbox Contents • Exchange Mailbox Content Summary • Exchange Online Mailbox Content Summary • Exchange Calendar • Exchange Online Calendar 	81033

Table 4. Insight, export, and subscription enhancements.

Enhancement	Issue ID
<p>The Email - Activity insight is updated to include information to show the average number of message recipients for internal messages, inbound messages, and outbound messages. The new information appears in the Message Summary and Internal vs External Messages views by default. You can add the information to the Messages by Internal Senders and Messages by Internal Recipients tables using the Customize option. Click the Customize icon on the top right of the table, click Show/hide calculation columns, and select the Average columns that you want to add.</p>	169088
<p>A new option is added to the User Profile (Click YourName Edit Profile) that allows you to exclude today's data when you are displaying an insight and showing a relative date range such as 7 days or 28 days. The Exclude Today option is useful when the collection jobs for today have not completed which might result in incomplete data appearing in insights.</p>	168450
<p>You can now add a column for Recipient Type Details Type (msExchRecipientTypeDetails) to identify mail-enabled users in insights such as Users - Inventory and Groups - Inventory. After you have added the column, you can filter for specific values in this field.</p> <p>For a mail-enabled user, the values that appear for Recipient Type Details Type correspond to the values for the Exchange msExchRecipientTypeDetails attribute. For a non-mail-enabled user, the column will be empty.</p> <p>For example, to add the column to the Users - Inventory insight, you would do the following steps:</p> <ol style="list-style-type: none"> 1 Select the Customize icon  , 2 Click Manage field columns and select Show advanced fields. 3 Search for Details and select Active Directory Object Recipient Type Details Type. 	725218 80552

Resolved issues

The following is a list of issues addressed in this release.

Table 5. Configuration and data collection resolved issues

Resolved issue	Issue ID
<p>In large customer environments, possible data corruption could occur when:</p> <ul style="list-style-type: none"> • There were two or more Query Engine instances running (usually one collector role and the other insight role). • The Data Query Availability job was running on one instance. • The other instance was restarted (either the Query Engine service or the VM itself) while the Data Query Availability job was merging a data shard on the first instance. <p>Now, when the Query Engine is restarted, uncommitted segments are deleted only after a specific timeout period (24 hours by default).</p>	173354
<p>Progress logging for the Exchange Calculation job (which calculates recipient response times and message delivery times) is improved to provide more detailed information that can be used in troubleshooting.</p>	170335
<p>The Exchange Calculation job processes messages in order of oldest day to the most recent day. If there was a bad shard, the job encountered an error and would exit on the first day with a bad shard. Subsequent runs would also error out on that day. Consequently, no response times or delivery times were populated for any day after day with the bad shard. Now the Exchange Calculation job continues to the next shard after encountering a day with a bad shard.</p>	174377
<p>Improved the performance of the Exchange Calculation data source job in processing message response times by implementing a better algorithm to query reply messages from the Query Engine.</p>	173680
<p>The Exchange (Online) Mailbox Content Summary ongoing data collection could not collect from mailboxes where, in the previous collection, the message statistics gathering part of the data collection had failed.</p>	86545
<p>When the PowerShell exception "An error caused a change in the current set of domain controllers" occurred in the following data collections, UC Analytics would wait for 300 seconds before retrying. Now it will create a new session and retry immediately (by default).</p> <ul style="list-style-type: none"> • Exchange Online Native/Hybrid Mailbox Configuration • Exchange Online Native/Hybrid User Configuration • Exchange Online Mailbox Contents • Exchange Online Public Folders • Office 365 User Subscription Configuration <p>Now, if you want to customize the PowerShell wait time, you can edit the value for each data source.in the UC.Analytics.Insights.DataEngine.DataCollector.dll.config file:</p> <pre><exchangeOnlineMailboxContentsJobSettings powerShellSecondsAfterTransientServerProblem="0" <exchangeOnlineUserJobSettings powerShellSecondsAfterTransientServerProblem="0" <office365UserSubscriptionJobSettings powerShellSecondsAfterTransientServerProblem="0" <exchangeOnlineMailboxJobSettings powerShellSecondsAfterTransientServerProblem="0" <exchangeOnlinePublicFoldersJobSettings powerShellSecondsAfterTransientServerProblem="0"</pre> <p>For details, see the Making Changes to your Deployment chapter in the <i>UC Analytics Deployment Guide</i>.</p>	174607

Table 6. Web site, insights, exports, and subscriptions resolved issues

Resolved issue	Issue ID
On the Exchange Mailbox Contents and Exchange Online Mailbox Contents data sources, the Data to Collect option labeled Localize send / receipt time is changed to Localized send / receipt time (to time zone of working hours) and working hours . Also, the errors that are logged for mailboxes that do not have working hours set in the calendar are aggregated to a single log to reduce volume of error messages.	171633
The Sender filters did not work for send-as messages. For example, if individual user A sent a message from the shared mailbox Support, and you ran the Exchange Tracking Logs data collection, user A was showing up as the sender in the Email - Details insight. If you set a filter of Sender Email Address Messaging Address = Support, the message from user A still appeared.	164166
New parameters are added to the UC.Analytics.Insights.DataEngine.InsightLogic.dll.config file that allow you to disable the inclusion of a header for insights that are exported to formatted (localized) or formatted (UTC) .csv or .tsv files. The new parameters are in the section titled <insightRenderingConfiguration> and are as follows: <pre> <add name="exportHeaderForRawTsvOrCsv" value="false"/> <add name="exportHeaderForFormattedTsvOrCsv" value="true"/> <add name="exportViewTitleForRawTsvOrCsv" value="false"/> <add name="exportViewTitleForFormattedTsvOrCsv" value="true"/> <add name="exportCustomizedUnitsForRawTsvOrCsv" value="false"/> <add name="exportCustomizedUnitsForFormattedTsvOrCsv" value="true"/> <add name="exportDisplayValueOfBoolean" value="yes,no"/> </pre> For more information, see chapter 10 in the <i>UC Analytics Deployment Guide</i> .	123726

Known issues

The following is a list of issues, including those attributed to third-party products, known to exist at the time of release.

Table 7. Installation known issues

Known issues	Issue ID
It is not recommended that you use the built-in domain Administrator account for installing or for accessing UC Analytics. If you have a child domain in your environment, or if you have two root level domains, you will be unable to install the product.	NA
Typically, when you uninstall the product, the Storage directory is removed. If the specified directory cannot be removed (for example, if the directory is on a network drive) an error message appears. You can work around the error by clicking "Ignore". You can manually remove the directory after the uninstallation process is complete.	504453

Table 7. Installation known issues

Known issues	Issue ID
<p>After installing the Storage Engine on a separate computer with multiple network cards, the customer is unable to access the web site (“Application failed to start.”) and nothing seems to work. In this case, an incorrect IP address may have been registered for the Storage Engine.</p> <p>NOTE: If you are installing multiple Storage Engines on a separate computers that have multiple network cards, the installation may not complete.</p> <p>Cause</p> <p>On servers that have more than one IPv4 address, the UC Analytics installer selects one of the IPv4 addresses and registers that as the IP address for the UC Analytics component on that computer. The selected IP address may not be the IP address you want for the UC Analytics Storage Engine.</p>	654123
<p>Workaround</p> <p>Disable the network cards that have undesired IP addresses, run the UC Analytics installer for the Storage Engine, and re-enable the disabled network cards. If you need to disable a network card that is used for Remote Desktop access to the server, you must install UC Analytics using the physical console instead of Remote Desktop.</p>	
<p>In the Autorun.exe, the Download buttons for the software prerequisites may appear to be not working. An error is displayed about a script error on the page.</p> <p>Cause</p> <p>On some computers, an iexplore.exe process lingers for about 30 seconds after Internet Explorer is closed. Until the iexplore.exe process exits, the Javascript window.open() call for the Download buttons fails to launch a new Internet Explorer window.</p>	NA
<p>Workaround</p> <p>Launch the Task Manager and wait until the iexplore.exe process has exited. The Download buttons work correctly.</p>	
<p>In a deployment with multiple Data Engine collector roles installed, if you modify your deployment configuration properties using the Deployment Manager, and you clear the Data Engine configuration and reset it, an issue can occur in which the Primary Data Collector cannot be identified. The following error is displayed “You must have one collector role for the Data Engine designated as the primary collector.”</p>	774682
<p>Workaround</p> <ol style="list-style-type: none"> 1 In the Deployment Manager, select Manage Deployment Modify Deployment. 2 Click Edit Deployment and click Data Engine Advanced. 3 Select the Primary Data Collector check box for the server that hosts collector that should be the primary collector. 	
<p>If an Office 365 account is added as a product administrator in the Deployment Manager, the account is not granted full access to the Admin Settings.</p> <p>Workaround</p> <p>In the UC Analytics web site, in Admin Settings Security, add the Office 365 user account under the Access to Tenant Configuration heading to grant full access to Admin Settings. You must have already added an Office 365 target environment.</p>	774770
<p>On the Admin Settings - Data Collection page, under Data Sources, you cannot remove data sources if you are viewing the page using iPad or other mobile platforms.</p>	NA
<p>In the Classifications Threshold Classification page, you can set thresholds for Skype for Business and Lync QoE quality metrics. The page has the recommended thresholds set for Skype for Business 2015 and Lync 2013 by default. Most of these thresholds also apply to Lync 2010. However, if you add a threshold classification that is specific to Lync 2010 only, and you have a mixed environment, the threshold will also be applied to Lync 2013 and later even though the threshold may not be applicable to those versions.</p>	NA

Table 8. Configuration known issues

Known issue	Issue ID
<p>When setting security access to insight data in the Admin Settings Security page, if you add an Active Directory (AD) user in email address format when the user does not have an associated mailbox, the security access is not set. For example, if you granted unrestricted access to that user, the user would see the error "You do not have the required access rights to view the insight" when attempting to view an insight such as the Mailboxes - Inactive insight.</p> <p>Workaround</p> <p>You can add the user and grant data access if you enter the user SAM account name.</p>	128425

Table 9. Data collection and resource kit known issues

Known issue	Issue ID
<p>In the Exchange Online (hybrid and native) data source collections, if the same PowerShell credentials are used for more than one data source, there can be overlapping Azure AD plug-in credential incompatibility. You might notice authentication errors with Azure AD PowerShell cmdlets such as the following:</p> <pre> AdalException: multiple_matching_tokens_detected: The cache contains multiple tokens satisfying the requirements. Call AcquireToken again providing more requirements (e.g. UserId) Microsoft.IdentityModel.Clients.ActiveDirectory.AuthenticationCont ext (IL Offset 0x31): T RunAsyncTask[T] (System.Threading.Tasks.Task`1[T]) Microsoft.Online.Administration.Automation.CommonFiles.AuthManager (IL Offset 0x11): System.String GetAuthorizationHeader (Microsoft.Online.Administration.Automation. EndPointAlias) </pre> <p>Though UC Analytics recovers from these errors, it is recommended that each Exchange Online data source be configured with its own set of PowerShell credentials.</p>	701364
<p>Previously, UC Analytics might collect incorrect data for mobile devices if a mailbox display name contained a / (forward slash) or a \ (backslash). For example, if there were two mailboxes, /AB and AB, and if mobile device #1 connected to mailbox /AB, and mobile device #2 connected to mailbox AB, UC Analytics would incorrectly match both mobile devices #1 and #2 to mailbox AB. This issue existed only for mailboxes that were migrated from on-premise Exchange to Exchange Online. Though this issue was corrected in version 8.4.2, incorrect mobile device data that was collected previously and stored in the database is not changed. All new collected data will be correct.</p>	700497
<p>UC Analytics does not distinguish between discovery mailboxes and system mailboxes. Discovery mailboxes are collected and recorded as system mailboxes. In insights, there is no indication that a mailbox is a discovery mailbox. You cannot filter on discovery mailboxes.</p>	701077
<p>There can be partial ActiveSync data on the day that a user first starts using a mobile device. For example, ActiveSync activity is shown but not associated with a user in the Exchange ActiveSync / Users / Email Activity / Summary insight. This situation occurred when a user started using an ActiveSync device for the first time after the Exchange Configuration collection had successfully run for that day. ActiveSync activity for subsequent days will be correctly associated with the user.</p>	612851
<p>If you have configured the Exchange Configuration data source for a resource forest implementation, if you later add an LDAP connection for more account forests, the data collection does not automatically run to update the data. You must wait until the next day's data collection run to see the new information from the account forest.</p>	644161
<p>In a hybrid environment (Exchange Online and Exchange on-premise), Azure AD Connect (formerly Azure AD Sync) synchronizes on-premises users with Office 365 cloud services for single identities. If the synchronization process is stopped, UC Analytics can double-count users. When the Azure AD Connect synchronization resumes, all new data collections will show the correct user count.</p>	NA

Table 9. Data collection and resource kit known issues

Known issue	Issue ID
<p>In the Exchange DLP Matches - Details insight, the text in the Justification for Override (insertable) column will appear incomplete if the justification text that was entered by the user contained a semicolon (;) or a single instance of single (') or double (") quotation marks.</p>	<p>605889 605908</p>
<p>The Exchange IIS Logs data collection cannot associate ActiveSync events to a user for some ActiveSync clients with users that have spaces in their Windows logon name (such as MYDOMAIN\N Wong). This issue affects ActiveSync events from the ActiveSync client in Windows Mail. It does not affect the ActiveSync clients in iOS or in Android.</p>	456921
<p>When collecting Exchange data from an Exchange resource forest deployment, there are certain limitations when an active (master) user account has more than one Exchange mailbox, or has more than one archive mailbox, in more than one forest.</p> <p>The master account of the linked mailboxes and of the linked archive mailboxes is correctly recorded. However, only one of the mailboxes that belong to the master account will be reported as its mailbox. Similarly, only one archive mailbox that belongs to the master account will be reported as its archive mailbox.</p>	NA
<p>For any back-end ActiveSync events that have an Exchange server as the authenticated user, the Exchange IIS data collector cannot associate the event to a device and user. The ActiveSync events are gathered but are shown in the insights without a device or a user.</p>	456614
<p>To collect data for personal archive mailboxes (using the Exchange Configuration, Exchange Online Hybrid Mailbox Configuration, or Exchange Online Native Configuration data sources), you select the following two options:</p> <ul style="list-style-type: none"> • Personal Archive Mailboxes (Configuration) • Personal Archive Mailboxes (Statistics) <p>If you do not select both options for the same data source collection, the Storage Limit Status column is not populated in the Personal Archive Mailboxes - Inventory and Personal Archive Mailboxes - Summary insights.</p>	775039
<p>In the Exchange Online data sources, during target expansion, batch size configuration is implemented to improve gathering performance. To ensure that the complete membership of dynamic distribution groups is collected, the batch size values set in the Data Engine collector configuration cannot be less than 1000, and must be greater than or equal to 1000.</p> <p>The batch size settings for the Exchange Online data source configuration are located in the UC.Analytics.Insights.DataEngine.DataCollector.dll.config file, on the computer that hosts the Data Engine (Collector):</p> <pre data-bbox="197 1323 794 1704"> <exchangeOnlineMailboxContentsJobSettings powerShellBatchSize="1000" /> <exchangeOnlineMailboxJobSettings resolvingBatchSize="1000" /> <exchangeOnlineUserJobSettings powerShellBatchSize="2000" /> </pre> <p>Do not change these values except under guidance from Quest Support. If you reduce these values to a number less than 1000, some members of the target dynamic distribution groups will not be included in the Exchange Online data collections.</p>	775273

Table 9. Data collection and resource kit known issues

Known issue	Issue ID
<p>When entering an organizational unit (OU) when configuring certain data sources, if the user enters an OU in the correct format but with an invalid value, the data collection jobs do not issue a warning or error but resolve 0 targets for the invalid OU. Data will be missing from the insights. Data sources in which you can specify an OU as a target are as follows:</p> <ul style="list-style-type: none"> • Domain Controller • Exchange Mailbox Contents • Exchange Mailbox Content Summary • Exchange Tracking Logs • Exchange Configuration • Exchange IIS Logs 	773630

Table 10. Insights and export known issues

Known issue	Issue ID
When you export an insight that shows a date range for the displayed data at the top of the insight, the date range time zone does not appear in the exported file.	121562
In Exchange 2010, if the Microsoft OWA light version is used, the Outlook on the Web (OWA) insights will display the browser as "Unknown" for Internet Explorer 11, Edge, FireFox, Chrome, and Opera. The issue does not exist in other versions of Exchange or if Safari is the browser.	NA
If the time zone offset is negative (such as -5), and you apply smoothing to a graph, and the beginning of your date range is before the date when data collection initially started, the total for the smoothed graph is less than the total for the unsmoothed graph.	694810
Workaround	
Ensure that the date range does not include the days before data was collected.	
In the Mobile Device insights, the Device IMEI column shows <none> for iOS devices. UC Analytics uses the cmdlet Get-MobileDeviceStatistics (for Exchange 2013/2016/2019) and Get-ActiveSyncDeviceStatistics (for Exchange 2010) to get the device IMEI. Due to how the iOS device built-in mail app works, the information is not stored in the internal mobile device logs and is not available to PowerShell, and by extension, to UC Analytics.	704642
In the insight view, If the date range is set to a single day, any trend graph will change to a vertical bar chart but if you export the same insight, the trend graph does not display a bar chart but displays a trend line with a single point.	718893
On the home page, you cannot enlarge or shrink the insight tiles on iPad and other mobile platforms.	NA
After installing Quest UC Analytics and attempting to open the Analytics web site (<a href="http://<server>/Analytics">http://<server>/Analytics), the user sees the following error: "The application failed to initialize." This issue may be caused by a bug in IIS 7.0 in handling extensionless URLs. See the following link for details: http://support.microsoft.com/kb/980368 Install the Microsoft patch to fix this issue.	NA
If the Date format that is set in your UC Analytics user profile is in a different order than the Date and time format that is set in regional settings on your local computer, and you export an insight to .csv or .tsv format, when you open the exported file in Excel, Excel will incorrectly convert the date.	654748
Workaround	
Set the order for day/month/year for the user profile Date format to be the same as in the local Date and time format that is set in your computer's regional settings.	
For example, if the Data and time format on your computer is set to be mm/dd/yyyy, set the Date format in the user profile to also be mm/dd/yyyy.	
For more information about setting the date format in UC Analytics, see the <i>Unified Communications Analytics User Guide</i> .	

Table 10. Insights and export known issues

Known issue	Issue ID
<p>When you export an insight to either .pdf or to Word (.docx) format, there might be discrepancies in how information is displayed:</p> <ul style="list-style-type: none"> Layout of Insights that contain two side-by-side tables can be different from what you see on the screen. Numbers might sometimes overlap horizontal bars. 	NA
<p>In the details browser, the Exchange server details are not shown in the Exchange ActiveSync / Servers / Server Sync Times insight.</p> <p>This scenario can occur if you collect ActiveSync data for a time period from before you installed the product. The insight is populated with the historical ActiveSync data collected from the IIS logs (Exchange IIS Logs data source). However, the server detailed data is populated from the once-a-day “snapshots” collected from Active Directory (Exchange Configuration data source).</p> <p>Since you had not run the Exchange Configuration data collection during that time period, there is no Exchange server detailed information in the database. This issue decreases over time as the server data is accumulated through daily Exchange Configuration data collections.</p>	591123
<p>In the Mailboxes - Folders Inventory insight, if there is a mailbox owner with many folders that span more than one displayed insight page, when you click a heading (such as Size) to sort the fields, sorting does not work.</p>	773936
<p>The total number or size of messages (Unique Messages, Total Volume) will not always equal the sum of sent and received messages. The reason is that the total includes messages that were “sent on behalf of” and messages that were “sent as”, while the total of sent messages does not include these types of message. For example, when user A sent a message on behalf of user B, the insight would show the total number of messages of user B is 1, while the number of sent messages is 0.</p> <p>The following insights are affected:</p> <ul style="list-style-type: none"> Mail Activity / Internal vs. External Mailboxes - Active and Inactive Summary Mailboxes / Mailbox Activity / Summary Mailboxes / Mailbox Activity / Daily Organizations / Departmental Reporting / Mailbox Activity 	163943

Table 11. Subscriptions known issues

Known issue	Issue ID
<p>When configuring UC Analytics for subscriptions (Admin Settings Subscriptions) you have the option to require authentication to the SMTP server that is used for email subscriptions.</p> <p>UC Analytics cannot send subscription emails through Exchange receive connectors that meet all the following conditions:</p> <ul style="list-style-type: none"> require authentication and do not allow anonymous access only allow Integrated Windows Authentication (basic authentication is disabled) have EnableAuthGSSAPI property set to true 	605072
<p>Subscriptions might not send long emails, such as insights with large tables, in MHTML or HTML format. Depending on message size limit set on the specified SMTP server for email subscriptions, a subscription in MHTML or HTML format with a long body might be blocked.</p> <p>Workaround</p> <p>If a user does not receive an email subscription in MHTML or HTML format, switch the subscription format to either .pdf or .docx format in which the size of the message is much smaller.</p>	606221

Table 11. Subscriptions known issues

Known issue	Issue ID
<p>For Insight Visibility and Security (data access settings), UC Analytics does not support a configuration in which specified users are in a separate forest from the forest in which UC Analytics is installed. For on-premise target environments that are configured for Authentication-enabled, all users that are entered for Insight Visibility and Security must be in the same target environment as UC Analytics.</p>	775501
<p>Time Zone Offsets: When you create a subscription, the current time zone offset (such as UTC - 04:00) is captured and is used for the future subscription schedule. This captured time zone offset does not change with Daylight Saving Time (DST). You must manually change the existing subscription schedule when DST begins and ends.</p>	NA
<p>Using a time zone offset override</p> <p>Each time you log in, your user profile's time zone offset is updated to the time zone of the client computer. The offset is used for executing queries and affects the display of data, including scheduled insights.</p> <p>If you want your data queries to always run using a particular time zone offset regardless of your current location or whether DST is active, you can set an override in your user profile page. To access your user profile, click your user name in the top right corner of the Analytics web site and select Edit Profile.</p> <p>If you travel to a different time zone, or when the time changes due to daylight saving, the scheduled subscription emails still use the old time settings until you log in to UC Analytics in the new time zone or after the time switch.</p>	

Table 12. Storage Engine and Data Engine known issues

Known issue	Issue ID
<p>The UC Analytics Storage Engine service cannot start due to a failure to read a file descriptor in one of the commit logs. The Storage Engine tries to restart and fails because of a commit log replay issue, resulting in an error in the Cassandra.log file such as the following:</p>	642319
<pre>org.apache.cassandra.db.commitlog.CommitLogReplayer\$CommitLogReplayException: Could not read commit log descriptor in file /data/commitlog/CommitLog-6-1460632496764.log at org.apache.cassandra.db.commitlog.CommitLogReplayer.handleReplayError(CommitLogReplayer.java:644) [apache-cassandra-3.0.5.jar:3.0.5]</pre>	
<p>By default the log file is located in the following path: C:\Program Files\Quest\UC Analytics\Storage Engine\bin\Cassandra.log</p>	
<p>Workaround</p> <p>Delete the corrupted commitlog file that is specified in the error message and restart the Storage Engine service.</p>	
<p>All the files in the Storage Engine directories must be available for reading and writing at all times. If you have any automated processes running on the Storage Engine directories that lock files, you might encounter problems. The Storage Engine, when it encounters one of its files that cannot be written to or deleted, stops running. You must restart the service to get the Storage Engine working again.</p>	NA
<p>The Data Engine does not communicate with the Query Engine when a proxy is enabled on the Data Engine server.</p>	NA
<p>Workaround</p> <p>Disable the proxy or ensure that the proxy allows direct communication to the Query Engine server (which can be the same server as the Data Engine).</p>	

System requirements

Before installing UC Analytics 8.6.1, ensure that your system meets the following minimum hardware and software requirements.

Hardware requirements

If you are installing UC Analytics, the computer must meet the following minimum requirements:

Table 13. Minimum requirements for hardware.

Type	Minimum
Processor	Minimum: Quad core 64-bit computer.
RAM	Minimum: 24 GB.
Disk	<ul style="list-style-type: none">• 5 GB for the application• X GB where X is the required disk space for collected data <p>For estimates regarding the required disk space for the collected data for different numbers of users for all the platforms, see the <i>UC Analytics Deployment Sizing.xlsx</i> spreadsheet which can be found under Documentation in the autorun.exe.</p>
Operating system	<p>One of the following:</p> <ul style="list-style-type: none">• Windows 7 (64 bit version) or later• Windows Server 2008 R2 (Service Pack 1) or later• Windows Server 2012 and later• Windows Server 2016• Windows Server 2019 <p>Any server on which a UC Analytics service or service role is installed must have a static IP address defined.</p> <p>For a distributed deployment, the Remote Registry Service must be running.</p>

About NAS/SAN support

Generally, using a NAS/SAN device for the Storage Engine is not supported. UC Analytics might support specific NAS/SAN devices but Quest would require full testing with the devices, or device simulators, to support them. Since each NAS/SAN device, depending on manufacturer, is unique, Quest will work with NAS/SAN vendors to certify or qualify a device but the NAS/SAN vendor must be willing to assist. To engage a NAS/SAN vendor and initiate the qualification process, you would send an email to your NAS/SAN vendor and contact Quest Support.

Software requirements

To install and run UC Analytics, the following software requirements must be met on the computers that host these specific UC Analytic services:

Table 14. Software requirements

Hosted service	Requirement
Web site	IIS (Internet Information Services) 7.0 or later For the required configuration for IIS logging, see Appendix C in the <i>Quest UC Analytics Deployment Guide</i> .

Table 14. Software requirements

Hosted service	Requirement
Data Engine service	<ul style="list-style-type: none"> • Microsoft .NET Framework 4.6 (full version) or later • PowerShell 3.0 or later • TLS (Transport Layer Security) 1.2 protocol must be enabled. • To collect Office 365 user subscription data, the following software prerequisites must be met: <ul style="list-style-type: none"> ▪ Microsoft Online Services Sign-in Assistant must be installed. ▪ Windows Azure Active Directory Module for Windows PowerShell 1.x must be installed. (Version 2.x has different PowerShell cmdlets and will not work.) <p>Also, since the Microsoft Azure AD cmdlets use the proxy settings for Internet Explorer, ensure that the Internet Explorer proxy settings for the service account are set correctly.</p>
Query Engine service	<p>64-bit Java Runtime Environment (JRE) 8</p> <p>- OR -</p> <p>Zulu OpenJDK 8 (Zulu Java 8 JRE for Windows, x86 64-bit in .MSI form)</p> <p>For information and downloads, see https://www.azul.com/downloads/zulu-community/</p>
Storage Engine service	<p>64-bit Java Runtime Environment (JRE) 8</p> <p>- OR -</p> <p>Zulu OpenJDK 8 (Zulu Java 8 JRE for Windows, x86 64-bit in .MSI form)</p> <p>For information and downloads, see https://www.azul.com/downloads/zulu-community/</p>

For information about the rights and permissions needed to configure UC Analytics and by the credentials used to gather information, see the *Quest UC Analytics Deployment Guide*.

Table 15. Supported environments

Requirement	Details
Gathering environment	<p>The following is a list of the minimum environments that are supported for data collection:</p> <ul style="list-style-type: none"> • Exchange 2010 (SP1 or later) • Exchange 2013 • Exchange 2016 • Exchange 2019 • Exchange Online (Office 365 hybrid deployment with on-premise Exchange) • Exchange Online (native Office 365 deployment) • Lync 2010 • Lync 2013 • Skype for Business 2015 • Skype for Business 2019 • Cisco Unified Communications Manager (CUCM) 9.x to 11.0 and 11.5.

Table 15. Supported environments

Requirement	Details
Supported browsers	<p>To access the UC Analytics web site, use one of the following browsers:</p> <ul style="list-style-type: none">• Microsoft Edge• Internet Explorer 10 or later• Google Chrome• Mozilla Firefox• Apple Safari <p>For users with large amounts of data, it is recommended that you ensure your browser is in 64-bit mode.</p> <p>For more information about setting Internet Explorer to 64-bit mode, see the section titled "Using a browser in 64-bit mode" in the <i>UC Analytics User Guide</i>.</p>

Product licensing

In release 8.1, UC Analytics switched to a new license type (.dlv) and emailed the new license file to existing customers.

Existing customers on 8.1 or later

If you are an existing customer with 8.1 or later installed, you will have a .dlv license file installed. When you upgrade, your dlv license will continue to work if it is not expired.

To install a new license, use the following procedure to activate it.

To activate a license

- 1 Copy the license file (xxx-xxxx.dlv) to any single computer on which the UC Analytics Data Engine service is installed.

You do not need to copy a license file to all computers on which the Data Engine service is installed. When the license is copied to one computer that hosts the Data Engine service, it is updated automatically on all the computers that host the Data Engine service.

- 2 Start Quest UC Analytics | Quest UC Analytics from the Start menu or run the DeploymentManager.exe file from the product installation directory.
- 3 Click the **Manage Licenses** button.
- 4 Click **Add License** and browse to the location where license file (xxx-xxxx.dlv) is copied and install it.

New customers

After you download a trial version or purchase UC Analytics, you will receive a license file (.dlv) through email that is used to activate UC Analytics. After you install UC Analytics but before you can use UC Analytics, you must activate the license.

To activate a license

- 1 Copy the license file (xxx-xxxx.dlv) to a computer on which the UC Analytics Data Engine service is installed.
- 2 Start Quest UC Analytics | Quest UC Analytics from the Start menu or run the DeploymentManager.exe file from the product installation directory.

- 3 Click the **Manage Licenses** button.
- 4 Click **Add License** and browse to the location where license file (xxx-xxxx.dlv) is copied and install it.

Globalization

This section contains information about installing and operating this product in non-English configurations, such as those needed by customers outside of North America. This section does not replace the materials about supported platforms and configurations found elsewhere in the product documentation.

This release is Unicode-enabled and supports any character set. In this release, all product components should be configured to use the same or compatible character encodings and should be installed to use the same locale and regional options. This release is targeted to support operations in the following regions: North America, Western Europe and Latin America, Central and Eastern Europe, Far-East Asia, Japan.

About us

Quest provides software solutions for the rapidly-changing world of enterprise IT. We help simplify the challenges caused by data explosion, cloud expansion, hybrid datacenters, security threats, and regulatory requirements. We are a global provider to 130,000 companies across 100 countries, including 95% of the Fortune 500 and 90% of the Global 1000. Since 1987, we have built a portfolio of solutions that now includes database management, data protection, identity and access management, Microsoft platform management, and unified endpoint management. With Quest, organizations spend less time on IT administration and more time on business innovation. For more information, visit www.quest.com.

Technical support resources

Technical support is available to Quest customers with a valid maintenance contract and customers who have trial versions. You can access the Quest Support Portal at <https://support.quest.com>.

The Support Portal provides self-help tools you can use to solve problems quickly and independently, 24 hours a day, 365 days a year. The Support Portal enables you to:

- Submit and manage a Service Request.
- View Knowledge Base articles.
- Sign up for product notifications.
- Download software and technical documentation.
- View how-to-videos.
- Engage in community discussions.
- Chat with support engineers online.
- View services to assist you with your product.

Third-party contributions

This product contains the following third-party components. For third-party license information, go to <http://www.quest.com/legal/license-agreements.aspx>. Source code for components marked with an asterisk (*) is available at <http://opensource.quest.com>.

Table 16. List of third-party contributions

Component	License or acknowledgement
BouncyCastle 1.8.1	MIT N/A
Hopscotch 0.1.2	Apache License, Version 2.0
HTML5 Sortable 1.0.0	MIT N/A
Infuse JS 1.0.1	Infuse JS License Copyright 2013 infuse.js Romuald Quantin www.soundstep.com
jquery.fileDownload 1.4.2	MIT N/A
Json.NET 6.0	MIT N/A
JQuery 1.8.2	MIT
MailKit 1.18	MIT N/A
MimeKIT 1.18.1	MIT N/A
Moment.js 2.6.0	MIT N/A
OpenSSL 1.0.2l (25-May-2017)	OpenSSL 1.0 Copyright (c) 1998-2017 The OpenSSL Project. All rights reserved. This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit (http://www.openssl.org/).
SharpZipLib 0.86	SharpZipLib License The library is released under the GPL with the following exception: Linking this library statically or dynamically with other modules is making a combined work based on this library. Thus, the terms and conditions of the GNU General Public License cover the whole combination. As a special exception, the copyright holders of this library give you permission to link this library with independent modules to produce an executable, regardless of the license terms of these independent modules, and to copy and distribute the resulting executable under terms of your choice, provided that you also meet, for each linked independent module, the terms and conditions of the license of that module. An independent module is a module which is not derived from or based on this library. If you modify this library, you may extend this exception to your version of the library, but you are not obligated to do so. If you do not wish to do so, delete this exception statement from your version. Note The exception is changed to reflect the latest GNU Classpath exception. Older versions of #ziplib did have another exception, but the new one is clearer and it doesn't break compatibility with the old one. Bottom line In plain English this means you can use this library in commercial closed-source applications.
Simple.OData.Client 4	MIT
spin.js 1.2.2	MIT
typeahead.js 0.10.2	Copyright 2013-2014 Twitter, Inc. and other contributors; Licensed MIT
Web Toolkit Javascript SHA-256 1.0*	© 2013 webtoolkit.info Inc. All rights reserved. Creative Commons Attribution England and Wales 2.0
ua-parser 0.7.10	Copyright 2012-2015 Faisal Salman
7-ZIP 9.20	7-ZIP 9.20

Table 17. List of third party components (for Doradus and QUI)

Doradus 3.0 Components & QUI (Quest UI Library) 1.8 Components	License or acknowledgement
Cassandra 3.0.14	Copyright © 2017 The Apache Software Foundation. Licensed under the Apache License, Version 2.0. Apache and the Apache feather logo are trademarks of The Apache Software Foundation.
Cassandra C# Driver 3.9.0	Copyright © 2018, DataStax Licensed under the Apache License, Version 2.0
Cassandra Java Driver 2.1	Copyright 2012-2015, DataStax Licensed under the Apache License, Version 2.0
Google Open Sans 1.0	Apache 2.0
Guava 18.0	Copyright (C) 2011 The Guava Authors Licensed under the Apache License, Version 2.0
Javax Servlet API 3.0.1	Copyright © 2014, Oracle Corporation and/or its affiliates. All rights reserved. Oracle and Java are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners. License CDDL + GPLv2 with classpath exception 1.0
Jetty 9.2	Copyright © 2015 The Eclipse Foundation. All Rights Reserved. Licensed under the Apache License, Version 2.0
log4j 1.2	This product includes software developed by the Apache Software Foundation (http://www.apache.org .) Licensed under the Apache License, Version 1.1
Lz4 .NET 1.0.10.93	Copyright © 2014, Milosz Krajewski Licensed under the BSD 2-Clause "Simplified" License
Lz4 Java 1.3	Licensed under the Apache License, Version 2.0
Netty 4.0.44.Final	Copyright © 2018 The Netty project Licensed under the Apache License, Version 2.0
slf4j - Simple Logging Facade for Java 1.7	Copyright (c) 2004-2008 QOS.ch All rights reserved.
snakeyaml 1.11	Licensed under the Apache License, Version 2.0
Snappy Compression Library 1.1	Copyright 2011, Google Inc. All rights reserved.
Twitter Bootstrap 2.1.1	Licensed under the Apache License, Version 2.0
Twitter Bootstrap 2.3.1	Licensed under the Apache License, Version 2.0
Underscore.js 1.5.1	© 2009-2013 Jeremy Ashkenas, DocumentCloud and Investigative Reporters & Editors MIT N/A
Underscore.string 2.3.0	MIT N/A

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Legend

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 **IMPORTANT NOTE, NOTE, TIP, MOBILE, or VIDEO:** An information icon indicates supporting information.