

Quest® Unified Communications Diagnostics 8.5 Release Notes

December 2017

These release notes provide information about the Quest® Unified Communications Diagnostics release.

- [About Unified Communications Diagnostics 8.5](#)
- [If you are upgrading from a previous version](#)
- [New features](#)
- [Enhancements](#)
- [Resolved issues](#)
- [Known issues](#)
- [System requirements](#)
- [Product licensing](#)
- [Globalization](#)
- [Third-party contributions](#)

About Unified Communications Diagnostics 8.5

Unified Communications Diagnostics helps administrators detect problems in their messaging environment, accurately locate the root cause, and resolve the problems from a single, easy-to-use interface. It provides a robust and informed troubleshooting solution for Exchange, BlackBerry, Lync, and Skype for Business.

From the Management Console, you can run health tests to verify server functionality. You can also launch the Diagnostic Console for an individual server which shows, in real-time, the actual flow of data within individual servers at increasingly granular levels of detail. This level of detail allows you to pinpoint problems and take preventative action. UC Diagnostics supports the following platforms:

- Exchange 2007/2010/2013/2016
- BlackBerry Enterprise Server and BlackBerry Enterprise Server Express 4.1.2 to 5.0.4 (including 5.0.4 MR4) for Microsoft Exchange
- Office Communications Server 2007 and 2007 R2
- Lync Server 2010, Lync Server 2013, and Skype for Business 2015
- Office 365 (Exchange Online and Skype for Business Online)

UC Diagnostics 8.5 is a minor release, with new features and functionality. See [New features](#) and [Known issues](#).

New features

The following new features are available in UC Diagnostics 8.5:

- Support is added for SQL Server Always On. If you have an existing UC Diagnostics deployment, see “Configuring existing UC Diagnostics to work with SQL Always On” in the *UC Diagnostics Deployment Guide*.
- Support is added for creating a server health test to monitor Application and Services event logs in the Exchange crimson channels such as HighAvailability or MailboxDatabaseFailureItems.
- New options are provided for health test notifications that to allow you to specify an external mail server or meet specific SMTP server requirements. Health test notifications now provide the following options:
 - specifying a custom port for the SMTP server used for notifications
 - using STARTTLS protocol
 - entering specific credentials for SMTP server authentication
- Support is added for Exchange 2016 CU 5, CU 6, and CU 7.
- Support is added for Exchange 2013 CU 16, CU 17, and CU 18.
- Licensing changes to add support for the new UC Diagnostics for Exchange license, to extend the UC Diagnostics for Exchange/UCCS for Exchange license for Exchange Online, and to extend the UCCS for Lync license for Skype for Business Online.

See also:

- [Enhancements](#)
- [Resolved issues](#)

If you are upgrading from a previous version

You can perform a direct upgrade from 8.2 and later. If you are upgrading from 8.1 or earlier, you must first upgrade to 8.4 and then upgrade from 8.4 to 8.5.

If you are upgrading from a previous version, IIS services will stop while upgrading the Web Reports components. IIS services will automatically restart once upgrading is complete.

If you are upgrading from version 8.2 or later, you must use the Force Rediscovery option to repopulate the topology view or show service pack information for Exchange. For more information, see [Upgrading from version 8.2 or later](#).

Upgrading a manually installed database

If you manually installed the database, you must manually upgrade the database. For more information, see the *Unified Communications Diagnostics Deployment Guide*.

Enhancements

The following is a list of enhancements implemented in this release.

Table 1. Management console and web report enhancements

Enhancements	Issue ID
In the Management Console, support is added for creating a server health test to monitor Application and Services event logs in the Exchange crimson channels such as HighAvailability or MailboxDatabaseFailureItems. This feature mainly affects Exchange 2013 and Exchange 2016 mailbox servers. However, you can also manually add Application and Services event log entries for earlier versions of Exchange, for Skype for Business and Lync, and for Blackberry metrics.	358417
Health test notifications now support the following options: <ul style="list-style-type: none">• use of a custom port for the SMTP server used for notifications• use of STARTTLS protocol• specific credentials for SMTP server authentication	698380
Support is added for SQL Server Always On. If you have an existing UC Diagnostics deployment, see “Configuring existing UC Diagnostics to work with SQL Always On” in the <i>UC Diagnostics Deployment Guide</i> for information about how to configure UC Diagnostics for Always On.	697712
For the Management Console, the 32-bit application memory limitation of 2 GB has been updated for 64-bit operating systems. User memory mode is increased from 2 GB to 4 GB for the SpotlightDiagnosticTestEngine.exe and the SpotlightDistributedCollector.exe services.	640356

Resolved issues

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

Table 2. Diagnostic console or management console resolved issues

Resolved issue	Issue ID
The Collector Recovery executable file would crash occasionally. There was a “Spotlight has Stopped working” error (Application Name: CollectorRecovery.exe) that is popped up.	346032
In the Diagnostics Console, when a user configured the alarm log to send an alarm notification through SMTP, UC Diagnostics would display an “out of system resources” error message.	692287
The View License Details dialog in the Management Console now displays the correct number of users or number of mailboxes.	727949
Argument exception handling is improved to resolve the endless loop issue of event log handling for the server health test. Previously, the server health test would time out when there were a large number of event log entries.	682982

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 3. General known issues

Known issue	Issue ID
Do not install UC Diagnostics on the same machine as Spotlight on Active Directory or as MessageStats.	NA

Table 4. Management console known issues

Known issue	Issue ID
When running the Exchange External Message Delivery Health Test against Exchange 2013 in which the CAS server is behind a load balancer, the test did not complete and it failed with the error "Failed to open the default message store".	452686
Workaround	
Remove the Exchange External Message Delivery Health Test and run the Exchange Modern Message Delivery Health Test instead.	
If you are upgrading from 8.2, some health tests will not run immediately for Exchange 2016. You must edit each test once and click Finish to cause the previous test to run and retrieve some of the counter values correctly. The tests that must be edited after upgrade are as follows:	593819
<ul style="list-style-type: none"> • Exchange Replication Health Test • Exchange Server Health Test • Exchange Storage Health Test • Exchange Queue Health Test • Exchange System Health Test 	
For a Skype for Business/Lync environment, if a DNS Alias record is configured for a front-end pool or standard edition server rather than a Host A record, UC Diagnostics will fail to discover and run the synthetic transaction health tests with that pool or server. This issue is only found on 32-bit and 64-bit systems of Windows 2008. Newer operating systems do not have this issue.	325647
In Skype for Business or Lync Discovery, the display name of PstnGateway only shows the numbers/characters before the first dot. There is a problem when PstnGateway name is an IP address.	354306
Upgrading from version 8.2 or later	599577
As of UC Diagnostics 8.3, Exchange 2000 and Exchange 2003 are not supported. If you are upgrading from UC Diagnostics 8.2, use the Force Discovery Now option to repopulate your topology view. If you are upgrading from 8.3, use this option to ensure Exchange version service pack and CU (cumulative update) information is shown for Exchange servers.	662418
Solution	
<ol style="list-style-type: none"> 1 After you have upgraded to UC Diagnostics, reconnect to your messaging environment by clicking the menu option "Connect to xxx Environment/Organization". 2 Click Force Discovery Now from the menu. <p>All objects in the treeview and topology and the health tests are now displayed. The service pack and CU information is also displayed for Exchange servers</p>	
If the BlackBerry Server Health Test runs on a standby BlackBerry server in a high availability configuration, the test results show errors for BlackBerry services that are not running. However, these services are not required to run in the standby server and no error exists.	161453
Workaround: Perform the BlackBerry server health test on the primary BlackBerry server only, or run a separate BlackBerry server health test on the standby BlackBerry server with the affected service counters set to 'informational'.	
If you are installing Exchange 2013 and have upgraded to the newest version of MAPI & CDO (version 6.5.8320.0) to support RPC over HTTP) in a mixed environment, some health tests may not run properly. ESM and MAPI & CDO might not work together.	274631
Workaround: Uninstall ESM. Reinstall the new MAPI & CDO for Exchange: (http://www.microsoft.com/en-us/download/details.aspx?id=39045).	

Table 5. Diagnostic console known issues

Known issue	Issue ID
<p>UC Diagnostics 8.4.1 was rebranded to the Quest company name and the installation path is now Quest. After you upgrade from 8.2, 8.3 or 8.4 to the current version, the Save As Template and Save As (Drilldown/AlarmLog) dialogs might still point to the previous installation path since Windows saved the path in the registry.</p> <p>Workaround</p> <p>You must manually redirect and save to the new default Quest path such as "%current_user%\AppData\Roaming\Quest\Shared\Templates".</p>	687018
<p>On a Windows Server 2016, when you launch the Diagnostics Console for the first time, you can see the following error: "There is no default printer currently selected."</p> <p>Workaround</p> <p>Open the Devices and Printer page by selecting either:</p> <ul style="list-style-type: none"> • Control Panel All Control Panel Items Devices and Printers -OR- • Control Panel Hardware Devices and Printers <p>All subsequent launches of the Diagnostic Console will be successful.</p>	652667
<p>If there is no Reverse Lookup Pointer (PTR) created for the target Lync 2013 Server in a different domain and users connect the server with its NetBIOS name, the Lync 2013 plug-in of the diagnostic console is unable to get values for some components.</p> <p>Solution</p> <p>Add a Reverse Lookup Pointer (PTR) for the Lync 2013 Serve in the "Reverse Lookup Zones" of DNS.</p>	369446
<p>In Data Recorder Mode, if you connect to a Lync 2013 or Skype for Business 2015 Server with the NetBIOS name (such as wm-skp-st), the home page does not display properly. Some components are greyed out in the Diagnostics Console Play Back Mode.</p> <p>Workaround</p> <p>Use the server FQDN instead of the NetBIOS name when you connect in Data Recorder Mode.</p>	453310

Table 6. Web reports known issues

Known issue	Issue ID
<p>On Windows Server 2016, when you opened Web Reports, the web site would fail if Internet Explorer was not set as the default browser.</p> <p>Workaround</p> <p>Set Internet Explorer as the default browser on the computer that is running Windows Server 2016.</p>	652943
<p>Even though the SMTP Server and SMTP From Address were not configured for a subscription, when the user ran the subscription, the result showed Success.</p> <p>Workaround</p> <p>Always ensure that you have configured the SMTP server and SMTP From Address before you run a report subscription.</p>	652729

Table 6. Web reports known issues

Known issue	Issue ID
<p>On Windows Server 2016, if the account that is running Web Reports is not a domain administrator, the following issues can occur:</p> <ul style="list-style-type: none"> • User is unable to open Subscriptions Configure Subscriptions. • After a user created a Web Reports custom report/graft/folder/subscription in the Microsoft Management Console (MMC), when the same user account accessed the Web Reports web site using Internet Explorer, the user cannot see the items that were created using MMC. • Sometimes Web Reports cannot be opened in Internet Explorer and the following error is displayed: "Unable to create copy template files to [My Reports] folders." • Subscription emails cannot be sent correctly. • On the Subscriptions page, the checkbox "Show Subscriptions for all users" is not shown in Internet Explorer but can be viewed in MMC. 	<p>651422 652856</p>
Workaround	
<ol style="list-style-type: none"> 1 Disable UAC by changing the registry key "EnableLUA" to value "0" 2 Restart the operating system. <p>Web Reports will work without error.</p>	
<p>On Windows Server 2016, when you are creating a custom report in Web Reports, the Preview option does not work correctly for data for a large number groups.</p>	651425
Workaround	
<ul style="list-style-type: none"> • Do not preview the custom report in the wizard. Click Finish. Then click Preview on the toolbar. -OR- • Select Organization, Server Name or Date field to group the data in the report instead of the counter name or counter value. 	
<p>Web Reports fail to open from the Management Console (MMC snap-in) if Web Reports is using another web site rather than the default web site with 80 port.</p>	386971
Solution	
<ul style="list-style-type: none"> • Click the Web Reports menu in MMC. Click the Select Web Reports Server option and enter the correct server name: http://<WebReportServerName>[:portnumber] <p>The Web Reports can now be launched successfully.</p>	
<p>When UAC is enabled, Web Report pops up an error to say that it has no enough permission to read Web Report related folders, such as, C:\inetpub\wwwroot\UCDiagnostics\Reports.</p>	385509
Solution	
<ol style="list-style-type: none"> 1 Disable UAC by changing the registry key "EnableLUA" to value "0" 2 Restart the operating system. <p>The Web Report will work without error.</p>	

System requirements

Before installing UC Diagnostics 8.5, ensure that your system meets the following minimum hardware and software requirements.

Hardware requirements

Table 7. Hardware requirements

Requirement	Details
Processor	Processor x86 or x64, running at a minimum speed of 2 GHz
Memory	8 GB
Hard disk space	300 MB on system drive for application. Historical reporting database requires additional space. For more information, see the <i>Unified Communications Diagnostics Deployment Guide</i> .

Software requirements

Local Windows Administrator privileges are required on the computer where the product is installed. For more detailed permissions for operating UC Diagnostics, see the *Unified Communications Diagnostics Deployment Guide*.

Table 8. Management console requirements

Component	Requirement
Operating system	One of the following: <ul style="list-style-type: none">• Microsoft Windows Server 2008 SP 2 or later (32 bit or 64 bit)• Microsoft Windows Server 2008 R2 (64 bit)• Microsoft Windows 7 SP 1 or later (32 bit or 64 bit)• Microsoft Windows 8 (32 bit or 64 bit)• Microsoft Windows 8.1 (32 bit or 64 bit)• Microsoft Windows Server 2012 (64 bit)• Microsoft Windows Server 2012 R2 (64 bit)• Microsoft Windows 8.1 with update (32 bit or 64 bit)• Microsoft Windows Server 2012 R2 with update (64 bit)• Microsoft Windows Server 2016 (64 bit) NOTE: To run health tests against Office 365, UC Diagnostics must be installed on a 64-bit operating system.

Table 8. Management console requirements

Component	Requirement
Database	<p>One of the following:</p> <ul style="list-style-type: none"> • Microsoft SQL Server 2008 SP 3 or later • Microsoft SQL Server 2008 Express Edition SP 3 or later • Microsoft SQL Server 2008 R2 SP 1 or later • Microsoft SQL Server 2008 R2 Express Edition SP 1 or later • Microsoft SQL Server 2012 SP 4 • Microsoft SQL Server 2012 Express Edition SP 4 • Microsoft SQL Server 2014 SP 2 • Microsoft SQL Server 2014 Express Edition SP 2 • Microsoft SQL Server 2016 SP 1 • Microsoft SQL Server 2016 Express Edition SP 1 • Microsoft SQL Server 2017 • Microsoft SQL Server 2017 Express Edition <p>NOTE: If you are installing the database on a remote computer, ensure remote connections are enabled on the SQL server and you have sufficient permissions to create/modify the database.</p> <p>NOTE: If you are using SQL Server Always On, you must have configured an availability group listener that connects to the primary replica. For SQL Server 2017, only availability groups that deploy on a Windows Server Failover Cluster (WSFC) are supported.</p>
Diagnostic Services (Health Tests) for all environments	<p>The following software is required for diagnostic services (health tests) to run on any environment:</p> <ul style="list-style-type: none"> • Microsoft .NET Framework 4.5.1 or later • Microsoft Data Access Components (MDAC) 2.8 <p>NOTE: MDAC 2.8 comes with your operating system. If MDAC is uninstalled, UC Diagnostics will not run.</p>
Diagnostic Services (Health Tests) for Exchange 2007	<ul style="list-style-type: none"> • Exchange Management Console (EMC) 2007 SP 1 and Update Rollup 1 or later <p>If your organization is mixed and contains Exchange 2007 servers, you must install EMC 2007 SP 2 or later.</p> <p>The Exchange Management Tools version installed on your UC Diagnostics computer must match the Exchange version installed on your Exchange server. For example, if you have Exchange 2007 SP 2 installed on your Exchange server, Exchange Management Console 2007 SP 2 must be installed on your UC Diagnostics computer.</p> <ul style="list-style-type: none"> • Exchange Server MAPI Client and Collaborative Data Objects (MAPI CDO) 1.2.1 (Build 6.5.8320.0 or later) <p>Microsoft Outlook should not be installed on the same computer on which MAPI & CDO is installed. For more information, see the following Microsoft knowledgebase article http://support.microsoft.com/kb/266418.</p>
Diagnostic Services (Health Tests) for Exchange 2010	<ul style="list-style-type: none"> • Microsoft PowerShell 2.0 or later • MAPI Client and Collaborative Data Objects (MAPI & CDO) 1.2.1 (version 6.5.8320.0 or later).
Diagnostic Services (Health Tests) for Exchange 2013	<ul style="list-style-type: none"> • Microsoft PowerShell 2.0 or later • MAPI Client and Collaborative Data Objects (MAPI & CDO) 1.2.1 (version 6.5.8320.0 or later)

Table 8. Management console requirements

Component	Requirement
Diagnostic Services (Health Tests) for Exchange 2016	<ul style="list-style-type: none"> Microsoft PowerShell 2.0 or later
Diagnostic Services (Health Tests) for BlackBerry	<ul style="list-style-type: none"> MAPI Client and Collaborative Data Objects (MAPI CDO) 1.2.1 (version 6.5.8320.0 or later)
Diagnostic Services (Health Tests) for Lync	<ul style="list-style-type: none"> Microsoft PowerShell 2.0 or later
Diagnostic Services (Health Tests) for Skype for Business	<ul style="list-style-type: none"> Microsoft PowerShell 2.0 or later
Diagnostic Services (Health Tests) for Office 365 (Exchange Online and Skype for Business Online)	<ul style="list-style-type: none"> Windows PowerShell 3.0 or later Microsoft Online Service Sign-in Assistant Windows Azure Active Directory for Windows PowerShell

You can download Microsoft MAPI & CDO from the Microsoft web site here: <https://www.microsoft.com/en-us/download/details.aspx?id=39045>.

Table 9. Diagnostic console requirements

Component	Requirement
Diagnostic Console for all Environments	<ul style="list-style-type: none"> Microsoft .NET Framework 4.5.1 or later
Diagnostic Console for Exchange 2007	<ul style="list-style-type: none"> EMC 2007 SP 1 or later
Diagnostic Console for Exchange 2010	<ul style="list-style-type: none"> Microsoft PowerShell 2.0 or later
Diagnostic Console for Exchange 2013	<ul style="list-style-type: none"> Microsoft PowerShell 2.0 or later
Diagnostic Console for Exchange 2016	<ul style="list-style-type: none"> Microsoft PowerShell 2.0 or later
Diagnostic Console for Lync 2013/ Skype for Business 2015	<ul style="list-style-type: none"> Microsoft PowerShell 2.0 or later

Table 10. Web reports requirements

Requirement	Details
Web reports	<p>For installing Web Reports, you need one of the following:</p> <ul style="list-style-type: none"> IIS 7.0 or later with the following enabled: <ul style="list-style-type: none"> World Wide Web Services or Web Server (IIS) <ul style="list-style-type: none"> Application Development Features: ASP, ASP.NET, Server-Side Includes Security: Windows Authentication - OR - IIS 8.0 or later with the following enabled: <ul style="list-style-type: none"> World Wide Web Services or Web Server (IIS) <ul style="list-style-type: none"> Application Development Features: ASP, ASP.NET 3.5, Server-Side Includes Security: Windows Authentication <p>For viewing Web Reports, you need:</p> <ul style="list-style-type: none"> Internet Explorer 9.0 or later <p>Requirements for specific operating systems:</p> <ul style="list-style-type: none"> If you are using Windows 7, you must enable Static Content and Default Documents in IIS to view Web Reports. If you are installing Web Reports on a remote computer, you must use SQL Authentication.

For detailed requirements and a list of rights and permissions necessary for product operation, refer to the *Unified Communications Diagnostics Deployment Guide*.

Product licensing

Quest uses the Quest license type (.dlv) and will be emailing your new license file to you.

Existing customers

If you are an existing customer, you might have an .asc license file installed. When you upgrade UC Diagnostics, the legacy .asc license will continue to work.

When you receive the new license, use the following procedure to activate it.

To activate a purchased commercial license

- 1 On home page of the Unified Communications Diagnostics management console, select the **Plug-In Information** tab.
- 2 Select one plug-in on the list, right-click and select **Update License**.
- 3 Select the purchased commercial license (xxxxxxx.dlv) to activate.
-OR -
- 1 On UC Diagnostics diagnostic console, click **Help** and select **About Spotlight** on the menu.
- 2 Select the Installed Products tab and click **View/change product license**.
-OR -
- 1 Select the **Spotlight Modules** tab, select a UC Diagnostics plug-in and click **View/change license**.
- 2 Click the **Update license**.
- 3 Select the purchased commercial license (xxxxxxx.dlv) to activate.

Repeat these steps on each computer on which you have the UC Diagnostics console installed.

New customers

Typically, when you download UC Diagnostics, a trial license is automatically downloaded as well. In some cases, you might extend the trial with another trial license (.dlv file). When you later obtain a purchased license, you can install the commercial license (.dlv file) over the trial license. You can install or update a license from either the management console or from the diagnostic console.

To activate a trial license

- 1 On the home page of the Unified Communications Diagnostics management console, select the **Plug-In Information** tab.
- 2 Select the UC Diagnostics plug-in on the list, right-click and select **Update License**.
- 3 Select the new trial license (xxxxxxx.dlv) to activate.
- OR -
- 1 On UC Diagnostics diagnostic console, click **Help** and select **About Spotlight** on the menu.
- 2 Select the Installed Products tab and click **View/change product license**.
- OR -

- 1 Select the **Spotlight Modules** tab, select the UC Diagnostics plug-in and click **View/change license**.
- 2 Click **Update license**.
- 3 Select the new trial license (xxxxxxx.dlv) to activate.

Repeat these steps on each computer on which you have the UC Diagnostics console installed.

To activate a purchased commercial license

- 1 On home page of the Unified Communications Diagnostics management console, select the **Plug-In Information** tab.
- 2 Select one plug-in on the list, right-click and select **Update License**.
- 3 Select the purchased commercial license (xxxxxxx.dlv) to activate.
-OR -
- 1 On UC Diagnostics diagnostic console, click **Help** and select **About Spotlight** on the menu.
- 2 Select the Installed Products tab and click **View/change product license**.
-OR -
- 1 Select the **Spotlight Modules** tab, select a UC Diagnostics plug-in and click **View/change license**.
- 2 Click the **Update license**.
- 3 Select the purchased commercial license (xxxxxxx.dlv) to activate.

Repeat these steps on each computer on which you have the UC Diagnostics console installed.

Getting started with UC Diagnostics 8.5

The UC Diagnostics release package contains the following products:

- UC Diagnostics application

Product Documentation, including:

- Evaluator's Guide
- Deployment Guide
- User Guide
- Data Recorder User Guide
- Online Help

Installation Instructions

See the *Unified Communications Diagnostics Deployment Guide* for installation instructions.

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

We are more than just a name

We are on a quest to make your information technology work harder for you. That is why we build community-driven software solutions that help you spend less time on IT administration and more time on business innovation. We help you modernize your data center, get you to the cloud quicker and provide the expertise, security and accessibility you need to grow your data-driven business. Combined with Quest's invitation to the global community to be a part of its innovation, and our firm commitment to ensuring customer satisfaction, we continue to deliver solutions that have a real impact on our customers today and leave a legacy we are proud of. We are challenging the status quo by transforming into a new software company. And as your partner, we work tirelessly to make sure your information technology is designed for you and by you. This is our mission, and we are in this together. Welcome to a new Quest. You are invited to Join the Innovation.

Our brand, our vision. Together.

Our logo reflects our story: innovation, community and support. An important part of this story begins with the letter Q. It is a perfect circle, representing our commitment to technological precision and strength. The space in the Q itself symbolizes our need to add the missing piece—you—to the community, to the new Quest.

Contacting Quest

For sales or other inquiries, visit www.quest.com/contact.

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 11. List of third-party contributions

Component	License or acknowledgement
Blowfish v2	MIT 1.0
Indy Sockets 9.0.1	Mozilla Public License (MPL) 1.1
SNMP SharpNet 0.7.9	Copyright © 2007 Free Software Foundation, Inc. GNU Lesser General Public License v3
ZipMaster 1.78	GNU Lesser General Public License v2.1
Zlib	zlib 1.2.8

© 2017 Quest Software Inc.

ALL RIGHTS RESERVED.

This guide contains proprietary information protected by copyright. The software described in this guide is furnished under a software license or nondisclosure agreement. This software may be used or copied only in accordance with the terms of the applicable agreement. No part of this guide may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying and recording for any purpose other than the purchaser's personal use without the written permission of Quest Software Inc.

The information in this document is provided in connection with Quest Software products. No license, express or implied, by estoppel or otherwise, to any intellectual property right is granted by this document or in connection with the sale of Quest Software products. EXCEPT AS SET FORTH IN THE TERMS AND CONDITIONS AS SPECIFIED IN THE LICENSE AGREEMENT FOR THIS PRODUCT, QUEST SOFTWARE ASSUMES NO LIABILITY WHATSOEVER AND DISCLAIMS ANY EXPRESS, IMPLIED OR STATUTORY WARRANTY RELATING TO ITS PRODUCTS INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR NON-INFRINGEMENT. IN NO EVENT SHALL QUEST SOFTWARE BE LIABLE FOR ANY DIRECT, INDIRECT, CONSEQUENTIAL, PUNITIVE, SPECIAL OR INCIDENTAL DAMAGES (INCLUDING, WITHOUT LIMITATION, DAMAGES FOR LOSS OF PROFITS, BUSINESS INTERRUPTION OR LOSS OF INFORMATION) ARISING OUT OF THE USE OR INABILITY TO USE THIS DOCUMENT, EVEN IF QUEST SOFTWARE HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. Quest Software makes no representations or warranties with respect to the accuracy or completeness of the contents of this document and reserves the right to make changes to specifications and product descriptions at any time without notice. Quest Software does not make any commitment to update the information contained in this document.

If you have any questions regarding your potential use of this material, contact:

Quest Software Inc.
Attn: LEGAL Dept.
4 Polaris Way
Aliso Viejo, CA 92656

Refer to our website (www.quest.com) for regional and international office information.

Patents

Quest Software is proud of our advanced technology. Patents and pending patents may apply to this product. For the most current information about applicable patents for this product, please visit our website at www.quest.com/legal.

Trademarks

Quest and the Quest logo are trademarks and registered trademarks of Quest Software Inc. in the U.S.A. and other countries. For a complete list of Quest Software trademarks, please visit our website at www.quest.com/legal. Microsoft, Active Directory, SQL Server, Windows, Lync, and Skype are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries. BlackBerry is the trademark or registered trademark of BlackBerry Limited, the exclusive rights to which are expressly reserved. All other trademarks, servicemarks, registered trademarks, and registered servicemarks are the property of their respective owners.

Legend

 **CAUTION:** A CAUTION icon indicates potential damage to hardware or loss of data if instructions are not followed.

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