

Foglight[®] for SQL Server[®] 6.0.0

Release Notes

Developed and tested for Foglight Management Server 6.0.0

June 2021

These release notes provide information about the Foglight[®] for SQL Server 6.0.0 release.

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Welcome to Foglight for SQL Server

Foglight[®] for SQL Server allows database administrators (DBAs) to quickly and efficiently identify performance deviations, determine their root cause, perform comprehensive analyses, and resolve performance bottlenecks. This product provides web-enabled dashboards for centralized visibility, management and health checks for the SQL Server instances deployed in your environment, as well as proactive alerting and alarm workflows for tracking your responses to critical performance anomalies.

Foglight for SQL Server is an n-tier application, which leverages a web-based user interface to ensure having complete visibility into the SQL Server infrastructure wherever an Internet connection is available.

These Release Notes cover the resolved issues, known issues, workarounds and other important information about 6.0.0 release of Foglight for SQL Server. Review all sections before starting installation.

New in this release

Version 6.0.0 contains the following new features and updates:

- Added support for Alarm Templates, which allow you to modify the threshold values for triggering alarms, and enable or disable certain alarms for a set of targets and apply these rules in bulk to targets in your environment.

See also:

- [Resolved issues and enhancements](#)

Resolved issues and enhancements

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

Table 1. Resolved issues

Issue ID	Resolved issue
FOG-207	Fixed an issue where 'Availability Group Database is not Failover Ready' incorrectly triggers when database role is secondary
FOG-209	Fixed an issue where the Index Fragmentation Report failed to run for large databases.
FOG-210	Fixed an issue causing Deadlock Numbers to sometimes not match.
FOG-277	Fixed an issue with TLS version 1.2 only preventing the SQL Server agent from connecting to the database.
FOG-347	Fixed issue with errors "Cannot get a connection, pool error Timeout waiting for idle object" when running the sample PI query.
FOG-971	Fixed issue with SQL Activity Disk Queue Length graphs showing "some data is unavailable".
FOG-1186	Resolved issue with memory usage data missing from the SQL Server Health Check report
FOG-1237	Added multiSubnetFailover option for multi subnet AlwaysOn availability groups connection
FOG-1629	Fixed issue with SQL Server Error Log message alarms not being captured SQL Server

Issues also resolved in version 5.9.7.10, 5.9.7.20, and 5.9.7.21

Table 2. Issues resolved in version 5.9.7.10 and 5.9.7.20

Issue ID	Resolved issue
FOM-71	Added ASP parameter to control maximum Host disk queue length and the default value of the parameter is 5000.
FOM-75	Fixed an issue that it might fail to execute the callback: [BLOCKING_LIST] and display error on blocking (current).
FOM-80	Fixed an issue where the users could not change the "Connect as" sysdba/normal in Migration Dashboard.
FOM-115	Fixed an issue that the agent might log exception when the backup location is a virtual disk.
FOM-231	Fixed an issue where it might fail to create SQL PI database when the initialize size is smaller than that of the Model database.
FOM-245	Fixed an issue after migrating the PI from Infobright to SQL Server-based repository the PI engine might be paused.
FOM-266	Fixed an issue when the agent name contains '[', the Jobs list might not show up in <i>Administration > Alarms > DBSS - Job Failed > Rule Exceptions</i> .
FOM-281	Fixed an issue where Database dashboard might not be able to sort by the size column.
FOM-315	Fixed an issue where <i>SQL - Disk Space Usage Report</i> PDF might miss detail rows if <i>file_groups.files.virtual_file_statistics</i> has no data.

Table 2. Issues resolved in version 5.9.7.10 and 5.9.7.20

Issue ID	Resolved issue
FOM-446	Fixed an issue where the collection <i>colMaxRows</i> value is set too small for customer's environment, and customer might not get full Databases dashboard.
FOM-490	Fixed the missing metrics for SQL Server: Up Since and Availability.
FOM-492	Fixed an issue where showplan parsing might be wrong for operation: <i>Clustered Index Seek</i> .
FOM-498	Fixed an issue where data in <i>Local Last Backup Date</i> field might be incorrect after all backup information has been deleted.
FOM-536	Fixed an issue where data for Disk Space might miss when having a snapshot in the instance.
FOM-537	Fixed an issue after clicking inactive session wrong dialog might pop up.
FOM-744	Fixed an issue when the system have hundreds of agents, the table records grow very fast. And ' <i>registry_registry_value</i> ' and ' <i>registry_registry_variable</i> ' take more than 1TB.
FOM-794	Fixed an issue where the Blocking (Current) page in SQL Server cartridge is very slow to load when the number of rows is >10.
FOM-801	Fixed an issue when the locale is <i>GERMAN</i> , the <i>Workload summary</i> report always displays 0.00% for each resource breakdown.
FOM-893	Fixed an issue when users access <i>Manage SQL PI Repository</i> from Databases dashboard, the FMS console might hang.
FOG-874	Fixed an issue where Foglight Agent manager crashes frequently on Windows platform with SQL Server cartridge 5.9.7.10 and 5.9.7.20.
FOM-1005	Fixed an issue where the dashboard I/O by File might not display a period value.
FOM-1019	Fixed an issue where the DB agent log might print password information as Pa\$\$word, even if the value has been encrypted.
FOM-1052	Fixed an issue where on-demand data connections might fail unless more TCP ports are opened.
FOM-1053	Fixed an issue when configuring <i>Rule exceptions</i> for rule <i>DBSS - Hours Since Last Log Backup</i> , it might not work.
FOM-1060	Fixed an issue when the customer have many system events files, the current deadlock query might consume high CPU, and the query execution time might need several minutes.
FOM-1088	Fixed an issue when the percentage of usage exceeds 100, there might be gaps in SQL Server Memory > Summary > Memory Used graph.

Known issues

The following is a list of issues known to exist at the time of release.

General issues

Table 3. General issues

Issue ID	Known issue
FAIO-217	PI engine didn't use new credential changed in Connection Details dashboard. Workaround: Reactive the agent after changing the credential.
FOG-1758	When applying an alarm template to an agent, the Inconsistent Values indication may appear. This indication can be ignored.

Table 3. General issues

Issue ID	Known issue															
FOM-609	Cannot use cluster server or AlwaysOn listener to monitor AlwaysOn environment on FIPS-enabled FMS. Workaround: Refer to KB 324797 for detailed information.															
FOM-800	When there are many DB agents with PI enabled in FMS environment and you want to upgrade the cartridge to the latest version, the SQL PI component update might fail. Workaround: Click Cancel on <i>Update SQL PI Failed</i> and click Update SQL PI Components to update again.															
FOGDG-858	DB instance is still synchronized and displayed in FMS federation master even though it is stopped for some reason and not displayed in the FMS federation child.															
PIFOG-431	After DB agent restarts, there will be a 5 minutes data gap in the <i>SQL PI baseline</i> view.															
PIFOG-666	Incomprehensible error message is displayed when using local account without hostname prefix to setup PI Repository. Workaround: Use hostname\username to setup PI Repository instead of only using username.															
PIFOG-701	Enabling SQL PI is only supported when the SQL PI agent manager is installed on one of the following operating systems:															
	<table border="1"> <thead> <tr> <th>Operating System</th> <th>Version</th> <th>OS Architecture</th> </tr> </thead> <tbody> <tr> <td>CentOS™ Linux®</td> <td>6.x, 7.x</td> <td>x86-64</td> </tr> <tr> <td>Red Hat® Enterprise Linux</td> <td>6.x, 7.x</td> <td>x86-64</td> </tr> <tr> <td>SUSE Linux</td> <td>11,12,13,14</td> <td>x86-64</td> </tr> <tr> <td>Microsoft® Windows®</td> <td>Windows Server 2003, 2008, 2012, and 2016</td> <td>x86-64</td> </tr> </tbody> </table>	Operating System	Version	OS Architecture	CentOS™ Linux®	6.x, 7.x	x86-64	Red Hat® Enterprise Linux	6.x, 7.x	x86-64	SUSE Linux	11,12,13,14	x86-64	Microsoft® Windows®	Windows Server 2003, 2008, 2012, and 2016	x86-64
Operating System	Version	OS Architecture														
CentOS™ Linux®	6.x, 7.x	x86-64														
Red Hat® Enterprise Linux	6.x, 7.x	x86-64														
SUSE Linux	11,12,13,14	x86-64														
Microsoft® Windows®	Windows Server 2003, 2008, 2012, and 2016	x86-64														
PIFOG-723	“Context infos” display <code>null</code> in the <i>Comparison Parameter</i> dashboard.															
GVFOG-207	An error log showed in FMS log for loading heatmap component in FMS version before 5.9.3.															
SSFOG-456	If two SQL Server instances running in different hosts but these two hosts have the same short name, these two hosts shows same on the Home page. Workaround: Contact Quest support to get the scripts for updating the <i>loadGVData</i> function.															
SSFOG-551	Due to the metric collection interval, value of <i>Data files</i> , <i>log files</i> , and <i>disk space</i> metrics will be occasionally missing on the <i>Databases > Temdb</i> dashboard. Workaround: Wait for 3 minutes, then you will see these metrics on the dashboard.															
SSFOG-645	It fails to run <i>DBSSSQLAgentErrorLogProcessor</i> processor of <i>DBSS_SQL_Agent_Error_Log</i> collection if the SQL Server Agent Service is not started. Workaround: Start the SQL Server Agent Service.															
SSFOG-736	<i>DBSS_Error_Log_List</i> collection fails if SQL Server 2017 Agent is not running on Linux.															
SSFOG-739	Logical Disk metrics of SUSE showing on the <i>SQL Server Overview</i> dashboard is different from its value showing in the Infrastructure dashboard.															
SSFOG-770	Alarm is not triggered while the error has been collected on the <i>DBSS - SQL Server Error Log</i> page.															
SSFOG-775	If AD authentication has been used to monitor SQL Server instance, the default option ' <i>Log in to the host using the same account used for monitoring SQL Server</i> ' cannot be used to monitor Linux Operating System (OS). Workaround: Switch to use the option ' <i>Log in to the host using different login credentials</i> ', then choose either of the following Linux authentication types: input AD account info, input other Linux account info, or use ' <i>Select from stored credentials...</i> '.															
SSFOG-844	When using IP address to create a SQL server agent, Disk metric and Host metric will be missing in the Global view.															

Table 3. General issues

Issue ID	Known issue
SSFOG-943	Using CLI to create multiple SQL Server instances with OS monitoring might result in failure to activate some host agents. Workaround: Either activate those host agents manually on the <i>Agent Status</i> dashboard or re-create those host agents.
SSFOG-948	When monitoring SQL Server 2017 on Linux, an error message will be shown in <i>Logs > SQL Agent Error Logs</i> page.
SSFOG-949	If you select either of <i>DB_SQL_Server</i> , <i>DB_SQL_Server_UI</i> , <i>DB_Global_View_UI</i> , <i>SPIRepository*</i> cartridges then click Reset on the <i>Cartridge Inventory</i> dashboard, the upgrade wizard will prompt again. Workaround: Do the following: <ol style="list-style-type: none"> 1 Navigate to the <i>Administration > Rules & Notifications > Manage Registry Variables</i> dashboard. 2 Search for <i>DBSS_Is_Fglams_Required_Upgrade</i>. 3 Change its value to -1.
SSFOG-956	Creating Infrastructure agent automatically after failover occurs on Linux-based SQL Server cluster may fail.
SSFOG-976	In the Master server of the federation environment, the values in Message of back up alarm are null.
SSFOG-1031	When SQL Server cluster on Linux does fail-over, IC agent may not be auto created when the host name of the node is different with previous node.
SSFOG-1071	<i>Databases Replication</i> Dashboard does not show all Subscriptions when using multiple distribution databases.
SSFOG-1206	Failed to monitor SQL Server 2005 on premise while using no required permission DB credential. Workaround: Download the <i>DB_SQL_Server_Grant_Permission_Script</i> from Components for Download , execute the script at SQL Server client to grant permission to the new user, then use the new user to monitor SQL Server 2005 Instance.
SSFOG-1207	Databases on a secondary replica are read-only, so the grant script cannot create the user in the database. The Foglight user may still not be able to read data from these read-only replicas even if the users are synchronized. Workarounds: <ul style="list-style-type: none"> • When using new SQL Server Authentication and granting permission failed, do the following: Re-monitor this instance again, and then it could be monitored successfully. • When using new AD (Active Directory) Authentication and granting permission failed, do the following: <ol style="list-style-type: none"> 1. Re-monitor this instance again. 2. A grant permission dialog pops up. Skip the permission granting step. 3. Continue monitoring the instance, and then it could be monitored successfully.
SSFOG-1310	When the <i>VMwarePerformance</i> Agent exists, the <i>Disk Latency in SQL Server Overview</i> would always show “-” while enabling OS monitoring.
SSDB-2060	On SQL Server 2008, deadlocks on two different databases of the same instance become one chained deadlock. Workaround: Implement trace flag -T1234.
SSDB-2379	When working with Global View while the screen resolution is set to 1024 by 768 pixels, it is advisable to switch to the browser's full view (F11 toggles between full and normal views in all browsers).
SSDB-2455	User-defined collection names and fields must be entered in Latin characters (A to Z), without any special symbols.

Table 3. General issues

Issue ID	Known issue
SSDB-3039	The <i>DBSS- Deadlock Details</i> alarm is disabled by default.
SSDB-3061	Changes made in the <i>Global Administrations > Alarms</i> screen are saved when switching to another global administration screen, even if selecting “Yes” in the dialog box that asks whether to exit without saving changes.
SSDB-5248	Editing a user-defined collection results in periodic overlap of data.
SSDB-5542	Creating a user-defined collection with more than one SQL in it will not alert the user, however, only the first SQL in the collection will be executed.
SSDB-8949	When editing the properties of the Foglight Agent Manager concentrator (<i>Dashboards > Administration > Agents > Agent Status</i>), the name of the Foglight Agent Managers should be entered in the Downstream FglAMs section exactly as they appear in the topology, under <i>Home > Agents > All agents > <Agent name> > RMI data > FglAM host property</i> .
SSDB-8987, SSDB-7326	On Microsoft® Windows® 2008 R2, a SQL Server version 2012 instance with a name that contains inverted commas ("; (for example:'X641_ENT1') can encounter issues with the retrieval of WMI data. This is by design on the part of Microsoft. Workaround: If WMI data is not retrieved, the instance name without the " should be added in the field Service Name in the <i>Agent Properties</i> dashboard.
SSDB-9138	Cluster data can be collected only if the <code>xp_cmdshell</code> parameter is configured. To configure this parameter, run the following commands: <pre>EXEC sp_configure 'show advanced options',1 GO --To update the currently configured value for advanced options. RECONFIGURE GO -- To enable the feature. EXEC sp_configure 'xp_cmdshell', 1 GO -- To update the currently configured value for this feature. RECONFIGURE GO</pre>
SSDB-13199	Selecting a batch text in the lock tree may navigate to a non-equal batch in the TSQL Batches dimension.
SSDB-13479	In environments configured to use Agent Manager in High Availability mode the chosen Agent Manager hosting the SQL PI repository will host watchdog and maintenance agents that cannot participate in the Agent Manager high availability utility.
SSDB-14323	The SQL Server Error log collection requires you to use WinShell. Follow the instructions below to configure the correct settings: <ul style="list-style-type: none"> • Configuring the Command-Shell Connection Settings • Configuring Windows Management Instrumentation
SSDB-15192	SQL BI - Reporting services, integration services and Analysis services are not supported on cluster configuration.
SSDB-16097	In case the privilege of OS monitoring is not set to the Local Administrator group on the host being monitored, see the Knowledge Article 215054 .
ODB-1606	Performing an upgrade process on a large environment (more than 50 agents) takes time to complete.
ODB-2829	When running user-defined collections on dynamic tables, deleted items are still kept in the topology. As a result, the number of rows displayed on the user-defined collections table will exceed the configured value for maximum allowed rows.

Table 3. General issues

Issue ID	Known issue
ODB-2984	In the <i>Global Administration > User-defined Collections</i> screen, it is possible to create two collections that bear the same name with a different capitalization (for example: MyCollection and Mycollection); however, the more recently created collection will not appear in the topology, nor will it be displayed on the User-defined Collections panel.
n/a	Need to wait for more than ten minutes between the upgrade of the Foglight Management Server and Foglight for SQL Server.
n/a	In environments configured to monitor SSAS agent only, when upgrading to version 5.9.2.1 or later, the upgrade process will fail. Workaround: In the <i>Administration > Agents > Agent Status</i> dashboard, click Deploy Agent Package , then follow on-screen instructions to deploy the SSAS package manually.
n/a	Monitoring Analysis services is supported only on Agent Managers running on Windows which must have a version of .NET 3.5 installed.
n/a	If the WMI exception "Format specifier '%s' " is entered in agent log the following workaround is recommended: Workaround: For Windows® Vista® and Windows Server 2008 or above: According to http://support.microsoft.com/kb/929851 , the default dynamic port range for TCP/IP has changed in both versions. The new default start port is 49152 and end port is 65535. Subsequently, monitoring instances that run under these operating systems can be carried out by setting a static (fixed) WMI port in Windows Server. For more information, see the Knowledge Article 114559 .
n/a	When Foglight or the Agent Manager are installed on a VM, it is highly recommended to reserve the following: <ul style="list-style-type: none"> • CPU - for a virtual machine the CPU reservation is highly recommended for better performance. The reservation is expressed in MHz. • RAM- for a virtual machine the memory reservation is highly recommended for better performance.
n/a	Antivirus exclusions is required for the SQL Server-based SQL PI repository. For more information refer to the Microsoft's official article https://support.microsoft.com/en-us/help/309422/choosing-antivirus-software-for-computers-that-run-sql-server .
n/a	When upgrading Foglight, if the FMS is upgraded to version 6.0.0 and the database cartridge is not, the dashboard will display "There is no data to display". Workaround: When upgrading Foglight to 6.0.0, first upgrade the FMS to 6.0.0, then directly upgrade the cartridges.
FOG-728	When creating a new user account to monitor an instance, If the same account is used as PI repository login to enable PI, the process will failed showing no permission error. Workaround: Manually grant the database user the db_owner role for the new created PI repository database. For more information, refer to KB article 331530 .

Execution plan

Table 4. Execution plan related known issues

Issue ID	Known issue
SSDB-11283	Execution plan may not be resolved.
SSDB-11582	Sometimes, query_hash is changed by SQL Server and generating a plan using the Generate button fails. SQLhash isn't found in XML so the screen displays No operation was found and the execution plan changes are missing.

Table 4. Execution plan related known issues

Issue ID	Known issue
SSDB-11657	Time range changes are not affecting the execution plan dashboard.
n/a	In the Execution Plan comparison popup, the date of the selected plan is the insert time to the SQL PI repository and not the execution time.
n/a	In the Execution Plan Comparison popup for statement - the estimated plan appears only as the selected plan on the left side. It cannot be selected from the list.

Third party known issues

The following is a list of third party issues known to exist at the time of this release.

Table 5. Third-party known issues

Issue ID	Known issue
SSFOG-1716	<p>No throughput data on dashboard for SSAS 2017 due to WMI class missing.</p> <p>Workaround:</p> <ol style="list-style-type: none">1 Download cumulative update package through https://support.microsoft.com/en-us/help/4056328/performance-counters-are-missing-after-the-installation-of-ssas-2017.2 Install the package on the host where SSAS is installed.3 Restart the host.
WCF-16277	Popup SQL Statement dialog cannot show all SQL text when accessing with Firefox browser using FMS version higher than 5.9.4.
FGL-20596	<p>Cannot import license into installer with license file name <i>XXX.lic</i>.</p> <p>Workaround:</p> <ol style="list-style-type: none">1 When importing license into installer, change license file name to <i>XXX.license</i>.2 Install <i>xxx.lic</i> after login FMS.3 Change license file name to <i>XXX.license</i> and put it into license folder before FMS start up.
FOGDG-650	<p>The Foglight Agent Manager (FglAM) failed to restart when upgrading DB Cartridge, which is due to <i>Could not obtain a deployment lock</i> error.</p> <p>Workaround: Perform the procedure described in the Knowledge Article 266110.</p>
FAM-7722	<p>In FIPS-compliant mode, it is required to use at least 2048 RSA and DSA key size to do OS monitoring via SSH connection in DB cartridge.</p> <p>When FglAM version is lower than 5.9.7.1, FglAM will not check RSA/DSA key size < 2048, and the connection is non-FIPS compliant.</p> <p>Workaround: Upgrade the FglAM version to 5.9.7.1 or later.</p>

Table 5. Third-party known issues

Issue ID	Known issue
n/a	<p data-bbox="389 277 584 300">WMI-related issue</p> <p data-bbox="389 322 906 344">Problem: WMI support is affected by the firewall</p> <p data-bbox="389 367 1353 389">Workaround: For Windows versions prior to Windows 2008/Vista, use the following steps:</p> <ol data-bbox="430 412 1396 815" style="list-style-type: none"> <li data-bbox="430 412 1396 479">1 Open TCP port: 135. WMI by default uses the port range 1024 to 5000. <li data-bbox="430 479 1396 636">2 Open up a range of ports above port 5000. Port numbers below 5000 may already be in use by other applications and could cause conflicts with your DCOM applications. It is recommended to have at least 100 ports opened, as several system services rely on these RPC ports to communicate with each other. <li data-bbox="430 636 1396 815">3 Add the registry key, including additional ports. <ul data-bbox="507 680 1396 815" style="list-style-type: none"> <li data-bbox="507 680 1396 748">▪ Use the <i>RPCCfg.exe</i> (Windows Resource Kits) by running: <code>rpccfg.exe -pe 5009-5009 -d 0</code> <li data-bbox="507 748 1396 815">▪ Manually add the registry keys under: <code>HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Rpc\Internet</code> <p data-bbox="389 837 906 860">For Windows Vista® and Windows Server 2008:</p> <p data-bbox="389 882 1396 972">According to Microsoft® http://support.microsoft.com/kb/929851, the default dynamic port range for TCP/IP has changed in these versions. The new default start port is 49152 and end port is 65535.</p> <p data-bbox="389 994 1396 1039">Subsequently, monitoring instances that run under these operation systems can be carried out by using either of the following options:</p> <ul data-bbox="430 1061 1396 1151" style="list-style-type: none"> <li data-bbox="430 1061 1396 1106">• Configure the firewalls to allow traffic between servers in the dynamic port range of 49152 through 65535 (less secure). <li data-bbox="430 1106 1396 1151">• Limit the port range that is used in each monitored server.
n/a	<p data-bbox="389 1160 1396 1272">As a result of the change introduced in Java 6 update 29 to how data is sent to databases, users may experience connection failures when using the Microsoft JDBC Driver for SQL Server® to connect to SQL Server. This interoperability enhancement is available in the following SQL Server versions:</p> <ul data-bbox="430 1285 1396 1429" style="list-style-type: none"> <li data-bbox="430 1285 1396 1308">• SQL Server 2012 Production version and later <li data-bbox="430 1308 1396 1330">• SQL Server 2008 Service Pack 3 Cumulative Update 4 <li data-bbox="430 1330 1396 1352">• SQL Server 2008R2 Service Pack 1 Cumulative Update 6 <li data-bbox="430 1352 1396 1429">• SQL Server 2008R2 Service Pack 2
n/a	<p data-bbox="389 1438 632 1460">Third Party Limitations</p> <p data-bbox="389 1482 1396 1527">Monitoring an SQL Server instance that resides on a Windows 2008R2 or higher requires a workaround as follows:</p> <ol data-bbox="430 1550 1396 1617" style="list-style-type: none"> <li data-bbox="430 1550 1396 1572">1 Browse to https://support.quest.com/ and log in. <li data-bbox="430 1572 1396 1617">2 Perform solution https://support.quest.com/kb/SOL65870.
n/a	<p data-bbox="389 1626 1396 1738">Some base values are not updated when using the <i>Win32_PerfRawData_PerfDisk_LogicalDisk</i> WMI class to calculate performance data in Windows Vista or in Windows Server 2008, because this class does not contain the <i>PercentDiskTime_Base</i> metric.</p> <p data-bbox="389 1760 1396 1818">Workaround: A hotfix is available on Microsoft site, https://support.microsoft.com/kb/961435/en-us.</p>
n/a	<p data-bbox="389 1827 1396 1874">Due to a known Microsoft issue, on SQL Server instances version 2014 the SQL text presented may be truncated.</p>

Table 5. Third-party known issues

Issue ID	Known issue
n/a	SQL's and execution plans may not be collected on SQL Server 2014 as a result of a Microsoft bug: " The values of column query_hash and query_plan_hash are NULL for DMV sys.dm_exec_requests in SQL Server 2014 "
n/a	The Foglight Time Bar Chart click event does not work with Chrome version 40.x.x.x and 39.x.x.x. Refer to https://code.google.com/p/chromium/issues/detail?id=428308 for more information.
n/a	The Windows System Center Endpoint Protection (SCEP) tool and Anti-Virus Protection tools installed on Windows® may negatively impact CPU and system performance of machines running Foglight, Foglight Agent Manager, and the SQL PI repository. To reduce resource consumption it is highly recommended that you exclude the following directory from being scanned by the protection tools: <ul style="list-style-type: none"> • <code><installation directory>\Quest\FoglightAgentManager</code>
n/a	Anti-virus software may negatively impact the CPU and system performance of machines running Foglight. To reduce resource consumption, it is highly recommended to exclude the relevant directory, processes, and executables from being scanned by the anti-virus software. For detailed information, refer to the "Configuring anti-virus exclusion settings" in Installing Foglight on Windows with an Embedded PostgreSQL Database .

Workaround for all missing WMI metric cases

In some cases, running the command: `%windir%\system32\wbem\wmiadap.exe /f` in Windows' command-line (CMD) may solve the problem of missing WMI classes. This command parses all the performance libraries on the system and refreshes the Performance Counter Classes. For further details, see <http://msdn.microsoft.com/en-us/library/aa394528%28VS.85%29.aspx>.

Upgrade and Compatibility

A direct upgrade to Foglight for SQL Server 6.0.0 is only available from version 5.7.5.x or later. Customers that are running 5.7.x of the product must first upgrade to version 5.7.5.x and then upgrade to version 6.0.0. A direct upgrade to Foglight for SQL Server 6.0.0 is only available from version 5.5.8 or later. Customers that are running earlier versions of the product must first upgrade to version 5.5.8 and then upgrade to version 5.7.x.

For example, if your Foglight for SQL Server is version 5.5.8 and you are going to upgrade to version 6.0.0, the upgrade path will be 5.5.8 > 5.7.x > 5.7.5.x (or later) > 6.0.0.

Foglight for SQL Server 6.0.0 requires:

- Management Server version 6.0.0
- Agent Manager version 6.0.0

To upgrade Foglight for SQL Server to version 6.0.0:

- Install version 6.0.0 of the cartridge as you would install a new Foglight for SQL Server cartridge. Do not delete the older version of the .car file. Install version 6.0.0 over the older version.

For cartridge installation instructions, see the *Foglight for Databases Deployment Guide*.

Once you have upgraded the cartridge, to deploy the agent package, navigate to the **Global View** dashboard and follow the upgrade wizard instructions. For a procedure describing how to deploy the agent package, see the *Foglight for Databases Deployment Guide*.

i **NOTE:**

- Foglight for SQL Server does not support the upgrade method of placing the new version in the folder `<foglight_home>/upgrade/cartridge/`.
- Starting from version 5.9.5.20, Infobright is no longer supported. It is necessary to move existing agents to the SQL Server-based PI repository. We have provided a data migration utility for customers who want to keep their historical performance data. For more information, refer to [How to migrate database agents to a SQL Server-based PI repository](#).

- i** **IMPORTANT:** If you are upgrading to the current version of Foglight for SQL Server in a Federation architecture, the upgrade should be applied first to the Federated Children and then to the Federation Master. If the Federation Master is upgraded first, it will display incorrect information regarding the number of instances being monitored in the Status Summary section.

The following Foglight product versions and platforms are compatible with this release.

Product Name	Product Version	Platform
Foglight Management Server	6.0.0	All platforms supported by this version of the Foglight Management Server
Foglight Agent Manager	6.0.0	All platforms supported by this version of the Foglight Agent Manager

Note: The monitoring agents available in this version of Foglight for SQL Server support the Agent Manager HA failover mode, except for the Agent Manager monitoring SQL PI agents. For more information about this mode, see the *Agent Manager Guide*.

System requirements

Before installing Foglight for SQL Server, ensure that your system meets the hardware and software requirements detailed in *Foglight System Requirements and Platform Support Guide*.

Customers running large deployments (that is, with more than 20 agents) should consult the *Foglight for Databases Deployment Guide*.

Required privileges

For information on the required privileges, refer to the *Foglight for Databases Deployment Guide*.

Supported platforms

Foglight for SQL Server supports monitoring the following platforms:

- Supported SQL Server versions:
 - SQL Server 2005 through 2019
 - SQL Server 2017, 2019 for Linux
 - Amazon RDS for SQL Server 2012, 2014, 2016, 2017

- Azure SQL Managed Instance
- Supported Operating Systems:
 - All Operating Systems supported by Microsoft® SQL Server

i | **NOTE:**

- Foglight for SQL Server also supports the Express and Developer editions of Microsoft® SQL Server.
- Virtualization monitoring requires installing the VMware tools service on the monitored VM.
- SQL Server on AWS VM (IaaS) is supported and can be monitored as long as the Instance port is opened and the OS is configured as described in: [Configuring Windows Remote Management \(WinRM\)](#).
- For the Amazon RDS for SQL Server, only Standard and Enterprise version are supported.

Final Browser Support Notice

Support for Microsoft® Internet Explorer® 8, 9, and 10 has been discontinued in this Foglight release.

Microsoft ended the support for these browsers on January 12, 2016. For more information, visit <https://support.microsoft.com/en-us/lifecycle?p1=13418>.

Troubleshooting

This section provides a list of references which address the most commonly faced issues relating to remote connectivity, allowing for easy troubleshooting using the vendor's information knowledge base:

- To verify TCP/IP connectivity for SQL statement collections, Management Studio (SSMS) cannot be used as other protocols may be leveraged. Instead, verify connectivity using a UDL as detailed here: <https://support.microsoft.com/kb/308075/>.
- To verify the WMI connectivity using a Microsoft Windows built-in utility, see <https://technet.microsoft.com/en-us/library/cc180684.aspx>.
- To troubleshoot WMI access permissions, see <http://blogs.technet.com/b/askperf/archive/2007/08/14/wmi-troubleshooting-permissions.aspx>.
- For information about WMI connectivity from Windows Server 2003/Vista and later versions, see [http://msdn.microsoft.com/en-us/library/aa822854\(VS.85\).aspx](http://msdn.microsoft.com/en-us/library/aa822854(VS.85).aspx).
- For WMI troubleshooting tips and techniques, see [http://msdn.microsoft.com/en-us/library/aa394603\(VS.85\).aspx](http://msdn.microsoft.com/en-us/library/aa394603(VS.85).aspx).
- For PI troubleshooting tips: exclude the SQL PI repository directory (named Infobright™) from real-time scanning (for example, Antivirus software). For a virtual machine, the CPU and memory allocations must be reserved.

Product licensing

Foglight includes a licensing capability that restricts access to those features that are defined in the license. Any Management Server installation requires a license that grants access to server-specific parts of the browser interface and the features associated with them. Foglight cartridges are also license-protected. While some cartridges are covered by the base Foglight license (such as Foglight Agent Manager cartridges and the Foglight for Infrastructure), others may require an additional license.

Foglight for SQL Server is covered by the base Foglight license that allows cartridges to be installed. The SQL Performance Investigator extension requires a dedicated license.

To activate a trial or a purchased commercial license:

- 1 On the navigation panel, under Dashboards, click *Administration > Setup > Manage Licenses*.
- 2 Click **Install**.
- 3 In the **Install License** dialog box, click **Browse**.
- 4 In the file browser that appears, specify the location of the license file.
- 5 In the **Install License** dialog box, click **Install License**.

Getting started with Foglight for SQL Server

Contents of the release package

The Foglight for SQL Server 6.0.0 release package contains the following:

- Foglight for SQL Server cartridge:
 - *DB_SQL_Server-6_0_0.car*
- Product documentation, including:
 - *Foglight for SQL Server User and Reference Guide* (PDF and online help)
 - *Foglight for Databases Deployment Guide* (PDF)
 - *Foglight for SQL Server Release Notes* (this document)

Installation instructions

For installation pre-requisites, permissions, information necessary to determine your environment's hardware requirements, and for installation instructions, see the *Foglight for Databases Deployment Guide*.

Additional resources

Additional information is available from the following:

- Online product documentation (<https://support.quest.com/technical-documents#F>)
- Foglight Community (<https://www.quest.com/community/products/foglight/>)

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.

This release has the following known capabilities or limitations: The server will be enabled for Global Operation, but not localized to any particular locale.

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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.

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Legend

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

Legend

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