

Spotlight® on Oracle 10.7

Release Notes

October 2018

These release notes provide information about the Spotlight® on Oracle release.

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About this release

Spotlight is a powerful diagnostic and resolution tool for Oracle databases. Its unique user interface provides you with an intuitive, visual representation of the activity on your database. Graphical flows illustrate the rate at which data is moving between database components. Icons display the value of key statistics and metrics.

Spotlight on Oracle

Spotlight on Oracle is used to diagnose the performance of Oracle instances running on individual host machines. It also includes the following products:

- **Predictive Diagnostics.** Use this to predict the future performance for individual SQL statements, bottlenecks, and database resources on the Oracle database.
- **Spotlight on Unix and Spotlight on Windows.** Launch the appropriate O/S Spotlight automatically when Spotlight connects to an Oracle database.
- **Spotlight on MySQL.** Diagnose the performance of MySQL instances.
- When delivered as part of the Toad® DBA Suite for Oracle, Spotlight incorporates **SQL Optimizer for Oracle.** SQL Optimizer offers a fully automated approach to maximizing SQL performance. It eliminates the manual, time-intensive process of ensuring that SQL code is performing as fast as possible.

Spotlight on Oracle RAC

Spotlight on Oracle RAC requires additional licensing. It enables the diagnosis of Oracle databases on multiple host machines under the Real Application Clusters (RAC) architecture and additionally may include monitoring of Exadata systems depending on the license purchased.

- Spotlight on Oracle 10.7 is a minor release,
- with no new functionality. See [Resolved issues](#).

New Features

Spotlight on Oracle 10.7

Spotlight on Oracle 10.7 now supports monitoring Oracle 18c databases and connecting to the Oracle 18c client.

Spotlight on Oracle 10.6

Spotlight on Oracle 10.6 is a maintenance release with no new functionality.

Spotlight on Oracle 10.5

Spotlight on Oracle 10.5 is a maintenance release with no new functionality.

Spotlight on Oracle 10.4

Spotlight on Oracle 10.4 is a maintenance release with no new functionality.

Spotlight on Oracle 10.3.3

Spotlight on Oracle 10.3.3 is a maintenance release with no new functionality.

Spotlight on Oracle 10.3.2

Spotlight on Oracle 10.3.2 is a maintenance release with no new functionality.

Spotlight on Oracle 10.3.1

Windows 10: Windows 10 is a supported platform for the installation of Spotlight on Oracle and the Spotlight Diagnostic Server, and for monitoring.

Spotlight on Oracle 10.3

In-Memory Diagnostics: Spotlight now provides diagnostic information for In-Memory databases in Oracle and Oracle RAC. What is the cost to the database of enabling In-Memory? Has the right amount of memory been

allocated to the In-Memory column store? To what extent is I/O being consumed by In-Memory activities? Drilldown further by segments, SQL, statistics and sessions.

Resolved Issues and Enhancements

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

Resolved Issue	Defect ID
Fixed a problem where the datafile query took too long to retrieve data. We updated the frequency for the datafile query and removed the <code>/+NO_CPU_COSTING/</code> hint.	SOO-2697
Fixed a problem where "See also" links returned a 404 error.	SOO-2693
Corrected the Spotlight cloud links on the Getting Started and Welcome pages.	SOO-2702
Created a new IO wait time alarm on the server for Spotlight on Unix connections.	SOO-2708
New Software Transaction Agreement (STA).	SOO-2695

Deprecated Features

The option to disable User Experience Feedback has been removed. Acceptance of providing User Experience Feedback and the Feedback given is covered by the [Software Transaction Agreement](#).

Known Issues

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

Feature	Known Issue	Defect ID
General	Spotlight data not displayed when overhead settings are restored to default values: In some cases, restoring Overhead Management settings on a Spotlight component may prevent the display of Spotlight data in one or more drilldown pages. To view the data, disconnect the original Spotlight connection and then reconnect.	
	Queued Spotlight queries will complete despite changes to Overhead Management settings: When you use Spotlight's Overhead control to reduce or halt the collection of data from a connection, any existing queries that have been queued for execution will complete as if started under the previous overhead setting.	
Installation issues	Brackets not permitted in installation path names: Prior to Oracle 11g, the Oracle client does not support an installation path for Spotlight that contains the brackets "(" and ")". For example: C:\Program Files (x86)\...	

Feature	Known Issue	Defect ID
	<p>Tip: For 64-bit operating systems we recommend not installing Spotlight on Oracle (Windows 32) in "c:\Program Files" since Windows re-directs this back to "C:\Program Files (x86)".</p> <p>Installing for multi-user access. If Spotlight is installed for use by multiple users of a system, the additional users must be local administrators.</p>	
Upgrade issues	When upgrading to Spotlight on Oracle 10.3.2 history data will be reset. If you would like to keep history between upgrades then you can change the folder spotlight stores history to, through Spotlight Options storage->History Location.	

Known Issues - Monitoring Oracle Databases

Feature	Known Issue	Defect ID
Connections	After connecting once with an Oracle 11g or Oracle 12c client, if you change the Oracle home to use a different client, the next time you connect you may see the error Entry Point Not Found...	2226
	<p>From a Spotlight on Oracle connection where the Oracle database is installed on a Windows operating system, from drilldown Operating System OS Processes right click on an Oracle process and select Top Sessions to open the Top Sessions drilldown - results in error: Unable to file Oracle session for this process.</p> <p>Limitations with automatic reconnection to Oracle systems:</p> <ul style="list-style-type: none"> • Connection lost during initial connection: Spotlight will not reconnect if the connection is lost while Spotlight is initializing its connection. • Connection lost while viewing alert log: Spotlight will report a number of errors if the disconnection and reconnection occurs while the Alert Log drilldown is open. <p>Spotlight on Oracle connections: Spotlight on Oracle RAC automatically creates Spotlight on Oracle connections for each instance in the cluster. If, for example, you name your Oracle RAC connection "My cluster", and it has two instances with instance names of "CL1" and "CL2", then two Spotlight on Oracle connections named "My cluster CL1" and "My cluster CL2" will be created automatically when you first connect Spotlight to the cluster. If you already have Spotlight on Oracle connections with those names, the connection details will be overwritten by Spotlight on Oracle RAC. If you subsequently delete the Oracle RAC "My cluster" connection, you will need to delete the associated Spotlight on Oracle connections manually.</p> <p>Avoid simultaneous REXEC and SSH connections: Spotlight supports both REXEC and SSH connections to Oracle servers, but raises an error when you try to open simultaneous REXEC and SSH connections to the same Oracle server.</p>	2197
Home Page / Drilldowns	Changing column order may disable sub-pages in SQL Analyze Trace drilldown page: Changing the order in which columns are displayed in the Trace File Details grid of the Trace Files page may disable the <i>Summary</i> , <i>SQL Statements</i> , and <i>SQL Statement Details</i> tabs, limiting your access to the other pages within SQL Analyze Trace . To counter this problem, right-click the Trace	

Feature	Known Issue	Defect ID
	File Details grid and choose Restore Default Settings from the shortcut menu.	
	The Spotlight on Oracle Data Guard Standby icon is disabled for a connection to an instance that is part of an Oracle RAC cluster. This is by design. The metrics would not be accurate if the primary connection was not Oracle RAC. If the primary connection was to an Oracle database then the metrics would not be for the whole cluster.	
	Negative value for Shared Pool Used component: The Shared Pool Used component on the Spotlight on Oracle home page may display a negative value when Oracle is first started or when the shared pool is flushed out. This occurs when the value for "shared pool free memory" in v\$sgastat is larger than the original shared pool size (Oracle bug 3288917).	
	Inaccurate value for Total RAM after network timeout error: After a network timeout error, Spotlight may display an inaccurate value for the Total RAM metric on the Spotlight on Oracle RAC home page. When this occurs, Spotlight's calculation of Total RAM has omitted data from one or more nodes in the cluster.	
	Operating system Drilldown: (OS) statistics not reported by Spotlight on Oracle: Differences between versions of operating systems mean that Spotlight is unable to collect all OS statistics in all environments. The following list shows statistics in the Operating System drilldown pages that are not reported by Spotlight on Oracle for each operating system.	
	<ul style="list-style-type: none"> • Microsoft Windows: "Waiting" graph within CPU Utilization chart is always zero. The "Waiting" graph in the CPU Utilization chart of the Operating System drilldown is included specifically to collect the relevant data from Unix systems. Windows systems do not provide the same information, and so the value of this metric is always zero for Windows systems. • Unix AIX: Some Disk I/O and virtual memory statistics are not reported. These may include disk I/O dataflows on the home page, disk read and write statistics on the Activity Summary page of the Activity drilldown, and metrics such as <i>% User, % Privileged, Work Set (MB), Page faults/s, Handles, Threads, Start Time, and % Processor.</i> • Unix HP-UX: Missing Total RAM value on Spotlight on Oracle RAC home page: The value for Total RAM can be displayed only if the cstm utility is installed and can be run on the HP-UX server. • Unix HP-UX: Some Disk I/O and virtual memory statistics are not reported. These may include disk I/O dataflows on the home page, disk read and write statistics on the Activity Summary page of the Activity drilldown, and metrics such as <i>% User, % Privileged, Work Set (MB), Page faults/s, Handles, Threads, Start Time, and % Processor.</i> • Unix HP-UX: Abnormal CPU figures. In some cases on HP-UX Unix, CPU user time has been diagnosed at -1% to -2%, which pushes the idle time to 101% to 102%. This appears to be a bug in the HP-UX operating system, which will result in abnormal Processor Utilization figures in Spotlight on Oracle. 	

Feature	Known Issue	Defect ID
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- **Linux: SUSE Linux — virtual memory statistics.** Statistics that may not be reported include *% User, % Privileged, Work Set (MB), Page faults/s, Handles, Threads, Start Time, and % Processor*.
- **Linux: Red Hat Linux — invalid network metrics reported by some versions of Red Hat Linux (2.4 kernel).** Because of a known formatting bug in the output for the Unix **netstat** command, Spotlight may report inaccurate values for metrics (Network flows and Network charts, for example) that rely on **netstat**.
- **Solaris Unix: Some virtual memory statistics are not reported.** These include *% User, % Privileged, Work Set (MB), Page faults/s, Handles, and Threads*
- **Solaris Unix: No data for Paging and Scan Rates in Solaris 9 systems.** When Spotlight returns no data in the Paging and Scan Rates chart of the **OS Performance** page in the **Operating System** drilldown for a Solaris 9 system, you should apply the patch 116543-01 to that system.

Installing and configuring DTrace scripts (Solaris 10 and later): DTrace, a dynamic analysis tool for Sun operating systems, was first introduced in Solaris version 10. You can enable and use Spotlight's **DTrace drilldown** to capture details about the interaction between Oracle and Solaris that would otherwise be unavailable.

Before doing this, you must configure the Solaris server under investigation. To do so:

1. Locate the **SoO_DTrace_scripts.tar** archive package in the **Plugins\SoO** sub-folder of the Spotlight installation folder.
2. Unpack the contents of the archive to a directory on the server. Ensure that the unpacked files have **execute** permission.
3. In the **.profile** of the account that will be used to run O/S commands from Spotlight, define a **QUEST_SOO_HOME** variable that points to that directory on the server. (In previous Spotlight versions, the variable was **QUEST_HOME**.)
4. Provide that user with DTrace authority by adding the following line to **/etc/user_attr**:

```
<<username>>:::defaultpriv=basic,dtrace_proc,dtrace_kernel
```

For more information, see the [DTrace User Guide](#).

Predictive Diagnostics	Predictive Diagnostics is disabled for Read Only connections. Read Only databases cannot run (Predictive Diagnostics) jobs therefore no data will be gathered.	ST11604
Oracle configuration	OCI error displayed when the Oracle client setting is changed in a connection profile: In some circumstances, changing the Oracle client setting within a profile can cause problems with loading the correct OCI.DLL. To resolve this issue, set the Oracle client global option to the desired client.	

Restarting Spotlight to change selected Oracle Home: Normally, you can

Feature	Known Issue	Defect ID
	<p>change the Oracle Home setting for Spotlight on Oracle whenever the selected home is NOT being used for an active Spotlight connection.</p> <p>In certain circumstances, however, disconnecting from a database causes the termination of one or more executing queries. When this happens, you can select a new Oracle Home in a connection profile (or in the Spotlight on Oracle Options window) ONLY AFTER Spotlight itself has been restarted.</p>	
	<p>Unable to create or open a Spotlight connection because of missing PATH entry for Oracle client:</p> <ul style="list-style-type: none"> • You cannot create a Spotlight on Oracle connection via a specified Oracle client if that client's home directory is not in the Windows PATH environment variable. • Spotlight may not connect successfully to an Oracle database if the home directory for the specified Oracle client has been removed from the PATH variable (as can happen, for example, when the PATH entry has been removed by the Oracle Universal Installer). 	
	<p>Error when connecting to Oracle 10g database on LDAP server: Spotlight may encounter access violation errors when attempting to connect to an Oracle 10g database on an LDAP 9.2.0.1 server via an Oracle 11g client. To resolve this problem, we recommend using an Oracle 10g client to connect to the 10g database.</p>	
	<p>Oracle error ORA-1031 when connecting to an Oracle database: To resolve the error ORA-1031: insufficient privileges in table Parameter when you try to connect to an Oracle database, add the following entry into the SQLNET.ORA file on the Spotlight client machine:</p> <p style="text-align: center;">SQLNET.AUTHENTICATION_SERVICES= (NONE)</p>	
	<p>Note: This error is seen most often for the Parameter table, but can also occur for others.</p>	
	<p>Read access required to analyze Oracle trace files: Before you can use Spotlight's SQL Analyze Trace facility to analyze trace files from a target Oracle database, the Spotlight OS User must have read access to the directory on the server specified by the Oracle parameter UserDumpDest.</p>	
	<p>Open_cursors parameter: The open_cursors parameter for the database instance needs to be greater than 70 to allow Spotlight to diagnose the database instance correctly.</p>	
	<p>Oracle error ORA-12154 when connecting to Predictive Diagnostics with Oracle Names Server: The known Oracle bug #2048583 may cause an ORA-12154 error to be raised when you navigate to the Predictive Diagnostics drilldown, preventing the display of the drilldown. A possible workaround is to upgrade your Oracle client.</p>	
Oracle archiving	<p>Close and re-open Spotlight connections to detect new archive destinations: When you add a new archive destination to a monitored Oracle database, it may not be detected by Spotlight. Disconnect from the database and then reconnect to view the details of the new archive destination.</p>	
	<p>Unreliable historical data for archive destinations: When viewed in History</p>	

Feature	Known Issue	Defect ID
	<p>mode, the Spotlight connection may on occasion display incorrect data for archive log destinations.</p> <p>Information shown for a single node only in Alert Log and Archive Log diagnostics: In a clustered environment where the global_names parameter is set to TRUE, alert log and archive log diagnostics within Spotlight on Oracle RAC will display data for one node only. To work around this, add the entry</p> <pre>alter session set global_names=FALSE</pre> <p>to the SPOTLIGHT.ORA file in the Plug-ins\SoO sub-folder of the Spotlight installation folder. This will change the global_names parameter for the relevant Spotlight session.</p> <p>Limited support for Archive Destinations on mapped network drives (Windows): Spotlight does not as yet calculate or display Time to Failure estimates for Oracle RAC systems on Windows platforms whose archive destinations are not local drives.</p>	
Oracle 12c	<p>In an Oracle 12c Data Guard environment, in some circumstances the Transport Process Running alarm fails to fire when log shipping is stopped. Spotlight on Oracle expects the Oracle process to stop when log shipping is stopped, but in some circumstances the Oracle process continues to run (idle).</p>	SoO-1759
	<p>Plugged database sessions sometimes don't show in the Top sessions drilldown.</p> <p>To fix the issue, run alter system flush shared_pool</p>	SoO-1374
	<p>When the Spotlight connection is to the container database, the Container drop down menu may not populate with all the plugged in databases. This applies to the Activity Summary and Pluggable Databases Resource Usage drilldowns.</p> <p>To fix the issue, run alter system flush shared_pool</p> <p>On Oracle RAC, run alter system flush shared_pool on every node of the RAC.</p>	SoO 1426
	<p>When the Spotlight connection is to the container database:</p> <ul style="list-style-type: none"> There may be No Data displayed on the IO Throughput Requests and IO Latency charts in the Activity Summary drilldown when the selected Container is the plugged in database. <p>When the Spotlight connection is to the plugged in database:</p> <ul style="list-style-type: none"> There will be No Data displayed in the I/O Tablespace and I/O Datafiles drilldowns, and the I/O Summary drilldown when File Type is selected. There will be No Data displayed on the IO Throughput Requests and IO Latency charts in the Activity Summary drilldown. <p>The problem is v\$iostat_file is empty on the pluggable database.</p>	SoO-1376 SoO-1417
	<p>When the Spotlight connection is to the container database:</p>	SoO-1377

Feature	Known Issue	Defect ID
	<ul style="list-style-type: none"> There may be negative values displayed in the Activity Summary drilldown when the selected Container is the plugged in database. There may be negative values displayed in the Pluggable Databases drilldown. There may be a delay in populating the Container drop down menu with all the plugged in databases on the Activity Summary drilldown. <p>When the Spotlight connection is to the plugged in database:</p> <ul style="list-style-type: none"> There may be negative/incorrect (self-correcting spiked) values displayed throughout the product including the Activity Summary drilldown, the SQL & Application Workload Parse Activity drilldown Parse Ratios and Parse Wait Times charts, and the SQL & Application Workload Sort Activity IO Wait Times chart. <p>The problem is with Oracle counters not always incrementing correctly for plugged in databases.</p>	SoO-1410
Oracle Exadata	<p>After heavy use of the cellcli utility, CPU utilization on the cell host may hit 100% and stay there. The runaway processes appear to be java and cellsvr. To fix, identify the cell host on the Exadata Cell Balance drilldown then enter the following Unix command on the appropriate cell host:</p> <pre>cellcli -e "alter cell restart services MS"</pre>	
	<p>Windows Firewall has blocked some features of this program: You may see this Windows Security Alert while Spotlight is running.</p> <ul style="list-style-type: none"> Program Name (Spotlight Console) - This may occur while monitoring Oracle Exadata. Exadata Storage Cells are generally only accessible to Spotlight via SSH port forwarding. If requested, allow Spotlight to communicate over the Network via SSH Port Forwarding. 	PT32653067
Oracle 11g	<p>Spotlight support for Oracle 10g or 11g Instant Client: Spotlight on Oracle supports the use of the Oracle 10g or Oracle 11g Instant Client when it is the default Oracle client, but the Oracle Instant Client may not be available in the list of Oracle clients shown in the Spotlight connection profile or in the Oracle home item in the Spotlight on Oracle Options window.</p> <p>Bad data in Latch Misses chart: The Latch Misses chart in the Activity Latches drilldown can show bad data for Oracle 11gR2 under category "Other". This is due to intermittent bad data being returned from Oracle for latch "JS slv state obj latch". Bug 9534870 has been raised with Oracle. Using the Filter button to remove the "Other" category from the chart is a possible workaround for this issue.</p>	
Oracle 10g	<p>Asynchronous I/O failure in Oracle 10g (Release 2) on Linux: In some Linux implementations, Oracle 10G (Release 2) is not able to report I/O activity or events to the operating system while using asynchronous I/O. This problem can cause database writer contention in Oracle and cause Spotlight to raise database writer alarms. To correct the problem, you need to stop the database and relink the base Oracle binary with the option async_on. <i>[For more information, see Document 365416.1 on the Oracle Metalink Web site (https://metalink.oracle.com/)]</i></p>	

Feature	Known Issue	Defect ID
	<p>Oracle 10g bug may affect display of SGA data: A bug introduced in Oracle 10g may result in several Spotlight components – in particular, the SGA Current Size component on the home page, and various components on the SGA Utilization page of the Configuration & Memory drilldown – to display the message "Unknown – Oracle Bug". The bug responsible for causing this error has been fixed in Oracle release 10.2.0.3.</p>	

Known Issues - Spotlight Diagnostic Server, Spotlight Mobile and Spotlight Cloud

Feature	Known Issue	Defect ID
Spotlight Cloud user token	Spotlight does not allow for multiple Windows users (on the same computer) to enable Spotlight for Mobile devices and web based analytics independently. Only the last Windows user's Spotlight Cloud user token is remembered.	SoO-1520
Installation and Startup	To install the Spotlight Diagnostic Server on a computer other than the Spotlight Client the remote computer must enable the "Remote Registry" service. The remote computer is the computer remote from the Spotlight Client. Note: By default the Remote Registry service is disabled on Windows 8.	SoO-1810
	If Spotlight on Oracle 10.3 is installed side by side with Spotlight on Oracle 10.2 or 10.1 then the Spotlight Client does not auto detect a pre existing Spotlight Diagnostic Server. Workaround: On the Spotlight on Oracle, View Options Configure Diagnostic Server page: 1) Enter the host of the Spotlight Diagnostic Server, 2) Spotlight detects that an upgrade is available. Click Upgrade/Install to upgrade the Spotlight Diagnostic Server. Alternative Workaround: On the Spotlight on Oracle, View Options Configure Diagnostic Server page: Reinstall the Spotlight Diagnostic Server.	SOO-2166
Spotlight Mobile	When two Diagnostic Servers use the same User Token then the Heat Map will flip back and forth between the two at various intervals.	
Monitoring Connections	For connections through the Spotlight Diagnostic Server (Spotlight Cloud and Spotlight Mobile) <ul style="list-style-type: none"> • Oracle RAC connections to an Oracle 12c pluggable database are not supported. • The CPU Usage alarm on an Oracle RAC connection sometimes does not show on the Heatmap. 	DS-312 SoO-1894
Uninstall	For Windows 8.x there may be issues using the Spotlight Client to uninstall the Spotlight Diagnostic Server. Workaround: For Windows 8.x use Windows Control Panel Programs and Features. Uninstall "Spotlight Diagnostic Server for Oracle".	SOO-1805

Known Issues - Monitoring MySQL Databases

Feature	Known Issue	Defect ID
Connections	Connections to MySQL databases do not support the use of SSH public and private keys.	
Activity drilldown	No data shown in Mutex page for MySQL versions 5.0.33 to 5.1.1: Because the data returned by the Show mutex status command depends on the compile options selected for the MySQL server, this version of Spotlight on MySQL does not display mutex information for MySQL versions 5.0.33 to 5.1.1.	
Linux	<p>'iostat' required for full functionality on Linux systems: In UNIX-based systems, Spotlight on MySQL requires access to the iostat program in order to display its full functionality; it will display an error if iostat is not available.</p> <p>A number of Linux distributions do NOT install iostat by default. If you encounter an "iostat command not found" error while diagnosing a MySQL database, you can either:</p> <ul style="list-style-type: none"> • Click Ignore, in which case the error message will not appear, and I/O by Disk statistics will NOT be shown in the OS Performance page of the OS Details drilldown. • Install the iostat command. On Red Hat Linux this command is included in the sysstat package. 	
Spotlight home page	Tablespace storage data not available without O/S user permissions to view InnoDB files: Without the O/S permission to view InnoDB files, the Tablespace components in the Storage panel of the Spotlight on MySQL home page display the value N/A .	

Known Issues - Monitoring Unix Operating Systems

Feature	Known Issue	Defect ID
Connections	<p>REXEC and SSH protocols and Unix commands: Spotlight uses the REXEC or SSH protocols to submit various Unix commands (for example, netstat, vmstat, iostat, sar) to observe system activity. These commands must be accessible to an REXEC or SSH session for Spotlight to be able to observe Unix activity. If these commands are not located in the search path for REXEC or SSH sessions, Spotlight displays an error.</p> <p>'iostat' command may not be installed.</p> <p>Spotlight on Unix works with full functionality only when the iostat command is installed on the server under diagnosis. This may NOT be true for all Unix systems. If iostat is NOT installed, Spotlight may display an error message such as 'iostat: command not found'. If you encounter this error, you can:</p> <p>Install the iostat command on the server. (On Red Hat Linux, this command is included in the sysstat package.)</p>	

Feature	Known Issue	Defect ID
	<p>Logging on as "root".</p> <p>When connecting to a Unix OS, you need to do so from a logon other than "root". Remote login as "root" has been disallowed for security reasons.</p>	
	<p>Public-key cryptography available for SSH2 connections only:</p> <p>Spotlight can now use public-key cryptography (via DSA or RSA) to communicate securely with Unix systems, but this functionality is made available only under the SSH2 protocol.</p>	
	<p>Password authentication for SSH connections that do NOT use public-key cryptography.</p> <p>To allow Spotlight to make SSH connections to any Unix or Linux hosts that permit SSH connections, you may need to alter the PasswordAuthentication configuration item in the sshd_config file. Set the value of PasswordAuthentication to yes.</p>	
	<p>Password Authentication when using SSH to connect to Linux servers: To allow Spotlight to make SSH connections to Linux machines via username/password authentication, you may need to set the value of the PasswordAuthentication configuration item in /etc/ssh/sshd_config to yes.</p>	
AIX Limitations	<p>Specific implementations of AIX may limit Spotlight's ability to collect data. These include:</p> <ul style="list-style-type: none"> • The Procs Swapped button in the Memory panel on the home page is not supported. • The Physical Memory metric in the Process Details sub-page of the Processes and Services drilldown is not supported. • I/O data unavailable before AIX 5.3. For versions before AIX 5.3, disk I/O flows on the home page are disabled, as are disk read and disk write charts in drilldown pages. 	
HP-UX Limitations	<p>Specific implementations of HP-UX may limit Spotlight's ability to collect data. These include:</p> <ul style="list-style-type: none"> • Missing Physical RAM and Virtual Memory values on Spotlight home page: Values for Physical RAM and Virtual Memory can be displayed only if the cstm utility is installed and can be run on the HP-UX server. • Free RAM values may be incorrect. Spotlight uses the "free" column in vmstat(1) to show the amount of free RAM. This is not strictly correct for HP-UX servers, but it is the only figure available that is in any way useful. • I/O data unavailable. Disk I/O flows on the home page are disabled, as are disk read and disk write charts in drilldown pages. • The Physical Memory metric in the Process Details sub-page of the Processes and Services drilldown is not supported. 	
Linux Limitations	<p>Specific implementations of Linux may limit Spotlight's ability to collect data. These include:</p>	

Feature	Known Issue	Defect ID
	<ul style="list-style-type: none"> • The Procs Swapped button in the Memory panel on the home page is not supported. • For versions of Linux based on the 2.4 kernel, Spotlight provides no information in the Waiting data series of the CPU Utilization chart on the Activity page of the Activity Summary drilldown. • When running with the latest version of the Linux 2.4 kernel, Disk Activity metrics on the home page return invalid results due to erroneous statistics being returned from iostat in the sysstat package. To overcome this problem, the OS should be updated to a 2.6 kernel. • In some Linux versions, Spotlight reports the virtual memory value of multi-threaded processes incorrectly. Each thread is reported as a separate process in the Processes drilldown, and the Virt Mem (MB) column is reported as the sum of the virtual memory values for all threads in the process. • With some older versions of Linux based on the 2.4 kernel, the Disk Reads and Disk Writes charts may include negative values. These charts are based on output from iostat, some versions of which do not return the data required by Spotlight. To resolve this issue, upgrade to a more recent version of Linux. • The Cache chart in the Memory page of the Activity Summary drilldown is not supported. 	
Solaris Limitations	<p>Unix OS commands. Unix OS commands need version 5.6 of perl or later. If this is not available you should revert to using a shell script to obtain operating system data for this server. To do this, edit the file ScriptConfig.ini (in the ..\Plugins\DatasourceUNIX sub-folder of the Spotlight installation folder) according to the instructions supplied in the file.</p>	
	<p>Problems with diagnosing Solaris 9 machines.</p> <p>A number of Spotlight home page components will not be populated when Spotlight diagnoses lightly-loaded Solaris 9 machines. This is caused by the output from the vmstat command regularly recording a "State Change" event, which in turn resets values for the vmstat command. In this case, the CPU spinner, User % gauge, System % gauge, Queue Length gauge, Free RAM label, Blocked Processes button, Swapped Processes button, Paging In and Paging Out flows, and Swapping In and Swapping Out flows will appear grayed out.</p>	
	<p>Other Solaris Limitations:</p> <ul style="list-style-type: none"> • The Collisions by Network Card chart in the Network page of the Activity Summary drilldown is not supported. 	

Known Issues - Monitoring Windows Operating Systems

Feature	Known Issue	Defect ID
Drilldowns	<p>Error Access denied on the Spotlight on Windows Home Page Open Sessions panel and the current user is in the Administrators group on both the local and the remote machine.</p> <p>To fix this issue: Enable the AllowRemoteRPC property in the registry of the monitored system.</p> <p>[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Terminal Server]"</p> <p>AllowRemoteRPC"=dword:00000001</p> <p>or import the registry file AllowRemoteRPC.reg</p> <p>Processes drilldown. For some versions of Microsoft Windows, the Peak Mem Usage (MB) column in the Processes grid displays bytes or kilobytes rather than megabytes.</p> <p>Windows 7 error. When diagnosing a Windows 7 machine, the Network / TCP/IP drilldown can show errors with the text "Error 80041010: Invalid class". This is due to problems within WMI (Windows Management Interface).</p> <p>Windows 7 hidden partition. Windows 7 is typically installed with a 200 MB hidden partition which contains the Windows Recovery Environment (WinRE). This partition is not shown on the Spotlight on Windows home page, but data for it will be displayed on the Logical Disk Activity drilldown.</p> <p>Missing event log message text. Redesigned resource information structures within Windows may prevent Spotlight from reading the content of event log messages on Windows Server 2008 systems.</p> <p>Missing Open Ports page. Spotlight cannot currently display the Open Ports page in the Network drilldown for Windows Server 2008 systems.</p> <p>Excessive event log activity. If you are connecting to a machine that has an event log that is being updated excessively (more than two items being logged per minute), it is recommended that you turn off the event log feature for that system. This is because Spotlight on Windows maintains details of all event log items, which may cause the program to use an excessive level of memory.</p> <p>Incorrect or missing NBT information. When connecting to a local machine, sometimes Windows will not return the correct NBT information. This may cause the NBT flows on the main window to be dimmed. It may also cause the information in the NBT drilldown to be blank.</p> <p>Errors in performance counters and WMI: Spotlight on Oracle now reports fewer performance counter and WMI errors of the type "Error 80041010: Unknown IwbemLocator.ConnectServer error". It is impossible to eliminate these errors entirely if they are generated by the Windows server under diagnosis.</p> <p>Event log size. There is a 64 KB limitation to the size of event log records.</p>	PT43095851
Connections	<p>Service Manager is not accessible error on connecting to a Windows 8 or Windows 2008 server image.</p>	SOO-34

Feature	Known Issue	Defect ID
	Resolution: Ensure the user on the Spotlight Client has administrator privileges on the windows server you want to monitor.	ST14620
	<p>Limit to simultaneous connections. It is recommended that no more than 10 simultaneous connections be executed from the same instance of Spotlight on Windows. Depending on the available system resources, the level of response will deteriorate if this number is exceeded. The number of connections possible may also be affected by option settings; for example, setting event log options to access thousands of event log items will degrade Spotlight performance and consume more memory.</p> <p>Remote Registry service. The Spotlight machine and the machine being diagnosed must have the Remote Registry service running. If you attempt to connect to a machine that has the Remote Registry service stopped, Spotlight will return the following error message:</p> <p>No Windows server called <machine name> could be found on the network. If the address is valid then the Remote Registry service may not be running on the remote server.</p> <p>Make sure the Remote Registry service is running on the Spotlight machine and the machine you are connecting to.</p> <p>Connecting to a machine running PC Anywhere. If a machine has PC Anywhere loaded and is using the PC Anywhere Performance Monitor extensions (from pcaperfctr.dll), Spotlight may show "query failed" messages on that connection.</p> <p>To work around this issue, unload the PC Anywhere Performance Monitor extensions from the machine..</p>	

System Requirements

Before installing Spotlight, ensure your system meets the following minimum hardware and software requirements:

Client Requirements

Requirement	Description
Platform	<p>A Pentium-based or equivalent PC with:</p> <ul style="list-style-type: none"> A 1.2 GHz Processor (recommended minimum). The required processing power will increase when Spotlight diagnoses Oracle RAC clusters with many instances. A monitor capable of supporting a resolution of 1280x1024 or larger. (You should also set the display to use the 64K color palette [65536 colors].)
Memory	<p>512 megabytes of RAM (minimum). 1 gigabyte recommended. Memory consumption will increase for multiple simultaneous connections and as the number of instances in an Oracle RAC cluster increases, and will also depend on the connection options chosen.</p>

Requirement	Description
Hard Disk Space	1 gigabyte of free disk space. This should exist on a local disk drive rather than a network drive. Extra disk space will be required if you choose to log historical snapshots from within Spotlight.
Operating System	Microsoft Windows Server 2012 64-bit Microsoft Windows Server 2008 64-bit R2 and above Microsoft Windows 10 32-bit and 64-bit Microsoft Windows 8 32-bit and 64-bit Microsoft Windows 7 32-bit and 64-bit
Additional Software (Monitor Oracle Database Servers)	<ul style="list-style-type: none"> • .NET 4.0 or above • SQL*Net 2.3.4 or later. SQL*Net enables a connection to be established to a database. The database may be local or remote. Before you start Spotlight you must have the SQL*Net connection string for the database. • Oracle Client: <ul style="list-style-type: none"> • Oracle 10g [full client or instant client] • Oracle 11g [full client or instant client] • Oracle 12c [full client or instant client] • Oracle 18c <p>Spotlight also requires that the version of the Oracle client be the same or later than the version of any Oracle database being diagnosed. For example, to connect to an Oracle 10g cluster, you must use an Oracle 10g client or later.</p>
Additional Software (Monitor MySQL Database Servers)	MySQL. Spotlight on MySQL supports MySQL versions 5.0.3 or later that employ the InnoDB storage engine. With reduced functionality , it also supports versions of MySQL that use other storage engines (such as MyISAM). Spotlight on MySQL may NOT support versions of the MySQL server prior to 5.0.3.

Spotlight Diagnostic Server Requirements

Requirement	Description
Platform	2 GHz Pentium Dual Core
Memory	2 GB RAM
Hard Disk Space	300 MB
Operating System	Microsoft Windows 7 (32-bit and 64-bit) Microsoft Windows 8 (32-bit and 64-bit) Microsoft Windows 10 (32-bit and 64-bit) Microsoft Windows Server 2008 (64-bit) R2 and above

Requirement	Description
	Microsoft Windows Server 2012 (64-bit)
Additional	.NET 4.0 or above must be installed on the Diagnostic Server.
	Internet Access
	A network connection between the Diagnostic Server and Spotlight on Oracle client is required during installation of the Diagnostic Server and intermittently for connection updates.
	Preferably the Diagnostic Server should be installed on a Physical Machine however it can be installed on a Virtual Machine if required.
	Connections to a database using an LDAP server are not supported through the Spotlight Diagnostic Server.

Monitored Database Servers - Requirements

Requirement	Description
Oracle	<p>The following Oracle database servers are supported for database queries. (<i>You must have the Database Administrator [DBA] user ID and password for the database you want to diagnose.</i>)</p> <ul style="list-style-type: none"> • Oracle 10g (Release 2) • Oracle 11g (Release 1 or Release 2) • Oracle 12c • Oracle 18c <p>Notes:</p> <ul style="list-style-type: none"> • When monitoring Oracle 11g Release 2 and above, to use the Spotlight User Wizard to install objects in your schema you require DBA privileges. To use the Spotlight User Wizard to setup another user to use this connection you require SYSDBA privileges. • When monitoring Oracle 11g Release 1 (and earlier) the Spotlight User Wizard installs several read-only views into the SYS schema of the target database when you use the wizard to create or modify a Spotlight user. Because of this, the DBA account that you use within the Spotlight User Wizard should have SYSDBA privileges. If the account does not have these privileges, you will be asked to provide a valid SYS account and password.
Oracle RAC	Spotlight supports up to 16 instances in a cluster, with a theoretical limit of 36 instances.
Oracle Exadata Storage Servers (Cells)	<p>Spotlight monitors Exadata Storage Server (Cells) hosted on the following Operating System: Linux Kernel V2.6.</p> <p>Ensure CellCLI is in the PATH of the Operating System account on the Exadata Storage Server (Cell) hosts. This is required for Spotlight to collect performance information.</p>
Cloud Database	Oracle Database as a Service.

Requirement	Description
Services	Oracle databases running on Amazon EC2.
MySQL	<p>The following MySQL database servers are supported for database queries. (<i>You must have the Database Administrator [DBA] user ID and password for the database you want to diagnose.</i>)</p> <ul style="list-style-type: none"> Version 5.0.3 and later.

Monitored Operating Systems (UNIX) - Requirements

Requirement	Description
Unix Servers	<p>Unix servers and versions. Spotlight supports the following server operating systems for O/S Server queries:</p> <ul style="list-style-type: none"> Oracle Solaris 9, 10, 11 HP-UX 11i, 11i v2, 11i v3 IBM AIX 5.2, 5.3, 6.1, 7.1 Red Hat operating system based on Linux 2.4, 2.6 and 3.10 kernels SUSE operating system based on Linux 2.4, 2.6 and 3.0 kernels Oracle Enterprise Linux (OEL) based on Linux 2.4, 2.6 and 3.8 kernels
Unix Server Software	<p>Unix programs. The following Unix programs must be accessible to the user logged on to the Unix machine.</p> <ul style="list-style-type: none"> Perl 5.x awk cat date df grep ifconfig iostat (not HP-UX) netstat ps sar sed tr uname uptime

Requirement	Description
	<ul style="list-style-type: none"> • vmstat • wc • who <p>For HP-UX, additionally</p> <ul style="list-style-type: none"> • bdf • cstm • getconf • swapinfo • /usr/sbin/ioscan <p>For AIX, additionally</p> <ul style="list-style-type: none"> • lsattr • lsdev • lsp • prtconf <p>For Solaris, additionally</p> <ul style="list-style-type: none"> • /etc/swap • mpstat • nawk • prtconf
Unix User Permissions and Installation Settings	<ul style="list-style-type: none"> • The Unix user should have no special processing on log-on. In particular there must be no input required from the user, and nor should any special login banners be displayed. • On AIX, the user must be a member of the "adm" group to be able to run the sar command. • On Linux, the sysstat package must be installed to enable the user to get detailed disk I/O information. • On Linux the /proc filesystem must be present. • For connection using SSH, the sshd daemon must be installed and running. • The Unix user must have read/write access to /tmp

Monitored Operating Systems (Windows) - Requirements

Requirement	Description
Operating	Microsoft Windows Server 2012 64-bit

Requirement	Description
Systems	Microsoft Windows Server 2008 64-bit R2 and above Microsoft Windows 10 32-bit and 64-bit Microsoft Windows 8 32-bit and 64-bit Microsoft Windows 7 32-bit and 64-bit
Administrator access	Ensure your login to the Windows machine has Administrator access privileges. To add a new connection to the Windows machine you are currently using, ensure you are logged in to the machine with Administrator access privileges. If necessary, logout and login again.
Privileges	Spotlight retrieves its data from Windows performance counters and the windows registry of the monitored system. An administrator login to the Windows machine has such access.
Remote connectivity	To add a new connection to a Windows machine other than the one you are currently using, ensure the machine is accessible to the Spotlight client. Spotlight uses NetBIOS traffic to retrieve perfmon and registry information, so any firewalls between the Spotlight client and the machine being monitored must allow this traffic to pass through.

Virtualization Support

Review the following information about using Spotlight in virtual environments:

Requirement	Description
Application	Spotlight has been tested on Citrix XenApp 6.5.
Desktop (VDI)	Spotlight has been tested on desktop VMware workstations.
Server	Spotlight has been tested on VMware ESX server. Spotlight supports Oracle Virtualization (OVM). Limited testing has been done using Oracle VM 3.0.

Note: Spotlight may work in virtualization environments other than the ones in which it was tested.

Upgrade and Compatibility

From time to time, Quest Software may make upgrades and patches available on the Internet. Upgrades will be made available from <http://software.quest.com/>. Instructions for downloading and installing upgrades are provided on the web site.

Notes:

- When upgrading to Spotlight on Oracle 10.3.2 history data will be reset. If you would like to keep history between upgrades then you can change the folder spotlight stores history to, through Spotlight Options | storage->History Location.
- VBScript is used to detect pre-existing Spotlight installations. If for security reasons your client system is unable to execute VBScript, you can provide the UPGRADE_EXISTING_PRODUCT=0 property during install to bypass checking for installed Spotlights. For example:

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Product Licensing

Spotlight is supplied with a time-limited trial key so you may test the product. When the trial key expires Spotlight reverts to a preview mode, which limits access to the Spotlight home page and one connection at a time. If you select to open a drilldown in preview mode the following message is displayed:

The current license does not allow access to this functionality.

When you enter a valid license key and authorization message in the License Viewer, you are licensed to use Spotlight on Oracle.

To activate a purchased commercial license

1. Click **Help | About Spotlight**.
2. Click **license information**.
3. Click **Change this license**.
4. Enter the **Authorization key**.

Make sure you enter the authorization key exactly. The site message is case sensitive.

The Windows user that updates the authorization key must have administrator access to the Windows registry and write access to the **ConsoleLicenses** folder in the Spotlight installation folder.

Getting Started

Contents of the Release Package

The **Spotlight on Oracle** release package contains the following products:

1. Spotlight on Oracle 10.7
2. Product Documentation, including:
 - Spotlight on Oracle Getting Started Guide
 - Online Help

Installation Instructions

Refer to the *Spotlight on Oracle Getting Started Guide* for installation instructions.

Note: When upgrading to Spotlight on Oracle 10.3.2 history data will be reset. If you would like to keep history between upgrades then you can change the folder spotlight stores history to, through Spotlight Options | storage->History Location.

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.

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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/company/contact-us.aspx or call +1 949 754-8000.

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

WARNING: A WARNING icon indicates a potential for property damage, personal injury, or death.

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

An information icon indicates supporting information.

Spotlight on Oracle Release Notes

Updated - October 2018

Software Version - 10.7