

Explorer Dashboard

User Guide

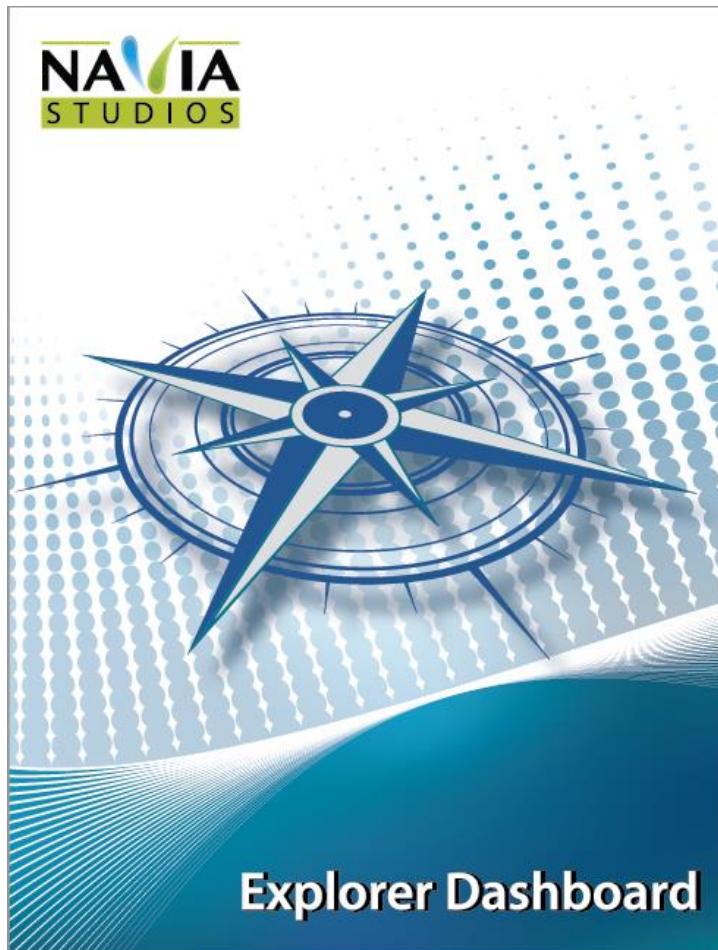


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1 Welcome to Explorer Dashboard

Welcome to Explorer Dashboard, an easy-to-use software solution that provides a powerful set of tools to analyze, compare and monitor server configurations and metrics. Explorer Dashboard's three main features are:

- **System Values Table:** Extract and analyze server settings and metrics at a glance.
- **Monitor Test Table:** Evaluate server settings and metrics against a defined set of thresholds.
- **Comparison Table:** Compare server settings and metrics between servers in one convenient table.

Explorer Dashboard can be used by system engineers and technicians to:

- Perform site-readiness tests before software installation.
- Perform post-installation verifications to validate software installations.
- Perform routine maintenance tests to detect issues before outages occur.
- Diagnose system issues, with the Comparison Table and easily detect differences by comparing the target system, with a lab or master systems.

Server settings and metrics are extracted over the network using Windows Management Instrumentation (WMI) and File System Objects. Explorer Dashboard extracts the following server system values:

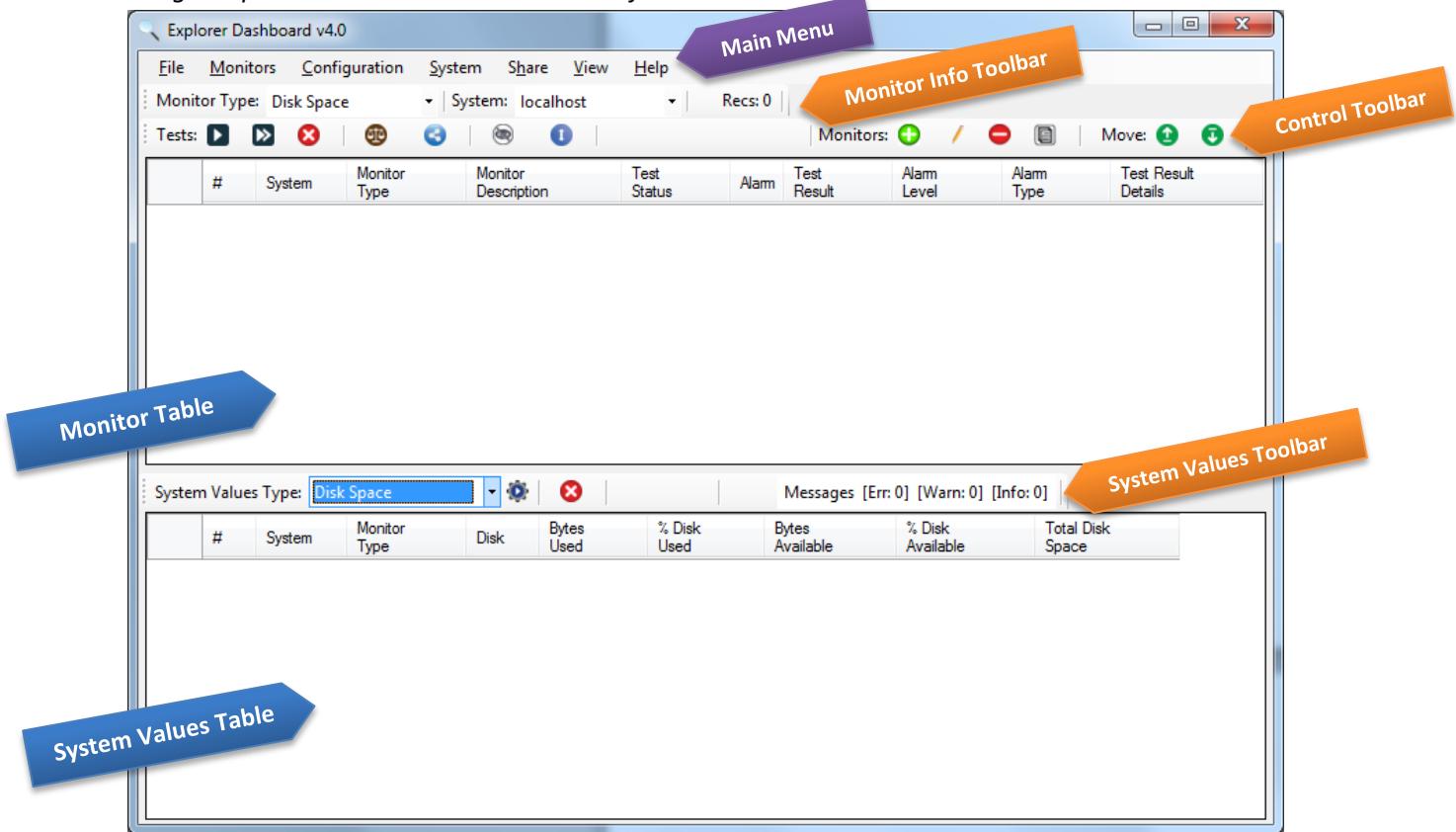
- | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none">▪ Disk Space▪ Environment Variables▪ Event Logs▪ File/Folder information▪ Installed Applications▪ Memory Performance | <ul style="list-style-type: none">▪ Operating System▪ Processes▪ Processor▪ Processor Performance▪ Registry▪ Services |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

System values are further detailed in [Appendix A – System Value Types](#).

2 Explorer Dashboard User Interface

Explorer Dashboard provides a simple interface to load system values and to define and test system monitors.

Image: Explorer Dashboard main user interface



The Monitor Table in the upper portion of the form is used to create, manage and test system monitors. The System Values Table in the lower portion of the screen is used to load system values. The next sections describe each of these tables in greater detail.

For a complete description of the Main Menu, please refer to [Appendix B – Explorer Dashboard Main Menu](#)

2.1 Getting Started

Once you have downloaded the Explorer Dashboard installer you can proceed to run the installer on the target machine. The installer will create shortcuts in the start menu for your convenience. Before you can run the application, you will need to obtain a valid license which requires you to forward the machine's Hardware ID to Navia Studios. Email the Hardware ID to support@naviastudios.com and provide your company name and the email address used to purchase the product. A license file will be emailed to you. The following section details the process to install Explorer Dashboard and to obtain a license file.

2.1.1 Installing Explorer Dashboard

Once you have downloaded the Explorer Dashboard installer, proceed to run the installer.

The installer that contains the "x86" in the file name is the 32-bit installer can be installed on 32-bit and 64-bit machines while the installer that contains the "x64" in the file name is the 64-bit installer that requires a 64-bit operating system.

When you run the installer, you will be prompted to accept the license agreement, and to specify the location where Explorer Dashboard will be installed. Depending on the operating system, the installer may prompt you to install the .NET Framework 4.0 which is included in the installer. It may require a reboot during installation. When the machine reboots the installer will resume.

The installer will create a shortcut to the application in the Start Menu as follows:

Start -> All Programs -> Navia Studios -> Explorer Dashboard -> Explorer Dashboard

Clicking on Explorer Dashboard will start the application. Please see section **2.1.3 Obtaining a License** below for details about obtaining and installing a valid license.

2.1.2 Product Documentation

The Explorer Dashboard User's Guide can be accessed via the Start Menu as follows:

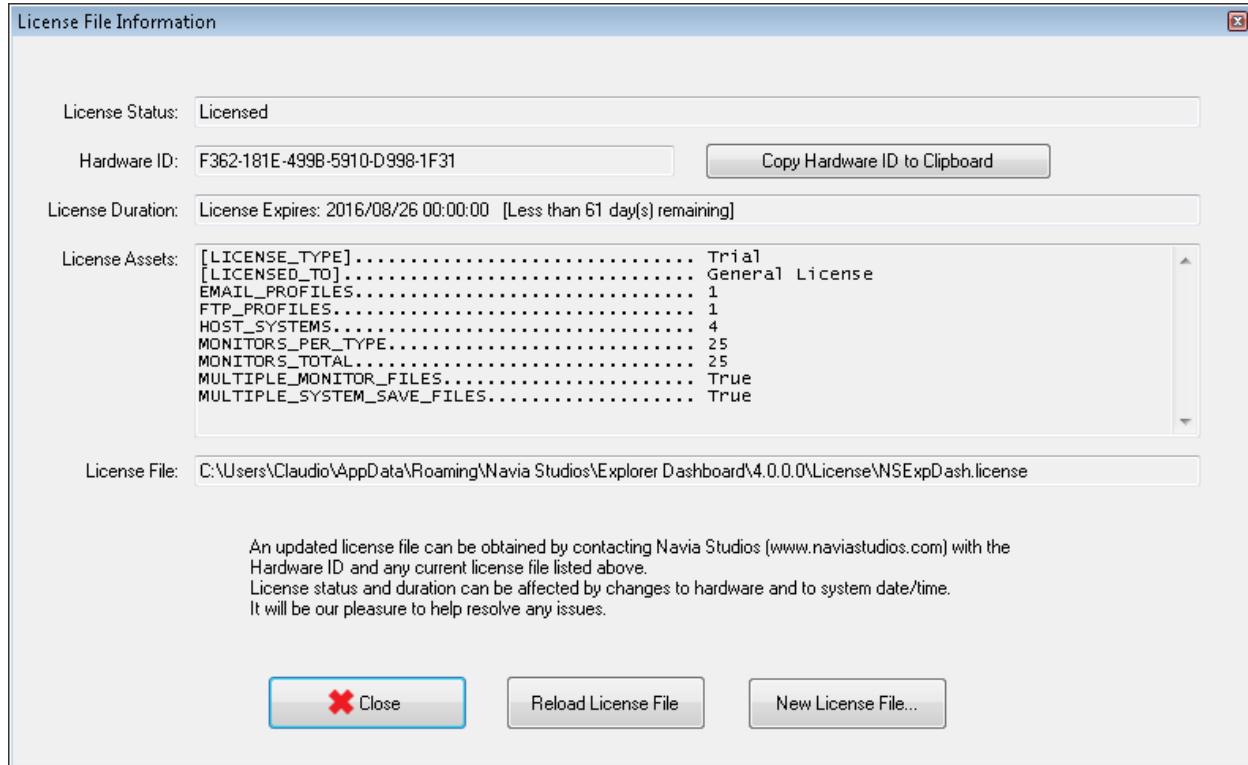
Start -> All Programs -> Navia Studios -> Explorer Dashboard -> Documentation -> User Guide

A pdf reader will be required to read the documentation.

2.1.3 Trial License

Once you have installed Explorer Dashboard, you will be able to run in Trial mode for the duration specified in the trial license. To view your license information, start Explorer Dashboard and from the Main Menu, click **Help -> License Info**. The License File Information window will be displayed with the License Status and Hardware ID as per the image below.

Image: License File Information form



In the image above, the license is valid for 60 days. You can create 1 email profile and 1 ftp profile that can be used to share system information. The license allows you to monitor up to 4 hosts, and up to 25 individual monitors per host.

2.1.4 Generating a Run-Time License

If you wish to extend the period of the license, or if you need additional resources, you can contact Navia Studios (www.naviestudios.com) to obtain a license that meets your needs. Once you purchase a license file, you will receive a confirmation email with a product key as an attachment that includes a **Purchase ID** and a **Serial Number**, both highlighted in the Sample email key below.

Sample email key attachment with a purchase

Serial Number: **9VCA-YK6D-BKQ9**

Purchase ID: **514515553**

Product ID: 300742637

Registered To: Bob Smith (Company XYZ)

A product license file can be generated at www.explorerdashboard.com/license.

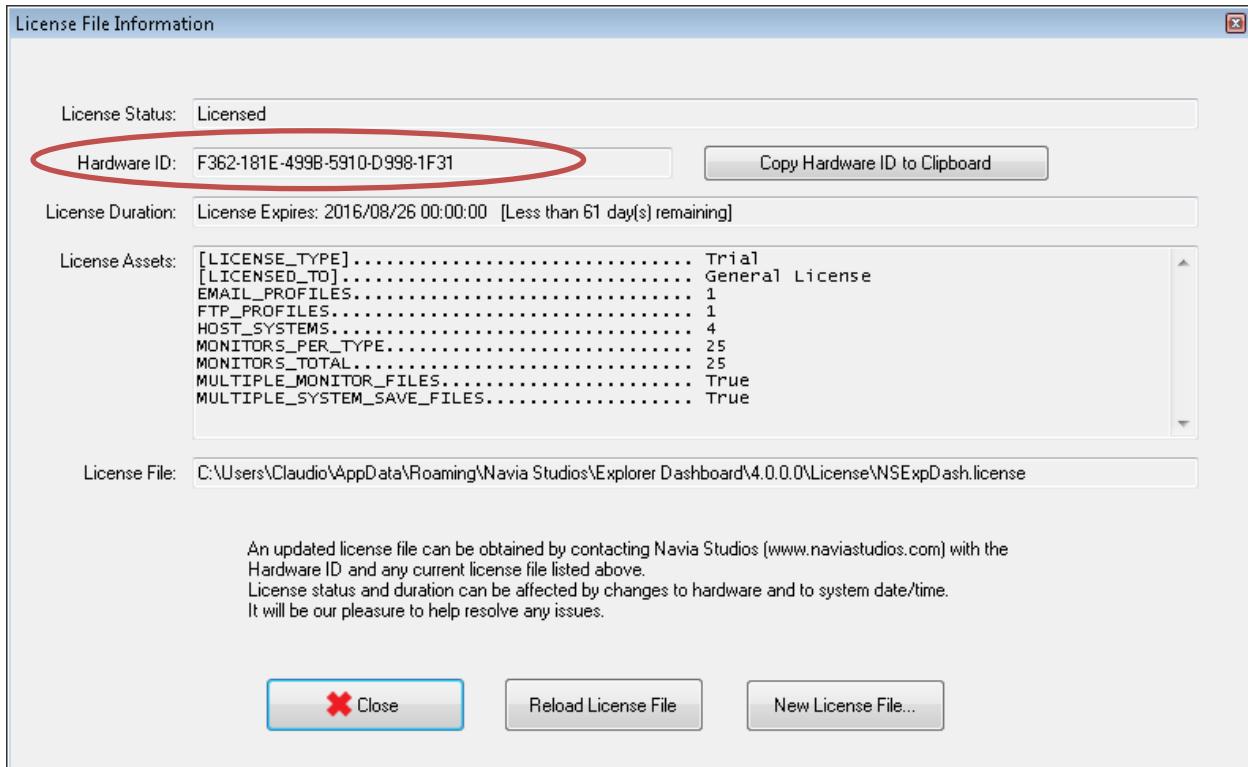
Use the Purchase ID and Serial Number above and the Hardware ID from your application to generate a license

Hardware ID can be obtained by clicking 'Help' -> 'License Info' from the application main menu.

If you need assistance, please contact Navia Studios (support@naviestudios.com)

The Hardware ID key can be obtained from the application. Start Explorer Dashboard and from the Main Menu, click **Help -> License Info**. The License File Information window will be displayed with the License Status and Hardware ID as per the image below.

Image: Hardware ID – in License File Information form



To generate a license file, navigate to <https://www.explorerdashboard.com/license>. On the form, enter the **Serial Number** and **Purchase ID** received from the transaction email, and enter the **Hardware ID** from Explorer Dashboard running on the machine you wish to license. Click “Generate New License File” to generate the license file for your machine.

Image: Filling in fields to generate a license file

The screenshot shows a Microsoft Internet Explorer window with the address bar set to <https://www.explorerdashboard.com/license>. The main content area displays the "Product License File" page from NAVIA STUDIOS. The page features a logo with the text "NAVIA STUDIOS". Below the logo, there are three input fields: "Serial Number" containing "9VCA-YK6D-BKQ9", "Hardware ID" containing "F362-181E-499B-5910-D998-1F31", and "Purchase ID" containing "514515553". A yellow button labeled "Generate New License File" is centered below these fields. At the bottom left, a green link says "<< Go Back". The status bar at the bottom right indicates "Internet | Protected Mode: On" and shows the zoom level as "100%".

Once you click the “Generate New License File” the information is validated and a license file is generated. The license details are displayed, as per the image below.

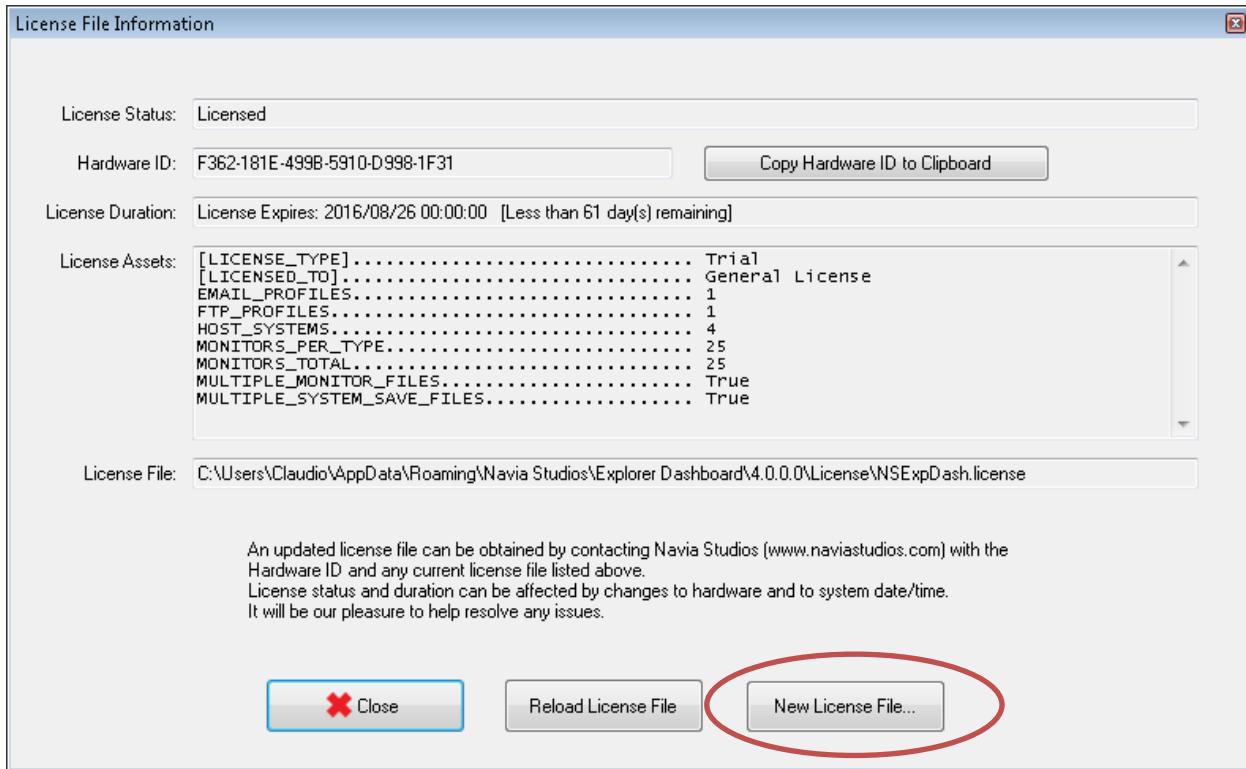
Image: Generated license file with license information displayed

The screenshot shows a Windows Internet Explorer window with the URL <https://www.explorerdashboard.com/license/>. The page displays the NAVIA STUDIOS logo at the top. Below it, the title "Product License File" is centered. Three input fields show the Serial Number (9VCA-YK6D-BKQ9), Hardware ID (F362-181E-499B-5910-D998-1F31), and Purchase ID (514515553). A message "License File Created. Details below." is followed by a "Generate New License File" button. A scrollable text area contains the license details:
License File Status: Valid
License Expiration: 9/27/2016 12:00:00 AM
License Generated: 6/26/2016 7:39:00 PM
Licensed To: Bob Smith (Company XYZ)
License Hardware ID: F362-181E-499B-5910-D998-1F31
Product: 300742637 - Explorer Dashboard Standard (3 month subscription)
At the bottom, there is a "Download License File" button and a "Go Back" link. The status bar at the bottom right shows "Internet | Protected Mode: On" and "100%".

To download the newly generated license file, click on “Download License File” and you will be able to save it to your machine.

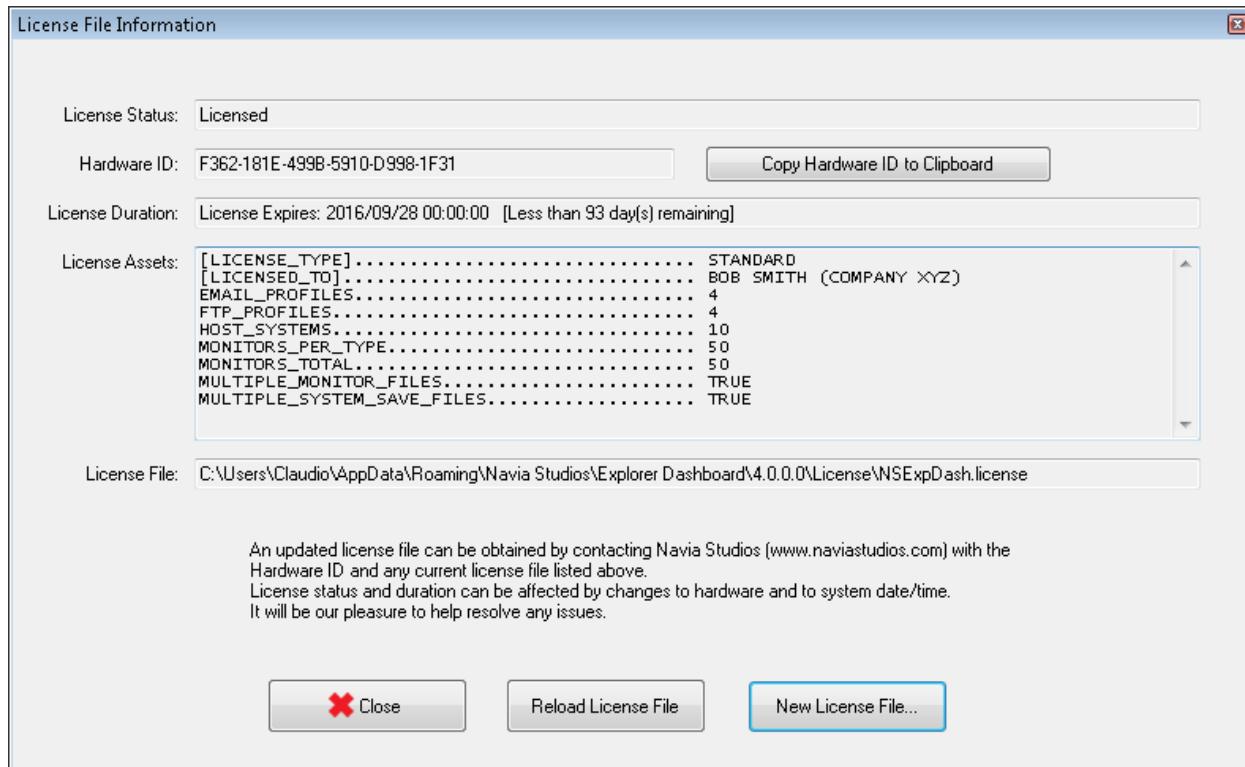
To load the new license, start Explorer Dashboard and from the Main Menu, click **Help -> License Info**. The License File Information screen will appear as per the image below.

Image: License File Information form



Click "New License File" and select the newly downloaded license file. The system will confirm that the new file has been loaded. And the new license file will be displayed as per the image below.

Image: New License File Information



The current license file (nsExpDash.license) is located in the folder: **%APPDATA%\Navia Studios\Explorer Dashboard\4.0.0.0\License**. For example: C:\Users\Claudio\AppData\Roaming\Navia Studios\Explorer Dashboard\4.0.0.0\License\nsExpDash.license.

3 Monitors

A monitor is a rule or a condition that is defined by the user and can be tested against a specific target system. For example, a monitor can be defined as “Any drive with disk space that is less than 10 percent of the total disk capacity”. Monitors can be tested against any system that has been configured in Explorer Dashboard. When evaluating or testing the monitor, an alarm is generated if the condition is met, or in this case, any drive on the target system has available disk space that is less than 10 percent of the total disk capacity, otherwise the test returns success.

Monitors can be used to test for thousands of system values or settings. Some of the tests that can be performed are:

- Check if a system drive has low free disk space remaining
- Verify whether a key environment variable is present and verify its value
- Validate the version of an operating system and verify if a service pack is installed
- Check if a specific message appears in the Windows Event logs
- Verify whether a file exists, or whether it contains a specified value
- Check if any application has been recently installed on the server
- Validate if a Windows service has the correct start mode or is in the correct state
- Verify memory performance numbers and compare against thresholds
- Check whether a process is running, and whether its properties like threads or handles exceed a specified threshold
- Verify a specific processor for number of cores or logical processors etc...
- Check the amount of system memory

3.1 Monitor Table Controls

The Monitor Table is used to create, edit, delete and test monitors. This section details the controls associated with the Monitor Table.

Image: Monitor Table controls

#	System	Monitor Type	Monitor Description	Test Status	Alarm	Test Result	Alarm Level	Alarm Type	Test Result Details
1	Win10_004	Disk Space	Any Drive with Free space < 10 Percent	Processed: No Alarm		No drives with Disk Free % < specified Percent value: 10 %, 5	Error		

#	System	Monitor Type	Disk	Bytes Used	% Disk Used	Bytes Available	% Disk Available	Total Disk Space
1	Win10_004	Disk Space	C:	14,449,299,456	34.06%	27,973,984,256	65.94%	42,423,283,712

3.1.1 Monitor Info Toolbar

The Monitor Info Toolbar contains controls to select the Monitor Type, the System to be used and information labels to offer information about the monitors. The controls are detailed below.

- **Monitor Type:** This drop down list selects the Monitor Type (system value type of the monitor). When creating a new monitor, this control determines the type of monitor. This control synchronizes with the System Values Type drop down list on the System Values Toolbar.
- **System:** This drop down list selects the target system used when testing the monitors.
- **Records:** This label indicates the number of records in the Monitor Table. In the Image above, "Recs: 1" indicates the table has one record.
- **Status:** This label shows the status of the monitor tests. When testing is in progress, it shows a progress message, like: "Remaining tests 1/1" and it counts down the number of tests remaining. Once the tests have completed, it summarizes the total number of tests that raised an alarm, the number of tests that did not raise an alarm, and the number of monitors that could not be evaluated. In the image above, the label indicates: "Alarms: 0 No Alarm: 1 Could not eval: 0".

3.1.2 Control Toolbar

The Control Toolbar contains buttons to create, manage, order and test monitors along with buttons to resize the tables and to compare and share table information. The buttons are detailed below.

- **Test Monitor** : Tests the highlighted entry in the Monitor Table. The system loads the necessary System Values to gather information required for the test.
- **Test All Monitors** : Tests all of the entries in the Monitor Table. The system loads the necessary System Values to gather information required for the test.
- **Clear All Test Results** : Clears all of the test results in the Monitor Table. The Test Status, Alarm, and Test Result Details columns are cleared.
- **Compare System Values** : will display the Compare System Values form which allows the comparison of System Values between different host systems.
- **Share (Email, FTP, File)** : Displays the Share (Email, FTP, File) form which can be used to send Monitor and/or System Values Table information by email, via FTP, or to a file.
- **Show/Hide System Values** : Toggles whether the System Values Table is displayed or hidden. Hiding the System Values Table allows the Monitor Table to be shown full screen. For more information, please refer to [Appendix C – Resizing Monitor and System Values Tables](#)
- **Resize Tables** : displays the Resize View Tables form which offers the ability to resize the Monitor and System Values Table vertically. This allows the redistribution of the vertical form space between the Monitor Table and System Values Table. For more information, please refer to [Appendix C – Resizing Monitor and System Values Tables](#)
- **Add Monitor** : Creates new Monitor Table entries. The value specified in the Monitor Type drop down on the Monitor Info Toolbar determines the type of Monitor that will be added.
- **Edit Monitor** : Displays a form required to edit the highlighted entry in the Monitor Table.

- **Delete Monitor** : Deletes the highlighted entry in the Monitor Table. The system prompts to confirm.
- **Clone Monitor** : Clones the highlighted entry in the Monitor Table. A Monitor form is displayed with the settings of the cloned or duplicated entry allowing the modification of its fields. Saving the cloned entry will add the new record to the table.
- **Move Up** / **Move Down** : Reorder the entries in the Monitor Table. The highlighted entry is moved up or down through the list.

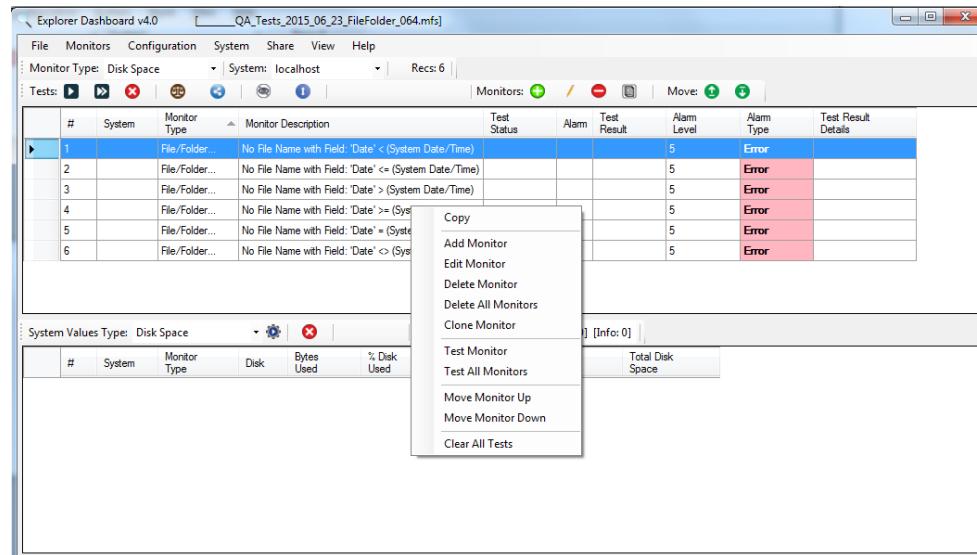
3.1.3 Monitor Table – Reordering by column

The Monitor Table contains the collection of monitors being worked on. Each entry represents a distinct monitor. The information in the table can be reordered by any column in ascending or descending order. To reorder, click on a column header and the table is reordered based on that column. The column header will contain an arrow pointing up (ascending). Clicking on the same column header will toggle the arrow in the header between up (ascending) and down (descending).

3.1.4 Monitor Table – Context Menu

The Monitor Table has a context menu which helps the user with quick access to commonly used functions. To access the Monitor Table's context menu, right-click anywhere on the table and the menu is displayed as illustrated in the image below.

Image: Monitor Table Context Menu



The context menu options are explained below.

- **Copy:** This option copies the highlighted row to the clipboard. You can use this to copy the information of the highlighted row, and paste the information to an external application via the clipboard.
- **Add Monitor:** This is a shortcut to add a monitor based on the selected Monitor Type specified on the Monitor Info Toolbar.
- **Edit Monitor:** This is a shortcut to edit the highlighted monitor.
- **Delete Monitor:** Prompts to delete the highlighted monitor.
- **Delete All Monitors:** Prompts to delete all of the monitors in the Monitor Table.
- **Clone Monitor:** This is a shortcut to clone the highlighted monitor to a new monitor. The new record is displayed in the “Add Monitor” form.
- **Test Monitor:** Tests the highlighted monitor.
- **Test All Monitors:** Tests all of the monitors in the table.
- **Move Monitor Up:** Moves the highlighted monitor up one row (if multiple monitors are present).
- **Move Monitor Down:** Moves the highlighted monitor down on row (if multiple monitors are present).
- **Clear All Tests:** Clears the test results for all monitors in the table.

3.2 Testing Monitors

Monitors can be tested individually or all at once. To test a single monitor, highlight the row in the Monitor Table, and click on the “Test Monitor” button . To test all of the monitors, click on the “Test All Monitors” button . To clear the test results, click on the “Clear All test Results” button .

When monitors are tested against a target host system, Explorer Dashboard checks to see if the system value for the host has been loaded into memory. If not, the system values are loaded from the host.

Monitor tests can return with the following results:

- **Alarm** The monitor condition has been met, and an alarm is raised
- **No Alarm** The monitor condition has not been met, no alarm is raised
- **Could not evaluate** The condition cannot be evaluated on the system

The image is displayed in the “Alarm” column, and the text description of the test result is displayed in the “Test Status” column, as illustrated in the image below.

Image: Three different monitor test results

The screenshot shows the Explorer Dashboard v4.0 application window. At the top, there's a menu bar with File, Monitors, Configuration, System, Share, View, and Help. Below the menu is a toolbar with icons for Test All, Test Selected, Clear All, and others. The main area contains two tables.

The top table is titled "Monitors" and shows the following data:

#	System	Monitor Type	Monitor Description	Test Status	Alarm	Test Result	Alarm Level	Alarm Type
1	190.168.1.110	Services	Service: 'AppMgmt' exists.	Processed: Alarm Triggered		Service: 'AppMgmt' exists.	5	Error
2	190.168.1.110	Services	Service: 'AppMgmt' exists.	Processed: No Alarm		Service: 'AppMgmt' does not exist.	5	Error
3	190.168.1.110	Services	Service: 'AppMgmt' has a Start Mode of 'Auto'	Could not evaluate		Service: 'AppMgmt' does not exist.	5	Error

The bottom table is titled "System Values" and shows the following data:

#	System	Monitor Type	Service Name	State	Start Mode	Process ID	Description
1	190.168.1.110	Services	AdobeARMservice	Running	Auto	768	Adobe Acrobat Updater keeps your Adobe software up to date.
2	190.168.1.110	Services	AJRouter	Stopped	Manual	0	Routes AllJoyn messages for the local AllJoyn clients. If this service fails, other AllJoyn clients will not be able to connect to this device.
3	190.168.1.110	Services	ALG	Stopped	Manual	0	Provides support for 3rd party protocol plug-ins for Internet Connection Sharing.
4	190.168.1.110	Services	ApplDSvc	Stopped	Manual	0	Determines and verifies the identity of an application. Disabling this service may cause problems with digital rights management (DRM) and other security features.
5	190.168.1.110	Services	Appinfo	Running	Manual	900	Facilitates the running of interactive applications with additional security features.
6	190.168.1.110	Services	AppMgmt	Stopped	Manual	0	Processes installation, removal, and enumeration requests for software components.
7	190.168.1.110	Services	AppReadiness	Stopped	Manual	0	Gets apps ready for use the first time a user signs in to this PC and provides a better user experience.
8	190.168.1.110	Services	AppXSvc	Stopped	Manual	0	Provides infrastructure support for deploying Store applications.
9	190.168.1.110	Services	AudioEndpointBuilder	Running	Auto	756	Manages audio devices for the Windows Audio service. If this service fails, audio output may not work correctly.
10	190.168.1.110	Services	Audiosrv	Running	Auto	988	Manages audio for Windows-based programs. If this service is disabled, audio output may not work correctly.
11	190.168.1.110	Services	AxinstSV	Stopped	Manual	0	Provides User Account Control validation for the installation of Applications.
12	190.168.1.110	Services	BDESVC	Stopped	Manual	0	BDESVC hosts the BitLocker Drive Encryption service. BitLocker protects data stored on encrypted drives.

Monitor 1: The service “AppMgmt” exists, the alarm is raised.

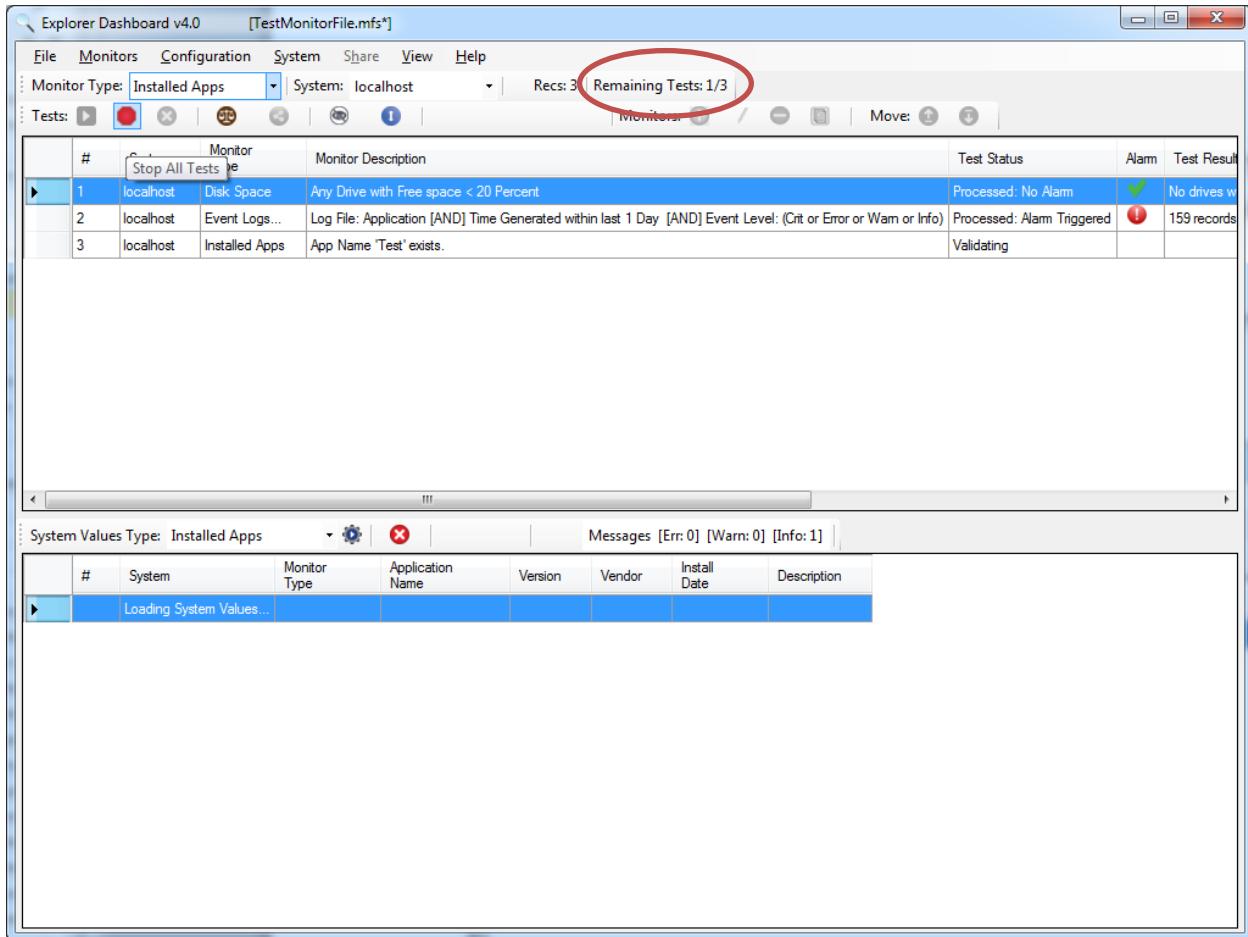
Monitor 2: The service “AppMgmt” does not exist, the alarm is not raised.

Monitor 3: The service “AppMgmt” does not exist, so its Start Mode could not be evaluated.

While the monitor tests are being performed, the Monitor Info Toolbar will show the progress of the remaining tests. In the image below, you will see “Remaining Tests: 1/3” as the system loads the appropriate system values and evaluates the monitors.

Note that during the tests, the Monitor controls on the Monitor Info Toolbar are greyed out and a “Stop All Tests” button  will appear in the place of the “Test All Monitors” button. Hovering over the “Stop All Tests” button will show the popup label as illustrated in the image below.

Image: Testing Monitors, “Stop All Tests” button visible



The screenshot shows the Explorer Dashboard v4.0 interface. At the top, there's a toolbar with various icons. A red circle highlights the "Stop All Tests" button, which is a red circle with a white minus sign. To the right of the toolbar, the status bar displays "Remaining Tests: 1/3". Below the toolbar is a menu bar with File, Monitors, Configuration, System, Share, View, and Help. Under the Monitors menu, "Monitor Type" is set to "Installed Apps" and "System" is set to "localhost". The status bar also shows "Recs: 3". The main area contains two tables. The top table is titled "Tests" and lists three entries:

#	System	Monitor Type	Monitor Description	Test Status	Alarm	Test Result
1	localhost	Disk Space	Any Drive with Free space < 20 Percent	Processed: No Alarm		No drives w...
2	localhost	Event Logs...	Log File: Application [AND] Time Generated within last 1 Day [AND] Event Level: (Crit or Error or Warn or Info)	Processed: Alarm Triggered		159 records
3	localhost	Installed Apps	App Name 'Test' exists.	Validating		

#	System	Monitor Type	Application Name	Version	Vendor	Install Date	Description
	Loading System Values...						

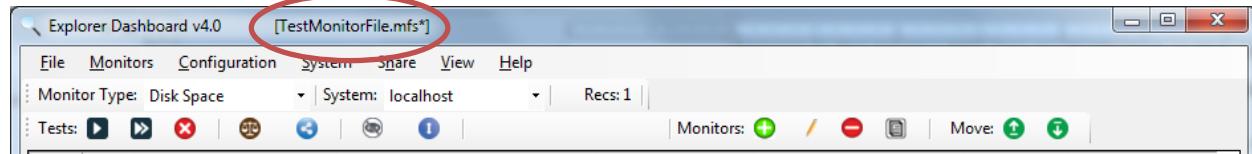
3.3 Monitor Files

Monitors can be saved to monitor files. Monitor files have the “.mfs” extension. Monitor files can contain monitors from any monitor type. The monitor file can be tested against any target host system.

3.3.1 Saving a monitor file

To save the Monitor Table to a monitor file, click **File -> Save** on the main menu. If a file name has not been specified, the system prompts you for a file name and saves the file. Using **File -> Save As** allows the user to specify a new file name. Once saved, the name of the file will appear in the form’s title bar as illustrated in the image below. Some versions of the product work with a default monitor file and do not have the “Save As” option.

Image: The name of the file appears in the title bar “[TestMonitorFile.mfs]”*



Note the asterisk “*” following the name indicates that the file has been modified since the last save. When the file is saved, the asterisk is removed.

3.3.2 Opening a monitor file

To open a monitor file and load it into the Monitor Table, click **File -> Open** on the main menu. This loads the file into the Monitor Table.

3.3.3 Clearing a monitor file

To clear the monitor file from the table, click **File -> New** and the active file is closed, and the table is cleared.

3.4 Monitor File Strategy

One strategy that can be used to create monitor files is to use a Master system where the environment is running correctly. System values can be loaded against the Master system and these values can be used to create monitors that test successfully (without alarms) against the Master system. The monitors can be saved to a monitor file which can be used to test a various number of target systems. Any alarm raised can be quickly identified and corrective action can be taken. With the use of the Monitor Tag and Monitor Reference fields, the user can specify key information that can help system users identify what corrective action to take. The Monitor Tag and Monitor Reference fields are detailed in the section: [4.1 Common Monitor Fields](#).

Users supporting different products or installation environments can create a separate monitor file for each product environment and can test the correct set of monitor files against each system.

4 Creating Monitors

This section outlines the various monitors that can be defined, and details how to define monitors for each system value type. The common fields that are shared between all monitors are defined in the next section followed by detailed monitor creation by system value type.

4.1 Common Monitor Fields

When creating monitors, there are common fields that appear on every monitor form regardless of the system value type. These fields relate to how the monitor test results are reported, and what corrective or follow up actions need to be taken following an alarm.

4.1.1 Alarm Level

The Alarm level field specifies the priority of the alarm associated with the monitor. The control is a drop down list offering values from 1 (highest priority) through 9 (lowest priority). This value is reported in the alarm test results and can be used to prioritize the alarms that are generated. For example, action is to be taken on all alarms that are generated that have an Alarm Level of 5 or higher for a given Alarm Type.

4.1.2 Alarm Type

The Alarm Type field specifies the type of the alarm associated with the monitor. The control is a drop down list that offers the following options:

- Error (defines highest priority alarms, typically errors)
- Warning (defines medium priority alarms, typically warnings)
- Info (defines low priority alarms, typically informational message)
- Debug (defines diagnostic or non-production alarms usually during system testing)

This value is specified in the alarm test results and can be used to categorize or group the alarms that are generated. When evaluating test results, this field can be verified in conjunction with the alarm level field to define corrective actions. For example, action is to be taken on all alarms that are generated that have an alarm level of 5 or higher for all Error alarm types.

4.1.3 Monitor Tag

The Monitor Tag field is a text field that allows the user to specify any number of user-defined tags or descriptors so that monitors can be labelled or grouped as needed. Multiple monitor tags can be specified by separating them with a semi-colon “;”.

The specified monitor tags are included in the monitor test results, so this additional descriptor can be used to get a custom descriptor for the alarm. The given tag can be used to associate different monitors that share the tag. For example, a monitor file with 10 monitors may have 2 monitors that contain a monitor tag of “Installer Issue”. If any one or more of these monitors generate an alarm, the “Installer Issue” monitor tag clearly indicates that the issue is due to a product installer issue on the target system.

4.1.4 Reference Tag

The Reference Tag field is a text field that allows the user to specify any number of user-defined reference tags or IDs so that monitor alarms test alarms can have a descriptor for corrective or follow up actions. Multiple monitor tags can be specified by separating them with a semi-colon “;”.

The specified Reference Tags are included in the monitor test results. These reference IDs are user-defined and therefore can be an ID that can be referenced by the user to take corrective or follow up actions to an alarm. When a monitor is defined, the Monitor Tag can be filled with a knowledge base ID that defines a fix for the issue monitored by the alarm. When the alarm is generated, the user can take the Reference Tag logged, look it up in their proprietary knowledge base, and take corrective actions to fix the issue.

4.2 Using System Values to Create Monitors Quickly

Monitors can be created by simply selecting the “Monitor Type” and “System” on the Monitor Info Toolbar, and clicking on the “Add Monitor” button . The corresponding “Add Monitor” form is displayed.

Explorer Dashboard allows you to conveniently create a monitor from an entry in the System Values Table. If an entry is highlighted in the System Values Table, information from this entry is loaded into the “Add Monitor” form and in some instances context-sensitive values are suggested to expedite the creation of the monitor and to help reduce errors.

To create a monitor from a System Values Table entry, you must load the system values from the desired host. The steps to load system values can be found here: [6. Loading System Values](#). Once the system values are loaded you must:

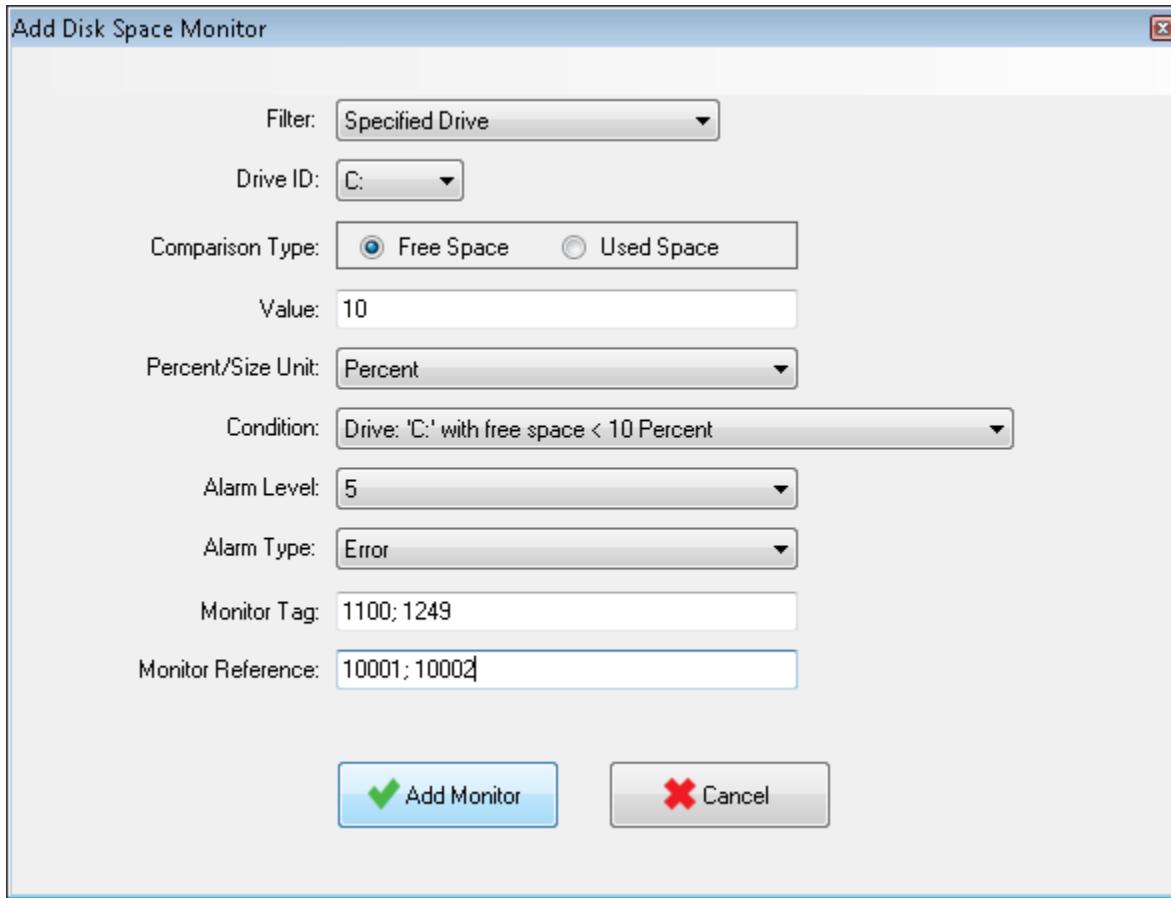
1. Highlight the entry in the System Values Table from which you wish to create a monitor
2. Verify that the “Monitor Type” indicated on the Monitor Info Toolbar corresponds to the system value of the monitor being created.
3. Click the “Add Monitor” button  on the Control Toolbar to bring up the “Add Monitor” form.

Note that some of the fields are filled in with information from the System Values Table entry. Additionally, when specifying a value, in many instances, the system suggests a list of values that correspond to fields in the System Values Table entry. An example appears here: [Appendix I – Creating a sample Monitor from a System Values Entry](#).

4.3 Creating Disk Space Monitors

Disk Space monitors are used to test the free and used disk space of storage drives on a system. A specific drive or all drives can be tested with one monitor. The monitor can test conditions like free or used disk space. The threshold can be specified as a percent of total disk space, or in specific terms of Bytes, Kbytes etc...

To add a new Disk Space monitor, select Disk Space from the Monitor Type on the Monitor Info Toolbar, click the Add Monitor button  to display the “Add Disk Space Monitor” form.



The screenshot shows the "Add Disk Space Monitor" dialog box. The fields are as follows:

- Filter: Specified Drive
- Drive ID: C:
- Comparison Type: Free Space (selected)
- Value: 10
- Percent/Size Unit: Percent
- Condition: Drive: 'C:' with free space < 10 Percent
- Alarm Level: 5
- Alarm Type: Error
- Monitor Tag: 1100;1249
- Monitor Reference: 10001;10002

At the bottom are two buttons: "Add Monitor" with a green checkmark icon and "Cancel" with a red X icon.

On the Add Disk Space Monitor form, define the details of the monitor. Each field is described in the section below.

- **Filter:** This field is used to define whether a “Specified Drive”, “Any Drive” or “No Drive” meets the condition. “Specified Drive” requires you to specify the Drive ID. In this case, the test will be performed on drive “C:”. If “Any Drive” is specified, the test will be performed on all of the drives on the target system, and an alarm will be raised if any of the drives meets the condition. If “No Drive” is specified, the test will be performed on all drives, however, the system will alarm only if none of the drives meets the criteria.
- **Drive ID:** This field defines the Drive ID that is tested if the Filter field is set to “Specified Drive”

- **Comparison Type:** The Comparison Type is used to specify whether the test will verify the Free Space available or the Used Space.
- **Value:** This field allows you to specify the numeric value of the test. It works with the Percent/Size field to define the amount and unit. In the image above we have specified “10 Percent”.
- **Percent/Size Unit:** This field defines whether the test is performed on a percentage of total disk space or done using a specific unit of bytes, KBytes etc... The list of values are:
 - Percent (Expressed as a total of a percent of total disk space)
 - Bytes (number of bytes)
 - KBytes (number of kilobytes)
 - MBytes (number of megabytes)
 - GBytes (number of gigabytes)
 - TBytes (number of terabytes)

KBytes = 1024^2 bytes or 1,048,576

MBytes = 1024^3 bytes or 1,073,741,824

GBytes = 1024^4 bytes or 1,099,511,627,776

TBytes = 1024^5 bytes or 1,125,899,906,842,624

- **Condition:** This field is used to specify the comparison to be performed. From the drop down you can select the numeric condition to be tested. The available conditions are detailed in the table below.

Table: Disk Space Monitor Conditions

Filter	Percent / Size Unit	Comparison Type	Condition
▪ Specified Drive	<ul style="list-style-type: none"> ▪ Percent ▪ Bytes ▪ KBytes ▪ Mbytes ▪ GBytes ▪ TBytes 	<ul style="list-style-type: none"> ▪ Free Space or ▪ Used Space 	<ul style="list-style-type: none"> ▪ Drive <Specified Drive> with free/used space < ‘N’ <Percent/Size unit> ▪ Drive <Specified Drive> with free/used space <= ‘N’ <Percent/Size unit> ▪ Drive <Specified Drive> with free/used space > ‘N’ <Percent/Size unit> ▪ Drive <Specified Drive> with free/used space >= ‘N’ <Percent/Size unit> ▪ Drive <Specified Drive> with free/used space = ‘N’ <Percent/Size unit> ▪ Drive <Specified Drive> with free/used space <> ‘N’ <Percent/Size unit>
▪ Any Drive or ▪ No Drive	<ul style="list-style-type: none"> ▪ Percent ▪ Bytes ▪ KBytes ▪ Mbytes ▪ GBytes ▪ TBytes 	<ul style="list-style-type: none"> ▪ Free Space or ▪ Used Space 	<ul style="list-style-type: none"> ▪ Any/No Drive with free/used space < ‘N’ <Percent/Size unit> ▪ Any/No Drive with free/used space <= ‘N’ <Percent/Size unit> ▪ Any/No Drive with free/used space > ‘N’ <Percent/Size unit> ▪ Any/No Drive with free/used space >= ‘N’ <Percent/Size unit> ▪ Any/No Drive with free/used space = ‘N’ <Percent/Size unit> ▪ Any/No Drive with free/used space <> ‘N’ <Percent/Size unit>

Clicking Add Monitor adds the monitor to the Monitor Table. The Monitor Description column contains the brief description of the newly created monitor “C: Free space < 10 Percent” as illustrated in the image below.

Image: Disk Space Monitor

The screenshot shows the Explorer Dashboard v4.0 interface with two main tables: the Monitor Table and the System Values Table.

Monitor Table:

#	System	Monitor Type	Monitor Description	Test Status	Alarm	Test Result	Alarm Level	Alarm Type	Test Result Details
1	190.168.1.110	Disk Space	C: Free space < 10 Percent				5	Error	

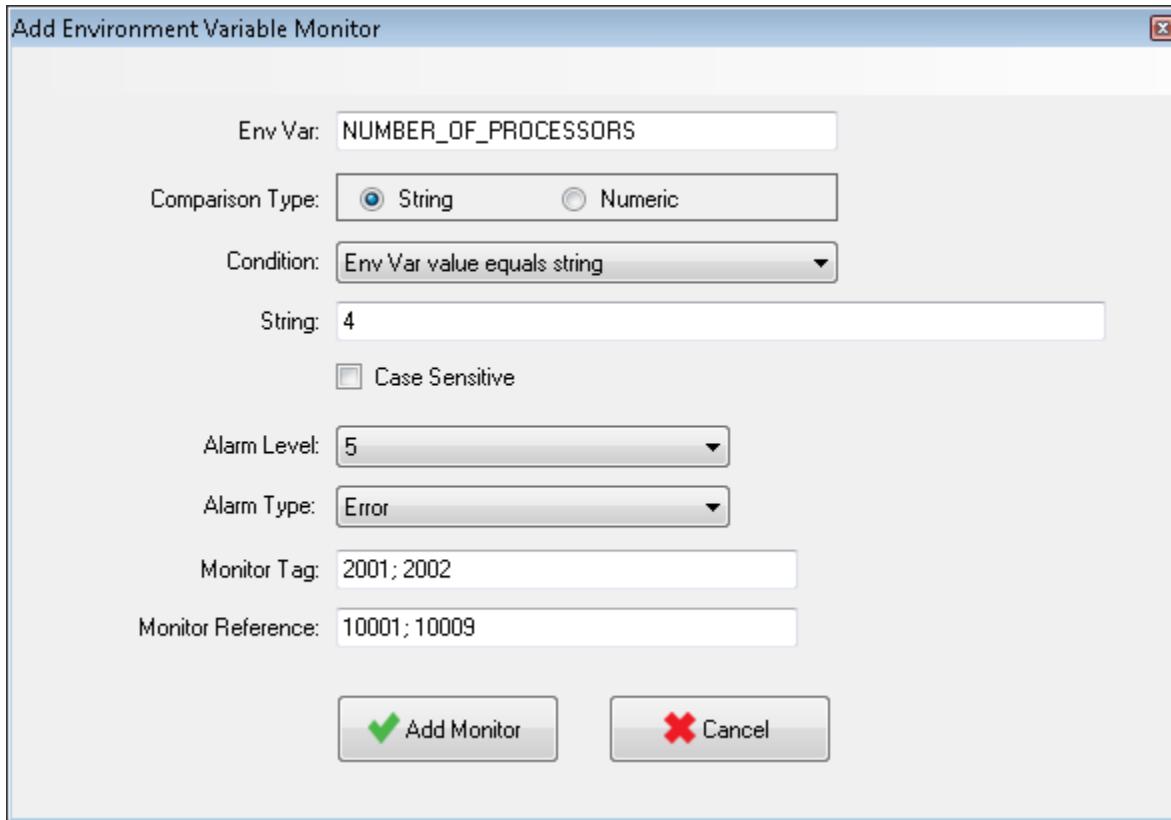
System Values Table:

#	System	Monitor Type	Disk	Bytes Used	% Disk Used	Bytes Available	% Disk Available	Total Disk
1	190.168.1.110	Disk Space	C:	13,198,045,184	31.11%	29,225,238,528	68.89%	42,423,283,712

4.4 Creating Environment Variable Monitors

Environment Variable monitors are used to test the environment variables that are defined on the target system. The monitor can test conditions like whether the environment variable exists or not, and can verify the value of the environment variable.

To add a new Environment Variable monitor, select Environment Vars... from the Monitor Type on the Monitor Info Toolbar, then click the Add Monitor button  to display the “Add Environment Variable Monitor” form.



On the Add Environment Variable Monitor form, define the details of the monitor. Each field is described in the section below.

- **Env Var:** This field specifies the Environment Variable that is being tested.
- **Comparison Type:** This field specifies whether the comparison is performed as string or as numeric. Both string and numeric comparisons can be performed.

- **Condition:** This field offers different options depending on the Comparison Type field. The available conditions are detailed in the table below.

Table: Environment Variable Monitor Conditions

Comparison Type	Condition
▪ String	<ul style="list-style-type: none"> ▪ Env Var value exists ▪ Env Var value does not exist ▪ Env Var value equals string (case) ▪ Env Var value does not equal string (case) ▪ Env Var value contains string (case) ▪ Env Var value does not contain string (case) ▪ Env Var value starts with string (case) ▪ Env Var value does not start with string (case) ▪ Env Var value ends with string (case) ▪ Env Var value does not end with string (case)
▪ Numeric	<ul style="list-style-type: none"> ▪ Env Var value = value ▪ Env Var value <> value ▪ Env Var value < value ▪ Env Var value <= value ▪ Env Var value > value ▪ Env Var value >= value

- **String or Value:** This field is used to specify the value to compare against the system value. If the Comparison Type is numeric, this should be a numeric value and if the Comparison Type is String, this should be a string value.
- **Case Sensitive:** Some string conditions require a string value to be specified and in these cases the case sensitive checkbox is displayed. If the Case Sensitive box is checked, the case of every letter in the specified value must match the system value, if unchecked, the case is irrelevant.

Clicking Add Monitor adds the monitor to the Monitor Table. The Monitor Description column contains the brief description of the newly created monitor: "Env Var: 'NUMBER_OF_PROCESSORS' equals string '4'" as illustrated in the image below.

Image: Environment Variable Monitor

The screenshot shows the Explorer Dashboard v4.0 interface with two main windows:

- Monitor Table (Top Window):**

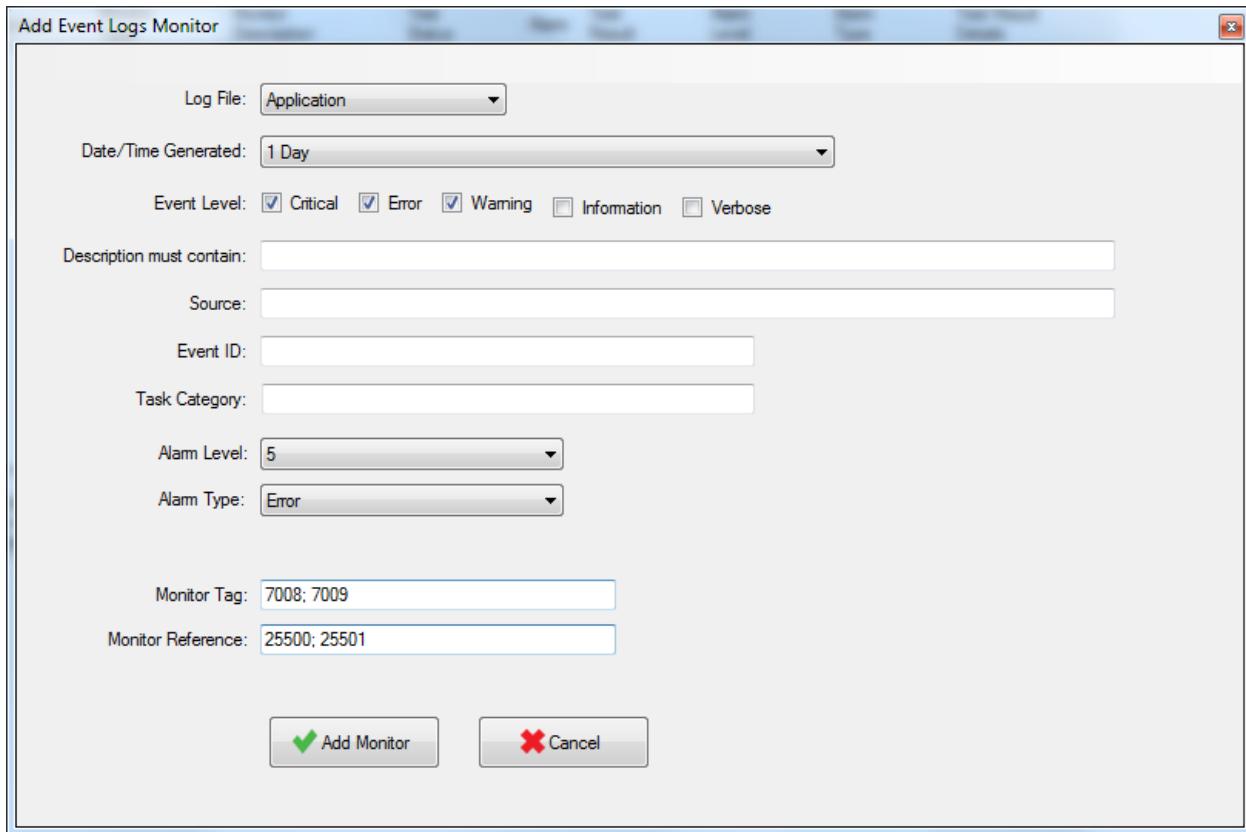
#	System	Monitor Type	Monitor Description	Test Status	Alarm	Test Result	Alarm Level	Alarm Type	Test Result Details
1	190.168.1.110	Environment Vars	Env Var 'NUMBER_OF_PROCESSORS' equals string '4'				5	Error	
- System Values Table (Bottom Window):**

#	System	Monitor Type	Env Var Name	Env Var Value
1	190.168.1.110	Environment Vars	ComSpec	%SystemRoot%\system32\cmd.exe
2	190.168.1.110	Environment Vars	NUMBER_OF_PROCESSORS	4
3	190.168.1.110	Environment Vars	OS	Windows_NT
4	190.168.1.110	Environment Vars	Path	%SystemRoot%\system32%SystemRoot%\System32\Wbem%SYSTEMROOT%\System32\WindowsF
5	190.168.1.110	Environment Vars	PATHEXT	.COM;.EXE;.BAT;.CMD;.VBS;.VBE;.JS;.JSE;.WSF;.WSH;.MSC
6	190.168.1.110	Environment Vars	PROCESSOR_ARCHITECTURE	AMD64
7	190.168.1.110	Environment Vars	PROCESSOR_IDENTIFIER	Intel64 Family 6 Model 45 Stepping 7, GenuineIntel
8	190.168.1.110	Environment Vars	PROCESSOR_LEVEL	6
9	190.168.1.110	Environment Vars	PROCESSOR_REVISION	2d07
10	190.168.1.110	Environment Vars	PSModulePath	%SystemRoot%\system32\WindowsPowerShell\v1.0\Modules\
11	190.168.1.110	Environment Vars	TEMP	%SystemRoot%\TEMP
12	190.168.1.110	Environment Vars	TMP	%SystemRoot%\TEMP

4.5 Creating Event Logs Monitors

Event Logs monitors are used to test whether Event Logs contain the specified criteria on the target system. The monitor can test conditions like whether a given message was written to the Application, Security or System log.

To add a new Event Logs monitor, select Event Logs... from the Monitor Type on the Monitor Info Toolbar, then click the Add Monitor button  to display the “Add Event Logs Monitor” form.



On the Add Event Logs Monitor form, define the details of the monitor. Each field is described in the section below.

- **Log File:** This field specifies the Windows Event Log file that is to be queried. Possible values are:
 - Application
 - Security
 - System

- **Date/Time Generated: Date/Time Generated:** This field allows the narrowing down of the period of time for which records are required. Valid selections are:

1. Any Time (no date/time restriction) *not recommended
2. 1 Hour (last 1 hour)
3. 2 Hours (last 2 hours)
4. 6 Hours (last 6 hours)
5. 12 Hours (last 12 hours)
6. 1 Day (last day)
7. 7 Days (last 7 days)
8. 31 Days (last 31 days)
9. Specify Range... (presents a date/time selection form – detailed below)

The pre-defined periods (1 Hour, 2 Hours, 6 Hours, 12 Hours, 1 Day, 7 Days and 31 Days) are provided for the user's convenience. These options return records for the period specified starting from the system date/time.

"Any Time" can be used to retrieve records without any date/time restriction. This is not recommended as it may return a very large number of records which can cause the user interface to slow down significantly.

Specify Range... presents a Specify Range form, which allows the user to specify a start date/time and/or an end date/time. The image below shows a sample Specify Range form.

Image: Specify Range form

The screenshot shows a 'Specify Range' dialog box. It contains two checked checkboxes: 'Specify Start Date' and 'Specify End Date'. Next to 'Specify Start Date' are 'From:' and 'To:' dropdowns, both set to '2015/07/24 18:00:00'. Next to 'Specify End Date' are 'From:' and 'To:' dropdowns, both set to '2015/07/25 18:00:00'. At the bottom left is a blue 'Update' button with a green checkmark icon, and at the bottom right is a grey 'Cancel' button with a red X icon.

If you only check the "Specify Start Date" checkbox, the system returns all records starting from the specified start date/time.

If you only check the Specify End Date checkbox, the system returns all records that have occurred prior to, up to and including the specified date/time.

If you check the "Specify Start Date" and the "Specify End Date" checkboxes, then the system returns all records that fall within the range between the Start date/time and End date/time.

Clicking “Update” closes the form and selects the specified range on the Event Logs Criteria form as illustrated in the image below. If “Specify Start Date” and “Specify End Date” are both left unchecked, then no entry is added to the “Date/Time Generated” drop down on the “Event Logs Criteria” form.

Image: Time/Date Generated field is updated with new date/time range.

The screenshot shows the 'Add Event Logs Monitor' dialog box. At the top, it says 'Log File: Application'. Below that is a dropdown for 'Date/Time Generated' set to 'From 2015/07/24 18:00:00 To 2015/07/25 18:59:00'. Under 'Event Level', there are checkboxes for 'Critical' (checked), 'Error' (checked), 'Warning' (unchecked), 'Information' (unchecked), and 'Verbose' (unchecked). There are several text input fields: 'Description must contain:' (empty), 'Source:' (empty), 'Event ID:' (empty), 'Task Category:' (empty), 'Alarm Level:' (set to 5), 'Alarm Type:' (set to Error), 'Monitor Tag:' (empty), and 'Monitor Reference:' (empty). At the bottom are two buttons: 'Add Monitor' with a green checkmark icon and 'Cancel' with a red X icon.

- **Event Level:** This field allows the user to specify the Event Level of the required records. For the Application and System Log Files, valid selections are:
 1. Critical
 2. Error
 3. Warning
 4. Information
 5. Verbose

For the Security Log File, valid selections are:

1. Audit Success
2. Audit Failure

The system returns all records that match the checked Event Levels.

- **Description must contain:** This field accepts a string value (not case sensitive) and restricts the records returned to only those whose “Description” field contains the specified string.
- **Source:** This field accepts a string value (not case sensitive) and restricts the records returned to only those whose “Source” field equals the specified string.
- **Event ID:** This field accepts a string value (not case sensitive) and restricts the records returned to only those whose “Event ID” equals the specified string.
- **Task Category:** This field accepts a string value (not case sensitive) and restricts the records returned to only those whose Task Category equals the specified string.

Note that each of the specified values (Log File, Date/Time Generated, Event Level, Description must contain, Source, Event ID, and Task Category) are used to further restrict the number of records that are returned.

For example if all values are specified, then the records returned are all records that:

- belong to the specified Log File (AND)
- whose Event Levels correspond to the checked boxes (AND)
- whose Description contains the specified value (AND)
- the Source field equals the specified string (AND)
- the Event ID field equals the specified string (AND)
- The Task Category string equals the specified string

Specifying all criteria can get very specific in terms of records selected. Normally, the Log File, Date/Time Generated, and one or two additional fields are enough to narrow down the required records.

Note: Using a range that is too large or using very little criteria may return an extremely large number of records which can slow down the user interface. In the case that too many records are returned, the system warns and prompts the user whether to proceed with the loading of the records.

It is not recommended to load too many records as this slows down the responsiveness of the application considerably.

Clicking Add Monitor adds the monitor to the Monitor Table. The Monitor Description column contains the brief description of the newly created monitor “Log File: Application [AND] Time Generated within last 1 Day [AND] Event Level: (Crit or Error or Warn)” as illustrated in the image below.

Image: Event Logs Monitor

The screenshot shows the Explorer Dashboard v4.0 interface. At the top, the title bar reads "Explorer Dashboard v4.0". The menu bar includes "File", "Monitors", "Configuration", "System", "Share", "View", and "Help". Below the menu is a toolbar with icons for "Monitor Type: Event Logs...", "System: 190.168.1.110", "Recs: 1", "Tests: (play, stop, refresh, etc.)", "Monitors: (+, -)", and "Move: (up, down, left, right)".

The main area consists of two windows:

- Monitors Window:** A table titled "Monitors" with columns: #, System, Monitor Type, Monitor Description, Test Status, Alarm, Test Result, Alarm Level, Alarm Type, and Test Data. One row is listed:

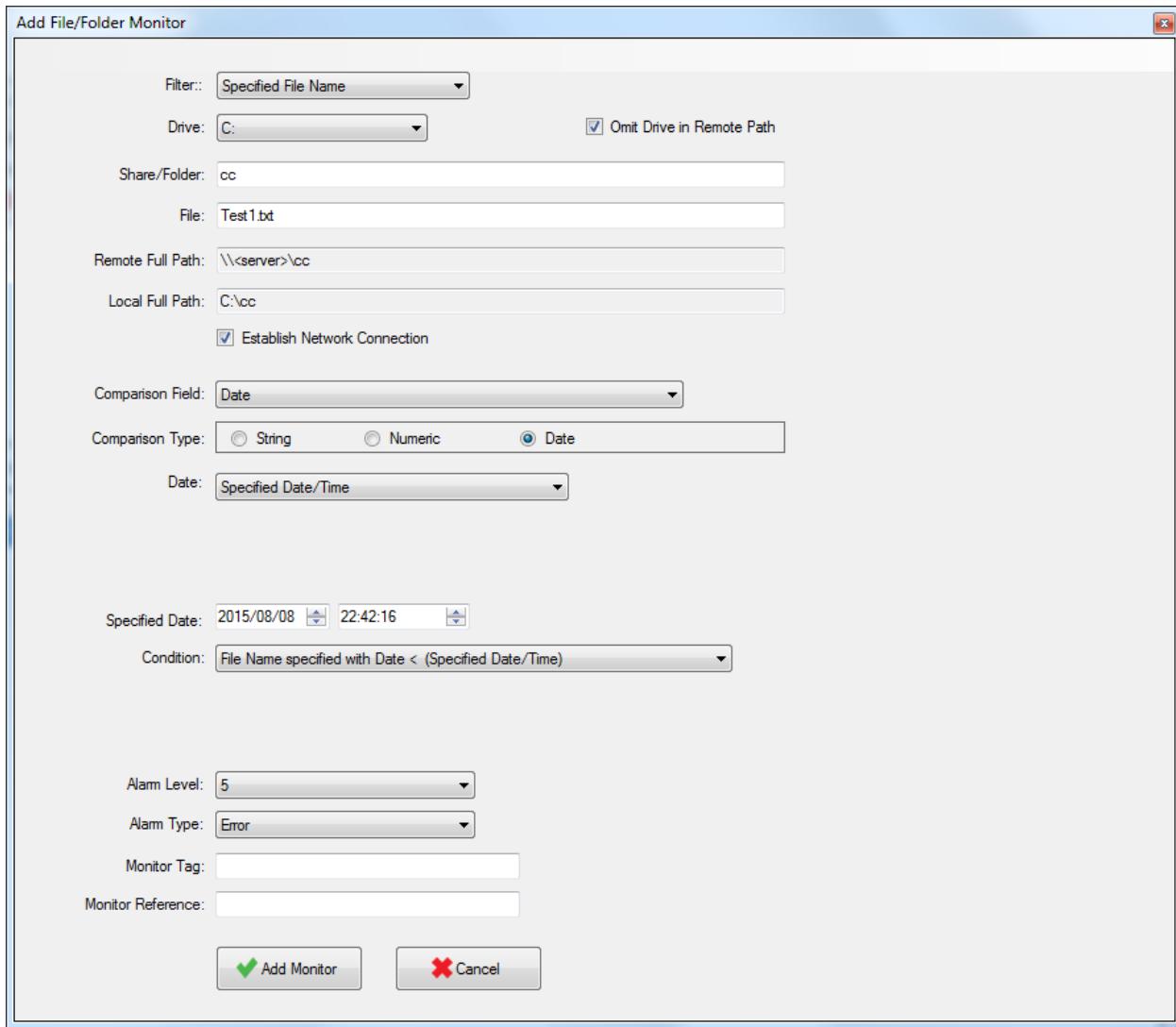
#	System	Monitor Type	Monitor Description	Test Status	Alarm	Test Result	Alarm Level	Alarm Type	Test Data
1	Event Logs...	Event Logs...	Log File: Application [AND] Time Generated within last 1 Day [AND] Event Level: (Crit or Error or Warn)				5	Error	
- Messages Window:** A table titled "Messages" with columns: #, System, Monitor Type, Log File, Level, Date/Time, Source, Event ID, Task Category, and Description. Seven rows of event logs are listed:

#	System	Monitor Type	Log File	Level	Date/Time	Source	Event ID	Task Category	Description
1	190.168.1.110	Event Logs	Application	Error	2015/08/08 16:52:13	Microsoft-Windows-Security-SPP	8198		License Activation (slui.exe) failed with the following error code: 0x8007000d.
2	190.168.1.110	Event Logs	Application	Error	2015/08/08 14:53:18	Microsoft-Windows-Security-SPP	8198		License Activation (slui.exe) failed with the following error code: 0x8007000d.
3	190.168.1.110	Event Logs	Application	Warning	2015/08/08 14:51:23	Microsoft-Windows-Search	3036	Gatherer	Crawl could not be completed on content source <winrt://\\$>.
4	190.168.1.110	Event Logs	Application	Error	2015/08/08 14:27:45	Microsoft-Windows-Perflib	1023		Windows cannot load the extensible counter DLL rdyboost.
5	190.168.1.110	Event Logs	Application	Error	2015/08/08 14:25:46	Microsoft-Windows-Security-SPP	8198		License Activation (slui.exe) failed with the following error code: 0x8007000d.
6	190.168.1.110	Event Logs	Application	Error	2015/08/08 14:25:27	Microsoft-Windows-Security-SPP	8198		License Activation (slui.exe) failed with the following error code: 0x8007000d.
7	190.168.1.110	Event Logs	Application	Error	2015/08/07 18:33:52	Microsoft-Windows-Security-SPP	8198		License Activation (slui.exe) failed with the following error code: 0x8007000d.

4.6 Creating File/Folder Monitors

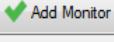
File and Folder monitors are used to test for file properties and file content on target systems. The monitor can test various conditions like whether a particular file exists, test if a file has been modified, test for file content etc...

To add a new File/Folder monitor, select File/Folder... from the Monitor Type on the Monitor Info Toolbar, then click the Add Monitor button  to display the “Add File/Folder Monitor” form.



The screenshot shows the 'Add File/Folder Monitor' dialog box. It contains the following fields:

- Filter:** Specified File Name
- Drive:** C:
- Omit Drive in Remote Path:**
- Share/Folder:** cc
- File:** Test1.txt
- Remote Full Path:** \\<server>\cc
- Local Full Path:** C:\cc
- Establish Network Connection:**
- Comparison Field:** Date
- Comparison Type:** String Numeric Date
- Date:** Specified Date/Time
- Specified Date:** 2015/08/08 22:42:16
- Condition:** File Name specified with Date < (Specified Date/Time)
- Alarm Level:** 5
- Alarm Type:** Error
- Monitor Tag:** (empty)
- Monitor Reference:** (empty)

At the bottom are two buttons:  Add Monitor and  Cancel.

On the Add File/Folder Monitor form, define the details of the monitor. Each field is described in the section below.

- **Filter:** This field is used to define whether a Specified File Name, Any File Name or No File Name meets the condition. “Specified File Name” requires you to specify the File field. In this case the test is performed on the specified File Name only. If “Any File Name” is specified, the test is performed on all of the Applications Installed on the target system, and an alarm is raised if any of the files meet the condition. If “No File Name” is specified, the test is performed on all files, however, the system raises an alarm only if none of the files meet the criteria.
- **Drive:** This field allows the drive letter to be specified when building the path. The Drive is used predominantly if the monitor is to be evaluated against the ‘localhost’ or the system on which Explorer Dashboard is running. This field is also used on remote systems when a drive share (example C\$) is used to share a system drive.
- **Omit Drive in Remote Path:** If using a remote share, then check the “Omit Drive in Remote Path” checkbox and this excludes the drive letter from being used in the remote path, otherwise the dollar sign “\$” is appended to the drive letter, and used in the remote path.
- **Share/Folder:** When running tests on the local machine, then this field should contain the folder to be used. This folder is appended to the Drive letter specified when building the path.

When running tests on a remote server, this field contains the full share name to be used to build the remote path. The Drive letter is included if the “Omit Drive in Remote Path” is not checked.

- **File:** This is the name of the file that is being tested.
- **Remote Full Path:** This field is read-only and contains the complete remote path that is used when the monitor is tested against a remote server. It contains information from the Drive and Share/Folder fields. You can exclude the Drive information by checking the **Omit Drive in Remote Path** checkbox.
- **Local Full Path:** This field is read-only and contains the complete local path that is used when the monitor is tested against ‘localhost’ the same machine that Explorer Dashboard is running on. It uses the Drive and Share/Folder fields to build the local full path.
- **Establish Network Connection:** This field specifies whether a network connection is required to obtain remote file/folder information. Monitors being run on remote servers should always have this checkbox checked. The system uses the user name and password from the Host System configuration. If the Monitor is intended to be run on ‘localhost’ then the box should be unchecked as no network connection is required.

- **Comparison Field:** This field defines which property of the file is to be tested. Possible values are:
 - File Name
 - Date
 - Size
- **Comparison Type:** This field specifies whether the comparison is performed as string, numeric or date. The Date option appears when the Comparison Field is set to “Date” otherwise the options are string and numeric.
- **Condition:** This field offers different options depending on the Filter, Comparison Field, and Comparison Type fields. The available conditions are detailed in the table below.

Table: File/Folder Monitor Conditions

Filter	Comparison Field	Comparison Type	Condition
▪ Specified File Name	▪ File Name	N/A	<ul style="list-style-type: none"> ▪ File Name specified exists ▪ File Name specified does not exist ▪ File Name specified – file content contains string ▪ File Name specified – file content does not contain string
▪ Any File Name or ▪ No File Name	▪ File Name	▪ String	<ul style="list-style-type: none"> ▪ Any/No File Name that contains string (case) ▪ Any/No File Name that does not contain string (case) ▪ Any/No File Name that start with string (case) ▪ Any/No File Name that does not start with string (case) ▪ Any/No File Name that ends with string (case) ▪ Any/No File Name that does not end with string (case)
▪ Any File Name or ▪ No File Name	▪ File Name	▪ Numeric	<ul style="list-style-type: none"> ▪ Any/No File Name = value ▪ Any/No File Name <> value ▪ Any/No File Name < value ▪ Any/No File Name <= value ▪ Any/No File Name > value ▪ Any/No File Name >= value
▪ Specified File Name	▪ Date ▪ Size	▪ String	<ul style="list-style-type: none"> ▪ File name specified with <Comparison Field> that is empty ▪ File name specified with <Comparison Field> that is not empty ▪ File name specified with <Comparison Field> that equals string (case) ▪ File name specified with <Comparison Field> that does not equal string (case) ▪ File name specified with <Comparison Field> that contains string (case) ▪ File name specified with <Comparison Field> that does not contain string (case) ▪ File Name specified with <Comparison Field> that starts with string (case) ▪ File Name specified with <Comparison Field> that does not start with string (case) ▪ File Name specified with <Comparison Field> that ends with string (case) ▪ File Name specified with <Comparison Field> that does not end with string (case)
▪ Any File Name or ▪ No File Name	▪ Date ▪ Size	▪ String	<ul style="list-style-type: none"> ▪ Any/No File Name with <Comparison Field> that is empty ▪ Any/No File Name with <Comparison Field> that is not empty ▪ Any/No File Name with <Comparison Field> that equals string (case) ▪ Any/No File Name with <Comparison Field> that does not equal string (case) ▪ Any/No File Name with <Comparison Field> that contains string (case) ▪ Any/No File Name with <Comparison Field> that does not contain string (case) ▪ Any/No File Name with <Comparison Field> that starts with string (case) ▪ Any/No File Name with <Comparison Field> that does not start with string (case) ▪ Any/No File Name with <Comparison Field> that ends with string (case) ▪ Any/No File Name with <Comparison Field> that does not end with string (case)

Table: File/Folder Conditions (continued...)

Filter	Comparison Field	Comparison Type	Condition
▪ Specified File Name	▪ Date ▪ Size	▪ Numeric	<ul style="list-style-type: none"> ▪ File Name specified with <Comparison Field> = value ▪ File Name specified with <Comparison Field> <> value ▪ File Name specified with <Comparison Field> < value ▪ File Name specified with <Comparison Field> <= value ▪ File Name specified with <Comparison Field> > value ▪ File Name specified with <Comparison Field> >= value
▪ Any File Name or ▪ No File Name	▪ Date ▪ Size	▪ Numeric	<ul style="list-style-type: none"> ▪ Any/No File Name with <Comparison Field> = value ▪ Any/No File Name with <Comparison Field> <> value ▪ Any/No File Name with <Comparison Field> < value ▪ Any/No File Name with <Comparison Field> <= value ▪ Any/No File Name with <Comparison Field> > value ▪ Any/No File Name with <Comparison Field> >= value
▪ Specified File Name	▪ Date	▪ Date (Specified Date)	<ul style="list-style-type: none"> ▪ File Name specified with Date < (Specified Date) ▪ File Name specified with Date <= (Specified Date) ▪ File Name specified with Date > (Specified Date) ▪ File Name specified with Date >= (Specified Date) ▪ File Name specified with Date = (Specified Date) ▪ File Name specified with Date <> (Specified Date)
▪ Specified File Name	▪ Date	▪ Date (Specified Date / Time)	<ul style="list-style-type: none"> ▪ File Name specified with Date < (Specified Date/Time) ▪ File Name specified with Date <= (Specified Date/Time) ▪ File Name specified with Date > (Specified Date/Time) ▪ File Name specified with Date >= (Specified Date/Time) ▪ File Name specified with Date = (Specified Date/Time) ▪ File Name specified with Date <> (Specified Date/Time)
▪ Specified File Name	▪ Date	▪ Date (System Date +/- N Days)	<ul style="list-style-type: none"> ▪ File Name specified with Date < (System Date +/- N days) ▪ File Name specified with Date <= (System Date +/- N days) ▪ File Name specified with Date > (System Date +/- N days) ▪ File Name specified with Date >= (System Date +/- N days) ▪ File Name specified with Date = (System Date +/- N days) ▪ File Name specified with Date <> (System Date +/- N days)
▪ Specified File Name	▪ Date	▪ Date (System Date / Time (+/- N Days / Hours / Minutes)	<ul style="list-style-type: none"> ▪ File Name specified with Date < (System Date +/- N Days/Hours/Minutes) ▪ File Name specified with Date <= (System Date +/- N Days/Hours/Minutes) ▪ File Name specified with Date > (System Date +/- N Days/Hours/Minutes) ▪ File Name specified with Date >= (System Date +/- N Days/Hours/Minutes) ▪ File Name specified with Date = (System Date +/- N Days/Hours/Minutes) ▪ File Name specified with Date <> (System Date +/- N Days/Hours/Minutes)
▪ Any File Name or ▪ No File Name	▪ Date	▪ Date (Specified Date)	<ul style="list-style-type: none"> ▪ Any/No File Name with Date < (Specified Date) ▪ Any/No File Name with Date <= (Specified Date) ▪ Any/No File Name with Date > (Specified Date) ▪ Any/No File Name with Date >= (Specified Date) ▪ Any/No File Name with Date = (Specified Date) ▪ Any/No File Name with Date <> (Specified Date)
▪ Any File Name or ▪ No File Name	▪ Date	▪ Date (Specified Date / Time)	<ul style="list-style-type: none"> ▪ Any/No File Name with Date < (Specified Date/Time) ▪ Any/No File Name with Date <= (Specified Date/Time) ▪ Any/No File Name with Date > (Specified Date/Time) ▪ Any/No File Name with Date >= (Specified Date/Time) ▪ Any/No File Name with Date = (Specified Date/Time) ▪ Any/No File Name with Date <> (Specified Date/Time)
▪ Any File Name or ▪ No File Name	▪ Date	▪ Date (System Date +/- N Days)	<ul style="list-style-type: none"> ▪ Any/No File Name with Date < (System Date +/- N days) ▪ Any/No File Name with Date <= (System Date +/- N days) ▪ Any/No File Name with Date > (System Date +/- N days) ▪ Any/No File Name with Date >= (System Date +/- N days) ▪ Any/No File Name with Date = (System Date +/- N days) ▪ Any/No File Name with Date <> (System Date +/- N days)
▪ Any File Name or ▪ No File Name	▪ Date	▪ Date (System Date / Time (+/- N Days / Hours / Minutes)	<ul style="list-style-type: none"> ▪ Any/No File Name with Date < (System Date +/- N Days/Hours/Minutes) ▪ Any/No File Name with Date <= (System Date +/- N Days/Hours/Minutes) ▪ Any/No File Name with Date > (System Date +/- N Days/Hours/Minutes) ▪ Any/No File Name with Date >= (System Date +/- N Days/Hours/Minutes) ▪ Any/No File Name with Date = (System Date +/- N Days/Hours/Minutes) ▪ Any/No File Name with Date <> (System Date +/- N Days/Hours/Minutes)

- **String or Value:** This field is used to specify the value to compare against the system value. If the Comparison Type is numeric, this should be a numeric value and if the Comparison Type is String, this should be a string value.
- **Case Sensitive:** Some string conditions require a string value to be specified and in these cases the case sensitive checkbox is displayed. If the Case Sensitive box is checked, the case of every letter in the specified value must match the system value, if unchecked, the case is irrelevant.
- **Date:** The Date field only applies when the Comparison Field is set to Install Date, and the Comparison Type is set to Date. The available options for this field are:
 - Specified Date/Time
 - Specified Date
 - System Date/Time
 - System Date

When using the specified date or specified date/time, the system displays date/time selection fields to allow the date and time to be specified.

When using the System Date or System Date/Time, the system uses the date/time of the system it is running on at the time of execution. The System Date/Time option displays three additional fields to allow an offset of time. The three fields are:

- **Date Offset Type:** This field takes a + or – to indicate whether to add or subtract time from System Date/Time
- **Date Offset Amount:** The amount of days/hours/minutes to offset by
- **Date Offset Unit:** This field contains days, hours and minutes if date/time is specified, otherwise it contains days if date is specified.

For example, if the user wishes to determine if a file has been modified within the last 30 days when testing the monitor they would set as illustrated in the image below.

Image: Creating a Monitor to verify if a file has been modified within the last 30 days.

Add File/Folder Monitor

Filter: Specified File Name

Drive: C: Omit Drive in Remote Path

Share/Folder: cc

File: Test1.txt

Remote Full Path: \\<server>\cc

Local Full Path: C:\cc Establish Network Connection

Comparison Field: Date

Comparison Type: String Numeric Date

Date: System Date

Date Offset Type: -

Date Offset Amount: 30 Date Offset Unit: Days

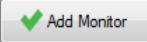
Condition: File Name specified with Date >= (System Date - 30 Days)

Alarm Level: 5

Alarm Type: Error

Monitor Tag: 8080;8089

Monitor Reference: 33400; 33417

 Add Monitor  Cancel

Clicking Add Monitor adds the monitor to the Monitor Table. The Monitor Description column contains the brief description of the newly created monitor “File Name ‘Test1.txt’ with Field: ‘Date’ >= (System Date – 30 Days)” as illustrated in the image below.

Image: File/Folder Monitor

The screenshot shows the Explorer Dashboard v4.0 interface. At the top, there's a menu bar with File, Monitors, Configuration, System, Share, View, and Help. Below the menu is a toolbar with icons for Monitor Type (File/Folder...), System (190.168.1.110), Recs: 1, Tests (play, stop, refresh, info), Monitors (add, edit, delete, move), and Move (up, down). The main window has two tables:

Monitors Table:

#	System	Monitor Type	Monitor Description	Test Status	Alarm	Test Result	Alarm Level	Alarm Type	Test Result Details
1	190.168.1.110	File/Folder...	File Name 'Test1.txt' with Field: 'Date' >= (System Date - 30 Days)			5		Error	

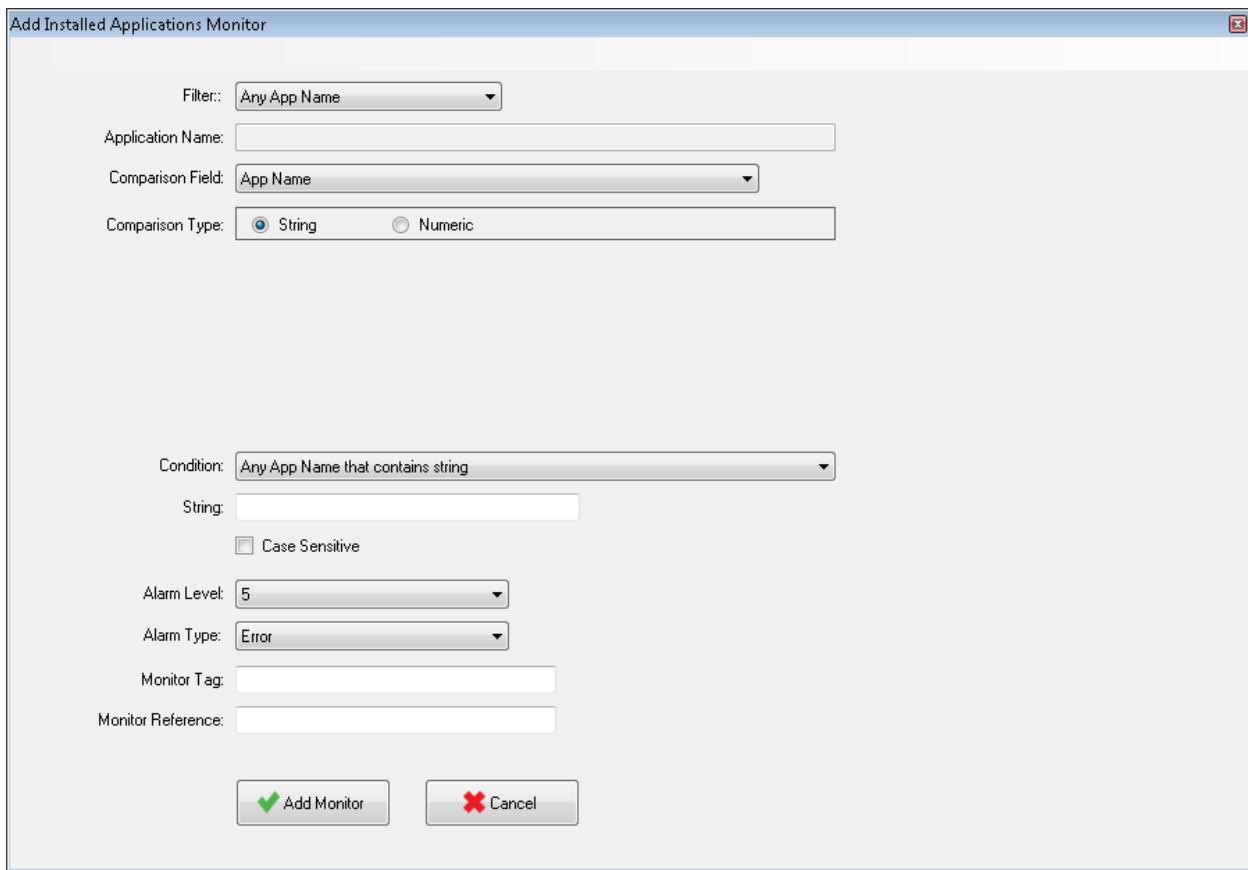
System Values Table:

#	System	Monitor Type	File Name	File Date/Time	File Size	Path
1	190.168.1.110	File/Folder	Test1.txt	2015/08/08 21:02:47	19	\\\190.168.1.110\cc

4.7 Creating Installed Applications Monitors

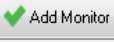
Installed Applications monitors are used to test the applications that have been installed on the target system. The monitor can test various conditions like whether a particular application has been installed, verify the version of an installed application, verify if any application has been installed since a specific date etc...

To add a new Installed Applications monitor, select Installed Apps from the Monitor Type on the Monitor Info Toolbar, then click the Add Monitor button  to display the “Add Installed Applications Monitor” form.



The screenshot shows the 'Add Installed Applications Monitor' dialog box. It contains several configuration fields:

- Filter:** A dropdown menu set to "Any App Name".
- Application Name:** An input field for specifying the application name.
- Comparison Field:** A dropdown menu set to "App Name".
- Comparison Type:** A radio button group with "String" selected, and "Numeric" as an option.
- Condition:** A dropdown menu set to "Any App Name that contains string".
- String:** An input field for the search string.
- Case Sensitive:** A checkbox that is unchecked.
- Alarm Level:** A dropdown menu set to "5".
- Alarm Type:** A dropdown menu set to "Error".
- Monitor Tag:** An input field for monitoring tags.
- Monitor Reference:** An input field for monitoring references.

At the bottom of the dialog are two buttons:  Add Monitor and  Cancel.

On the Add Installed Applications Monitor form, define the details of the monitor. Each field is described in the section below.

- **Filter:** This field is used to define whether a “Specified Application”, “Any Application” or “No Application” meets the condition. “Specified App Name” requires you to specify the Application Name. In this case the test is performed on the specified Application Name only. If “Any App Name” is specified, the test is performed on all of the Applications Installed on the target system, and an alarm is raised if any of the applications meet the condition. If “No App name” is specified, the test is performed on all of the applications, however, the system raises an alarm only if none of the applications meet the criteria.

- **Application Name:** This field must contain the application name if the filter is set to Specified App Name.
- **Comparison Field:** This field contains the field or property of the Installed Application that is tested. Possible values are:
 - App Name
 - Description
 - Install Date
 - Vendor
- **Comparison Type:** This field specifies whether the comparison is performed as string, numeric or date. The Date option appears when the Comparison Field is set to Install Date, otherwise the options are string and numeric.
- **Condition:** This field offers different options depending on the Filter, Comparison Field, and Comparison Type fields. The available conditions are detailed in the table below.

Table: Installed Applications Monitor Conditions

Filter	Comparison Field	Comparison Type	Condition
▪ Specified App Name	▪ App Name	N/A	<ul style="list-style-type: none"> ▪ App Name specified exists ▪ App Name specified does not exist
▪ Any App Name or ▪ No App Name	▪ App Name	▪ String	<ul style="list-style-type: none"> ▪ Any/No App Name that contains string (case) ▪ Any/No App Name that does not contain string (case) ▪ Any/No App Name that start with string (case) ▪ Any/No App Name that does not start with string (case) ▪ Any/No App Name that ends with string (case) ▪ Any/No App Name that does not end with string (case)
▪ Any App Name or ▪ No App Name	▪ App Name	▪ Numeric	<ul style="list-style-type: none"> ▪ Any/No App Name = value ▪ Any/No App Name <> value ▪ Any/No App Name < value ▪ Any/No App Name <= value ▪ Any/No App Name > value ▪ Any/No App Name >= value
▪ Specified App Name	▪ Description ▪ Install Date ▪ Vendor ▪ Version	▪ String	<ul style="list-style-type: none"> ▪ App name specified with <Comparison Field> that is empty ▪ App name specified with <Comparison Field> that is not empty ▪ App name specified with <Comparison Field> that equals string (case) ▪ App name specified with <Comparison Field> that does not equal string (case) ▪ App name specified with <Comparison Field> that contains string (case) ▪ App name specified with <Comparison Field> that does not contain string (case) ▪ App Name specified with <Comparison Field> that starts with string (case) ▪ App Name specified with <Comparison Field> that does not start with string (case) ▪ App Name specified with <Comparison Field> that ends with string (case) ▪ App Name specified with <Comparison Field> that does not end with string (case)

Table: Installed Applications Conditions (continued)

Filter	Comparison Field	Comparison Type	Condition
▪ Any App Name or ▪ No App Name	▪ Description ▪ Install Date ▪ Vendor ▪ Version	▪ String	<ul style="list-style-type: none"> ▪ Any/No App Name with <Comparison Field> that is empty ▪ Any/No App Name with <Comparison Field> that is not empty ▪ Any/No App Name with <Comparison Field> that equals string (case) ▪ Any/No App Name with <Comparison Field> that does not equal string (case) ▪ Any/No App Name with <Comparison Field> that contains string (case) ▪ Any/No App Name with <Comparison Field> that does not contain string (case) ▪ Any/No App Name with <Comparison Field> that starts with string (case) ▪ Any/No App Name with <Comparison Field> that does not start with string (case) ▪ Any/No App Name with <Comparison Field> that ends with string (case) ▪ Any/No App Name with <Comparison Field> that does not end with string (case)
▪ Specified App Name	▪ Description ▪ Install Date ▪ Vendor ▪ Version	▪ Numeric	<ul style="list-style-type: none"> ▪ App Name specified with <Comparison Field> = value ▪ App Name specified with <Comparison Field> <> value ▪ App Name specified with <Comparison Field> < value ▪ App Name specified with <Comparison Field> <= value ▪ App Name specified with <Comparison Field> > value ▪ App Name specified with <Comparison Field> >= value
▪ Any App Name or ▪ No App Name	▪ Description ▪ Install Date ▪ Vendor ▪ Version	▪ Numeric	<ul style="list-style-type: none"> ▪ Any/No App Name with <Comparison Field> = value ▪ Any/No App Name with <Comparison Field> <> value ▪ Any/No App Name with <Comparison Field> < value ▪ Any/No App Name with <Comparison Field> <= value ▪ Any/No App Name with <Comparison Field> > value ▪ Any/No App Name with <Comparison Field> >= value
▪ Specified App Name	▪ Install Date	▪ Date (Specified Date)	<ul style="list-style-type: none"> ▪ App Name specified with Install Date < (Specified Date) ▪ App Name specified with Install Date <= (Specified Date) ▪ App Name specified with Install Date > (Specified Date) ▪ App Name specified with Install Date >= (Specified Date) ▪ App Name specified with Install Date = (Specified Date) ▪ App Name specified with Install Date <> (Specified Date)
▪ Specified App Name	▪ Install Date	▪ Date (System Date +/- N Days)	<ul style="list-style-type: none"> ▪ App Name specified with Install Date < (System Date +/- N days) ▪ App Name specified with Install Date <= (System Date +/- N days) ▪ App Name specified with Install Date > (System Date +/- N days) ▪ App Name specified with Install Date >= (System Date +/- N days) ▪ App Name specified with Install Date = (System Date +/- N days) ▪ App Name specified with Install Date <> (System Date +/- N days)
▪ Any App Name or ▪ No App Name	▪ Install Date	▪ Date (Specified Date)	<ul style="list-style-type: none"> ▪ Any/No App Name with Install Date < (Specified Date) ▪ Any/No App Name with Install Date <= (Specified Date) ▪ Any/No App Name with Install Date > (Specified Date) ▪ Any/No App Name with Install Date >= (Specified Date) ▪ Any/No App Name with Install Date = (Specified Date) ▪ Any/No App Name with Install Date <> (Specified Date)
▪ Any App Name or ▪ No App Name	▪ Install Date	▪ Date (System Date +/- N Days)	<ul style="list-style-type: none"> ▪ Any/No App Name with Install Date < (System Date +/- N days) ▪ Any/No App Name with Install Date <= (System Date +/- N days) ▪ Any/No App Name with Install Date > (System Date +/- N days) ▪ Any/No App Name with Install Date >= (System Date +/- N days) ▪ Any/No App Name with Install Date = (System Date +/- N days) ▪ Any/No App Name with Install Date <> (System Date +/- N days)

- **String or Value:** This field is used to specify the value to compare against the system value. If the Comparison Type is numeric, this should be a numeric value and if the Comparison Type is String, this should be a string value.
- **Case Sensitive:** Some string conditions require a string value to be specified and in these cases the case sensitive checkbox is displayed. If the Case Sensitive box is checked, the case of every letter in the specified value must match the system value, if unchecked, the case is irrelevant.
- **Date:** The Date field only applies when the Comparison Field is set to Install Date, and the Comparison Type is set to Date. The available options for this field are:
 - Specified Date
 - System Date

When using the specified date, the system displays a date selection field to allow the date to be specified.

When using the System Date, the system uses the date of the system it is running on at the time of execution. The System Date option displays three additional fields to allow an offset of time. The three fields are:

- **Date Offset Type:** This field takes a + or – to indicate whether to add or subtract time from System Date
- **Date Offset Amount:** The amount of days to offset by
- **Date Offset Unit:** This field only contains days in this instance

For example, if the user wishes to determine if any application has been installed within the last 30 days when testing the monitor they would set the fields similarly to the fields illustrated in the image below.

Image: Creating an Installed Application monitor to verify if any app has been installed in the last 30 days.

Edit Installed Applications Monitor

Filter:	Any App Name		
Application Name:			
Comparison Field:	Install Date		
Comparison Type:	<input type="radio"/> String <input type="radio"/> Numeric <input checked="" type="radio"/> Date		
Date:	System Date		
Date Offset Type:	-		
Date Offset Amount:	30	Date Offset Unit:	Days
Condition:	Any App Name with Install Date >= (System Date - 30 Days)		
Alarm Level:	5		
Alarm Type:	Error		
Monitor Tag:			
Monitor Reference:			
<input checked="" type="button"/> Update Monitor <input type="button"/> Cancel			

Clicking Add Monitor adds the monitor to the Monitor Table. The Monitor Description column contains the brief description of the newly created monitor “Any App Name with Field: ‘Install Date’ >= (System Date – 30 Days)” as illustrated in the image below.

Image: Installed Applications Monitor

The screenshot shows the Explorer Dashboard v4.0 interface with two main tables displayed.

Installed Applications Monitor Table:

#	System	Monitor Type	Monitor Description	Test Status	Alarm	Test Result	Alarm Level	Alarm Type	Test Result Details
1	190.168.1.110	Installed Apps	Any App Name with Field: 'Install Date' < (System Date - 30 Days)				5	Error	

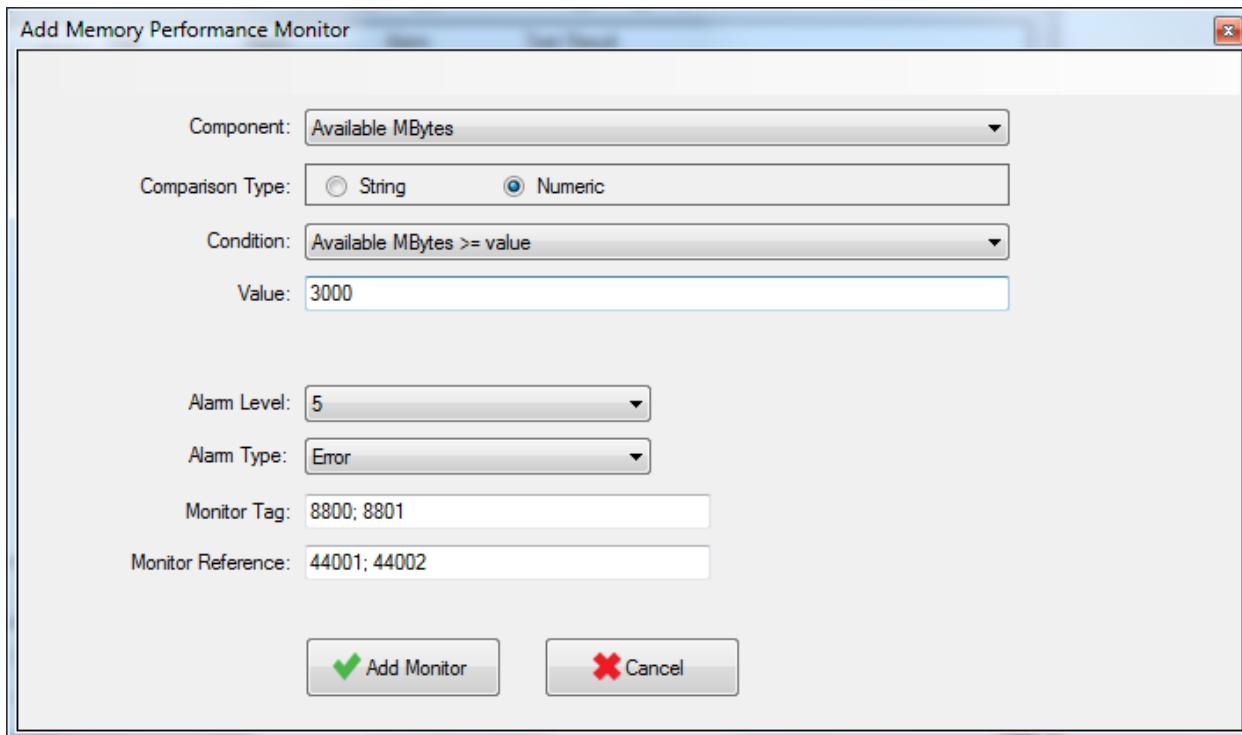
System Values Table:

#	System	Monitor Type	Application Name	Version	Vendor	Install Date	Description
1	190.168.1.110	Installed Apps	Adobe Acrobat Reader DC	15.008.20082	Adobe Systems Incorporated	20150803	Adobe Acrobat Reader DC
2	190.168.1.110	Installed Apps	Adobe Refresh Manager	1.8.0	Adobe Systems Incorporated	20150803	Adobe Refresh Manager

4.8 Creating Memory Performance Monitors

Memory Performance monitors are used to test various memory performance statistics on the target system. The monitor can test various conditions like available memory, cached memory, page read/writes per sec etc...

To add a new Memory Performance monitor, select Memory Perform from the Monitor Type on the Monitor Info Toolbar, then click the Add Monitor button  to display the “Add Memory Performance Variable Monitor” form.



On the Add Memory Performance Monitor form, define the details of the monitor. Each field is described in the section below.

- **Component:** This field specifies the Memory Performance component that is used in the test.

Possible values are:

- Available Bytes
- Available Kbytes
- Available Mbytes
- Cache Bytes
- Cache Bytes Peak
- Cache Faults Per Sec
- Caption
- Commit Limit
- Committed Bytes
- Demand Zero Faults Per Sec
- Description
- Free System Page Table Entries
- Frequency Object
- Frequency PerfTime
- Frequency Sys100NS
- Name
- Page Faults Per Sec
- Page Reads Per Sec

- Pages Input Per Sec
- Pages Output Per Sec
- Pages Per Sec
- Page Writes Per Sec
- Percent Committed Bytes In Use
- Percent Committed Bytes In Use Base
- Pool Nonpaged Allocs
- Pool Nonpaged Bytes
- Pool Paged Allocs
- Pool Paged Bytes
- Pool Paged Resident Bytes
- System Cache Resident Bytes
- System Code Resident Bytes
- System Code Total Bytes
- System Driver Resident Bytes
- System Driver Total Bytes
- Timestamp Object
- Timestamp PerfTime
- Timestamp Sys100NS
- Transition Faults Per Sec
- Write Copies Per Sec

- **Comparison Type:** This field specifies whether the comparison is performed as string or as numeric. Both string and numeric comparisons can be performed.
- **Condition:** This field offers different options depending on the Component and Comparison Type fields. The available conditions are detailed in the table below.

Table: Memory Performance Monitor Conditions

Component	Comparison Type	Condition
▪ Any Component	▪ String	<ul style="list-style-type: none"> ▪ <Component> is empty ▪ <Component> is not empty ▪ <Component> equals string (case) ▪ <Component> does not equal string (case) ▪ <Component> contains string (case) ▪ <Component> does not contain string (case) ▪ <Component> starts with string (case) ▪ <Component> does not start with string (case) ▪ <Component> ends with string (case) ▪ <Component> does not end with string (case)
▪ Any Component	▪ Numeric	<ul style="list-style-type: none"> ▪ <Component> = value ▪ <Component> <> value ▪ <Component> < value ▪ <Component> <= value ▪ <Component> > value ▪ <Component> >= value

- **String or Value:** This field is used to specify the value to compare against the system value. If the Comparison Type is numeric, this should be a numeric value and if the Comparison Type is String, this should be a string value.
- **Case Sensitive:** Some string conditions require a string value to be specified and in these cases the case sensitive checkbox is displayed. If the Case Sensitive box is checked, the case of every letter in the specified value must match the system value, if unchecked, the case is irrelevant.

Clicking Add Monitor adds the monitor to the Monitor Table. The Monitor Description column contains the brief description of the newly created monitor “Component: ‘Available Mbytes’ >= numeric value: 3,000” as illustrated in the image below.

Image: Memory Performance Monitor

The screenshot shows the Explorer Dashboard v4.0 interface with two main tables: the Monitor Table and the System Values Table.

Monitor Table:

#	System	Monitor Type	Monitor Description	Test Status	Alarm	Test Result	Alarm Level	Alarm Type	Test Result Details
1	190.168.1.110	Memory Perform	Component: 'Available MBytes' >= numeric value: 3,000				5	Error	

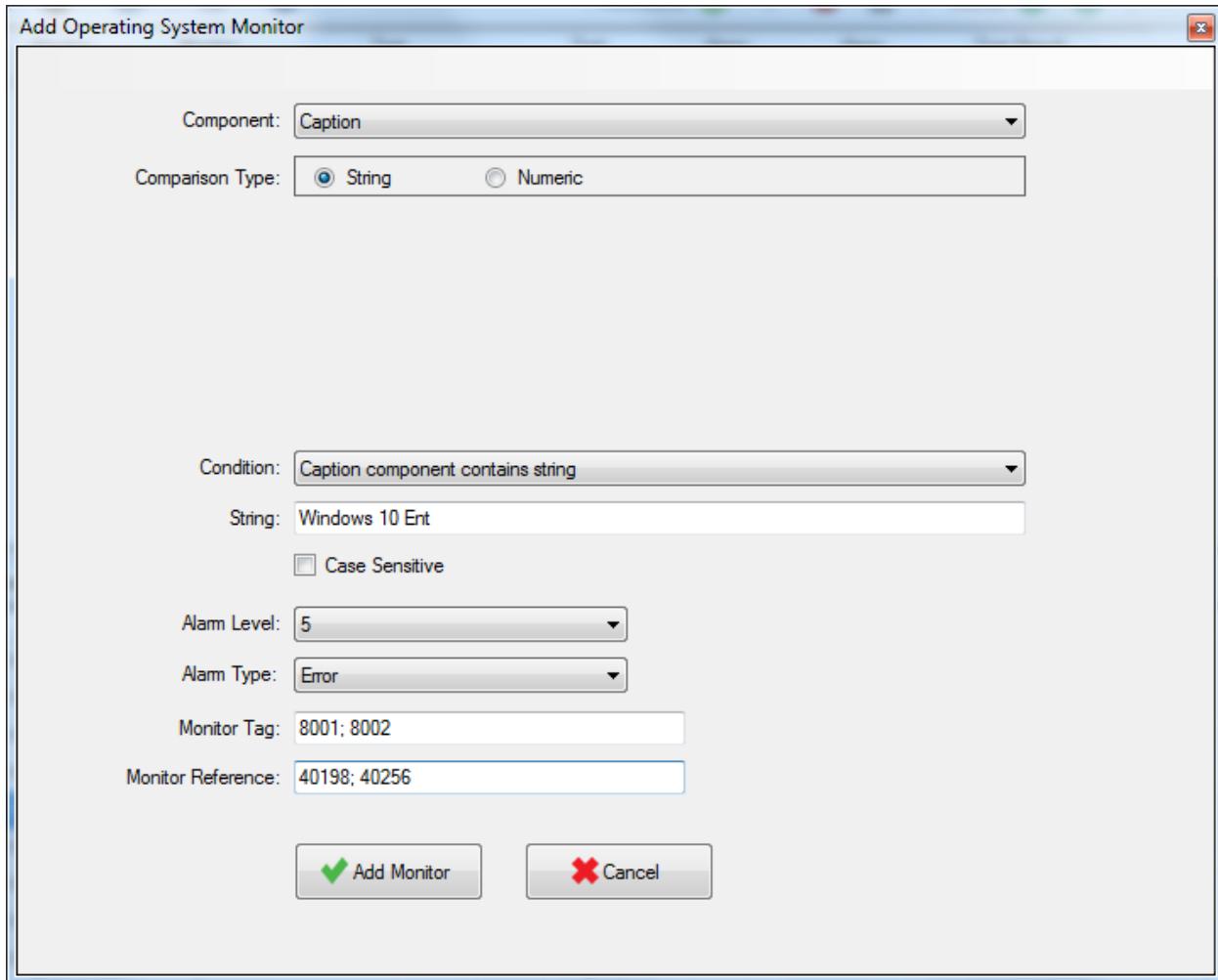
System Values Table:

#	System	Monitor Type	Key	Value
1	190.168.1.110	Memory Perform	Available Bytes	3230433280
2	190.168.1.110	Memory Perform	Available KBytes	3154720
3	190.168.1.110	Memory Perform	Available MBytes	3080
4	190.168.1.110	Memory Perform	Cache Bytes	62930944
5	190.168.1.110	Memory Perform	Cache Bytes Peak	319373312
6	190.168.1.110	Memory Perform	Cache Faults Per Sec	1358858
7	190.168.1.110	Memory Perform	Caption	
8	190.168.1.110	Memory Perform	Commit Limit	5770891264
9	190.168.1.110	Memory Perform	Committed Bytes	1069023232
10	190.168.1.110	Memory Perform	Demand Zero Faults Per Sec	8433753
11	190.168.1.110	Memory Perform	Description	
12	190.168.1.110	Memory Perform	Free System Page Table Entries	16506844
13	190.168.1.110	Memory Perform	Frequency Object	0

4.9 Creating Operating System Monitors

Operating System monitors are used to test the operating system properties of the target system. The monitor can test various conditions like the version of the operating system, the service pack installed, total system memory etc...

To add a new Operating System monitor, select Operating System from the Monitor Type on the Monitor Info Toolbar, then click the Add Monitor button  to display the “Add Operating System Monitor” form.



On the Add Process Monitor form, define the details of the monitor. Each field is described in the section below.

- **Component:** This field specifies the Operating System component that is to be tested. This corresponds to the Key column in the System Values Table when Operating System Information is displayed. Possible values are:

- Boot Device
- Build Number
- Build Type
- Caption
- Code Set
- Country Code
- Creation Class Name
- CS Creation Class Name
- CSD Version
- CS Name
- Current Time Zone
- Data Execution Prevention - 32 Bit Applications
- Data Execution Prevention – Available
- Data Execution Prevention – Drivers
- Data Execution Prevention - Support Policy
- Debug
- Description
- Distributed
- Encryption Level
- Foreground Application Boost
- Free Physical Memory
- Free Space In Paging Files
- Free Virtual Memory
- Install Date
- Large System Cache
- Boot Up Time
- Local Date Time
- Locale
- Manufacturer
- Max Number Of Processes
- Max Process Memory Size
- MUI Languages
- Name
- Number Of Licensed Users
- Number Of Processes
- Number Of Users
- Operating System SKU
- Organization
- OS Architecture
- OS Language
- OS Product Suite
- OS Type
- Other Type Description
- PAE Enabled
- Plus Product ID
- Plus Version Number
- Primary
- Product Type
- Registered User
- Serial Number
- Service Pack Major Version
- Service Pack Minor Version
- Size Stored In Paging Files
- Status
- Suite Mask
- System Device
- System Directory
- System Drive
- Total Swap Space Size
- Total Virtual Memory Size
- Total Visible Memory Size
- Version
- Windows Directory

- **Comparison Type:** This field specifies whether the comparison is performed as a string, numeric or date. The Date option appears when the Comparison Field is set to “Install Date”, “Boot Up Time”, or “Local Date Time”, otherwise the options are string and numeric.

- **Condition:** This field offers different options depending on the Component and Comparison Type fields. The available conditions are detailed in the table below.

Table: Operating System Monitor Conditions

Component	Comparison Type	Condition
▪ Any Component	▪ String	<ul style="list-style-type: none"> ▪ <Component> is empty ▪ <Component> is not empty ▪ <Component> equals string (case) ▪ <Component> does not equal string (case) ▪ <Component> contains string (case) ▪ <Component> does not contain string (case) ▪ <Component> starts with string (case) ▪ <Component> does not start with string (case) ▪ <Component> ends with string (case) ▪ <Component> does not end with string (case)
▪ Any Component	▪ Numeric	<ul style="list-style-type: none"> ▪ <Component> = value ▪ <Component> <> value ▪ <Component> < value ▪ <Component> <= value ▪ <Component> > value ▪ <Component> >= value
▪ Any Component	▪ Date (Specified Date / Time)	<ul style="list-style-type: none"> ▪ <Component> < (Specified Date/Time) ▪ <Component> <= (Specified Date/Time) ▪ <Component> > (Specified Date/Time) ▪ <Component> >= (Specified Date/Time) ▪ <Component> = (Specified Date/Time) ▪ <Component> <> (Specified Date/Time)
▪ Any Component	▪ Date (Specified Date)	<ul style="list-style-type: none"> ▪ <Component> < (Specified Date) ▪ <Component> <= (Specified Date) ▪ <Component> > (Specified Date) ▪ <Component> >= (Specified Date) ▪ <Component> = (Specified Date) ▪ <Component> <> (Specified Date)
▪ Any Component	▪ Date (System Date / Time +/- N Days / Hours / Minutes)	<ul style="list-style-type: none"> ▪ <Component> < (System Date +/- N Days/Hours/Minutes) ▪ <Component> <= (System Date +/- N Days/Hours/Minutes) ▪ <Component> > (System Date +/- N Days/Hours/Minutes) ▪ <Component> >= (System Date +/- N Days/Hours/Minutes) ▪ <Component> = (System Date +/- N Days/Hours/Minutes) ▪ <Component> <> (System Date +/- N Days/Hours/Minutes)
▪ Any Component	▪ Date -(System Date +/- N Days)	<ul style="list-style-type: none"> ▪ <Component> < (System Date +/- N Days) ▪ <Component> <= (System Date +/- N Days) ▪ <Component> > (System Date +/- N Days) ▪ <Component> >= (System Date +/- N Days) ▪ <Component> = (System Date +/- N Days) ▪ <Component> <> (System Date +/- N Days)

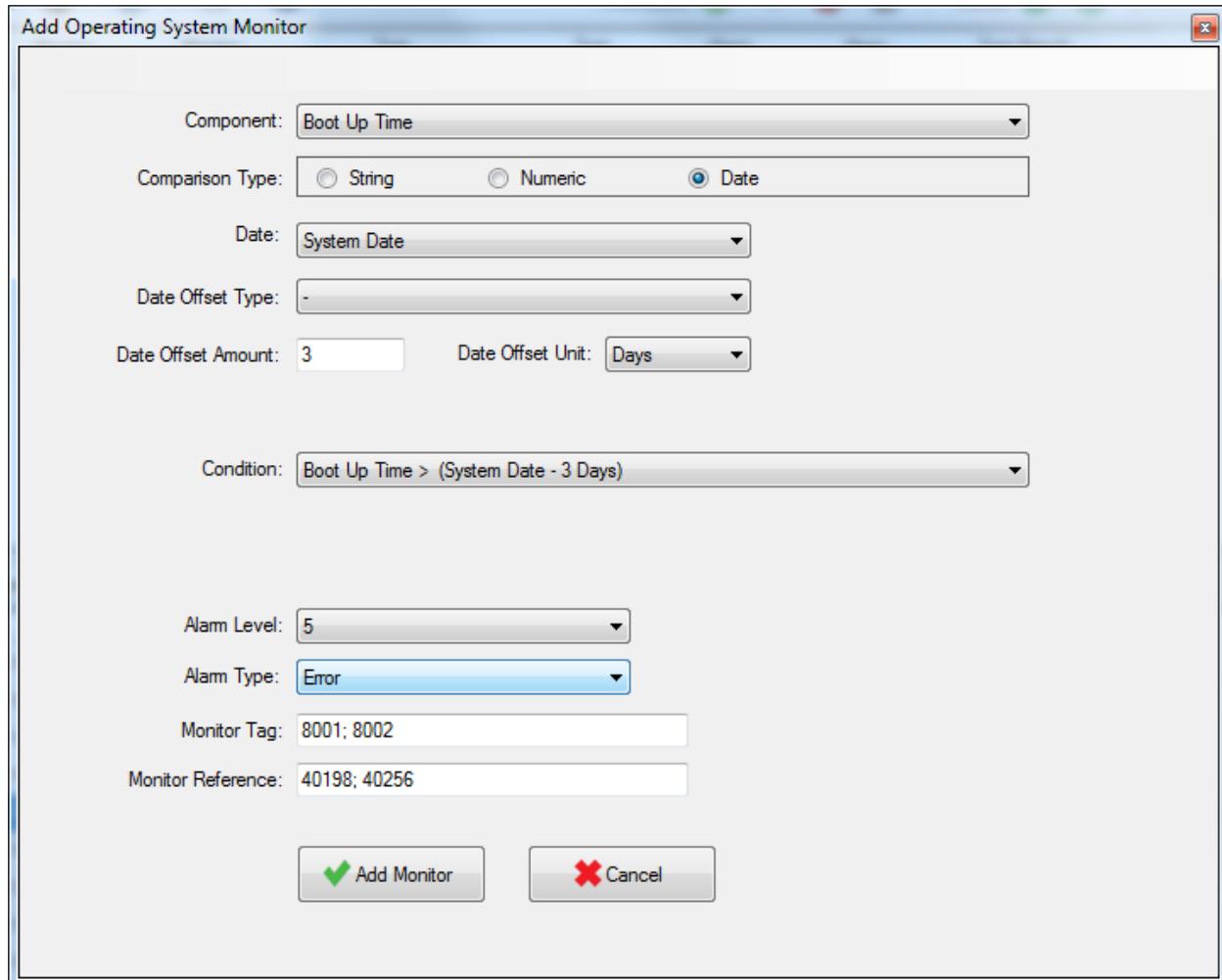
- **String or Value:** This field is used to specify the value to compare against the system value. If the Comparison Type is numeric, this should be a numeric value and if the Comparison Type is String, this should be a string value.
- **Date:** The Date field only applies when the Comparison Field is set to Install Date, and the Comparison Type is set to Date. The available options for this field are:
 - Specified Date/Time
 - Specified Date
 - System Date/Time
 - System Date

When using the specified date or specified date/time, the system displays date/time selection fields to allow the date and time to be specified.

When using the System Date or System Date/Time, the system uses the date/time of the system it is running on at the time of execution. The System Date/Time option displays three additional fields to allow an offset of time. The three fields are:

- **Date Offset Type:** This field takes a + or – to indicate whether to add or subtract time from System Date/Time
- **Date Offset Amount:** The amount of days/hours/minutes to offset by
- **Date Offset Unit:** This field contains days, hours and minutes if date/time is specified, otherwise it contains days if date is specified.

For example, if the user wishes to determine if the system has been rebooted within the last 3 days, they would set the fields similarly to the fields illustrated in the image below.



- **Case Sensitive:** Some string conditions require a string value to be specified and in these cases the case sensitive checkbox is displayed. If the Case Sensitive box is checked, the case of every letter in the specified value must match the system value, if unchecked, the case is irrelevant.

Clicking Add Monitor adds the monitor to the Monitor Table. The Monitor Description column contains the brief description of the newly created monitor: "Component 'Boot Up Time' > (System Date – 3 Days)" as illustrated in the image below.

Image: Operating System Monitor

The screenshot shows the Explorer Dashboard v4.0 application window. The top section displays a table of monitor tests. The bottom section displays a table of system values.

Monitor Tests Table:

#	System	Monitor Type	Monitor Description	Test Status	Alarm	Test Result	Alarm Level	Alarm Type	Test Result Details
1	190.168.1.110	Operating System	Component: 'Boot Up Time' > (System Date - 3 Days)				5	Error	

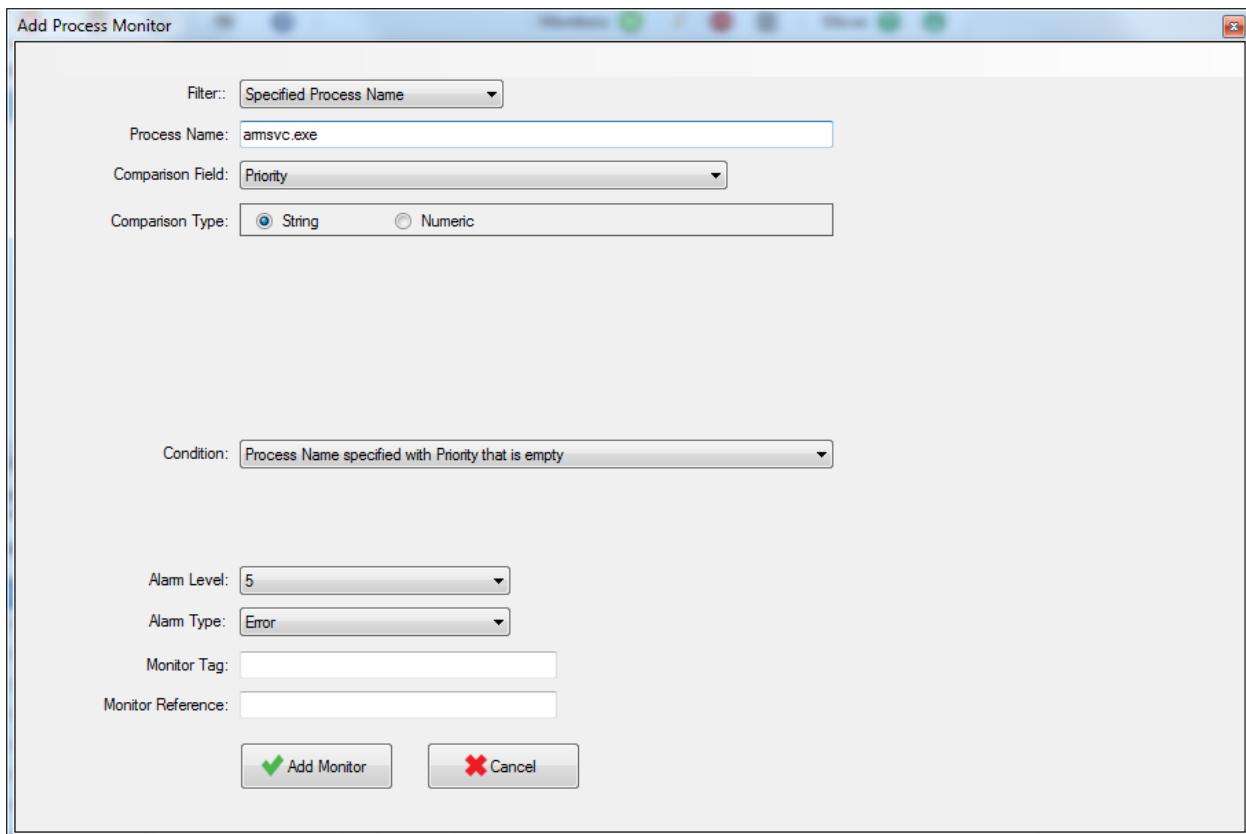
System Values Table:

#	System	Monitor Type	Key	Value
1	190.168.1.110	Operating System	Boot Device	\Device\HarddiskVolume1
2	190.168.1.110	Operating System	Boot Up Time	2015/08/07 14:47:55
3	190.168.1.110	Operating System	Build Number	10240
4	190.168.1.110	Operating System	Build Type	Multiprocessor Free
5	190.168.1.110	Operating System	Caption	Microsoft Windows 10 Enterprise
6	190.168.1.110	Operating System	Code Set	1252
7	190.168.1.110	Operating System	Country Code	1
8	190.168.1.110	Operating System	Creation Class Name	Win32_OperatingSystem
9	190.168.1.110	Operating System	CS Creation Class Name	Win32_ComputerSystem
10	190.168.1.110	Operating System	CS Name	DESKTOP-QJMJ5I2
11	190.168.1.110	Operating System	CSD Version	
12	190.168.1.110	Operating System	Current Time Zone	-420
13	190.168.1.110	Operating System	Data Execution Prevention - 32 Bit Applications	True

4.10 Creating Process Monitors

Process monitors are used to test the processes that are running on the target system. The monitor can test various conditions like whether a particular process is running on the target system, verify the total number of handles or threads for a given process, verify the process priority etc...

To add a new Process monitor, select Process from the Monitor Type on the Monitor Info Toolbar, then click the Add Monitor button  to display the “Add Process Monitor” form.



On the Add Process Monitor form, define the details of the monitor. Each field is described in the section below.

- **Filter:** This field is used to define whether a “Specified Process Name”, “Any Process Name” or “No Process Name” meets the condition. “Specified Process Name” requires you to specify the Process Name. In this case, the test is performed on the specified Process Name only. If “Any Process Name” is specified, the test is performed on all of the processes running on the target system, and an alarm is raised if any of the processes meet the condition. If “No Process name” is specified, the test is performed on all processes however, the system raises an alarm only if none of the processes meet the criteria.

- **Process Name:** This field must contain the process name if the filter is set to Specified Process Name.
- **Comparison Field:** This field contains the field or property of the Process that is tested. Possible values are:
 - Process Name
 - Process ID
 - Parent PID
 - Priority
 - Thread Count
 - Handle Count
 - Handle
 - Creation Class Name
 - Creation Date
 - Kernel Mode Time
 - Maximum Working Set Size
 - Minimum Working Set Size
 - OS Creation Class Name
 - Other Operation Count
 - Other Transfer Count
 - Page Faults
 - Page File Usage
 - Peak Page File Usage
 - Peak Virtual Size
 - Peak Working Set Size
 - Private Page Count
 - Quota Non Paged Pool Usage
 - Quota Paged Pool Usage
 - Quota Peak Non Paged Pool Usage
 - Quota Peak Paged Pool Usage
 - Read Operation Count
 - Read Transfer Count
 - Session ID
 - Status
 - User Mode Time
 - Virtual Size
 - Working Set Size
 - Write Operation Count
 - Write Transfer Count
 - Executable Path
- **Comparison Type:** This field specifies whether the comparison is performed as string, numeric or date. The Date option appears when the Comparison Field is set to Creation Date, otherwise the options are string and numeric.
- **Condition:** This field offers different options depending on the Filter, Comparison Field, and Comparison Type fields. The available conditions are detailed in the table below.

Table: Process Monitor Conditions

Filter	Comparison Field	Comparison Type	Condition
▪ Specified Process Name	▪ Process Name	N/A	<ul style="list-style-type: none"> ▪ Process name specified exists ▪ Process name specified does not exist
▪ Any Process Name or ▪ No Process Name	▪ Process Name	▪ String	<ul style="list-style-type: none"> ▪ Any/No Process Name that contains string (case) ▪ Any/No Process Name that does not contain string (case) ▪ Any/No Process Name that starts with string (case) ▪ Any/No Process Name that does not start with string (case) ▪ Any/No Process Name that ends string (case) ▪ Any/No Process Name that does not end with string (case)
▪ Any Process Name or ▪ No Process Name	▪ Process Name	▪ Numeric	<ul style="list-style-type: none"> ▪ Any/No Process Name = value ▪ Any/No Process Name <> value ▪ Any/No Process Name < value ▪ Any/No Process Name <= value ▪ Any/No Process Name > value ▪ Any/No Process Name >= value
▪ Specified Process Name	▪ Other fields	▪ String	<ul style="list-style-type: none"> ▪ Process Name specified with <Comparison Field> that is empty ▪ Process Name specified with <Comparison Field> that is not empty ▪ Process Name specified with <Comparison Field> that equals string (case) ▪ Process Name specified with <Comparison Field> that does not equal string (case) ▪ Process Name specified with <Comparison Field> that contains string (case) ▪ Process Name specified with <Comparison Field> that does not contain string (case) ▪ Process Name specified with <Comparison Field> that starts with string (case) ▪ Process Name specified with <Comparison Field> that does not start with string (case) ▪ Process Name specified with <Comparison Field> that ends with string (case) ▪ Process Name specified with <Comparison Field> that does not end with string (case)
▪ Any Process Name or ▪ No Process Name	▪ Other fields	▪ String	<ul style="list-style-type: none"> ▪ Any/No Process Name with <Comparison Field> that is empty ▪ Any/No Process Name with <Comparison Field> that is not empty ▪ Any/No Process Name with <Comparison Field> that equals string (case) ▪ Any/No Process Name with <Comparison Field> that does not equal string (case) ▪ Any/No Process Name with <Comparison Field> that contains string (case) ▪ Any/No Process Name with <Comparison Field> that does not contain string (case) ▪ Any/No Process Name with <Comparison Field> that start with string (case) ▪ Any/No Process Name with <Comparison Field> that does not start with string (case) ▪ Any/No Process Name with <Comparison Field> that ends with string (case) ▪ Any/No Process Name with <Comparison Field> that does not end with string (case)
▪ Specified Process Name	▪ Other fields	▪ Numeric	<ul style="list-style-type: none"> ▪ Process Name specified with <Comparison Field> = value ▪ Process Name specified with <Comparison Field> <> value ▪ Process Name specified with <Comparison Field> < value ▪ Process Name specified with <Comparison Field> <= value ▪ Process Name specified with <Comparison Field> > value ▪ Process Name specified with <Comparison Field> >= value
▪ Any Process Name or ▪ No Process Name	▪ Other fields	▪ Numeric	<ul style="list-style-type: none"> ▪ Any/No Process Name with <Comparison Field> = value ▪ Any/No Process Name with <Comparison Field> <> value ▪ Any/No Process Name with <Comparison Field> < value ▪ Any/No Process Name with <Comparison Field> <= value ▪ Any/No Process Name with <Comparison Field> > value ▪ Any/No Process Name with <Comparison Field> >= value
▪ Specified Process Name	▪ Creation Date	▪ Date (Specified Date/Time)	<ul style="list-style-type: none"> ▪ Process Name specified with Creation Date < (Specified Date/Time) ▪ Process Name specified with Creation Date <= (Specified Date/Time) ▪ Process Name specified with Creation Date > (Specified Date/Time) ▪ Process Name specified with Creation Date >= (Specified Date/Time) ▪ Process Name specified with Creation Date = (Specified Date/Time) ▪ Process Name specified with Creation Date <> (Specified Date/Time)
▪ Specified Process Name	▪ Creation Date	▪ Date (Specified Date)	<ul style="list-style-type: none"> ▪ Process Name specified with Creation Date < (Specified Date) ▪ Process Name specified with Creation Date <= (Specified Date) ▪ Process Name specified with Creation Date > (Specified Date) ▪ Process Name specified with Creation Date >= (Specified Date) ▪ Process Name specified with Creation Date = (Specified Date) ▪ Process Name specified with Creation Date <> (Specified Date)

Table: Process Monitor Conditions (continued...)

Filter	Comparison Field	Comparison Type	Condition
▪ Specified Process Name	▪ Creation Date	▪ Date (System Date/Time +/- N Days / Hours / Minutes)	<ul style="list-style-type: none"> ▪ Process Name specified with Creation Date < (System Date +/- N Days/Hours/Minutes) ▪ Process Name specified with Creation Date <= (System Date +/- N Days/Hours/Minutes) ▪ Process Name specified w Creation Date > (System Date +/- N Days/Hours/Minutes) ▪ Process Name specified with Creation Date >= (System Date +/- N Days/Hours/Minutes) ▪ Process Name specified with Creation Date = (System Date +/- N Days/Hours/Minutes) ▪ Process Name specified with Creation Date <> (System Date +/- N Days/Hours/Minutes)
▪ Specified Process Name	▪ Creation Date	Date (System Date +/- N Days)	<ul style="list-style-type: none"> ▪ Process Name specified with Creation Date < (System Date +/- N Days) ▪ Process Name specified with Creation Date <= (System Date +/- N Days) ▪ Process Name specified with Creation Date > (System Date +/- N Days) ▪ Process Name specified with Creation Date >= (System Date +/- N Days) ▪ Process Name specified with Creation Date = (System Date +/- N Days) ▪ Process Name specified with Creation Date <> (System Date +/- N Days)
▪ Any Process Name or ▪ No Process Name	▪ Creation Date	Date (Specified Date/Time)	<ul style="list-style-type: none"> ▪ Any/No Process Name with Creation Date < (Specified Date/Time) ▪ Any/No Process Name with Creation Date <= (Specified Date/Time) ▪ Any/No Process Name with Creation Date > (Specified Date/Time) ▪ Any/No Process Name with Creation Date >= (Specified Date/Time) ▪ Any/No Process Name with Creation Date = (Specified Date/Time) ▪ Any/No Process Name with Creation Date <> (Specified Date/Time)
▪ Any Process Name or ▪ No Process Name	▪ Creation Date	▪ Date (Specified Date)	<ul style="list-style-type: none"> ▪ Any/No Process Name with Creation Date < (Specified Date) ▪ Any/No Process Name with Creation Date <= (Specified Date) ▪ Any/No Process Name with Creation Date > (Specified Date) ▪ Any/No Process Name with Creation Date >= (Specified Date) ▪ Any/No Process Name with Creation Date = (Specified Date) ▪ Any/No Process Name with Creation Date <> (Specified Date)
▪ Any Process Name or ▪ No Process Name	▪ Creation Date	▪ Date (System Date / Time +/- N Days / Hours / Minutes)	<ul style="list-style-type: none"> ▪ Any/No Process Name with Creation Date < (System Date/Time +/- N Days/Hours/Minutes) ▪ Any/No Process Name with Creation Date <= (System Date/Time +/- N Days/Hours/Minutes) ▪ Any/No Process Name with Creation Date > (System Date/Time +/- N Days/Hours/Minutes) ▪ Any/No Process Name with Creation Date >= (System Date/Time +/- N Days/Hours/Minutes) ▪ Any/No Process Name with Creation Date = (System Date/Time +/- N Days/Hours/Minutes) ▪ Any/No Process Name with Creation Date <> (System Date/Time +/- N Days/Hours/Minutes)
▪ Any Process Name or ▪ No Process Name	▪ Creation Date	Date (System Date +/- N Days)	<ul style="list-style-type: none"> ▪ Any/No Process Name with Creation Date < (System Date +/- N Days) ▪ Any/No Process Name with Creation Date <= (System Date +/- N Days) ▪ Any/No Process Name with Creation Date > (System Date +/- N Days) ▪ Any/No Process Name with Creation Date >= (System Date +/- N Days) ▪ Any/No Process Name with Creation Date = (System Date +/- N Days) ▪ Any/No Process Name with Creation Date <> (System Date +/- N Days)

- **String or Value:** This field is used to specify the value to compare against the system value. If the Comparison Type is numeric, this should be a numeric value and if the Comparison Type is String, this should be a string value.
- **Date:** The Date field only applies when the Comparison Field is set to Install Date, and the Comparison Type is set to Date. The available options for this field are:
 - Specified Date/Time
 - Specified Date
 - System Date/Time
 - System Date

When using the specified date or specified date/time, the system displays date/time selection fields to allow the date and time to be specified.

When using the System Date or System Date/Time, the system uses the date/time of the system it is running on at the time of execution. The System Date/Time option displays three additional fields to allow an offset of time. The three fields are:

- **Date Offset Type:** This field takes a + or – to indicate whether to add or subtract time from System Date/Time
- **Date Offset Amount:** The amount of days/hours/minutes to offset by
- **Date Offset Unit:** This field contains days, hours and minutes if date/time is specified, otherwise it contains days if date is specified.

For example, if the user wishes to determine if any process has been created within the last 3 days when testing the monitor they would set the following:

Image: Monitor to verify if any process has been created within the last 3 days

The screenshot shows the 'Add Process Monitor' dialog box. It includes fields for Filter (set to 'Any Process Name'), Process Name, Comparison Field (set to 'Creation Date'), Comparison Type (set to 'Date'), Date (set to 'System Date'), Date Offset Type (set to '-'), Date Offset Amount (set to '3'), Date Offset Unit (set to 'Days'), Condition (set to 'Any Process Name with Creation Date >= (System Date - 3 Days)'), Alarm Level (set to '5'), Alarm Type (set to 'Error'), Monitor Tag (set to '6009; 6101'), and Monitor Reference (set to '30080, 30081'). At the bottom are 'Add Monitor' and 'Cancel' buttons.

- **Case Sensitive:** Some string conditions require a string value to be specified and in these cases the case sensitive checkbox is displayed. If the Case Sensitive box is checked, the case of every letter in the specified value must match the system value, if unchecked, the case is irrelevant.

Clicking Add Monitor adds the monitor to the Monitor Table. The Monitor Description column contains the brief description of the newly created monitor “Any Process Name with Field: ‘Creation Date’ >= (System Date – 3 Days)” as illustrated in the image below.

Image: Processes Monitor

The screenshot shows the Explorer Dashboard v4.0 interface. At the top, there's a menu bar with File, Monitors, Configuration, System, Share, View, and Help. Below the menu is a toolbar with icons for Test, Monitor, and Configuration. The main area has two tables:

- Monitors Table:** Shows a single monitor entry for "Processes" with the description "Any Process Name with Field: 'Creation Date' >= (System Date - 3 Days)". The status is "Error".
- System Values Table:** Shows a list of processes on the system. The columns include #, System, Monitor Type, Process Name, Process ID, Parent PID, Priority, Thread Count, Handle Count, Handle, Creation Class Name, Creation Date, and Kernel Mode Time. The table lists 11 processes, with the 5th row highlighted.

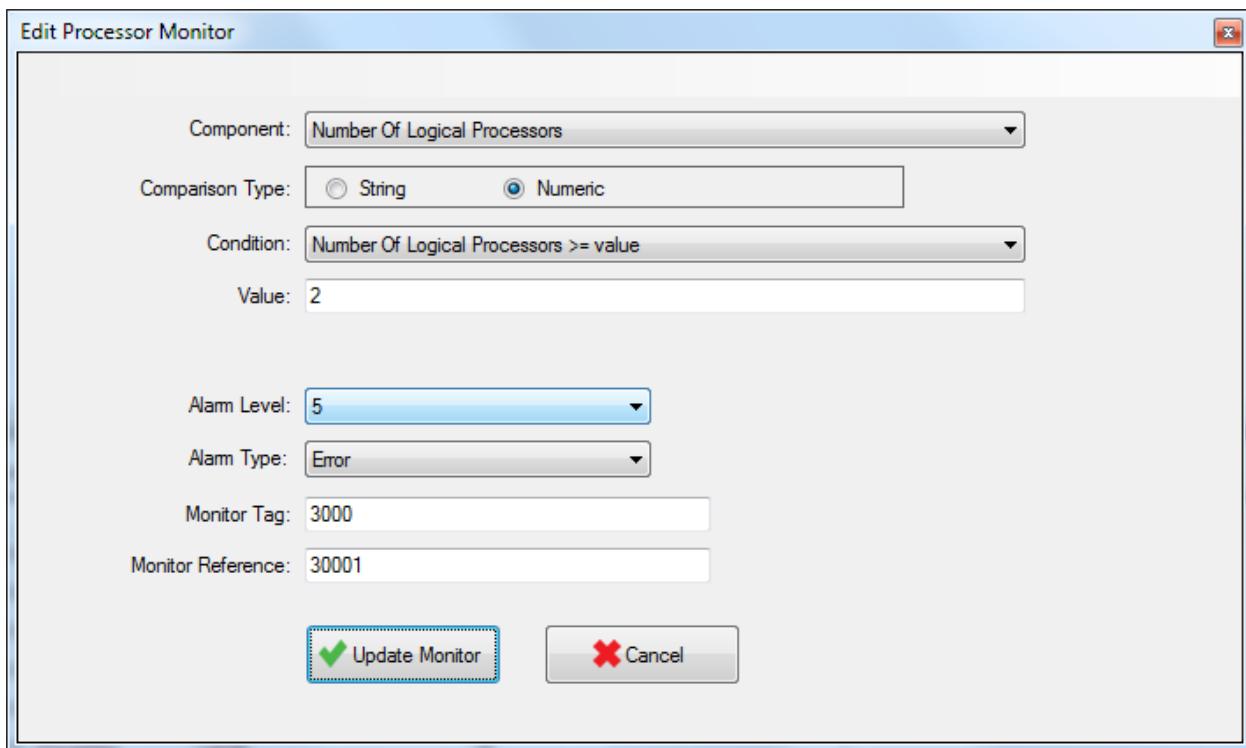
#	System	Monitor Type	Monitor Description	Test Status	Alarm	Test Result	Alarm Level	Alarm Type	Test Result Details
1	190.168.1.110	Processes	Any Process Name with Field: 'Creation Date' >= (System Date - 3 Days)				5	Error	

#	System	Monitor Type	Process Name	Process ID	Parent PID	Priority	Thread Count	Handle Count	Handle	Creation Class Name	Creation Date	Kernel Mode Time
1	190.168.1.110	Processes	armsvc.exe	1784	564	8	2	110	1,784	Win32_Process	2015/08/07 14:48:21	1,406,250
2	190.168.1.110	Processes	csrss.exe	364	356	13	9	243	364	Win32_Process	2015/08/07 14:48:06	4,843,750
3	190.168.1.110	Processes	csrss.exe	4440	4076	13	10	117	4,440	Win32_Process	2015/08/08 15:22:04	468,750
4	190.168.1.110	Processes	dwm.exe	4356	912	13	7	249	4,356	Win32_Process	2015/08/08 15:22:04	781,250
5	190.168.1.110	Processes	LogonUI.exe	1224	912	13	14	487	1,224	Win32_Process	2015/08/08 15:22:04	2,968,750
6	190.168.1.110	Processes	lsass.exe	584	460	9	6	879	584	Win32_Process	2015/08/07 14:48:07	9,218,750
7	190.168.1.110	Processes	MsMpEng.exe	1892	564	8	23	508	1,892	Win32_Process	2015/08/07 14:48:21	394,531,250
8	190.168.1.110	Processes	NisSrv.exe	2536	564	8	4	171	2,536	Win32_Process	2015/08/07 14:48:37	1,875,000
9	190.168.1.110	Processes	SearchIndexer.exe	1916	564	8	11	574	1,916	Win32_Process	2015/08/07 14:50:26	22,031,250
10	190.168.1.110	Processes	services.exe	564	460	9	1	200	564	Win32_Process	2015/08/07 14:48:07	11,406,250
11	190.168.1.110	Processes	smss.exe	280	4	11	2	49	280	Win32_Process	2015/08/07 14:48:01	1,875,000

4.11 Creating Processor Monitors

Processor monitors are used to test the properties of the processor on the target system. The monitor can test various conditions like number of cores, number of logical processors, processor ID, etc...

To add a new Processor monitor, select Processor from the Monitor Type on the Monitor Info Toolbar, then click the Add Monitor button  to display the “Add Processor Monitor” form.



On the Add Processor Monitor form, define the details of the monitor. Each field is described in the section below.

- **Component:** This field specifies the Processor component that is to be tested. This corresponds to the Key column in the System Values Table when Processor Information is displayed. Possible values are:
 - Address Width
 - Architecture
 - Availability
 - Caption
 - Config Manager Error Code
 - Config Manager User Config
 - Cpu Status
 - Creation Class Name
 - Current Clock Speed
 - Current Voltage
 - Data Width
 - Description
 - Device ID
 - Error Cleared
 - Error Description
 - Ext Clock
 - Family
 - Install Date
 - L2 Cache Size
 - L2 Cache Speed
 - L3 Cache Size
 - L3 Cache Speed

- Last Error Code
- Level
- Percentage
- Manufacturer
- Max Clock Speed
- Name
- Number Of Cores
- Number Of Logical Processors
- Other Family Description
- PNP Device ID
- Power Management
- Capabilities
- Power Management Supported
- Processor Id
- Processor Type
- Revision
- Role
- Socket Designation
- Status
- Status Info
- Stepping
- System Creation Class Name
- System Name
- Unique Id
- Upgrade Method
- Version
- Voltage Caps

- **Comparison Type:** This field specifies whether the comparison is performed as string or as numeric. Both string and numeric comparisons can be performed.
- **Condition:** This field offers different options depending on the Component and Comparison Type fields. The available conditions are detailed in the table below.

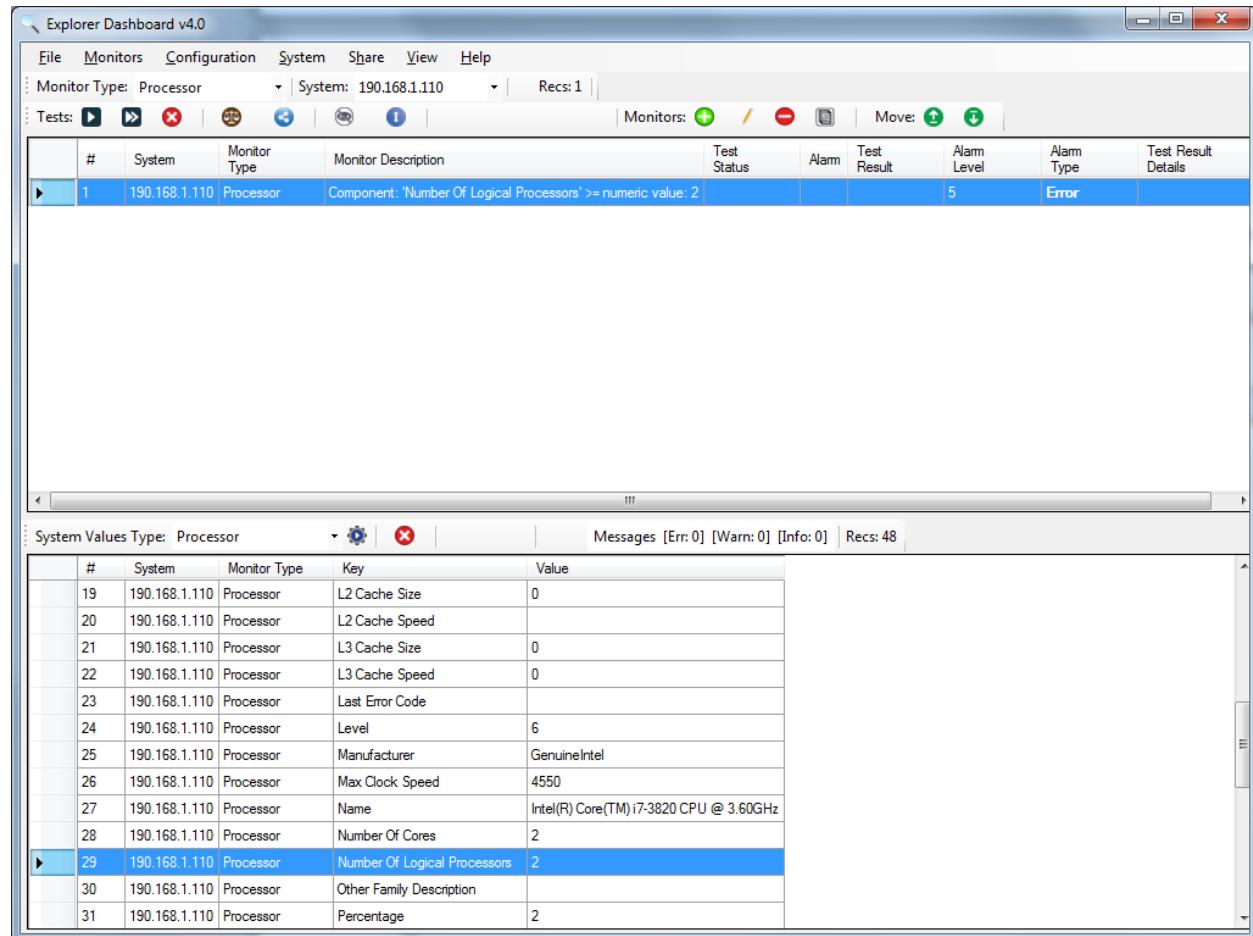
Table: Processor Monitor Conditions

Component	Comparison Type	Condition
▪ Any Component	▪ String	<ul style="list-style-type: none"> ▪ <Component> is empty ▪ <Component> is not empty ▪ <Component> equals string (case) ▪ <Component> does not equal string (case) ▪ <Component> contains string (case) ▪ <Component> does not contain string (case) ▪ <Component> starts with string (case) ▪ <Component> does not start with string (case) ▪ <Component> ends with string (case) ▪ <Component> does not end with string (case)
▪ Any Component	▪ Numeric	<ul style="list-style-type: none"> ▪ <Component> = value ▪ <Component> <> value ▪ <Component> < value ▪ <Component> <= value ▪ <Component> > value ▪ <Component> >= value

- **String or Value:** This field is used to specify the value to compare against the system value. If the Comparison Type is numeric, this should be a numeric value and if the Comparison Type is String, this should be a string value.
- **Case Sensitive:** Some string conditions require a string value to be specified and in these cases the case sensitive checkbox is displayed. If the Case Sensitive box is checked, the case of every letter in the specified value must match the system value, if unchecked, the case is irrelevant.

Clicking Add Monitor adds the monitor to the Monitor Table. The Monitor Description column contains the brief description of the newly created monitor: "Component: Number Of Logical Processors' >= numeric value 2" as illustrated in the image below.

Image: Processor Monitor



The screenshot shows the Explorer Dashboard v4.0 interface with the Processor Monitor table open. The table has columns for #, System, Monitor Type, Monitor Description, Test Status, Alarm, Test Result, Alarm Level, Alarm Type, and Test Result Details. One row is selected, showing a System of 190.168.1.110, Monitor Type of Processor, and Monitor Description of 'Component: Number Of Logical Processors' >= numeric value: 2'. The Alarm Level is set to 5 and the Alarm Type is Error. Below the main table, there is a smaller table titled 'System Values Type: Processor' with columns for #, System, Monitor Type, Key, and Value. The selected row in this table has a System of 190.168.1.110, Monitor Type of Processor, Key of 'Number Of Logical Processors', and Value of 2.

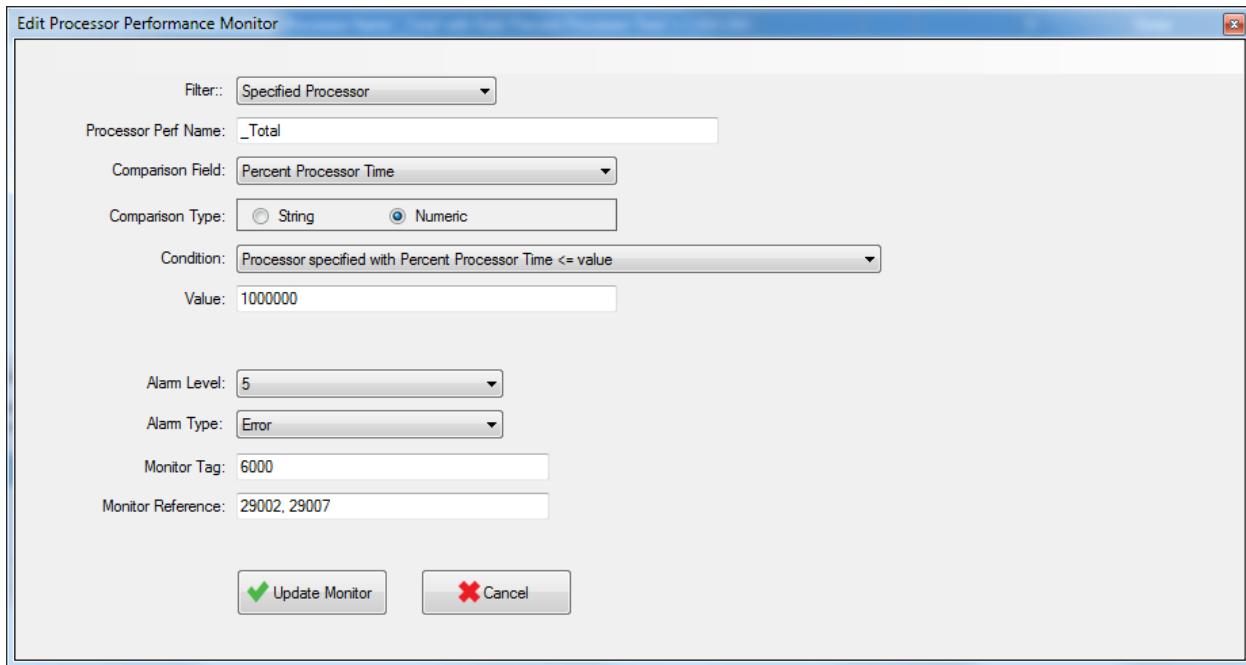
#	System	Monitor Type	Monitor Description	Test Status	Alarm	Test Result	Alarm Level	Alarm Type	Test Result Details
1	190.168.1.110	Processor	Component: 'Number Of Logical Processors' >= numeric value: 2				5	Error	

#	System	Monitor Type	Key	Value
19	190.168.1.110	Processor	L2 Cache Size	0
20	190.168.1.110	Processor	L2 Cache Speed	
21	190.168.1.110	Processor	L3 Cache Size	0
22	190.168.1.110	Processor	L3 Cache Speed	0
23	190.168.1.110	Processor	Last Error Code	
24	190.168.1.110	Processor	Level	6
25	190.168.1.110	Processor	Manufacturer	GenuineIntel
26	190.168.1.110	Processor	Max Clock Speed	4550
27	190.168.1.110	Processor	Name	Intel(R) Core(TM) i7-3820 CPU @ 3.60GHz
28	190.168.1.110	Processor	Number Of Cores	2
29	190.168.1.110	Processor	Number Of Logical Processors	2
30	190.168.1.110	Processor	Other Family Description	
31	190.168.1.110	Processor	Percentage	2

4.12 Creating Processor Performance Monitors

Processor Performance monitors are used to test processor performance statistics from the target system. The monitor can test various conditions like Percent Processor Time, Percent User time etc...

To add a new Processor Performance monitor, select Processor Perform from the Monitor Type on the Monitor Info Toolbar, then click the Add Monitor button  to display the “Add Processor Performance Monitor” form.



On the Add Processor Performance Monitor form, define the details of the monitor. Each field is described in the section below.

- **Filter:** This field is used to define whether a “Specified Processor”, “Any Processor” or “No Processor” meets the condition. “Specified Processor” requires you to specify the Processor Perf Name. In this case the test is performed on the specified drive (_Total). If “Any Processor” is specified, the test is performed on all of the processor lines returned from the target system, and an alarm is raised if any of the processors meets the condition. If “No Processor” is specified, the test is performed on all processor lines however, the system raises an alarm only if none of the processors meets the criteria.
- **Processor Perf Name:** This field allows the Processor Name to be specified. Since the system reports the statistics for each processor and as a total amount, this field allows the user to specify which processor is to be tested, or using ‘_Total’ as reported in the System Values Table, tests against the total amounts.

- **Comparison Field:** This field contains the field of the Process Performance date that is tested.

Possible values are:

- Name
- C1 Transitions Per Sec
- C2 Transitions Per Sec
- C3 Transitions Per Sec
- DPC Rate
- DPCs Queued Per Sec
- Frequency Object
- Frequency Perf Time
- Frequency Sys 100 NS
- Interrupts Per Sec
- Percent C1 Time
- Percent C2 Time
- Percent C3 Time
- Percent DPC Time
- Percent Idle Time
- Percent Interrupt Time
- Percent Privileged Time
- Percent Processor Time
- Percent User Time
- Timestamp Object
- Timestamp Perf Time
- Timestamp Sys 100 NS
- Caption
- Description

- **Comparison Type:** This field specifies whether the comparison is performed as string or as numeric. Both string and numeric comparisons can be performed.
- **Condition:** This field offers different options depending on the Filter, Comparison, and Comparison Type fields. The available conditions are detailed in the table below.

Table: Processor Performance Monitor Conditions

Filter	Comparison Field	Comparison Type	Condition
▪ Specified Processor	▪ Processor Perf Name	N/A	<ul style="list-style-type: none"> ▪ Processor Perf Name exists ▪ Processor Perf Name does not exist
▪ Any Processor or ▪ No Processor	▪ Processor Perf Name	▪ String	<ul style="list-style-type: none"> ▪ Any/No Processor Perf Name that contain string (case) ▪ Any/No Processor Perf Name that does not contain string (case) ▪ Any/No Processor Perf Name that starts with string (case) ▪ Any/No Processor Perf Name that does not start with string (case) ▪ Any/No Processor Perf Name that ends with string (case) ▪ Any/No Processor Perf Name that does not end with string (case)
▪ Any Processor or ▪ No Processor	▪ Processor Perf Name	▪ Numeric	<ul style="list-style-type: none"> ▪ Any Processor Perf Name = value ▪ Any Processor Perf Name <> value ▪ Any Processor Perf Name < value ▪ Any Processor Perf Name <= value ▪ Any Processor Perf Name > value ▪ Any Processor Perf Name >= value

Table: Processor Performance Monitor Conditions (continued...)

Filter	Comparison Field	Comparison Type	Condition
▪ Specified Processor	▪ Other fields	▪ String	<ul style="list-style-type: none"> ▪ Processor specified with <Comparison Field> that is empty ▪ Processor specified with <Comparison Field> that is not empty ▪ Processor specified with <Comparison Field> that equals string (case) ▪ Processor specified with <Comparison Field> that does not equal string (case) ▪ Processor specified with <Comparison Field> that contains string (case) ▪ Processor specified with <Comparison Field> that does not contain string (case) ▪ Processor specified with <Comparison Field> that starts with string (case) ▪ Processor specified with <Comparison Field> that does not start with string (case) ▪ Processor specified with <Comparison Field> that ends with string (case) ▪ Processor specified with <Comparison Field> that does not end with string (case)
▪ Any Processor or ▪ No Processor	▪ Other fields	▪ String	<ul style="list-style-type: none"> ▪ Any/No Processor with <Comparison Field> that is empty ▪ Any/No Processor with <Comparison Field> that is not empty ▪ Any/No Processor with <Comparison Field> that equals string (case) ▪ Any/No Processor with <Comparison Field> that does not equal string (case) ▪ Any/No Processor with <Comparison Field> that contains string (case) ▪ Any/No Processor with <Comparison Field> that does not contain string (case) ▪ Any/No Processor with <Comparison Field> that starts with string (case) ▪ Any/No Processor with <Comparison Field> that does not start with string (case) ▪ Any/No Processor with <Comparison Field> that ends with string (case) ▪ Any/No Processor with <Comparison Field> that does not end with string (case)
▪ Specified Processor	▪ Other fields	▪ Numeric	<ul style="list-style-type: none"> ▪ Processor specified with <Comparison Field> = value ▪ Processor specified with <Comparison Field> <> value ▪ Processor specified with <Comparison Field> < value ▪ Processor specified with <Comparison Field> <= value ▪ Processor specified with <Comparison Field> > value ▪ Processor specified with <Comparison Field> >= value
▪ Any Processor or ▪ No Processor	▪ Other fields	▪ Numeric	<ul style="list-style-type: none"> ▪ Any/No Processor with <Comparison Field> = value ▪ Any/No Processor with <Comparison Field> <> value ▪ Any/No Processor with <Comparison Field> < value ▪ Any/No Processor with <Comparison Field> <= value ▪ Any/No Processor with <Comparison Field> > value ▪ Any/No Processor with <Comparison Field> >= value

- **String or Value:** This field is used to specify the value to compare against the system value. If the Comparison Type is numeric, this should be a numeric value and if the Comparison Type is String, this should be a string value.
- **Case Sensitive:** Some string conditions require a string value to be specified and in these cases the case sensitive checkbox is displayed. If the Case Sensitive box is checked, the case of every letter in the specified value must match the system value, if unchecked, the case is irrelevant.

Clicking Add Monitor adds the monitor to the Monitor Table. The Monitor Description column shows the brief description of the newly created monitor “Processor Name ‘_Total’ with Field ‘Percent Processor Time’ <= 1,000,000” as illustrated in the image below.

Image: Processor Performance Monitor

The screenshot displays the Explorer Dashboard v4.0 interface. At the top, there is a menu bar with File, Monitors, Configuration, System, Share, View, and Help. Below the menu is a toolbar with various icons for monitoring and configuration. The main area consists of two tables:

Monitor Table:

#	System	Monitor Type	Monitor Description	Test Status	Alarm	Test Result	Alarm Level	Alarm Type	Test Re Details
1	190.168.1.110	Processor Perform	Processor Name '_Total' with Field 'Percent Processor Time' <= 1,000,000				5	Error	

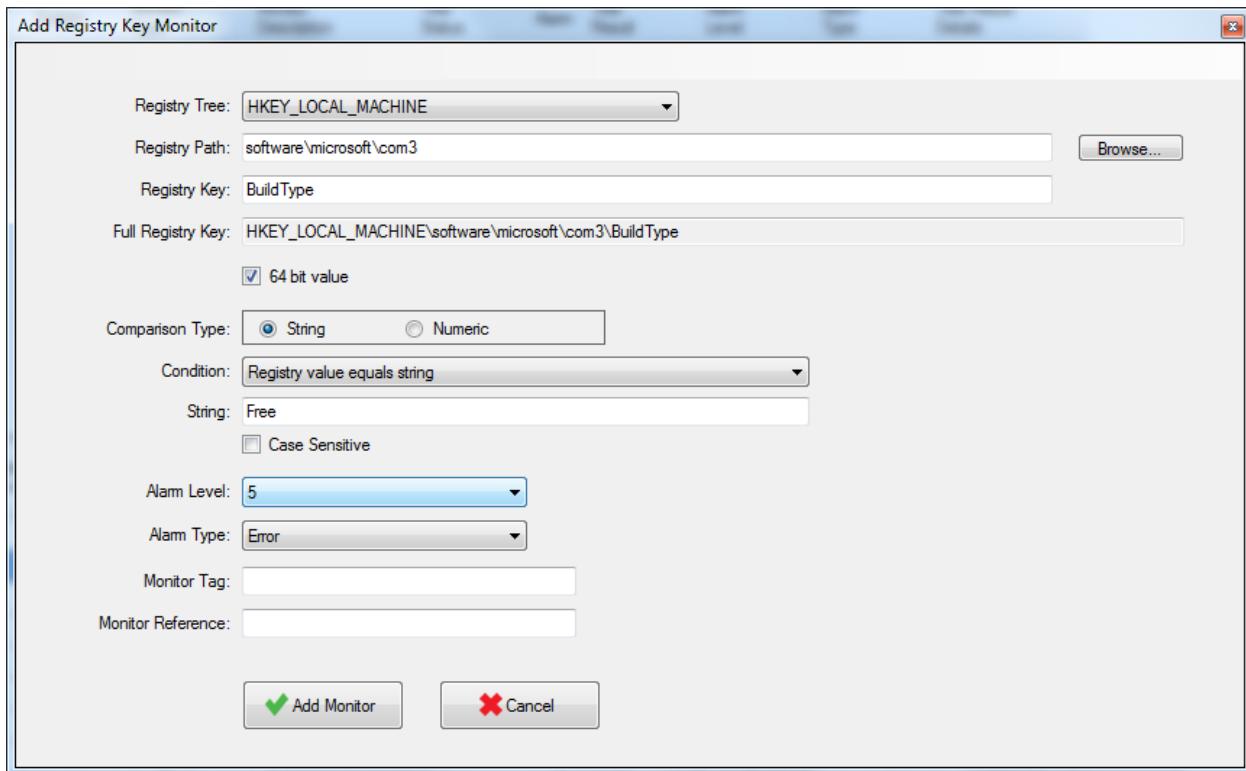
System Values Table:

#	System	Monitor Type	Name	C1TransitionsPerSec	C2TransitionsPerSec	C3TransitionsPerSec	DPCRate	DPCsQueuedPerSec	Frequency_Obj
1	190.168.1.110	Processor Perform	_Total	7,211,809	0	0	0	994,598	0
2	190.168.1.110	Processor Perform	0	1,976,594	0	0	0	875,748	0
3	190.168.1.110	Processor Perform	1	1,920,584	0	0	0	89,247	0
4	190.168.1.110	Processor Perform	2	1,651,033	0	0	0	14,046	0
5	190.168.1.110	Processor Perform	3	1,663,598	0	0	0	15,557	0

4.13 Creating Registry Monitors

Registry monitors are used to test registry key and value properties on the target system. The monitor can test various conditions like whether a registry key exists, and test the registry value.

To add a new Registry monitor, select Registry... from the Monitor Type on the Monitor Info Toolbar, then click the Add Monitor button  to display the “Add Registry Key Monitor” form.



On the Add Registry Key Monitor form, define the details of the monitor. Each field is described in the section below.

- **Registry Tree:** This field specifies the base Registry Keys the registry. Valid options are:
 - HKEY_CLASSES_ROOT
 - HKEY_CURRENT_USER
 - HKEY_LOCAL_MACHINE
 - HKEY_USERS
 - HKEY_CURRENT_CONFIG
- Specify the correct base key for that corresponds to the keys to be loaded.
- **Registry Path:** Registry Path must be defined here. The Registry Tree and the Registry Key Path define the complete path of the Registry Key values that are to be tested.
- **Registry Key:** The Registry Key contains the key that is tested by the monitor.

- **Full Registry Key:** This is a read-only field that displays the full path and key that is being tested. It is made up of the “Registry Tree”, “Registry Path” and “Registry Key” values.
- **64-bit value:** By default, this checkbox is unchecked and refers to 32-bit values. Checking this box forces a 64-bit search on the registry. This feature allows the search of the 32-bit registry hive on a 64-bit computer.
- **Comparison Type:** This field specifies whether the comparison is performed as string or as numeric. Both string and numeric comparisons can be performed.
- **Condition:** This field offers different options depending on the Comparison Type field. The available conditions are detailed in the table below.

Table: Registry Monitor Conditions

Comparison Type	Condition
▪ String	<ul style="list-style-type: none"> ▪ Registry value exists ▪ Registry value does not exist ▪ Registry value equals string (case) ▪ Registry value does not equal string (case) ▪ Registry value contains string (case) ▪ Registry value does not contain string (case) ▪ Registry value starts with string (case) ▪ Registry value does not start with string (case) ▪ Registry value ends with string (case) ▪ Registry value does not end with string (case)
▪ Numeric	<ul style="list-style-type: none"> ▪ Registry value = value ▪ Registry value <> value ▪ Registry value < value ▪ Registry value <= value ▪ Registry value > value ▪ Registry value >= value

- **String or Value:** This field is used to specify the value to compare against the system value. If the Comparison Type is numeric, this should be a numeric value and if the Comparison Type is String, this should be a string value.
- **Case Sensitive:** Some string conditions require a string value to be specified and in these cases the case sensitive checkbox is displayed. If the Case Sensitive box is checked, the case of every letter in the specified value must match the system value, if unchecked, the case is irrelevant.

Clicking Add Monitor adds the monitor to the Monitor Table. The Monitor Description column contains the brief description of the newly created monitor “Registry Key: ‘HKEY_LOCAL_MACHINE\software\microsoft\com3\BuildType’: equals string ‘Free’ [case]”, as illustrated in the image below. Note the [case] specified that the comparison is case-sensitive.

Image: Registry Monitor

The screenshot shows the Explorer Dashboard v4.0 interface with two main tables displayed.

Monitor Table:

#	System	Monitor Type	Monitor Description	Test Status	Alarm	Test Result	Alarm Level	Alarm Type
1	190.168.1.110	Registry...	Registry Key: 'HKEY_LOCAL_MACHINE\software\microsoft\com3\BuildType' equals string 'Free'				5	Error

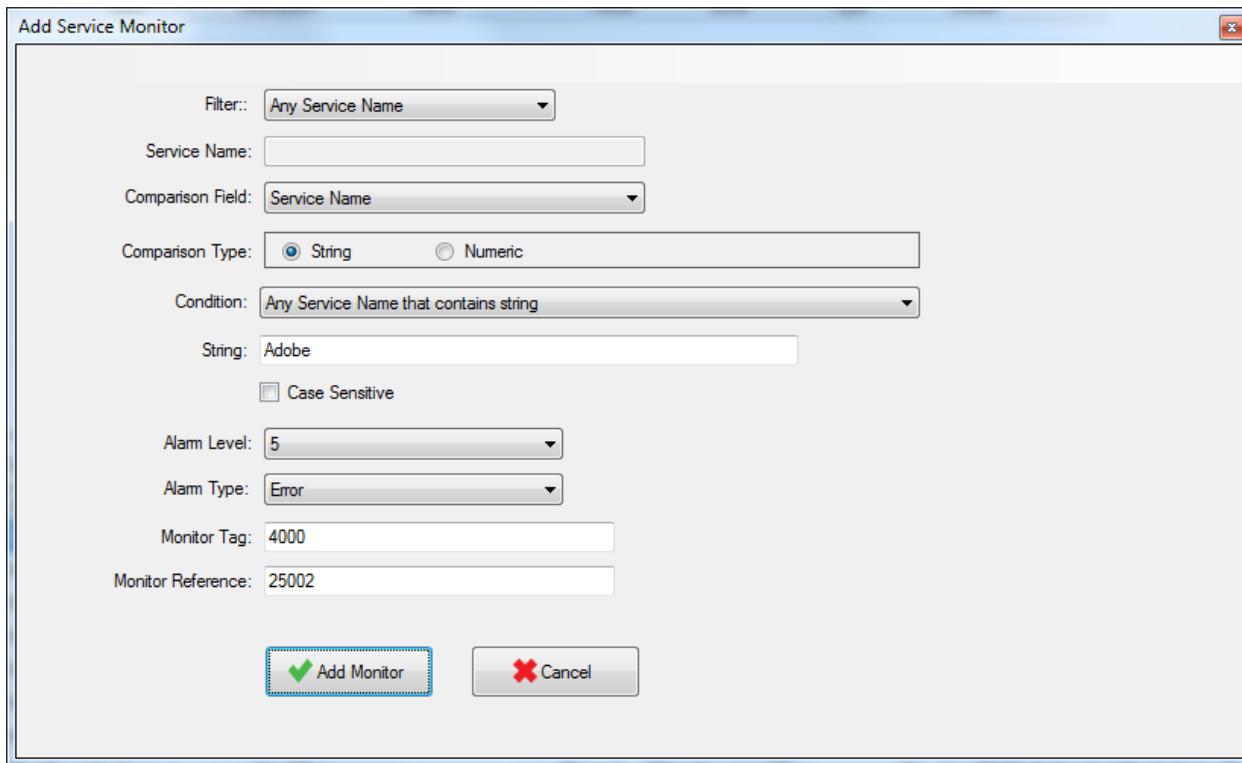
System Values Table:

#	System	Monitor Type	Key Name	Key Value	Key Type	Registry Tree	Registry Path	32/64 bit
1	190.168.1.110	Registry	BuildNumber	4720	4 (REG_DWORD)	HKEY_LOCAL_MACHINE	software\microsoft\com3	32
2	190.168.1.110	Registry	BuildType	Free	1 (REG_SZ)	HKEY_LOCAL_MACHINE	software\microsoft\com3	32
3	190.168.1.110	Registry	Com+Enabled	1	4 (REG_DWORD)	HKEY_LOCAL_MACHINE	software\microsoft\com3	32
4	190.168.1.110	Registry	CurrentSchemaVersion	84	4 (REG_DWORD)	HKEY_LOCAL_MACHINE	software\microsoft\com3	32
5	190.168.1.110	Registry	PartitionsEnabled	0	4 (REG_DWORD)	HKEY_LOCAL_MACHINE	software\microsoft\com3	32
6	190.168.1.110	Registry	RegDBAutoBackUp	1	4 (REG_DWORD)	HKEY_LOCAL_MACHINE	software\microsoft\com3	32
7	190.168.1.110	Registry	REGDBVersion	01 00 00	3 (REG_BINARY)	HKEY_LOCAL_MACHINE	software\microsoft\com3	32
8	190.168.1.110	Registry	RemoteAccessEnabled	1	4 (REG_DWORD)	HKEY_LOCAL_MACHINE	software\microsoft\com3	32

4.14 Creating Service Monitors

Service monitors are used to test the services that have been installed on the target system. The monitor can test various conditions like whether a particular service exists, test for a service state, test the service start mode etc...

To add a new Service monitor, select Services from the Monitor Type on the Monitor Info Toolbar, then click the Add Monitor button  to display the “Add Service Monitor” form.



On the Add Service Monitor form, define the details of the monitor. Each field is described in the section below.

- **Filter:** This field is used to define whether a Specified Service Name, Any Service name or No Service Name meets the condition. “Specified Service Name” requires you to specify the Service Name. In this case the test is performed on the specified Service Name only. If “Any Service Name” is specified, the test is performed on all of the Services Installed on the target system, and an alarm is raised if any of the services meet the condition. If “No Service Name” is specified, the test is performed on all services however, the system raises an alarm only if none of the services meet the criteria.
- **Service Name:** This field must contain the service name if the filter is set to Specified Service Name.

- **Comparison Field:** This field contains the field or property of the Installed Application that is tested. Possible values are:
 - Service Name
 - State
 - Start Mode
 - Process ID
 - Description
- **Comparison Type:** This field specifies whether the comparison is performed as string or as numeric. Both string and numeric comparisons can be performed.
- **Condition:** This field offers different options depending on the Filter, Comparison Field, and Comparison Type fields. The available conditions are detailed in the table below.

Table: Service Monitor Conditions

Filter	Comparison Field	Comparison Type	Condition
▪ Specified Service Name	▪ Service Name	N/A	<ul style="list-style-type: none"> ▪ Service Name specified exists ▪ Service Name specified does not exist
▪ Any Service Name or ▪ No Service Name	▪ Service Name	▪ String	<ul style="list-style-type: none"> ▪ Any/No Service Name that contains string (case) ▪ Any/No Service Name that does not contain string (case) ▪ Any/No Service Name that start with string (case) ▪ Any/No Service Name that does not start with string (case) ▪ Any/No Service Name that ends with string (case) ▪ Any/No Service Name that does not end with string (case)
▪ Any Service Name or ▪ No Service Name	▪ Service Name	▪ Numeric	<ul style="list-style-type: none"> ▪ Any/No Service Name = value ▪ Any/No Service Name <> value ▪ Any/No Service Name < value ▪ Any/No Service Name <= value ▪ Any/No Service Name > value ▪ Any/No Service Name >= value
▪ Specified Service Name	▪ State	N/A	<ul style="list-style-type: none"> ▪ Service Name specified with State = Running ▪ Service Name specified with State = [not] Running ▪ Service Name specified with State = Stopped ▪ Service Name specified with State = [not] Stopped ▪ Service Name specified with State = Paused ▪ Service Name specified with State = [not] Paused ▪ Service Name specified with State = Unknown ▪ Service Name specified with State = [not] Unknown ▪ Service Name specified with State = Continue Pending ▪ Service Name specified with State = [not] Continue Pending ▪ Service Name specified with State = Pause Pending ▪ Service Name specified with State = [not] Pause Pending ▪ Service Name specified with State = Start Pending ▪ Service Name specified with State = [not] Start Pending ▪ Service Name specified with State = Stop Pending ▪ Service Name specified with State = [not] Stop Pending

Table: Service Monitor Conditions (continued...)

Filter	Comparison Field	Comparison Type	Condition
▪ Any Service Name or ▪ No Service Name	▪ State	N/A	<ul style="list-style-type: none"> ▪ Any/No Service Name with State = Running ▪ Any/No Service Name with State = [not] Running ▪ Any/No Service Name with State = Stopped ▪ Any/No Service Name with State = [not] Stopped ▪ Any/No Service Name with State = Paused ▪ Any/No Service Name with State = [not] Paused ▪ Any/No Service Name with State = Unknown ▪ Any/No Service Name with State = [not] Unknown ▪ Any/No Service Name with State = Continue Pending ▪ Any/No Service Name with State = [not] Continue Pending ▪ Any/No Service Name with State = Pause Pending ▪ Any/No Service Name with State = [not] Pause Pending ▪ Any/No Service Name with State = Start Pending ▪ Any/No Service Name with State = [not] Start Pending ▪ Any/No Service Name with State = Stop Pending ▪ Any/No Service Name with State = [not] Stop Pending
▪ Specified Service Name	▪ Start Mode	N/A	<ul style="list-style-type: none"> ▪ Service Name specified with Start Mode = Auto ▪ Service Name specified with Start Mode = [not] Auto ▪ Service Name specified with Start Mode = Boot ▪ Service Name specified with Start Mode = [not] Boot ▪ Service Name specified with Start Mode = Disabled ▪ Service Name specified with Start Mode = [not] Disabled ▪ Service Name specified with Start Mode = Manual ▪ Service Name specified with Start Mode = [not] Manual ▪ Service Name specified with Start Mode = System ▪ Service Name specified with Start Mode = [not] System
▪ Any Service Name or ▪ No Service Name	▪ Start Mode	N/A	<ul style="list-style-type: none"> ▪ Any/No Service Name with Start Mode = Auto ▪ Any/No Service Name with Start Mode = [not] Auto ▪ Any/No Service Name with Start Mode = Boot ▪ Any/No Service Name with Start Mode = [not] Boot ▪ Any/No Service Name with Start Mode = Disabled ▪ Any/No Service Name with Start Mode = [not] Disabled ▪ Any/No Service Name with Start Mode = Manual ▪ Any/No Service Name with Start Mode = [not] Manual ▪ Any/No Service Name with Start Mode = System ▪ Any/No Service Name with Start Mode = [not] System
▪ Specified Service Name	▪ Process ID ▪ Description	▪ String	<ul style="list-style-type: none"> ▪ Service Name specified with <Comparison Field> that is empty ▪ Service Name specified with <Comparison Field> that is not empty ▪ Service Name specified with <Comparison Field> that equals string (case) ▪ Service Name specified with <Comparison Field> that does not equal string (case) ▪ Service Name specified with <Comparison Field> that contains string (case) ▪ Service Name specified with <Comparison Field> that does not contain string (case) ▪ Service Name specified with <Comparison Field> that starts with string (case) ▪ Service Name specified with <Comparison Field> that does not start with string (case) ▪ Service Name specified with <Comparison Field> that ends with string (case) ▪ Service Name specified with <Comparison Field> that does not end with string (case)

Table: Service Monitor Conditions (continued...)

Filter	Comparison Field	Comparison Type	Condition
▪ Any Service Name or ▪ No Service Name	▪ Process ID ▪ Description	▪ String	<ul style="list-style-type: none"> ▪ Any/No Service Name specified with <Comparison Field> that is empty ▪ Any/No Service Name specified with <Comparison Field> that is not empty ▪ Any/No Service Name specified with <Comparison Field> that equals string (case) ▪ Any/No Service Name specified with <Comparison Field> that does not equal string (case) ▪ Any/No Service Name specified with <Comparison Field> that contains string (case) ▪ Any/No Service Name specified with <Comparison Field> that does not contain string (case) ▪ Any/No Service Name specified with <Comparison Field> that starts with string (case) ▪ Any/No Service Name specified with <Comparison Field> that does not start with string (case) ▪ Any/No Service Name specified with <Comparison Field> that ends with string (case) ▪ Any/No Service Name specified with <Comparison Field> that does not end with string (case)
▪ Specified Service Name	▪ Process ID ▪ Description	▪ Numeric	<ul style="list-style-type: none"> ▪ Specified Service Name with <Comparison Field> = value ▪ Specified Service Name with <Comparison Field> <> value ▪ Specified Service Name with <Comparison Field> < value ▪ Specified Service Name with <Comparison Field> <= value ▪ Specified Service Name with <Comparison Field> < value ▪ Specified Service Name with <Comparison Field> >= value
▪ Any Service Name or ▪ No Service Name	▪ Process ID ▪ Description	▪ Numeric	<ul style="list-style-type: none"> ▪ Any/No Service Name with <Comparison Field> = value ▪ Any/No Service Name with <Comparison Field> <> value ▪ Any/No Service Name with <Comparison Field> < value ▪ Any/No Service Name with <Comparison Field> <= value ▪ Any/No Service Name with <Comparison Field> < value ▪ Any/No Service Name with <Comparison Field> >= value

- **String or Value:** This field is used to specify the value to compare against the system value. If the Comparison Type is numeric, this should be a numeric value and if the Comparison Type is String, this should be a string value.
- **Case Sensitive:** Some string conditions require a string value to be specified and in these cases the case sensitive checkbox is displayed. If the Case Sensitive box is checked, the case of every letter in the specified value must match the system value, if unchecked, the case is irrelevant.

Image: Monitor that verifies if the 'WSService' service has a Start Mode of Auto.

Add Service Monitor

Filter: Specified Service Name

Service Name: WSService

Comparison Field: Start Mode

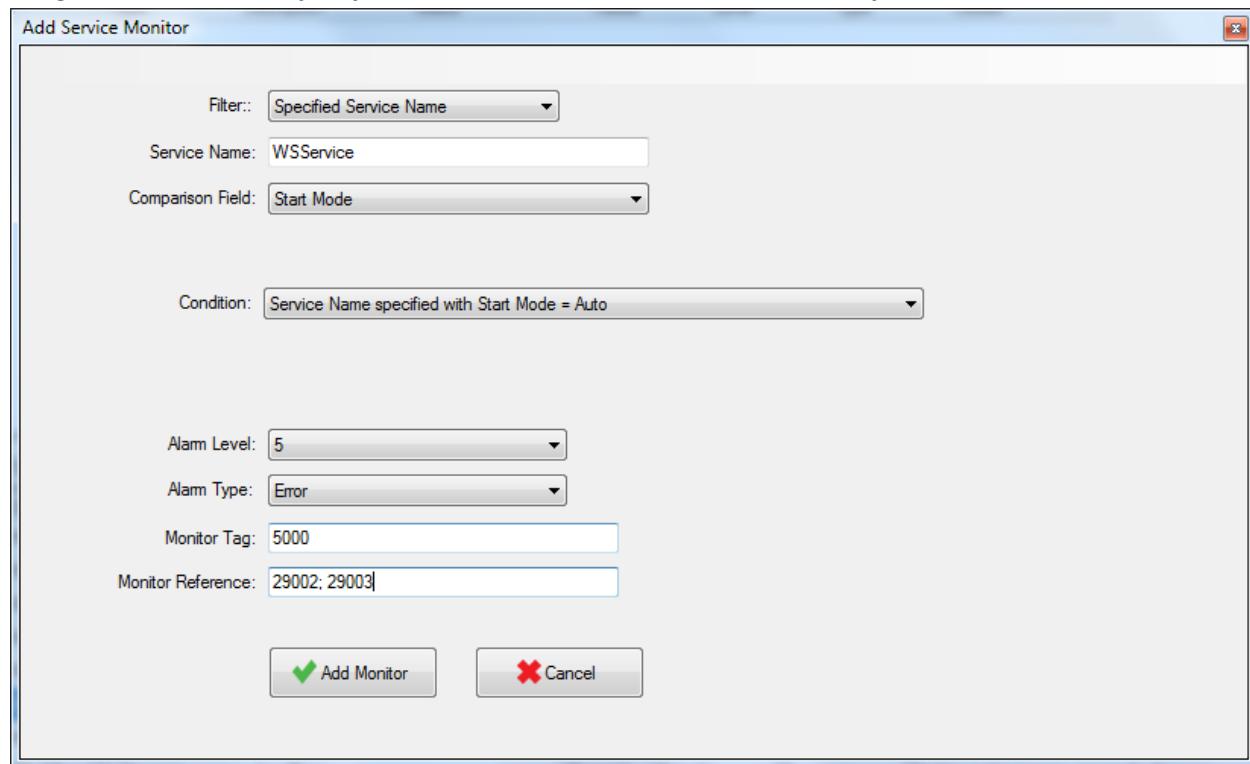
Condition: Service Name specified with Start Mode = Auto

Alarm Level: 5

Alarm Type: Error

Monitor Tag: 5000

Monitor Reference: 29002; 29003



Clicking Add Monitor adds the monitor to the Monitor Table. The Monitor Description column contains the brief description of the newly created monitor “Service: ‘WSService’ has a Start Mode of ‘Auto’”, as illustrated in the image below.

Image: Service Monitor

The screenshot shows the Explorer Dashboard v4.0 interface with two main windows. The top window is titled "Monitor Type: Services" and displays a single record for "Win10_004". The table has columns: #, System, Monitor Type, Monitor Description, Test Status, Alarm, Test Result, Alarm Level, Alarm Type, and Test Result Details. The record shows: # 1, System Win10_004, Monitor Type Services, Monitor Description "Service: 'WSService' has a Start Mode of 'Auto'", Test Status (empty), Alarm (empty), Test Result 5, Alarm Level 5, Alarm Type Error, and Test Result Details (empty). The bottom window is titled "System Values Type: Services" and displays a list of 200 records for "Win10_004". The table has columns: #, System, Monitor Type, Service Name, State, Start Mode, Process ID, and Description. Some entries include: # 1, System Win10_004, Monitor Type Services, Service Name AdobeARMSservice, State Running, Start Mode Auto, Process ID 1820, Description "Adobe Acrobat Updater keeps your Adobe software up to date.". Other services listed include AJRouter, ALG, AppIDSvc, AppInfo, AppMgmt, AppReadiness, AppXSvc, AudioEndpointBuilder, Audiosrv, AxInstSV, and BDESV. The descriptions for many services mention their role in maintaining system functionality or supporting specific applications.

5 System Values

System values consist of various pieces of information and statistics gathered from the target server. A system value can be one of the following types:

- Disk Space
- Environment Variables
- Event Logs
- File/Folder information
- Installed Applications
- Memory Performance
- Operating System
- Processes
- Processor
- Processor Performance
- Registry
- Services

System values can be loaded from different servers into the System Values Table where they can be analyzed at a glance. Changing the System Value Type selection on the System Values Toolbar, or changing the System selection on the Monitor Info Toolbar updates the table with new system values if the values have been loaded in memory.

5.1 System Values Table Controls

The System Values Table can be used to load and clear system values from one or more target systems. This section details the controls associated with the System Values Table.

Image: System Values Table controls

A screenshot of a software application window titled "System Values Table". The window has a toolbar at the top with various icons. An orange arrow points to the right side of the toolbar, with the text "System Values Toolbar" written diagonally across it. Below the toolbar is a status bar showing "Messages [Err: 0] [Warn: 0] [Info: 0] | Recs: 3". The main area is a data grid with the following columns: #, System, Monitor Type, File Name, File Date/Time, File Size, and Path. There are three rows of data:

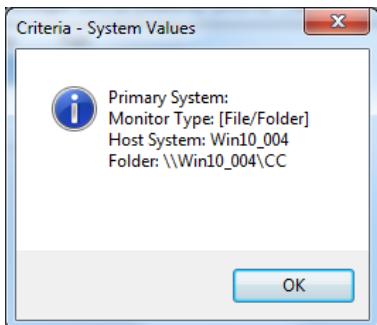
#	System	Monitor Type	File Name	File Date/Time	File Size	Path
1	Win10_004	File/Folder	Text1.txt	2015/08/10 14:38:47	19	\Win10_004\CC
2	Win10_004	File/Folder	Text2.txt	2015/08/10 15:14:38	252	\Win10_004\CC
3	Win10_004	File/Folder	Text3.txt	2015/08/10 18:08:12	2,223	\Win10_004\CC

5.1.1 System Values Toolbar

The System Values Toolbar offers controls to load and clear system values, along with selecting the active record displayed in the table. It contains the System Message control and an information label. The controls are detailed below.

- **System Values Type:** This drop down list selects the System Values Type. This control synchronizes with the Monitor Type drop down list on the Monitor Info Toolbar.
- **Load System Values** : This button loads the system values from the System specified on the Monitor Info Toolbar. The System Values Type drop down list on the System Values Toolbar determines the system value type that is loaded.
- **Clear System Values** : This button clears the system values currently loaded in the System Values Table.
- **Criteria Information** : This button is visible only for System Value types that require criteria (Event Logs..., File/Folder... and Registry...). Note, the Monitor Types that require criteria all have an ellipsis “...” appended to the name. Move and hover the mouse over the button to displays the criteria for the System Values Table. Click the button to display a window with the criteria info as illustrated in the image below.

Image: Criteria window



- **Select Record** : This button is visible for System Value types that require criteria (Event Logs..., File/Folder... and Registry...). Click the button to display the “Select System Values by Criteria” form which allows the user to select which record is to be displayed in the System Values Table.

Image: Select System Values by Criteria form showing 2 available records

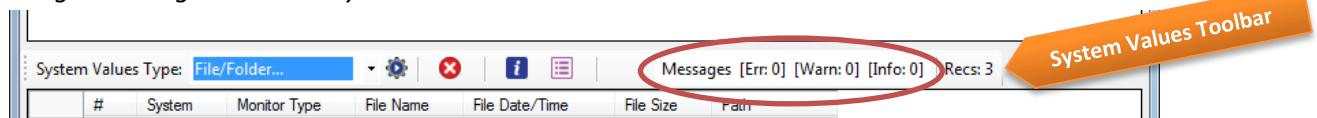
Curr Rec	No.	System	Monitor Type	Path	Records	Data Timestamp	Result Code	Result Message
>>>	1	Win10_004	File/Folder...	\Win10_004\DD	3	2015/08/12 14:19:47	0	
	2	Win10_004	File/Folder...	\Win10_004\CC	3	2015/08/12 14:19:53	0	

The active record that is displayed in the System Values Table has “>>>” in the “Curr Rec” column. To change the record, simply click on a new record to highlight it, and click on “Select Record”. This closes the form and display the newly selected record in the System Values Table.

The “Select System Values by Criteria” form is detailed in [Appendix D – “Select System Values by Criteria” form](#)

- **Messages status bar:** The messages status bar offers a summary of system information messages that have been generated. It summarized the number of Error, Warning, and Information messages that have been generated as illustrated in the image below.

Image: Message Center on System Values Toolbar



In the image above, the message center is reporting that there are 0 Error, 0 Warning, and 0 Information messages. A full description of the message center can be found in the section: [Appendix G – The Message Center](#). Note that messages displayed in the message center are also logged to the application log file in the “logs” folder.

- **Rec:** This label specifies the number of records in the table.

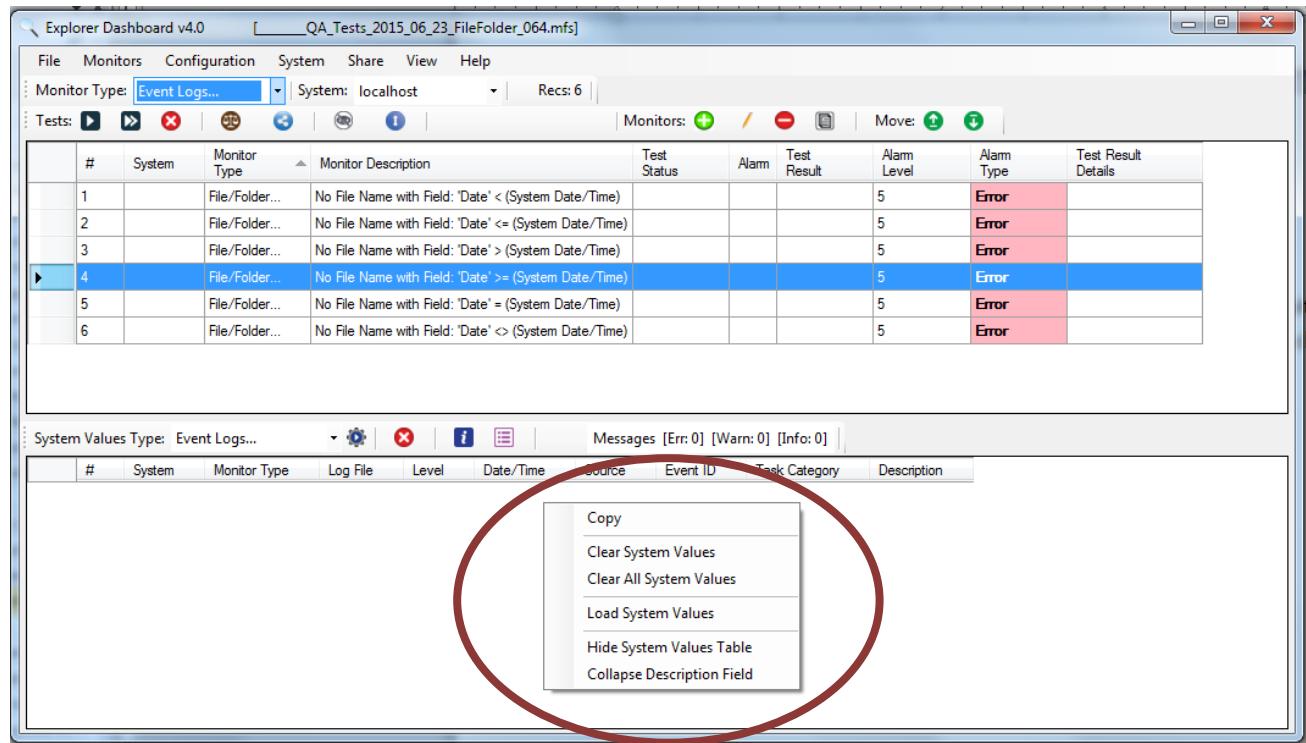
5.1.2 System Values Table – Reordering by column

The System Values Table contains the values returned from the target host system. The information in the table can be reordered by any column in ascending or descending order. To reorder, simply click on a column header and the table is reordered using that column. The column header displays an arrow pointing up (ascending). Clicking on the same column header will toggle the arrow in the header between up (ascending) and down (descending).

5.1.3 System Values Table – Context Menu

The System Values Table has a context menu which helps the user with quick access to commonly used functions. To access the System Values Table's context menu, right-click anywhere on the table and the menu is displayed as illustrated in the image below.

Image: System Values Table Context Menu



The context menu options are explained below.

- **Copy:** This option copies the highlighted row to the clipboard. You can use this to copy the information of the highlighted row, and paste the information to an external application via the clipboard.
- **Clear System Values:** This clears the system values currently displayed in the System Values Table.
- **Clear All System Values:** This clears all system values in memory. This can be used to force a new set of values to be reloaded when testing monitors.
- **Load System Values:** This is a shortcut to load the system values. For system values that require parameters or criteria, the appropriate form is displayed.

- **Hide System Values Table:** Hides the System Values Table. The System Values Table can be displayed again using the main menu or the “Show/Hide System Values” button  on the Control Toolbar.
- **Collapse/Expand Description Field:** Shortens/expands the description field at the end of the table. The collapse shrinks the width of the description field to avoid very large description column widths.

6 Loading System Values

System Values can be loaded directly by the user in the System Value Table and in the Comparison Table. Additionally when testing a monitor, if the system values for the monitor type and host system have not been loaded, the system loads the system values. This section concentrates on loading the system values directly from the System Values Table.

To load the system values, select the target Host System on the Monitor Info Toolbar from the drop down list and select the System Values Type from the drop down list on the System Values Toolbar. To load the values:

1. Click on the **System -> Load System Values** in the Main Menu or
2. Right-click the System Values Table and click **Load System Values** or
3. Click on the **Load System Values** button 

The System Values Table shows the “Loading System Values...” status in the System column until the values are loaded. Once the values are loaded, they are displayed in the System Values Table.

6.1 System Values in Memory

The new system values replace the existing ones in memory. For system value types that require parameters or criteria (Event Logs..., File/Folder... and Registry...) the new values replace existing records whose criteria match, otherwise a new table is loaded in memory. For example, for File/Folder... system values, reloading system values from the same folder replaces the existing table in memory. In the case that a different folder is specified, the new table is loaded in memory and the existing record remains in memory.

6.1.1 Reloading Multiple System Values

When loading multiple system values from the same host, the system schedules the request in series so only one request is made to the same server at any given time. Loading system values from different target host systems will process simultaneously.

6.1.2 Clearing System Values

Once loaded, the system values are stored in memory. These values are used when testing monitors, when comparing system values, and are displayed in the System Values Table. A new set of values can be reloaded anytime by following the steps above.

To clear the current values in the System Values Table, you can

1. Click on **System -> Clear System Values** on the main menu
2. Right-click the System Values Table and click on **Clear System Values**
3. Click on the **Clear System Values** button 

To clear all of the System Values for all systems and System Value Types

1. Right-click on the System Values Table and click on **Clear All System Values**

Testing monitors uses System Values from memory if these values have been loaded otherwise the monitor test loads a new set of system values before the monitor can be tested. If you need the monitor test to load a new set of system values, you must clear the corresponding system values or clear all system values as outlined above. Additional information about testing monitors is detailed in the section: [3.2 Testing Monitors](#).

Loading System Values from the Compare System Values form is detailed in the section: [7. Comparing System Values](#).

6.2 Loading Disk Space system values

The Disk Space system values type is used to retrieve disk utilization information for fixed hard drives from the target system. WMI is used to extract the information using the Win32_LogicalDisk class. The fields retrieved from the system are:

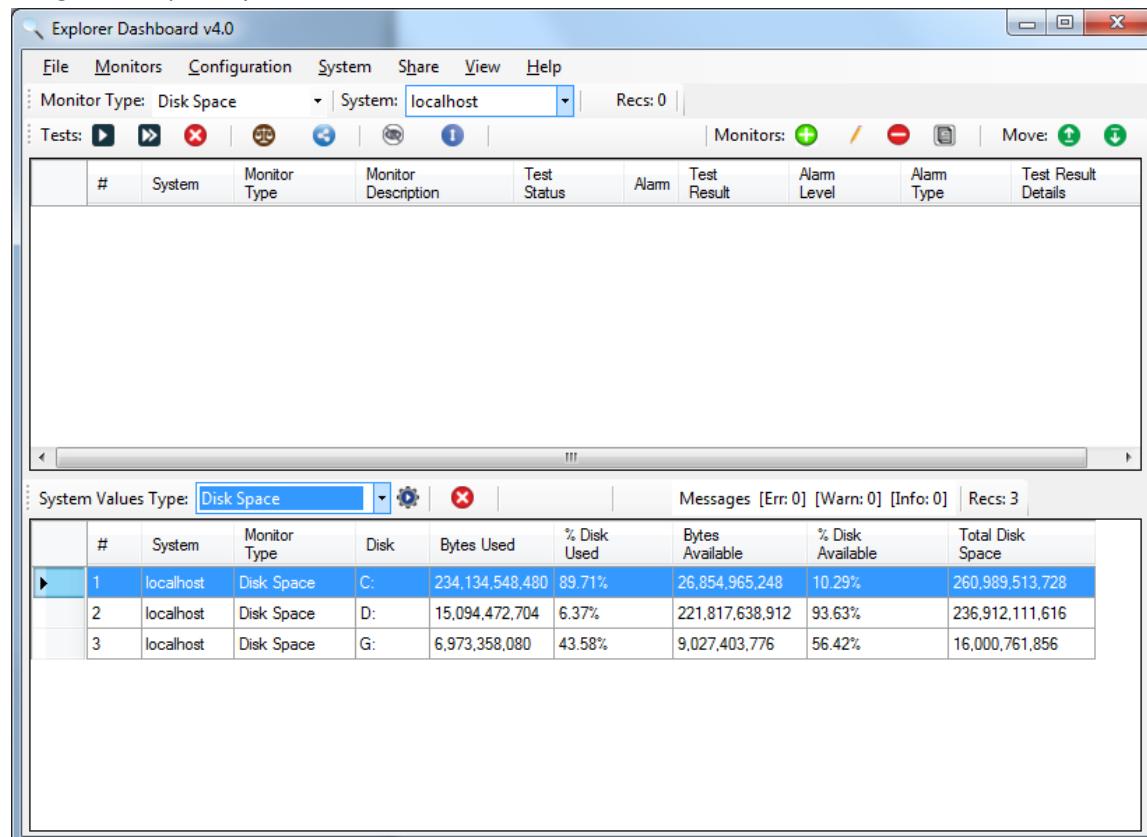
- Disk ID
- Bytes Used
- % Disk Used
- Bytes Available
- % Disk Available
- Total Disk Space

To load Disk Space System Values from a target host system, you must

1. Select the System from the drop down list on the Monitor Info Toolbar,
2. Select **Disk Space** from the System Values Type drop down list on the System Values Toolbar
3. Click on the Load System Values button  to load the values

The System Values Table displays “Loading System Values...” in the System column of the System Values Table. Once the values are loaded, the system displays the information in the System Values Table as shown in the image below.

Image: Disk Space system values



The screenshot shows the Explorer Dashboard v4.0 application window. At the top, the menu bar includes File, Monitors, Configuration, System, Share, View, and Help. The System dropdown is set to "localhost". The toolbar below the menu has buttons for Tests (play, stop, refresh, etc.) and Monitors (add, remove, move). The main area contains two tables. The top table is the System Values Table with columns: #, System, Monitor Type, Monitor Description, Test Status, Alarm, Test Result, Alarm Level, Alarm Type, and Test Result Details. The bottom table is the System Values Type table, which is currently set to "Disk Space". This table has columns: #, System, Monitor Type, Disk, Bytes Used, % Disk Used, Bytes Available, % Disk Available, and Total Disk Space. The data for the "Disk Space" table is as follows:

#	System	Monitor Type	Disk	Bytes Used	% Disk Used	Bytes Available	% Disk Available	Total Disk Space
1	localhost	Disk Space	C:	234,134,548,480	89.71%	26,854,965,248	10.29%	260,989,513,728
2	localhost	Disk Space	D:	15,094,472,704	6.37%	221,817,638,912	93.63%	236,912,111,616
3	localhost	Disk Space	G:	6,973,358,080	43.58%	9,027,403,776	56.42%	16,000,761,856

6.3 Loading Environment Variables system values

The Environment Variables (Environment Vars) system value type is used to retrieve the Environment Variables defined on the target system. WMI is used to extract the information using the Win32_Environment class. The fields retrieved from the system are:

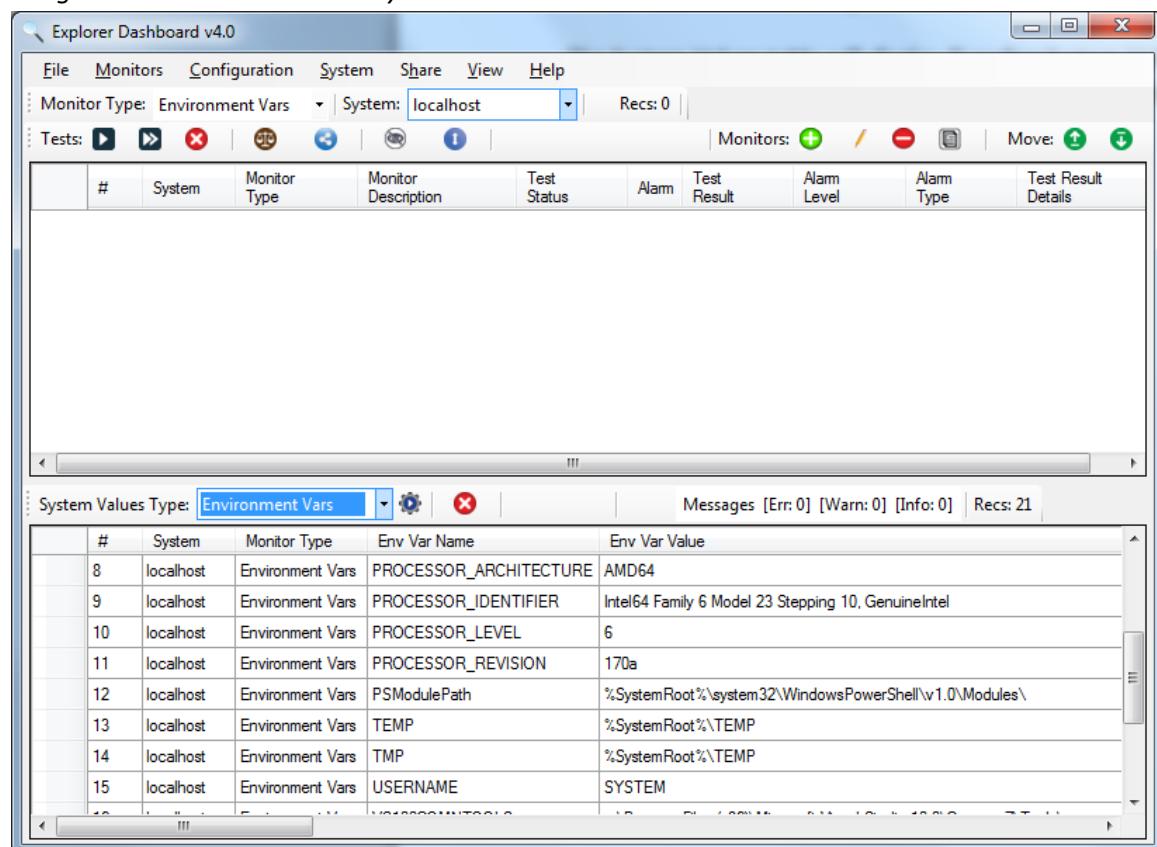
- Environment Variable Name (Env Var Name)
- Environment Variable Value (Env Var Value)

To load Environment Variables System Values from a target system, you must

1. Select the System from the drop down list on the Monitor Info Toolbar,
2. Select **Environment Vars** from the System Values Type drop down list on the System Values Toolbar
3. Click on the Load System Values button  to load the values

The System Values Table displays “Loading System Values...” in the System column of the System Values Table. Once the values are loaded, the system displays the information in the System Values Table as shown in the image below.

Image: Environment Variables system values



The screenshot shows the Explorer Dashboard v4.0 application window. At the top, there's a menu bar with File, Monitors, Configuration, System, Share, View, and Help. Below the menu is a toolbar with various icons. A dropdown menu for 'Monitor Type' is set to 'Environment Vars'. The main area contains two tables. The top table is a summary table for monitors, with columns for #, System, Monitor Type, Monitor Description, Test Status, Alarm, Test Result, Alarm Level, Alarm Type, and Test Result Details. The bottom table is the 'System Values Type' table, which is currently set to 'Environment Vars'. This table has columns for #, System, Monitor Type, Env Var Name, and Env Var Value. The data in the table includes environment variables like PROCESSOR_ARCHITECTURE, PROCESSOR_IDENTIFIER, PROCESSOR_LEVEL, PROCESSOR_REVISION, PSModulePath, TEMP, TMP, and USERNAME, along with their corresponding values.

#	System	Monitor Type	Env Var Name	Env Var Value
8	localhost	Environment Vars	PROCESSOR_ARCHITECTURE	AMD64
9	localhost	Environment Vars	PROCESSOR_IDENTIFIER	Intel64 Family 6 Model 23 Stepping 10, GenuineIntel
10	localhost	Environment Vars	PROCESSOR_LEVEL	6
11	localhost	Environment Vars	PROCESSOR_REVISION	170a
12	localhost	Environment Vars	PSModulePath	%SystemRoot%\system32\WindowsPowerShell\v1.0\Modules\
13	localhost	Environment Vars	TEMP	%SystemRoot%\TEMP
14	localhost	Environment Vars	TMP	%SystemRoot%\TEMP
15	localhost	Environment Vars	USERNAME	SYSTEM

6.4 Loading Event Logs system values

The Event Logs system value type is used to retrieve the Windows Event Logs from the target system. WMI is used to extract information using the Win32_NTLogEvent class. The fields retrieved from the system are:

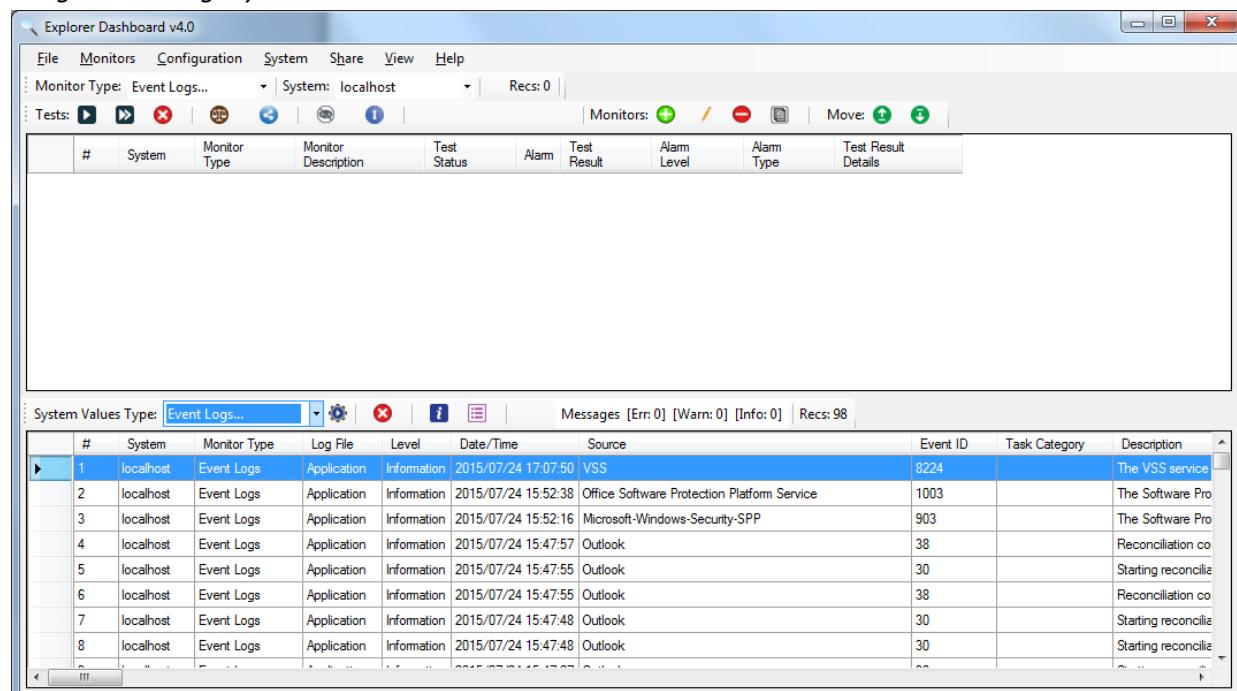
- Log File
- Log Level
- Date/Time Generated
- Source
- Event ID
- Task Category
- Description

To load Event Logs System Values from a target system, you must

1. Select the System from the drop down list on the Monitor Info Toolbar,
2. Select **Event Logs...** from the System Values Type drop down list on the System Values Toolbar
3. Click on the **Load System Values** button  to display the Event Logs Criteria form
4. Once the criteria (detailed below), is filled out, click Load Values to load the information.

The System Values Table displays “Loading System Values...” in the System column of the System Values Table. Once the values are loaded, the system displays the information in the System Values Table as shown in the image below.

Image: Event Logs system values



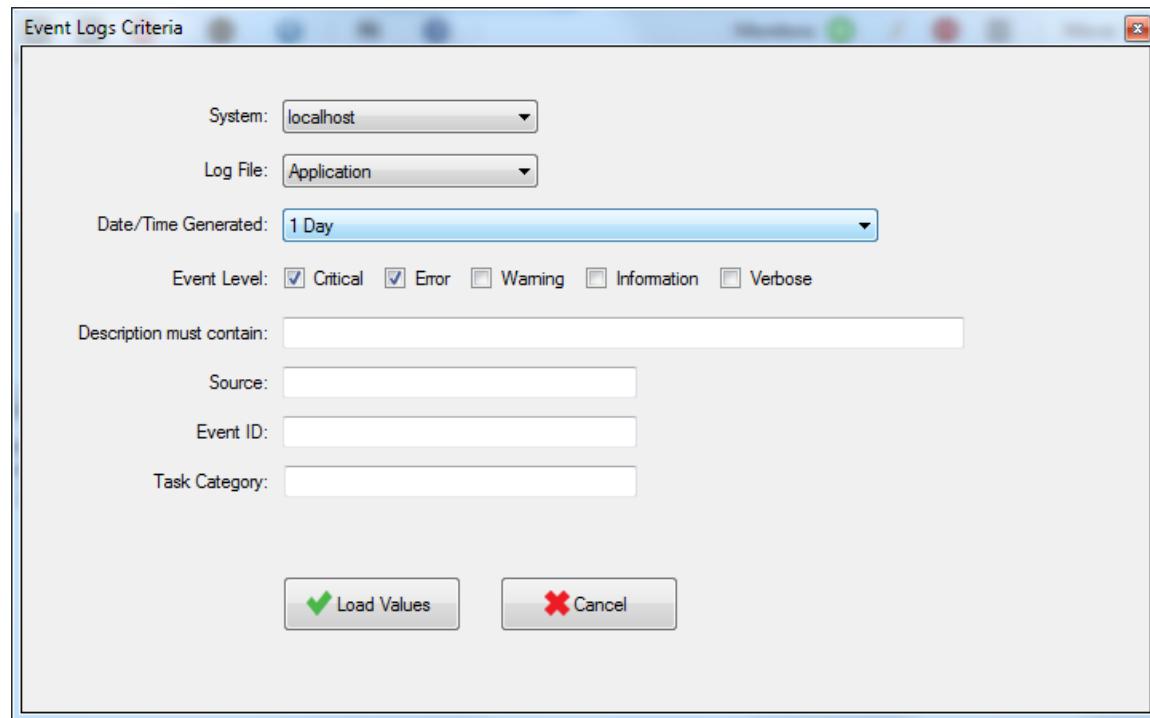
The screenshot shows the Explorer Dashboard v4.0 application window. At the top, there's a toolbar with various icons. Below the toolbar, the 'System Values Type' dropdown is set to 'Event Logs...'. The main area contains two tables. The top table is a summary table for monitors, showing one entry for 'localhost' with 'Monitor Type: Event Logs...' and 'System: localhost'. The bottom table is a detailed 'System Values' table with columns: #, System, Monitor Type, Log File, Level, Date/Time, Source, Event ID, Task Category, and Description. This table lists 903 entries, with the first few rows visible:

#	System	Monitor Type	Log File	Level	Date/Time	Source	Event ID	Task Category	Description
1	localhost	Event Logs	Application	Information	2015/07/24 17:07:50	VSS	8224		The VSS service
2	localhost	Event Logs	Application	Information	2015/07/24 15:52:38	Office Software Protection Platform Service	1003		The Software Pro
3	localhost	Event Logs	Application	Information	2015/07/24 15:52:16	Microsoft-Windows-Security-SPP	903		The Software Pro
4	localhost	Event Logs	Application	Information	2015/07/24 15:47:57	Outlook	38		Reconciliation co
5	localhost	Event Logs	Application	Information	2015/07/24 15:47:55	Outlook	30		Starting reconcilia
6	localhost	Event Logs	Application	Information	2015/07/24 15:47:55	Outlook	38		Reconciliation co
7	localhost	Event Logs	Application	Information	2015/07/24 15:47:48	Outlook	30		Starting reconcilia
8	localhost	Event Logs	Application	Information	2015/07/24 15:47:48	Outlook	30		Starting reconcilia

6.4.1 Event Logs Criteria form

On the System Values Type drop down list, the Event Logs... option has an ellipsis or three dots following the name. This indicates that further parameters or information is required to load Event Logs system values. Once the Load System Values button  is pressed, the Event Logs Criteria form is displayed so the user can enter the appropriate criteria regarding which event logs are to be loaded. The image below shows the Event Logs Criteria form.

Image: Event Logs Criteria form



The screenshot shows a Windows-style dialog box titled "Event Logs Criteria". It contains several input fields and buttons. At the top left are dropdown menus for "System" (set to "localhost") and "Log File" (set to "Application"). Below them is a dropdown for "Date/Time Generated" set to "1 Day". Under "Event Level", there are five checkboxes: Critical (checked), Error (checked), Warning (unchecked), Information (unchecked), and Verbose (unchecked). Below these are four text input fields: "Description must contain" (empty), "Source" (empty), "Event ID" (empty), and "Task Category" (empty). At the bottom are two buttons: "Load Values" with a green checkmark icon and "Cancel" with a red X icon.

The Event Logs Criteria form allows multiple criteria to be entered to help narrow down which Event Log records are to be loaded. Each of these fields is described below.

System: The user can specify which target system is to be used in loading of the Event Logs. Changing this value updates the System value on the main form.

Log File: This field specifies the name of the log file from which to extract records. Valid selections are:

1. Application
2. Security
3. System

Date/Time Generated: This field allows the narrowing down of the period of time for which records are required. Valid selections are:

1. Any Time (no date/time restriction) *not recommended
2. 1 Hour (last 1 hour)
3. 2 Hours (last 2 hours)
4. 6 Hours (last 6 hours)
5. 12 Hours (last 12 hours)
6. 1 Day (last day)
7. 7 Days (last 7 days)
8. 31 Days (last 31 days)
9. Specify Range... (presents a date/time selection form – detailed below)

The pre-defined periods (**1 Hour, 2 Hours, 6 Hours, 12 Hours, 1 Day, 7 Days and 31 Days**) are provided for convenience. These options will return records for the period specified starting from the system date/time.

Any Time can be used to retrieve records without any date/time restriction. This is not recommended as it may return a very large number of records which can cause the user interface to slow down significantly.

Specify Range... presents a Specify Range form, which allows the user to specify a start date/time and/or an end date/time. The image below shows a sample Specify Range form.

Image: Specify Range form

The screenshot shows a 'Specify Range' dialog box. It has two checked checkboxes: 'Specify Start Date' and 'Specify End Date'. Below each checkbox is a date and time picker. The 'From' picker shows '2015/07/24 18:00:00'. The 'To' picker shows '2015/07/25 18:00:00'. At the bottom left is a blue 'Update' button with a green checkmark icon, and at the bottom right is a grey 'Cancel' button with a red X icon.

If you only check the **Specify Start Date** checkbox, the system returns all records starting from the specified start date/time.

If you only check the **Specify End Date** checkbox, the system returns all records that have occurred prior to, up to and including the specified date/time.

If you check the **Specify Start Date** and the **Specify End Date** checkboxes, then the system returns all records that fall within the range between the Start date/time and End date/time.

Clicking **Update** closes the form and selects the specified range on the Event Logs Criteria form as illustrated in the image below. If Specify Start Date and Specify End Date are both left unchecked, then no entry is added to the **Date/Time Generated** drop down on the Event Logs Criteria form.

Image: Specified Date Range updated in Event Logs Criteria

The screenshot shows the 'Event Logs Criteria' dialog box. At the top, there are dropdown menus for 'System' (set to 'localhost') and 'Log File' (set to 'Application'). Below these is a dropdown for 'Date/Time Generated' containing the value 'From 2015/07/24 18:00:00 To 2015/07/25 18:00:00'. Underneath is a section for 'Event Level' with checkboxes for 'Critical' (checked), 'Error' (checked), 'Warning' (unchecked), 'Information' (unchecked), and 'Verbose' (unchecked). Further down are fields for 'Description must contain', 'Source', 'Event ID', and 'Task Category', each with an associated text input box. At the bottom are two buttons: 'Load Values' with a green checkmark icon and 'Cancel' with a red X icon.

To change the date/time you can use the Date/Time Generated drop down list to select another time period.

Event Level: This field allows the user to specify the Event Level of the required records. For the Application and System Log Files, valid selections are:

6. Critical
7. Error
8. Warning
9. Information
10. Verbose

For the Security Log File, valid selections are:

3. Audit Success
4. Audit Failure

The system returns all records that match the checked Event Levels.

Description must contain: This field accepts a string value (not case sensitive) and restricts the records returned to only those whose **Description** field contains the specified string.

Source: This field accepts a string value (not case sensitive) and restricts the records returned to only those whose **Source** field equals the specified string.

Event ID: This field accepts a string value (not case sensitive) and restricts the records returned to only those whose **Event ID** field equals the specified string.

Task Category: This field accepts a string value (not case sensitive) and restricts the records returned to only those whose Task Category field equals the specified string.

Note that each of the specified values (Log File, Date/Time Generated, Event Level, Description must contain, Source, Event ID, and Task Category) are used to further restrict the number of records that are returned.

For example if all values are specified, then the records returned are all records that:

- belong to the specified Log File (AND)
- whose Event Levels correspond to the checked boxes (AND)
- whose description contains the specified value (AND)
- the Source field equals the specified string (AND)
- the Event ID field equals the specified string (AND)
- The Task Category string equals the specified string

Specifying all criteria can get very specific in terms of records selected. Normally, the Log File, Date/Time Generated, and one or two additional fields are enough to narrow down the required records.

Note: Using a range that is too large or using very little criteria may return an extremely large number of records which can slow down the user interface. In the case that a large number of records are returned, the system warns and prompts the user whether to proceed with the loading of the records.

It is not recommended to load too many records as this may slow down the responsiveness of the application considerably.

6.5 Loading File and Folder system values

The File/Folder... system value type is used to retrieve file and folder information from the target system. File System Objects are used to extract the information. The fields retrieved from the system are:

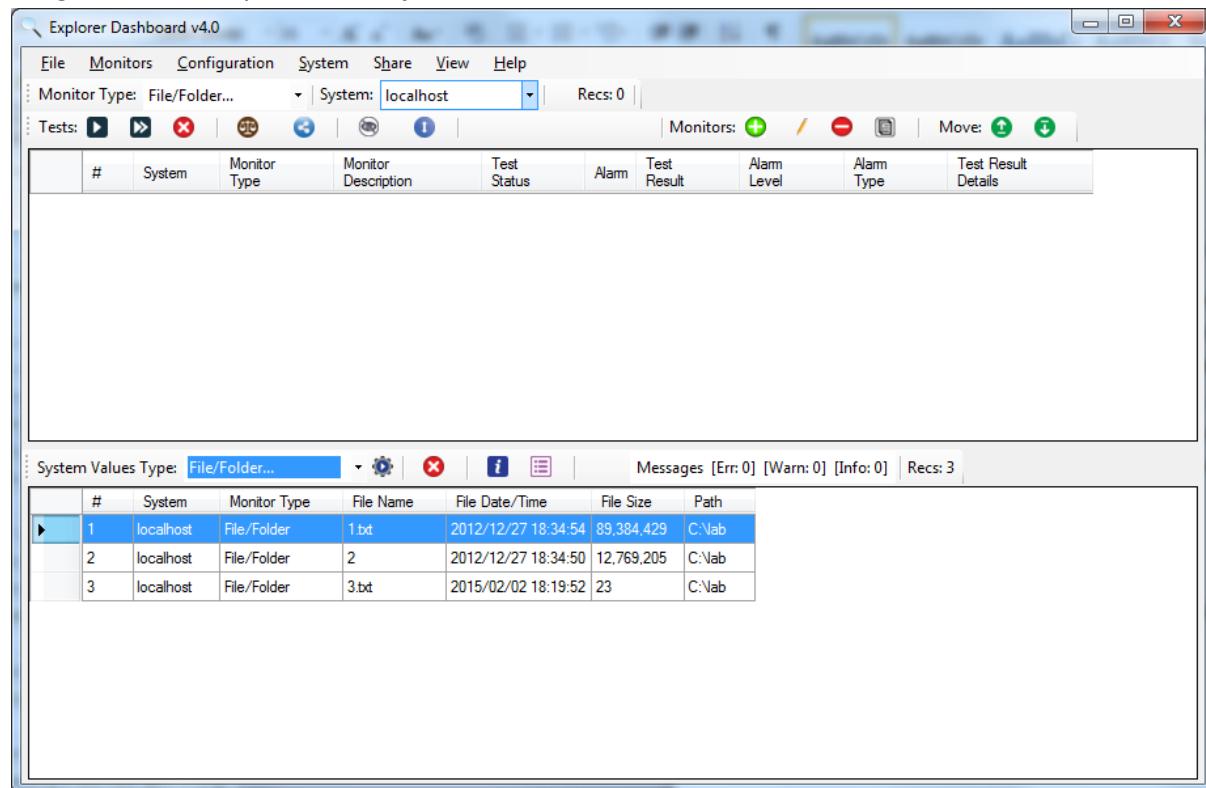
- File Name
- File Date/Time (modified)
- File Size
- Folder or Path

To load File / Folder System Values from a target system, you must

5. Select the System from the drop down list on the Monitor Info Toolbar,
6. Select **File/Folder...** from the System Values Type drop down list on the System Values Toolbar
7. Click on the **Load System Values** button  to display the File Folder Criteria form
8. Once the fields (detailed later in this section) are filled out, click Load Values to load the information.

The System Values Table displays “Loading System Values...” in the System column of the System Values Table. Once the values are loaded, the system displays the information in the System Values Table as shown in image below.

Image: File/Folder system values for C:\lab



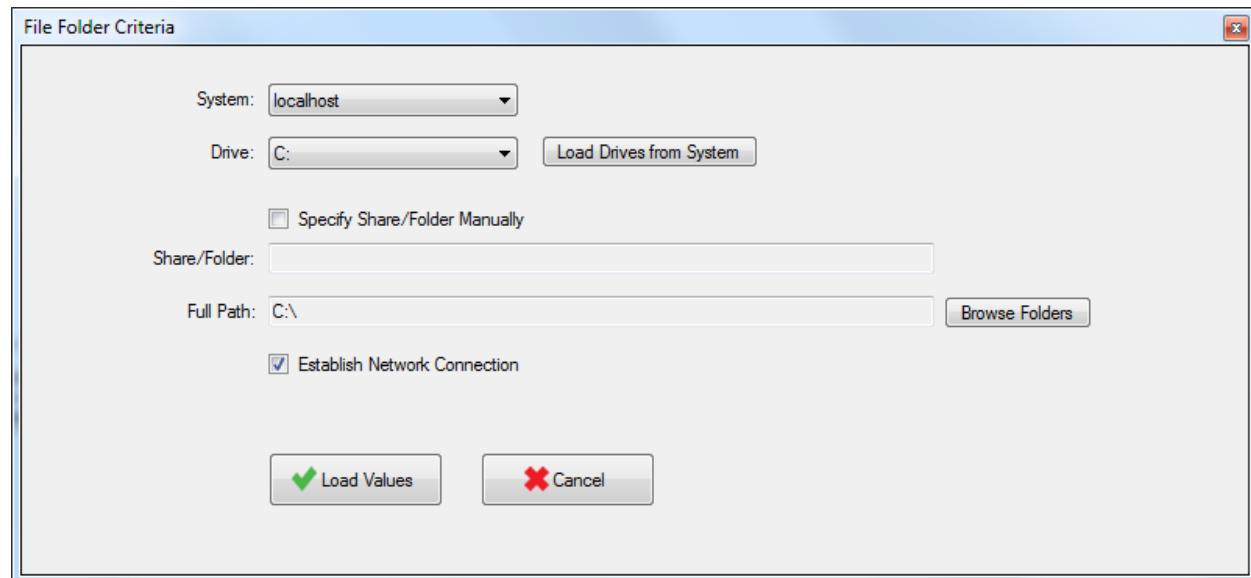
The screenshot shows the Explorer Dashboard v4.0 application window. At the top, there's a toolbar with various icons. Below the toolbar, the main interface has two main sections. The top section is a table header for the System Values Table, with columns: #, System, Monitor Type, Monitor Description, Test Status, Alarm, Test Result, Alarm Level, Alarm Type, and Test Result Details. The bottom section is a data grid showing the actual system values. The data grid has the following rows:

#	System	Monitor Type	Monitor Description	Test Status	Alarm	Test Result	Alarm Level	Alarm Type	Test Result Details
1	localhost	File/Folder	1.txt	2012/12/27 18:34:54	89,384,429	C:\lab			
2	localhost	File/Folder	2	2012/12/27 18:34:50	12,769,205	C:\lab			
3	localhost	File/Folder	3.txt	2015/02/02 18:19:52	23	C:\lab			

6.5.1 File/Folder Criteria form

On the System Values Type drop down list, File/Folder... has an ellipsis or three dots following the name. This indicates that further information is required to load File/Folder system values. Once the Load System Values button  is pressed, the File/Folder Criteria form is displayed so the user can enter the appropriate criteria regarding which files/folder are loaded. The image below shows the File/Folder Criteria form.

Image: File/Folder Criteria form



The screenshot shows the 'File Folder Criteria' dialog box. It contains the following fields and controls:

- System:** A dropdown menu set to "localhost".
- Drive:** A dropdown menu set to "C:". To its right is a button labeled "Load Drives from System".
- Specify Share/Folder Manually:** A checkbox that is unchecked.
- Share/Folder:** An empty text input field.
- Full Path:** A text input field containing "C:\\". To its right is a button labeled "Browse Folders".
- Establish Network Connection:** A checkbox that is checked.
- Load Values:** A button with a green checkmark icon.
- Cancel:** A button with a red X icon.

The File/Folder Criteria form allows the user to specify the local path (if the information to be loaded is on the current system that Explorer Dashboard is running on) or a remote path for which file/folder information is to be loaded. Each of these fields is described below.

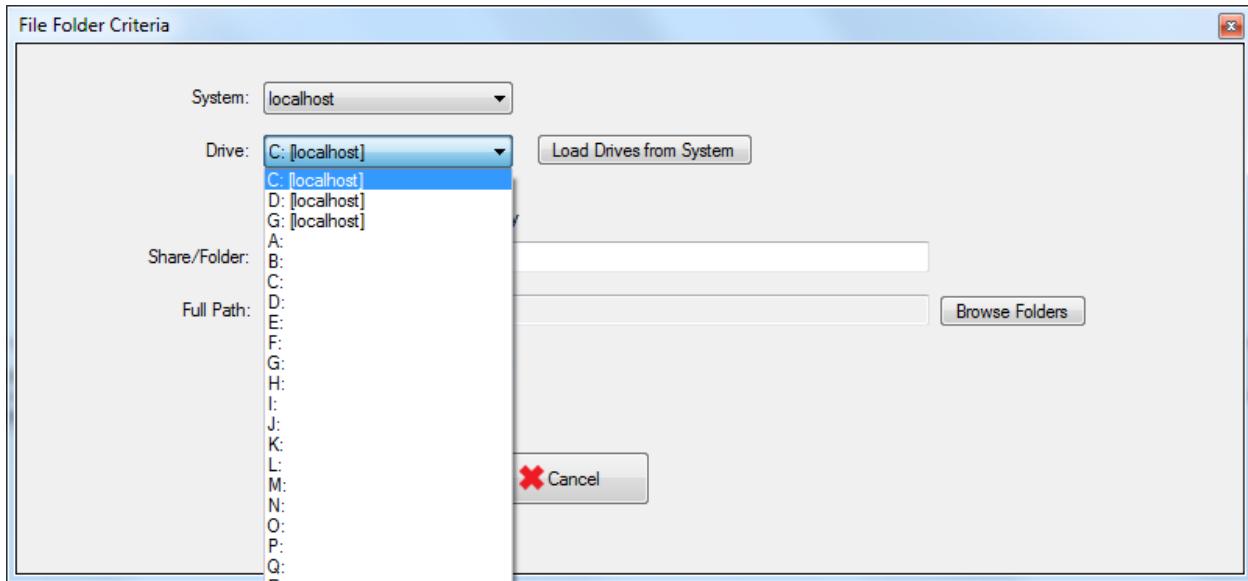
System: The user can specify which target system is to be used in loading the Event Logs. Changing this value updates the System value on the main form. The option “localhost” refers to the machine on which Explorer Dashboard is running.

Drive: This field specifies the name of the drive from which to load information. When the system is set to “localhost” then a drive must be specified, otherwise, for remote servers, a drive is optional and “Other Drive/Share...” is the default setting.

Specify Share/Folder Manually: When checked, this control enables the Share/Folder text box where a full remote path can be specified manually. This allows the user to manually specify a remote path instead of using the “Browse Folders” button.

Load Drives from System: This button loads drives from the system and make them available in the Drive dropdown list to help facilitate the selection of the available drives for your convenience. Note the “Disk Space” system values are loaded for the specified host. By default all drives are listed (A:, B:, ... through Z:). Clicking on the “Load Drives from System” loads a list of drives on the current system and place them at the top of the list above the list from (A:, B:, ... Z:). The drives loaded from the system have “[localhost]” as a suffix. The image below shows an image of the 3 drives that are loaded ahead of the complete list of drive letters.

Image: Showing system drives ahead of the standard drive list.



Share/Folder: This field is enabled by checking the “Specify Share/Folder Manually” checkbox and allows the user to manually specify the remote path from which file information is to be loaded. The information is appended to the name of the server specified in the System drop down list.

Browse Folders: This button opens a network folder dialog window that allows the user to navigate their way to the required network connection. Optionally, the user is free to check the “Specify Share/Folder Manually” checkbox and specify the path by typing it into the Share/Folder field.

Full Path: This is a read-only field that shows the full path used to load file/folder information whether the local or remote server is specified.

Establish Network Connection: This checkbox specifies whether a network connection is to be established with the specified system. This should be cleared for the “localhost” server, and should be checked for all remote servers requiring credentials. The credentials used are the ones specified when a Host System is created by clicking **Configuration -> Host Systems** from the main menu.

The following section describes how to load various File/Folder... system values from remote and local servers.

Example 1: Loading C:\lab folder on local system

The user wishes to load the C:\lab folder on the “localhost” system – the machine on which Explorer Dashboard is running on. The image below shows a sample form.

Image: Loading the “C:\lab” file information on the local machine

The screenshot shows a Windows-style dialog box titled "File Folder Criteria". It has the following fields:

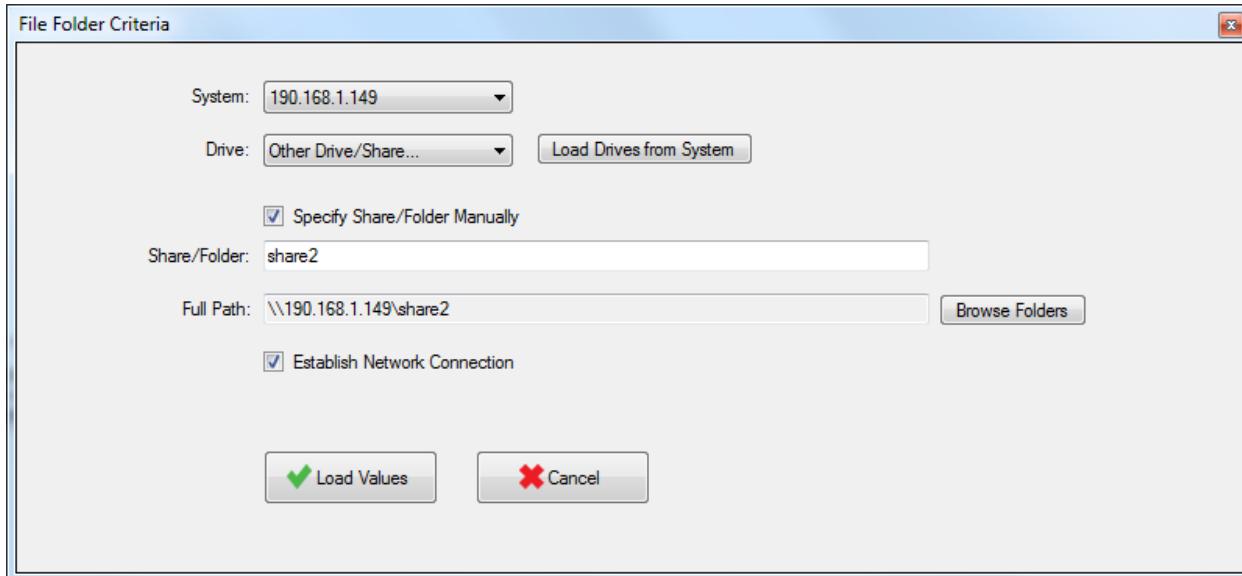
- System:** A dropdown menu set to "localhost".
- Drive:** A dropdown menu set to "C: [localhost]" with a "Load Drives from System" button next to it.
- Specify Share/Folder Manually:** A checked checkbox.
- Share/Folder:** An input field containing "lab".
- Full Path:** An input field containing "C:\lab" with a "Browse Folders" button to its right.
- Establish Network Connection:** An unchecked checkbox.
- Buttons:** "Load Values" (with a green checkmark icon) and "Cancel" (with a red X icon).

1. The **System** dropdown field must be set to “localhost” as we are dealing with the local system
2. The **Drive** dropdown field must be set to the required drive
3. The **Specify Share/Folder Manually** checkbox is enabled allowing the user to specify “lab” in the Share/Folder field. Optionally, the “Browse Folders” button can be used to navigate to the C:\lab folder which is the recommended option.
4. Note the Full Path field confirms the path that is used in loading of the file information, in this case it is “C:\lab”.

Example 2: Loading from a remote server using a share

The user wishes to load the “share2” shared folder on a remote server. The image below shows a sample form.

Image: Loading the “\\<server>\share” file information



1. The **System** dropdown is set to the required server name/IP address (190.168.1.149 in this case)
2. The **Drive** dropdown field is set to the default “Other Drive/Share...” as no drive letter is required.
3. The **Specify Share/Folder Manually** checkbox is enabled allowing the user to specify “lab” in the Share/Folder field. Optionally, the “Browse Folders” button can be used to navigate to the “\\190.168.1.149\share2” folder which is the recommended option. Navigating to the folder may prompt for credentials.
4. Note the Full Path field confirms the path that is used in loading of the file information. In this case it is “\\190.168.1.149\share2”.

Image: Loaded system values for share: "\\\\"190.168.1.149\\share2"

The screenshot shows the Explorer Dashboard v4.0 application window. The top menu bar includes File, Monitors, Configuration, System, Share, View, and Help. The main interface displays two tables of data.

The first table, titled "Monitors", has columns: #, System, Monitor Type, Monitor Description, Test Status, Alarm, Test Result, Alarm Level, Alarm Type, and Test Result Details. It shows 0 records.

#	System	Monitor Type	Monitor Description	Test Status	Alarm	Test Result	Alarm Level	Alarm Type	Test Result Details

The second table, titled "System Values Type: File/Folder...", has columns: #, System, Monitor Type, File Name, File Date/Time, File Size, and Path. It shows 1 record for "Test1.txt".

#	System	Monitor Type	File Name	File Date/Time	File Size	Path
1	190.168.1.149	File/Folder	Test1.txt	2015/08/01 22:56:50	0	\\190.168.1.149\share2

Below the tables, there are sections for "Messages [Err: 0] [Warn: 0] [Info: 0]" and "Rec: 1".

Example 3: Loading from a remote server using a shared drive letter

The user wishes to load a folder from a shared drive on a remote server (\\\190\\168.1.149\\C\$\\folder1). The image below shows a sample form.

Image: Loading the “\\<server>\\<shared drive>\\folder” file information

The screenshot shows a Windows-style dialog box titled "File Folder Criteria". It contains the following fields:

- System:** A dropdown menu set to "190.168.1.149".
- Drive:** A dropdown menu set to "C:".
- Load Drives from System:** A button next to the Drive dropdown.
- Specify Share/Folder Manually:** A checked checkbox.
- Share/Folder:** An input field containing "folder1".
- Full Path:** An input field containing "\\190.168.1.149\\C\$\\folder1".
- Browse Folders:** A button next to the Full Path field.
- Establish Network Connection:** A checked checkbox.
- Load Values:** A button with a green checkmark icon.
- Cancel:** A button with a red X icon.

1. The **System** dropdown is set to the required server name/IP address (190.168.1.149 in this case)
2. The **Drive** dropdown field is set to the default “C” as we are accessing the shared C drive via \\c\$
3. The **Specify Share/Folder Manually** checkbox is enabled allowing the user to specify “folder1” in the Share/Folder field. Optionally, the “Browse Folders” button can be used to navigate to the \\190.168.1.149\\C\$\\folder1 folder which is the recommended option. Navigating to the folder may prompt for credentials.
4. Note the Full Path field confirms the path that is used in loading of the file information. In this case it is “\\190.168.1.149\\C\$\\folder1”.

Image: Loaded system values for share: "\\\\"190.168.1.149\\C\$\\folder1"

The screenshot shows the Explorer Dashboard v4.0 application window. At the top, there's a menu bar with File, Monitors, Configuration, System, Share, View, and Help. Below the menu is a toolbar with various icons for monitoring and configuration. A status bar at the bottom displays "System Values Type: File/Folder...", "Messages [Err: 0] [Warn: 0] [Info: 0] [Rec: 1]", and a timestamp of "2015/08/01 23:02:34".

The main area contains two tables:

- Top Table:** A grid for monitoring tests. It has columns for #, System, Monitor Type, Monitor Description, Test Status, Alarm, Test Result, Alarm Level, Alarm Type, and Test Result Details. The status bar indicates "Recs: 0".
- Bottom Table:** A grid for system values. It has columns for #, System, Monitor Type, File Name, File Date/Time, File Size, and Path. One row is visible, showing entry 1 for the system 190.168.1.149, monitor type File/Folder, file name Doc2.txt, date/time 2015/08/01 23:02:34, size 0, and path \\190.168.1.149\C\$\folder1.

6.6 Loading Installed Applications system values

The Installed Applications (Installed Apps) system value type is used to retrieve information about applications that are installed on the target system. WMI is used to extract information using the Win32_Product class. The fields retrieved from the system are:

- Application Name
- Version
- Vendor
- Install Date
- Description

To load Installed Apps System Values from a target system, you must

1. Select the System from the drop down list on the Monitor Info Toolbar
2. Select **Installed Apps** from the System Values Type drop down list on the System Values Toolbar
3. Click on the Load System Values button  to load the values

The System Values Table displays “Loading System Values...” in the System column of the System Values Table. Once the values are loaded, the system displays the information in the System Values Table as shown in the image below.

Image: Installed Applications system values

The screenshot shows the Explorer Dashboard v4.0 application window. At the top, there's a menu bar with File, Monitors, Configuration, System, Share, View, and Help. Below the menu is a toolbar with icons for Test, Monitor, Configuration, Share, View, and Help. The main area has two sections: one for 'Installed Apps' and one for 'System Values'.

Installed Apps Section:

- Monitor Type: Installed Apps
- System: 190.168.1.110
- Recs: 0
- Tests: (empty)
- Monitors: (empty)
- Move: (empty)

#	System	Monitor Type	Monitor Description	Test Status	Alarm	Test Result	Alarm Level	Alarm Type	Test Result Details

System Values Section:

- System Values Type: Installed Apps
- Messages [Err: 0] [Warn: 0] [Info: 0]
- Recs: 2

#	System	Monitor Type	Application Name	Version	Vendor	Install Date	Description
1	190.168.1.110	Installed Apps	Adobe Acrobat Reader DC	15.008.20082	Adobe Systems Incorporated	20150803	Adobe Acrobat Reader DC
2	190.168.1.110	Installed Apps	Adobe Refresh Manager	1.8.0	Adobe Systems Incorporated	20150803	Adobe Refresh Manager

6.7 Loading Memory Performance system values

The Memory Performance system value type (Memory Perform) is used to retrieve information about the system's memory performance. WMI is used to extract information using the Win32_PerfRawData_PerfOS_Memory class. The fields retrieved from the system are:

- Available Bytes
- Available Kbytes
- Available Mbytes
- Cache Bytes
- Cache Bytes Peak
- Cache Faults Per Sec
- Caption
- Commit Limit
- Committed Bytes
- Demand Zero Faults Per Sec
- Description
- Free System Page Table Entries
- Frequency Object
- Frequency PerfTime
- Frequency Sys100NS
- Name
- Page Faults Per Sec
- Page Reads Per Sec
- Pages Input Per Sec
- Pages Output Per Sec
- Pages Per Sec
- Page Writes Per Sec
- Percent Committed Bytes In Use
- Percent Committed Bytes In Use Base
- Pool Nonpaged Allocs
- Pool Nonpaged Bytes
- Pool Paged Allocs
- Pool Paged Bytes
- Pool Paged Resident Bytes
- System Cache Resident Bytes
- System Code Resident Bytes
- System Code Total Bytes
- System Driver Resident Bytes
- System Driver Total Bytes
- Timestamp Object
- Timestamp PerfTime
- Timestamp Sys100NS
- Transition Faults Per Sec
- Write Copies Per Sec

To load Memory Performance System Values from a target system, you must

4. Select the System from the drop down list on the Monitor Info Toolbar,
5. Select **Memory Perform** from the System Values Type drop down list on the System Values Toolbar
6. Click on the Load System Values button  to load the values

The System Values Table displays “Loading System Values...” in the System column of the System Values Table. Once the values are loaded, the system displays the information in the System Values Table as shown in the image below.

Image: Memory Performance system values

The screenshot shows the Explorer Dashboard v4.0 interface. At the top, there's a menu bar with File, Monitors, Configuration, System, Share, View, and Help. Below the menu is a toolbar with various icons for monitoring and configuration. The main area has two tabs: "Monitor Type: Memory Perform" and "System Values Type: Memory Perform". The "System Values Type" tab is active, displaying a table with 13 rows of system values. The columns are labeled: #, System, Monitor Type, Key, and Value. The first row, which is highlighted, shows the value "3412017152" for the key "Available Bytes".

#	System	Monitor Type	Key	Value
1	190.168.1.110	Memory Perform	Available Bytes	3412017152
2	190.168.1.110	Memory Perform	Available KBytes	3332048
3	190.168.1.110	Memory Perform	Available MBytes	3253
4	190.168.1.110	Memory Perform	Cache Bytes	32256000
5	190.168.1.110	Memory Perform	Cache Bytes Peak	128516096
6	190.168.1.110	Memory Perform	Cache Faults Per Sec	184230
7	190.168.1.110	Memory Perform	Caption	
8	190.168.1.110	Memory Perform	Commit Limit	5770891264
9	190.168.1.110	Memory Perform	Committed Bytes	843038720
10	190.168.1.110	Memory Perform	Demand Zero Faults Per Sec	2109137
11	190.168.1.110	Memory Perform	Description	
12	190.168.1.110	Memory Perform	Free System Page Table Entries	16507636
13	190.168.1.110	Memory Perform	Frequency Object	0

6.8 Loading Operating System - system values

The Operating System - system value type is used to retrieve information about the system's operating system. WMI is used to extract information using the Win32_OperatingSystem class. The fields retrieved from the system are:

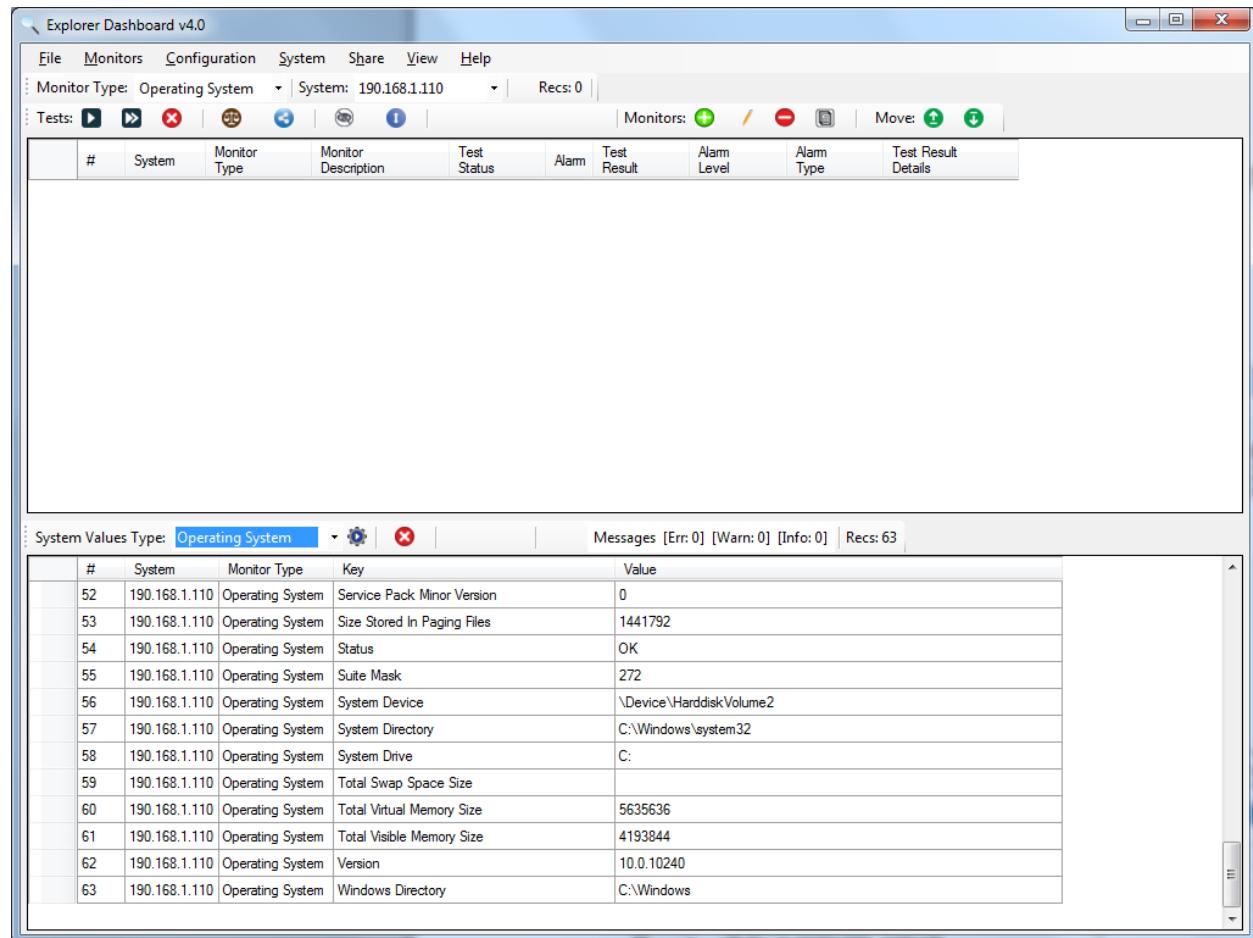
- Boot Device
- Build Number
- Build Type
- Caption
- Code Set
- Country Code
- Creation Class Name
- CS Creation Class Name
- CSD Version
- CS Name
- Current Time Zone
- Data Execution Prevention - 32 Bit Applications
- Data Execution Prevention – Available
- Data Execution Prevention – Drivers
- Data Execution Prevention - Support Policy
- Debug
- Description
- Distributed
- Encryption Level
- Foreground Application Boost
- Free Physical Memory
- Free Space In Paging Files
- Free Virtual Memory
- Install Date
- Large System Cache
- Boot Up Time
- Local Date Time
- Locale
- Manufacturer
- Max Number Of Processes
- Max Process Memory Size
- MUI Languages
- Name
- Number Of Licensed Users
- Number Of Processes
- Number Of Users
- Operating System SKU
- Organization
- OS Architecture
- OS Language
- OS Product Suite
- OS Type
- Other Type Description
- PAE Enabled
- Plus Product ID
- Plus Version Number
- Primary
- Product Type
- Registered User
- Serial Number
- Service Pack Major Version
- Service Pack Minor Version
- Size Stored In Paging Files
- Status
- Suite Mask
- System Device
- System Directory
- System Drive
- Total Swap Space Size
- Total Virtual Memory Size
- Total Visible Memory Size
- Version
- Windows Directory

To load Operating System - System Values from a target system, you must

1. Select the System from the drop down list on the Monitor Info Toolbar,
2. Select **Operating System** from the System Values Type drop down list on the System Values Toolbar
3. Click on the Load System Values button  to load the values

The System Values Table displays “Loading System Values...” in the System column of the System Values Table. Once the values are loaded, the system displays the information in the System Values Table as shown in the image below.

Image: Operating System – system values



The screenshot shows the Explorer Dashboard v4.0 interface. At the top, there's a menu bar with File, Monitors, Configuration, System, Share, View, and Help. Below the menu is a toolbar with various icons. A status bar at the bottom indicates "Messages [Err: 0] [Warn: 0] [Info: 0] Recs: 63". The main area contains two tables. The top table is a summary table with columns: #, System, Monitor Type, Monitor Description, Test Status, Alarm, Test Result, Alarm Level, Alarm Type, and Test Result Details. The bottom table is a detailed System Values table with columns: #, System, Monitor Type, Key, and Value. The detailed table lists 63 records for the system 190.168.1.110, operating system type.

#	System	Monitor Type	Key	Value
52	190.168.1.110	Operating System	Service Pack Minor Version	0
53	190.168.1.110	Operating System	Size Stored In Paging Files	1441792
54	190.168.1.110	Operating System	Status	OK
55	190.168.1.110	Operating System	Suite Mask	272
56	190.168.1.110	Operating System	System Device	\Device\HarddiskVolume2
57	190.168.1.110	Operating System	System Directory	C:\Windows\system32
58	190.168.1.110	Operating System	System Drive	C:
59	190.168.1.110	Operating System	Total Swap Space Size	
60	190.168.1.110	Operating System	Total Virtual Memory Size	5635636
61	190.168.1.110	Operating System	Total Visible Memory Size	4193844
62	190.168.1.110	Operating System	Version	10.0.10240
63	190.168.1.110	Operating System	Windows Directory	C:\Windows

6.9 Loading Processes system values

The Processes system value type is used to retrieve information about the processes running on the target system. WMI is used to extract information using the Win32_Process class. The fields retrieved from the system are:

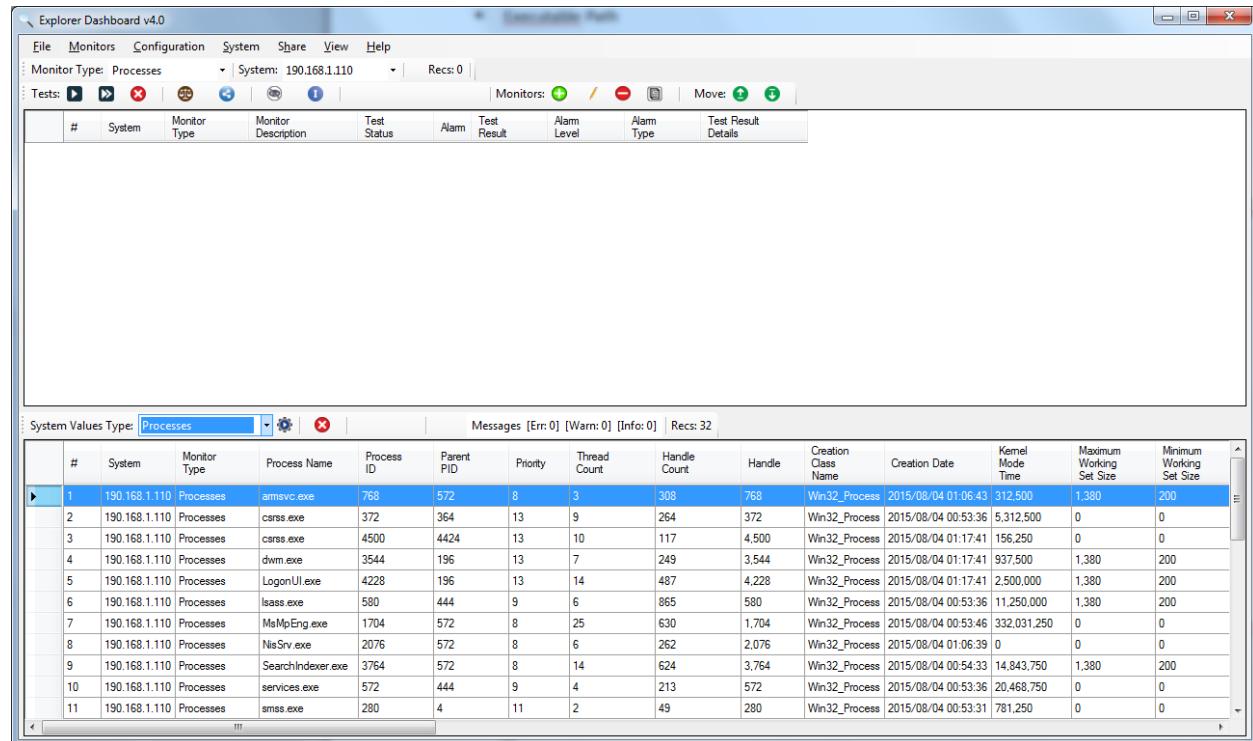
- Process Name
- Process ID
- Parent PID
- Priority
- Thread Count
- Handle Count
- Handle
- Creation Class Name
- Creation Date
- Kernel Mode Time
- Maximum Working Set Size
- Minimum Working Set Size
- OS Creation Class Name
- Other Operation Count
- Other Transfer Count
- Page Faults
- Page File Usage
- Peak Page File Usage
- Peak Virtual Size
- Peak Working Set Size
- Private Page Count
- Quota Non Paged Pool Usage
- Quota Paged Pool Usage
- Quota Peak Non Paged Pool Usage
- Quota Peak Paged Pool Usage
- Read Operation Count
- Read Transfer Count
- Session ID
- Status
- User Mode Time
- Virtual Size
- Working Set Size
- Write Operation Count
- Write Transfer Count
- Executable Path

To load Processes System Values from a target system, you must

1. Select the System from the drop down list on the Monitor Info Toolbar,
2. Select **Processes** from the System Values Type drop down list on the System Values Toolbar
3. Click on the Load System Values button  to load the values

The System Values Table displays “Loading System Values...” in the System column of the System Values Table. Once the values are loaded, the system displays the information in the System Values Table as shown in the image below.

Image: Processes system values



The screenshot shows the Explorer Dashboard v4.0 interface. At the top, there's a menu bar with File, Monitors, Configuration, System, Share, View, and Help. Below the menu is a toolbar with icons for Test, Monitor, Configuration, Share, View, and Help. The main area has two tabs: 'Tests' and 'System Values Type: Processes'. The 'System Values Type: Processes' tab is active, displaying a table with 11 rows of process data. The columns are: #, System, Monitor Type, Process Name, Process ID, Parent PID, Priority, Thread Count, Handle Count, Handle, Creation Class Name, Creation Date, Kernel Mode Time, Maximum Working Set Size, and Minimum Working Set Size. The data includes various system processes like armavc.exe, ccrss.exe, cress.exe, dvm.exe, LogonUI.exe, lsass.exe, MsMpEng.exe, NisSrv.exe, SearchIndexer.exe, services.exe, and smss.exe.

#	System	Monitor Type	Process Name	Process ID	Parent PID	Priority	Thread Count	Handle Count	Handle	Creation Class Name	Creation Date	Kernel Mode Time	Maximum Working Set Size	Minimum Working Set Size
1	190.168.1.110	Processes	armavc.exe	768	572	8	3	308	768	Win32_Process	2015/08/04 01:06:43	312,500	1,380	200
2	190.168.1.110	Processes	ccrss.exe	372	364	13	9	264	372	Win32_Process	2015/08/04 00:53:36	5,312,500	0	0
3	190.168.1.110	Processes	cress.exe	4500	4424	13	10	117	4,500	Win32_Process	2015/08/04 01:17:41	156,250	0	0
4	190.168.1.110	Processes	dvm.exe	3544	196	13	7	249	3,544	Win32_Process	2015/08/04 01:17:41	937,500	1,380	200
5	190.168.1.110	Processes	LogonUI.exe	4228	196	13	14	487	4,228	Win32_Process	2015/08/04 01:17:41	2,500,000	1,380	200
6	190.168.1.110	Processes	lsass.exe	580	444	9	6	865	580	Win32_Process	2015/08/04 00:53:36	11,250,000	1,380	200
7	190.168.1.110	Processes	MsMpEng.exe	1704	572	8	25	630	1,704	Win32_Process	2015/08/04 00:53:46	332,031,250	0	0
8	190.168.1.110	Processes	NisSrv.exe	2076	572	8	6	262	2,076	Win32_Process	2015/08/04 01:06:39	0	0	0
9	190.168.1.110	Processes	SearchIndexer.exe	3764	572	8	14	624	3,764	Win32_Process	2015/08/04 00:54:33	14,843,750	1,380	200
10	190.168.1.110	Processes	services.exe	572	444	9	4	213	572	Win32_Process	2015/08/04 00:53:36	20,468,750	0	0
11	190.168.1.110	Processes	smss.exe	280	4	11	2	49	280	Win32_Process	2015/08/04 00:53:31	781,250	0	0

6.10 Loading Processor system values

The Processor system value type is used to retrieve information about the target system's processor. WMI is used to extract information using the Win32_Processor class. The fields retrieved from the system are:

- Address Width
- Architecture
- Availability
- Caption
- Config Manager Error Code
- Config Manager User Config
- Cpu Status
- Creation Class Name
- Current Clock Speed
- Current Voltage
- Data Width
- Description
- Device ID
- Error Cleared
- Error Description
- Ext Clock
- Family
- Install Date
- L2 Cache Size
- L2 Cache Speed
- L3 Cache Size
- L3 Cache Speed
- Last Error Code
- Level
- Percentage
- Manufacturer
- Max Clock Speed
- Name
- Number Of Cores
- Number Of Logical Processors
- Other Family Description
- PNP Device ID
- Power Management Capabilities
- Power Management Supported
- Processor Id
- Processor Type
- Revision
- Role
- Socket Designation
- Status
- Status Info
- Stepping
- System Creation Class Name
- System Name
- Unique Id
- Upgrade Method
- Version
- Voltage Caps

To load Processor System Values from a target system, you must

1. Select the System from the drop down list on the Monitor Info Toolbar,
2. Select **Processor** from the System Values Type drop down list on the System Values Toolbar
3. Click on the Load System Values button  to load the values

The System Values Table displays “Loading System Values...” in the System column of the System Values Table. Once the values are loaded, the system displays the information in the System Values Table as shown in the image below.

Image: Processor system values

The screenshot shows the Explorer Dashboard v4.0 interface. At the top, there's a menu bar with File, Monitors, Configuration, System, Share, View, and Help. Below the menu is a toolbar with icons for Monitor Type (Processor), System (190.168.1.110), Recs: 0, Tests, Monitors, Move, and other system-related functions. The main area has two tables. The top table is titled "Monitors" and has columns for #, System, Monitor Type, Monitor Description, Test Status, Alarm, Test Result, Alarm Level, Alarm Type, and Test Result Details. The bottom table is titled "System Values Type: Processor" and has columns for #, System, Monitor Type, Key, and Value. The "Value" column for entry 1 is highlighted in blue. The table contains 13 rows of processor information.

#	System	Monitor Type	Monitor Description	Test Status	Alarm	Test Result	Alarm Level	Alarm Type	Test Result Details
1	190.168.1.110	Processor							
2	190.168.1.110	Processor	Address Width	64					
3	190.168.1.110	Processor	Architecture	9					
4	190.168.1.110	Processor	Availability	3					
5	190.168.1.110	Processor	Caption	Intel64 Family 6 Model 45 Stepping 7					
6	190.168.1.110	Processor	Config Manager Error Code						
7	190.168.1.110	Processor	Config Manager User Config						
8	190.168.1.110	Processor	Cpu Status	1					
9	190.168.1.110	Processor	Creation Class Name	Win32_Processor					
10	190.168.1.110	Processor	Current Clock Speed	4550					
11	190.168.1.110	Processor	Current Voltage	33					
12	190.168.1.110	Processor	Data Width	64					
13	190.168.1.110	Processor	Description	Intel64 Family 6 Model 45 Stepping 7					
			Device ID	CPU0					

6.11 Loading Processor Performance system values

The Processor Performance system value type is used to retrieve information about the target system's processor statistics. WMI is used to extract information using the Win32_PerfRawData_PerfOS_Processor class. The fields retrieved from the system are:

- Name
- C1 Transitions Per Sec
- C2 Transitions Per Sec
- C3 Transitions Per Sec
- DPC Rate
- DPCs Queued Per Sec
- Frequency Object
- Frequency Perf Time
- Frequency Sys 100 NS
- Interrupts Per Sec
- Percent C1 Time
- Percent C2 Time
- Percent C3 Time
- Percent DPC Time
- Percent Idle Time
- Percent Interrupt Time
- Percent Privileged Time
- Percent Processor Time
- Percent User Time
- Timestamp Object
- Timestamp Perf Time
- Timestamp Sys 100 NS
- Caption
- Description

To load Processor System Values from a target system, you must

4. Select the System from the drop down list on the Monitor Info Toolbar,
5. Select **Processor Perf** from the System Values Type drop down list on the System Values Toolbar
6. Click on the Load System Values button  to load the values

The System Values Table display “Loading System Values...” in the System column of the System Values Table. Once the values are loaded, the system displays the information in the System Values Table as shown in the image below.

Image: Processor Performance system values

The screenshot shows the Explorer Dashboard v4.0 interface. At the top, there's a menu bar with File, Monitors, Configuration, System, Share, View, and Help. Below the menu is a toolbar with icons for Test, Monitor, Share, View, and Help. A status bar at the bottom shows 'Messages [Err: 0] [Warn: 0] [Info: 0] Recs: 5'. The main area contains two tables. The first table, titled 'Processor Perform', has columns: #, System, Monitor Type, Name, C1TransitionsPerSec, C2TransitionsPerSec, C3TransitionsPerSec, DPCRRate, DPCsQueuedPerSec, Frequency_Object, and Frequency_Percent. It lists five rows for processor 0, 1, 2, 3, and a total row. The second table, also titled 'Processor Perform', has the same columns and lists five rows for processor 0, 1, 2, 3, and a total row. The 'Total' row in both tables is highlighted with a blue background.

#	System	Monitor Type	Name	C1TransitionsPerSec	C2TransitionsPerSec	C3TransitionsPerSec	DPCRRate	DPCsQueuedPerSec	Frequency_Object	Frequency_Percent
1	Win10_004	Processor Perform	_Total	199,202	0	0	2	40,655	0	4,442,972
2	Win10_004	Processor Perform	0	53,681	0	0	2	34,468	0	4,442,972
3	Win10_004	Processor Perform	1	53,707	0	0	0	2,491	0	4,442,972
4	Win10_004	Processor Perform	2	47,340	0	0	0	1,014	0	4,442,972
5	Win10_004	Processor Perform	3	44,474	0	0	0	2,682	0	4,442,972

#	System	Monitor Type	Name	C1TransitionsPerSec	C2TransitionsPerSec	C3TransitionsPerSec	DPCRRate	DPCsQueuedPerSec	Frequency_Object	Frequency_Percent
1	Win10_004	Processor Perform	_Total	199,202	0	0	2	40,655	0	4,442,972
2	Win10_004	Processor Perform	0	53,681	0	0	2	34,468	0	4,442,972
3	Win10_004	Processor Perform	1	53,707	0	0	0	2,491	0	4,442,972
4	Win10_004	Processor Perform	2	47,340	0	0	0	1,014	0	4,442,972
5	Win10_004	Processor Perform	3	44,474	0	0	0	2,682	0	4,442,972

Each line presents the data for a specific processor, and one line (the highlighted line in the image above with “_Total” in the “Name” column) presents the total data for the processors.

6.12 Loading Registry system values

The Registry system value type is used to retrieve information about the target system's registry. WMI is used to extract information using the StdRegProv class. The fields retrieved from the system are:

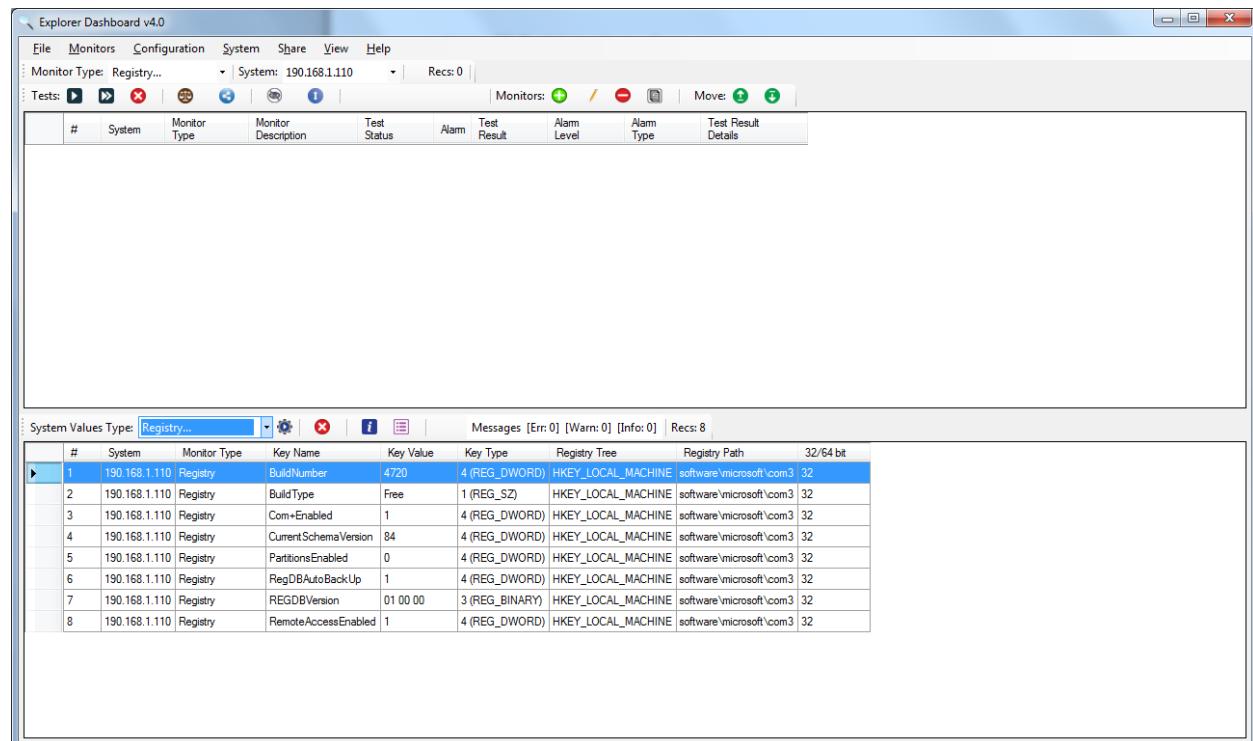
- Key Name
- Key Value
- Key Type
- Registry Tree
- Registry Path
- 32 or 64 bit value

To load Registry System Values from a target system, you must

1. Select the System from the drop down list on the Monitor Info Toolbar,
2. Select **Registry...** from the System Values Type drop down list on the System Values Toolbar
3. Click on the **Load System Values** button  to display the Registry Criteria form
4. Once the fields (detailed below) are filled out, click Load Values to load the information.

The System Values Table displays “Loading System Values...” in the System column of the System Values Table. Once the values are loaded, the system displays the information in the System Values Table as shown in the image below.

Image: Registry system values



The screenshot shows the Explore Dashboard v4.0 application window. At the top, there is a toolbar with various icons for file operations like Open, Save, Print, and Help. Below the toolbar, the menu bar includes File, Monitors, Configuration, System, Share, View, and Help. A status bar at the bottom displays "Messages [Err: 0] [Warn: 0] [Info: 0] | Recs: 8".

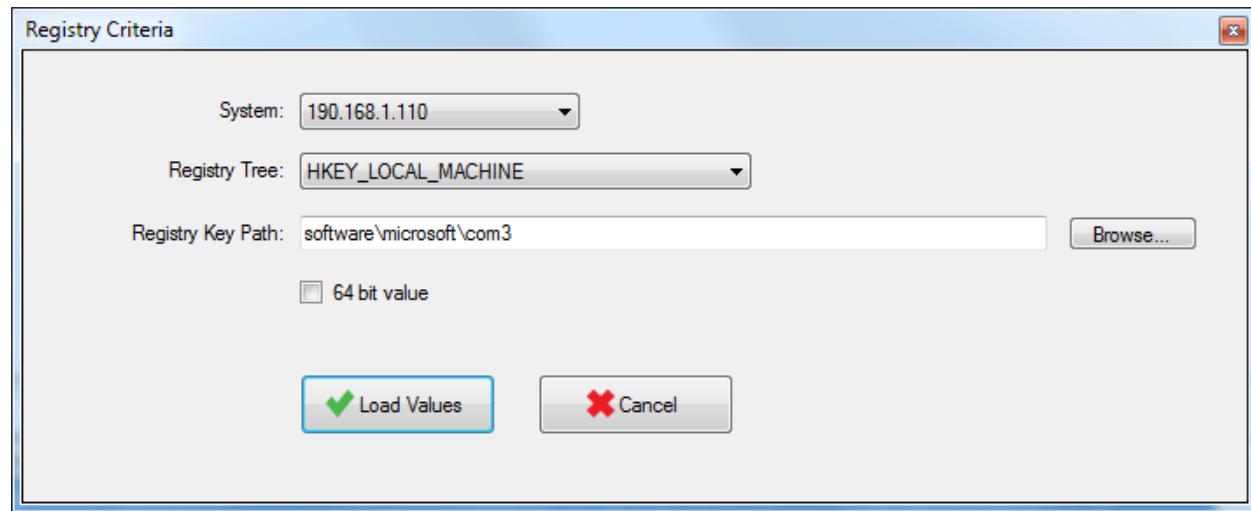
The main area of the window is a table titled "System Values Type: Registry...". The table has columns: #, System, Monitor Type, Key Name, Key Value, Key Type, Registry Tree, Registry Path, and 32/64 bit. There are 8 rows of data, each representing a registry key. The first row, which corresponds to the highlighted row in the table above, is selected and shows the details for the registry key "BuildNumber" with a value of "4720".

#	System	Monitor Type	Key Name	Key Value	Key Type	Registry Tree	Registry Path	32/64 bit
1	190.168.1.110	Registry	BuildNumber	4720	4 (REG_DWORD)	HKEY_LOCAL_MACHINE\software\microsoft\com3	32	
2	190.168.1.110	Registry	BuildType	Free	1 (REG_SZ)	HKEY_LOCAL_MACHINE\software\microsoft\com3	32	
3	190.168.1.110	Registry	Com+Enabled	1	4 (REG_DWORD)	HKEY_LOCAL_MACHINE\software\microsoft\com3	32	
4	190.168.1.110	Registry	CurrentSchemaVersion	84	4 (REG_DWORD)	HKEY_LOCAL_MACHINE\software\microsoft\com3	32	
5	190.168.1.110	Registry	PartitionsEnabled	0	4 (REG_DWORD)	HKEY_LOCAL_MACHINE\software\microsoft\com3	32	
6	190.168.1.110	Registry	RegDBAutoBackUp	1	4 (REG_DWORD)	HKEY_LOCAL_MACHINE\software\microsoft\com3	32	
7	190.168.1.110	Registry	REGDBVersion	01 00 00	3 (REG_BINARY)	HKEY_LOCAL_MACHINE\software\microsoft\com3	32	
8	190.168.1.110	Registry	RemoteAccessEnabled	1	4 (REG_DWORD)	HKEY_LOCAL_MACHINE\software\microsoft\com3	32	

6.12.1 Registry Criteria form

In the System Values Type drop down list, the Registry... has an ellipsis or three dots following the name. This indicates that further information is required to load File/Folder system values. Once the Load System Values button  is pressed, the File/Folder Criteria form is displayed so the user can enter the appropriate criteria regarding which files/folder are loaded. The image below shows the File/Folder Criteria form.

Image: Registry Criteria form



The screenshot shows the 'Registry Criteria' dialog box. It contains the following fields:

- System: A dropdown menu set to '190.168.1.110'.
- Registry Tree: A dropdown menu set to 'HKEY_LOCAL_MACHINE'.
- Registry Key Path: A text input field containing 'software\microsoft\com3'. To its right is a 'Browse...' button.
- A checkbox labeled '64 bit value' is unchecked.
- At the bottom are two buttons: 'Load Values' (with a green checkmark icon) and 'Cancel' (with a red X icon).

The Registry Criteria form allows the user to specify the Registry Tree and Path along with whether to use a 64-bit value (by default, it is 32-bit with the checkbox unchecked). Each of these fields is described below.

System: The user can specify which target system is to be used in loading of the Event Logs. Changing this value updates the System value on the main form. The option “localhost” refers to the machine on which Explorer Dashboard is running on.

Registry Tree: This field specifies the base Registry Keys the registry. Valid options are:

- HKEY_CLASSES_ROOT
- HKEY_CURRENT_USER
- HKEY_LOCAL_MACHINE
- HKEY_USERS
- HKEY_CURRENT_CONFIG

Specify the correct base key for that corresponds to the keys you are loading.

Registry Key Path: The user must specify the Registry Path here. All values in the specified path are loaded by Explorer Dashboard.

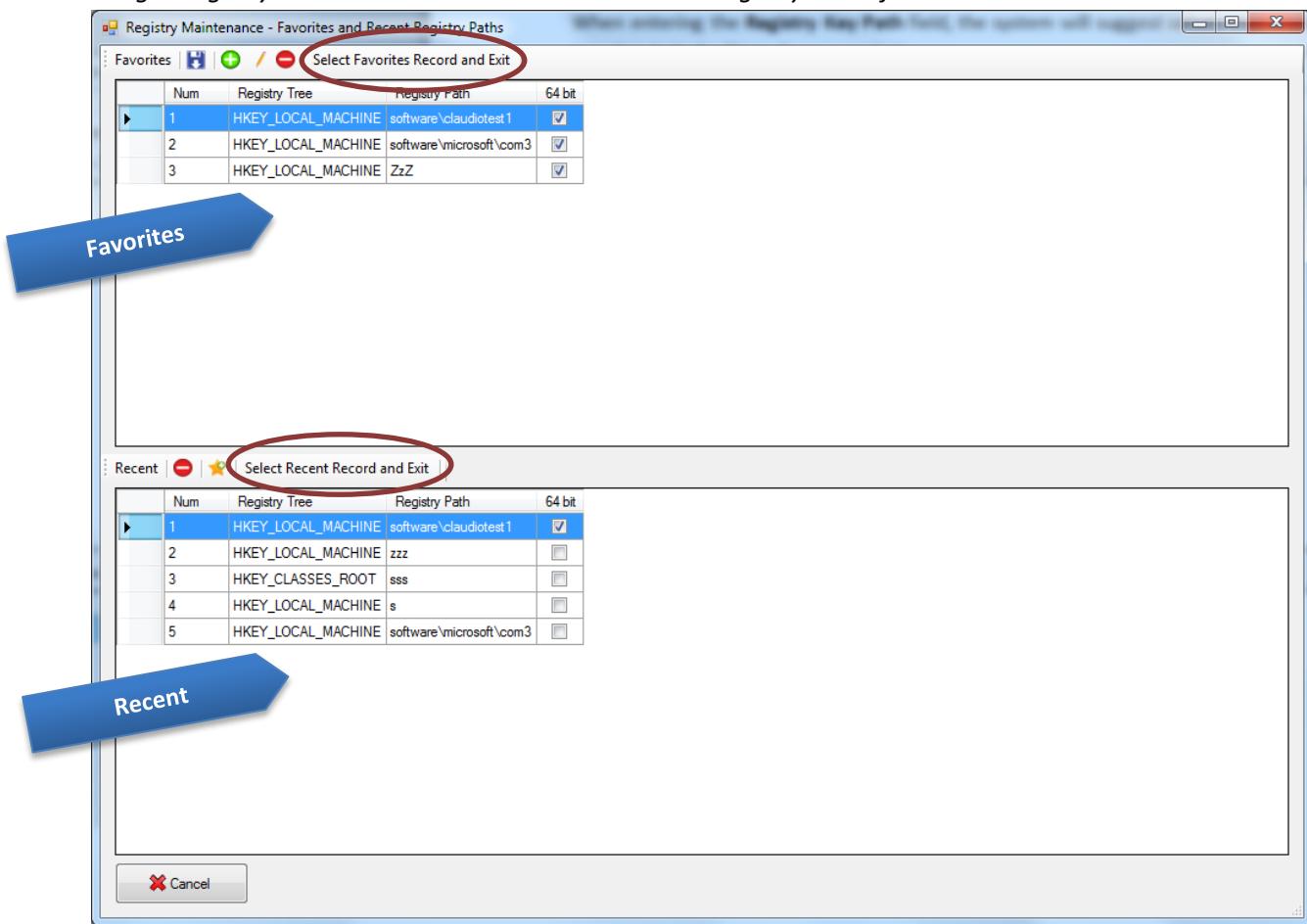
64-bit value: By default, this checkbox is unchecked and refers to 32-bit values. Checking this box forces a 64-bit search on the registry. This feature allows the search of the 32-bit registry hive on a 64-bit computer.

The system stores the most recent Registry Searches to help facilitate the filling out of the form. When entering the **Registry Key Path** field, the system suggests values that correspond to the text typed to help facilitate form completion.

6.12.2 Registry Criteria Favorites and Recent Records

The Browse button can be used to bring up the **Registry Maintenance – Favorites and Recent Registry Paths** form which can be used to select a record as illustrated in the image below.

Image: Registry Maintenance – Favorites and Recent Registry Paths form



The top part of the form lists the **Favorites** that have been saved by the user. The bottom part of the form lists **Recent** queries.

6.12.2.1 Selecting a Record

The user can select a record from either the Favorites Table or the Recent Table.

- 1) To select a record from the Favorites Table, highlight the record and click “Select Favorites Record and Exit” in the toolbar.
- 2) To select a record from the Recent Table, simply highlight the record and click “Select Recent Record and Exit” in the toolbar.

Selecting a record will close the form and update the fields on the “Add Registry Key Monitor” form.

6.12.2.2 Moving a Recent record to Favorites

To add a record in Recent to Favorites, highlight the record in the Recent Table and click on the “Add Recent Record to Favorites” button . The user is prompted to confirm before the record is added to the Favorites Table.

6.12.2.3 Saving the Favorites Table

To save the information in the Favorites Table, click on the “Save Tables to File” button . If changes are made to the Favorites Table, the form’s title banner will have as asterisk [*] appended to it as illustrated in the image below.

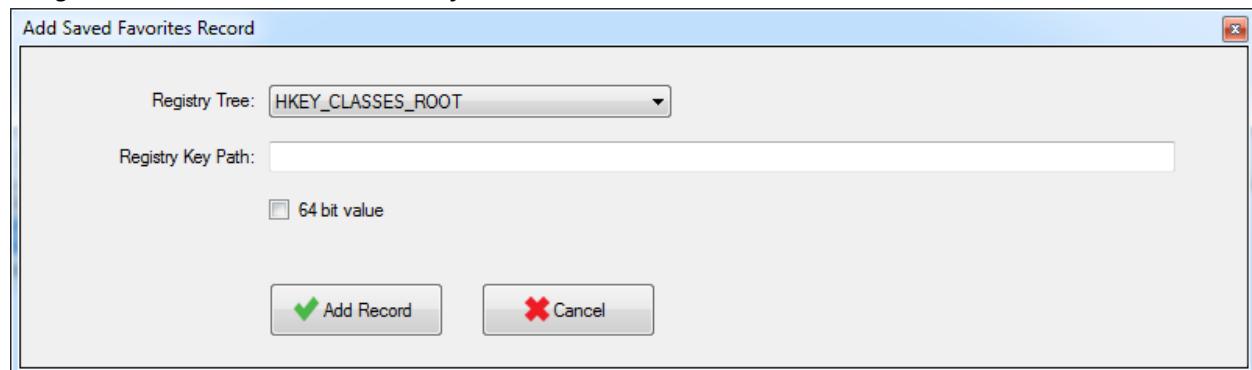
Image: Asterisk in the title bar indicates the file has been changed



6.12.2.4 Adding a record to the Favorites Table

The user can add a record to the Favorites Table at any time. Click on the “Add Record to Favorites” button . The “Add Saved Favorites Record” form will be displayed. Fill in the fields as described earlier in this section.

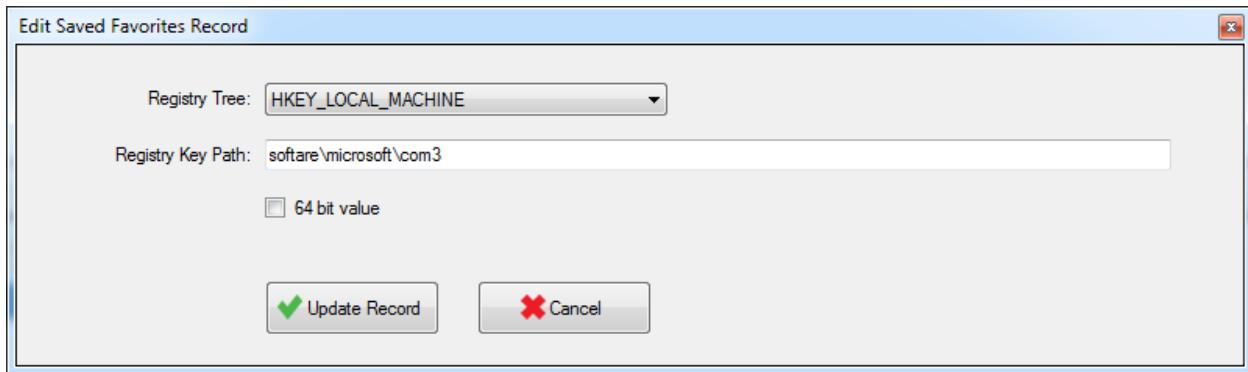
Image: “Add Saved Favorites record” form



6.12.2.5 Editing a record to the Favorites Table

To edit a record in the Favorites Table, highlight the record and click the “Edit Favorites Record” button . The Edit Saved Favorites Record form is displayed. Edit the fields as described earlier in this section. To save the changes, click on “Update Record” or click “Cancel” to exit without updating.

Image: “Edit Saved Favorites Record” form



6.12.2.6 Deleting a record to the Favorites Table

To delete a record from the Favorites Table, highlight the record and click the “Delete Favorites Record” button . The system confirms the deletion.

6.13 Loading Services system values

The Services system value type is used to retrieve information about the target system's services. WMI is used to extract information using the Win32_Service class. The fields retrieved from the system are:

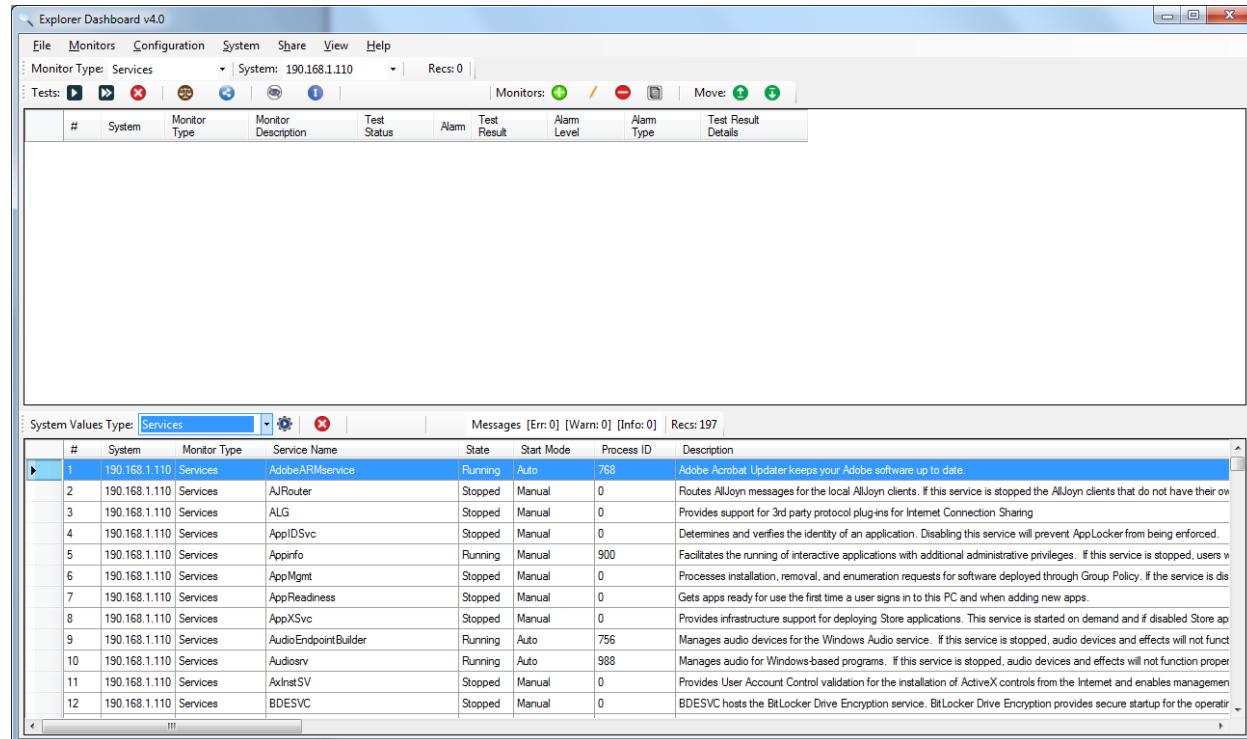
- Service Name
- State
- Start Mode
- Process ID
- Description

To load Services System Values from a target system, you must

1. Select the System from the drop down list on the Monitor Info Toolbar,
2. Select **Services** from the System Values Type drop down list on the System Values Toolbar
3. Click on the Load System Values button  to load the values

The System Values Table displays “Loading System Values...” in the System column of the System Values Table. Once the values are loaded, the system displays the information in the System Values Table as shown in the image below.

Image: Services system values



The screenshot shows the Explorer Dashboard v4.0 interface. At the top, there is a navigation bar with File, Monitors, Configuration, System, Share, View, and Help. Below the navigation bar, the monitor type is set to 'Services' and the system IP is '190.168.1.110'. The system values table has columns: #, System, Monitor Type, Monitor Description, Test Status, Alarm, Test Result, Alarm Level, Alarm Type, and Test Result Details. The table is currently empty. Below the table, there is a message bar stating 'Messages [Err: 0] [Warn: 0] [Info: 0] Recs: 197'. A second table is displayed, titled 'System Values Type: Services'. This table also has columns: #, System, Monitor Type, Service Name, State, Start Mode, Process ID, and Description. It lists 12 services, including AdobeARMservice, AJRouter, ALG, AppIDSvc, AppInfo, AppMgmt, AppReadiness, AppXSvc, AudioEndpointBuilder, Audiosrv, AxinstSV, and BDESV. The first service, AdobeARMservice, is highlighted. The description for AdobeARMservice states: 'Adobe Acrobat Updater keeps your Adobe software up to date.' The description for AxinstSV states: 'Provides User Account Control validation for the installation of ActiveX controls from the Internet and enables management of User Account Control settings.' The description for BDESV states: 'BDESV hosts the BitLocker Drive Encryption service. BitLocker Drive Encryption provides secure startup for the operating system.' The bottom of the table has a footer with '!!!'.

#	System	Monitor Type	Service Name	State	Start Mode	Process ID	Description
1	190.168.1.110	Services	AdobeARMservice	Running	Auto	768	Adobe Acrobat Updater keeps your Adobe software up to date.
2	190.168.1.110	Services	AJRouter	Stopped	Manual	0	Routes AllJoyn messages for the local AllJoyn clients. If this service is stopped the AllJoyn clients that do not have their own AllJoyn daemon will not be able to communicate with each other.
3	190.168.1.110	Services	ALG	Stopped	Manual	0	Provides support for 3rd party protocol plug-ins for Internet Connection Sharing.
4	190.168.1.110	Services	AppIDSvc	Stopped	Manual	0	Determines and verifies the identity of an application. Disabling this service will prevent AppLocker from being enforced.
5	190.168.1.110	Services	AppInfo	Running	Manual	900	Facilitates the running of interactive applications with additional administrative privileges. If this service is stopped, users will not be able to run interactive applications with elevated privileges.
6	190.168.1.110	Services	AppMgmt	Stopped	Manual	0	Processes installation, removal, and enumeration requests for software deployed through Group Policy. If the service is disabled, users will not be able to install or remove software through Group Policy.
7	190.168.1.110	Services	AppReadiness	Stopped	Manual	0	Gets apps ready for use the first time a user signs in to this PC and when adding new apps.
8	190.168.1.110	Services	AppXSvc	Stopped	Manual	0	Provides infrastructure support for deploying Store applications. This service is started on demand and if disabled Store applications will not be able to run.
9	190.168.1.110	Services	AudioEndpointBuilder	Running	Auto	756	Manages audio devices for the Windows Audio service. If this service is stopped, audio devices and effects will not function properly.
10	190.168.1.110	Services	Audiosrv	Running	Auto	988	Manages audio for Windows-based programs. If this service is stopped, audio devices and effects will not function properly.
11	190.168.1.110	Services	AxinstSV	Stopped	Manual	0	Provides User Account Control validation for the installation of ActiveX controls from the Internet and enables management of User Account Control settings.
12	190.168.1.110	Services	BDESV	Stopped	Manual	0	BDESV hosts the BitLocker Drive Encryption service. BitLocker Drive Encryption provides secure startup for the operating system.

7 Comparing System Values

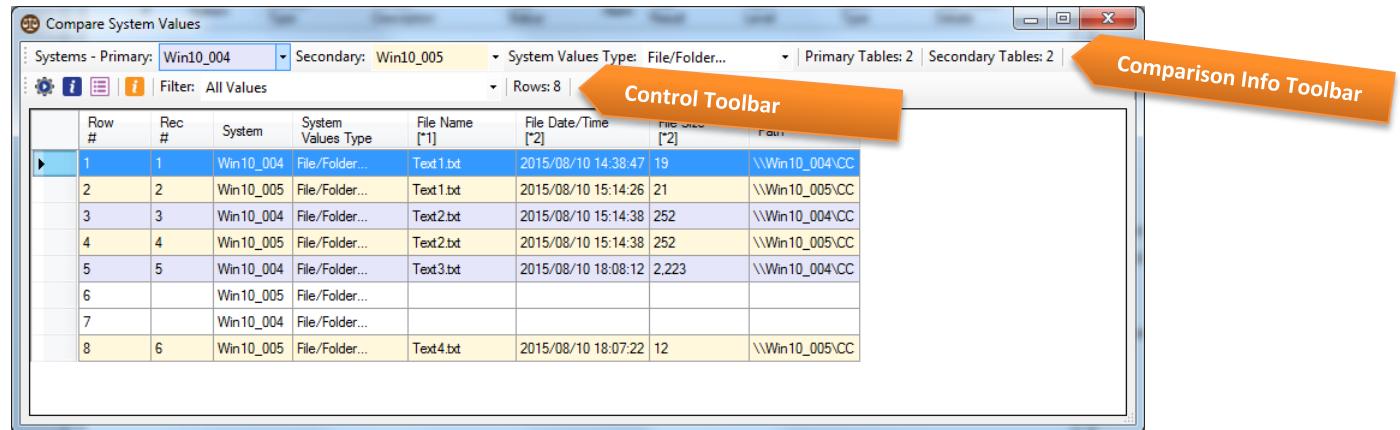
Comparing System Values allows the user to compare system settings from two target host systems in one table. The System Values from any two target host systems can be analyzed and compared in the Comparison Table.

To display the Compare System Values form, click on the “Compare System Values”  button on the Control Toolbar.

7.1 Comparison Table Controls

The Comparison Table is used to compare system values from two host target systems. This section details the controls associated with the Comparison Table.

Image: Compare System Values form



The screenshot shows the 'Compare System Values' window. At the top, there are dropdown menus for 'Systems - Primary' (Win10_004) and 'Secondary' (Win10_005), a 'System Values Type' dropdown ('File/Folder...'), and buttons for 'Primary Tables: 2' and 'Secondary Tables: 2'. Below this is a toolbar with icons for refresh, search, and filter, followed by a 'Filter: All Values' dropdown and a 'Rows: 8' button. The main area is a grid table with columns: Row #, Rec #, System, System Values Type, File Name [*1], File Date/Time [*2], File Size [*2], and Path. The data grid contains 8 rows of file/folder comparisons between the two systems. An orange arrow points to the 'Control Toolbar' at the top of the grid, and another orange arrow points to the 'Comparison Info Toolbar' on the right side of the window.

Row #	Rec #	System	System Values Type	File Name [*1]	File Date/Time [*2]	File Size [*2]	Path
1	1	Win10_004	File/Folder...	Text1.txt	2015/08/10 14:38:47	19	\\\Win10_004\CC
2	2	Win10_005	File/Folder...	Text1.txt	2015/08/10 15:14:26	21	\\\Win10_005\CC
3	3	Win10_004	File/Folder...	Text2.txt	2015/08/10 15:14:38	252	\\\Win10_004\CC
4	4	Win10_005	File/Folder...	Text2.txt	2015/08/10 15:14:38	252	\\\Win10_005\CC
5	5	Win10_004	File/Folder...	Text3.txt	2015/08/10 18:08:12	2,223	\\\Win10_004\CC
6		Win10_005	File/Folder...				
7		Win10_004	File/Folder...				
8	6	Win10_005	File/Folder...	Text4.txt	2015/08/10 18:07:22	12	\\\Win10_005\CC

7.1.1 Comparison Info Toolbar

The Comparison Info Toolbar offers controls to select the Primary and Secondary target host systems to compare, the System Values type along with labels to show the number of tables that are in memory and ready to be loaded into the table. The controls are detailed below.

- **Systems - Primary:** This drop down list selects the Primary target host system to be compared.
- **Secondary:** This drop down list selects the Secondary target host system to be compared.
- **System Values Type:** This drop down list selects the System Values type to be compared.
- **Primary Tables:** This label indicates the total number of tables that are loaded in memory from the Primary system and are available to be loaded into the Comparison Table. “Primary Table: 2” in the image above indicates that 2 records are available from the Primary system.
- **Secondary Tables:** This label indicates the total number of tables that are loaded in memory from the Secondary system and are available to be loaded into the Comparison Table. “Secondary Table: 2” in the image above indicates that 2 records are available from the Secondary system.

Note that if there are System Values that have been previously loaded for both the Primary and Secondary systems, these loaded values are automatically displayed in the Comparison Table otherwise the table is blank.

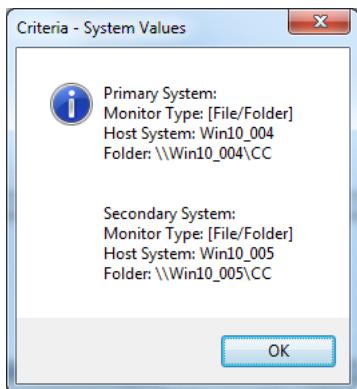
In the case that comparison records are loaded, but that the selected filter does not produce any records, then a “No records to compare” message appears in the “System” column.

7.1.2 Control Toolbar

The Control Toolbar offers the controls to load system values and to select the records to be compared in the Comparison Table. The controls are detailed below.

- **Load System Values** : This button loads the system values for both the Primary and Secondary target host systems. For System Values that require criteria or parameters (Event Logs..., File/Folder... and Registry...), the appropriate criteria selection form is displayed for the Primary system followed by one for the Secondary system.
- **Criteria Info** : This button is only displayed for System Values that require criteria or parameters (Event Logs..., File/Folder... and Registry...) and is used to display the criteria that was used to load the system values. Simply hovering the mouse over the button displays a popup with a summary of the criteria for both Primary and Secondary systems. Clicking on the button displays a window with the criteria uses, as illustrated in the image below.

Image: Criteria- System Values window



- **Select Record** : This button is only displayed for System Values that require criteria or parameters (Event Logs..., File/Folder... and Registry...) and is used to display the “Select Comparison System Values by Criteria” form which allows the user to select the Primary and Secondary system records. An image details this form at the end of this section.
- **Info – Comparison Details** : This button displays a window that defines for each system value type which field is used to determine that a record is unique, and which fields are used to determine if the record is equal on the Primary and Secondary systems. This information is detailed in [Appendix E – Key Comparison Table Fields](#)

- **Filter:** This drop-down list selects the filter that is used to present the comparison data. Valid filter selections are:
 - **All Values:** This filter lists all keys on the Primary system and all keys on the Secondary system.
 - **All Values on Primary:** This filter lists all keys on the Primary system.
 - **All Values on Secondary:** This filter lists all keys on the Secondary System.
 - **Values on both systems:** This filter displays all keys that appear on both the Primary and Secondary systems. Keys that appear only on the Primary or only on the Secondary system are not listed here.
 - **Values only on Primary:** This filter only lists the keys that appear on the Primary System but do not appear on the Secondary system.
 - **Values only on Secondary:** This filter only lists the keys that appear on the Secondary System but do not appear on the Primary system.
 - **Values on both systems that are equal:** This filter lists all keys that appear on both Primary and Secondary systems, and whose value is the same on both systems. Keys that appear only on the Primary or only on the Secondary system are not listed.
 - **Values on both systems that are not equal:** This filter lists all keys that appear on both Primary and Secondary systems, and whose value is not the same on both systems. Keys that appear only on the Primary or only on the Secondary system are not listed.
- **Rows:** The Rows: label indicates the total number of rows in the Comparison Table. “Rows: 8” indicates that there are 8 records in the table.

Image: Select Comparison System Values by Criteria

The dialog box has a title bar 'Select Comparison System Values by Criteria'. It contains two sections:

- Primary Host System:** Win10_004
- Secondary Host System:** Win10_005

Primary Host System Table:

Curr Rec	#	System	Monitor Type	Path	Records	Data Timestamp	Result Code	Result Message
>	1	Win10_004	File/Folder...	\Win10_004\DD	3	2015/08/12 16:56:40	0	
>>>	2	Win10_004	File/Folder...	\Win10_004\CC	3	2015/08/12 16:56:44	0	

Select Primary Record button (with green checkmark)

Secondary Host System Table:

Curr Rec	#	System	Monitor Type	Path	Records	Data Timestamp	Result Code	Result Message
>	1	Win10_005	File/Folder...	\Win10_005\DD	3	2015/08/12 16:56:53	0	
>>>	2	Win10_005	File/Folder...	\Win10_005\CC	3	2015/08/12 16:56:57	0	

Select Secondary Record button (with green checkmark)

Exit button (with red X)

To select a Primary Record, highlight the record in the upper table, and click the “Select Primary Record” button. Similarly, to select a Secondary Record, highlight the record in the lower table, and click the “Select Secondary Record” button.

The active record contains “>>>” in the “Curr Rec” column in each of the tables. Clicking exit closes the form and loads the selected records in the Comparison Table.

7.2 Comparison Table Record Presentation

This section outlines the Comparison Table and how records are presented in the table.

Sample Comparison Table showing File/Folder system values

The screenshot shows a Windows application window titled "Compare System Values". The interface includes a toolbar with icons for file operations, a status bar at the bottom, and a main table area. The table has columns for Row #, Rec #, System, System Values Type, File Name, File Date/Time, File Size, and Path. The data in the table is as follows:

Row #	Rec #	System	System Values Type	File Name [*1]	File Date/Time [*2]	File Size [*2]	Path
1	1	Win10_004	File/Folder...	Text1.txt	2015/08/10 14:38:47	19	\Win10_004\CC
2	2	Win10_005	File/Folder...	Text1.txt	2015/08/10 15:14:26	21	\Win10_005\CC
3	3	Win10_004	File/Folder...	Text2.txt	2015/08/10 15:14:38	252	\Win10_004\CC
4	4	Win10_005	File/Folder...	Text2.txt	2015/08/10 15:14:38	252	\Win10_005\CC
5	5	Win10_004	File/Folder...	Text3.txt	2015/08/10 18:08:12	2,223	\Win10_004\CC
6		Win10_005	File/Folder...				
7		Win10_004	File/Folder...				
8	6	Win10_005	File/Folder...	Text4.txt	2015/08/10 18:07:22	12	\Win10_005\CC

7.2.1 Record Highlighting

Record highlighting colors are used to distinguish between records that originate on the Primary system (Win10_004 in this example) which are light-purple, and the records that originate on the Secondary system (Win10_005 in this example) in light yellow.

7.2.2 Filler Records

Filler records are blank records (no highlight) that are inserted in the table to show that the record does not exist on one of the systems. The “System” column contains the target host system and the “System Values Type” shows the System Values type of the blank record.

Row # 1 and 2 (in the image above) show that the file “Text1.txt” exists on both the Primary and Secondary systems.

Row # 3 and 4 show that the file “Text2.txt” exists on both the Primary and Secondary systems.

Row # 5 and 6 show that the file “Text3.txt” exists on the Primary System, but the file does not exist on the Secondary system. Row # 6 (no highlight) means there is no file on Secondary system (Win10_005 in this example).

Row # 7 and 8 show that the file “Text4.txt” does not exist on the Primary system, but the file does exist on the Secondary system (Win10_005 in this example). Row # 7 (no highlight) means that there is no file on the Primary system (Win10_004 in this example).

7.2.3 Column Numbering

The column “Row #” numbers every line in the table including the filler records. The “Rec #” column numbers actual records that exist on target host systems.

7.3 How to Compare System Values

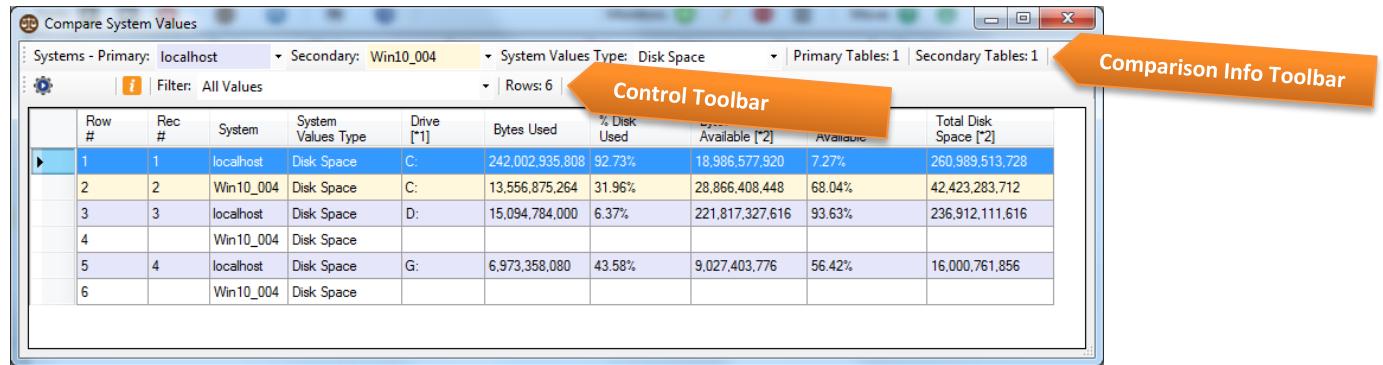
This section describes the steps to load system values from both the Primary and Secondary systems in the Comparison Table.

To compare the system values, it is necessary to load the system values for both the Primary and Secondary target host systems. This can be done on the main form by doing the following:

1. Select the Primary host in the System control on the “Monitor Info Toolbar”.
2. Select the type from the “System Values Type” control on the “System Values Toolbar”.
3. Click on the “Load System Values” button  to load the system values.
4. Repeat steps 1 through 3 for the Secondary host.

Open the “Compare System Values” form by clicking on the “Compare System Values” button , as illustrated in the image below.

Image: Comparison Table



Row #	Rec #	System	System Values Type	Drive [*1]	Bytes Used	% Disk Used	Available [*2]	Available	Total Disk Space [*2]
1	1	localhost	Disk Space	C:	242,002,935,808	92.73%	18,986,577,920	7.27%	260,989,513,728
2	2	Win10_004	Disk Space	C:	13,556,875,264	31.96%	28,866,408,448	68.04%	42,423,283,712
3	3	localhost	Disk Space	D:	15,094,784,000	6.37%	221,817,327,616	93.63%	236,912,111,616
4		Win10_004	Disk Space						
5	4	localhost	Disk Space	G:	6,973,358,080	43.58%	9,027,403,776	56.42%	16,000,761,856
6		Win10_004	Disk Space						

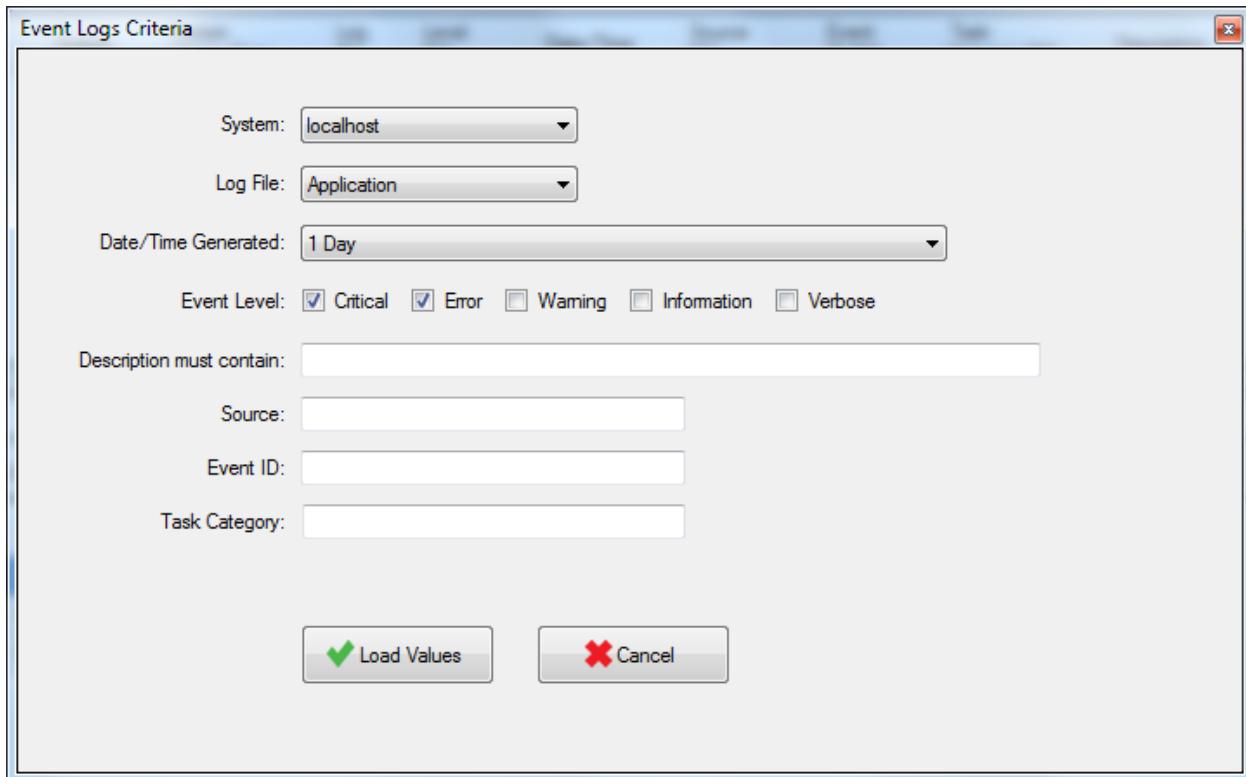
To Display the correct information in the table, you must select the following on the Comparison Info Toolbar:

1. Select the Primary system
2. Select the Secondary system
3. Select the System Values Type

The information for the selected system values type is displayed in the table from both the Primary and Secondary systems. If the table is blank, this means that one or both of the system values may not have been loaded. You can verify the number of sets of system values at the right of the Comparison Info Toolbar. In the image above, we have “Primary Tables: 1” and “Secondary Tables: 1” indicating that both the Primary and Secondary systems each have one record loaded.

7.3.1 Loading System Values from the Comparison Table

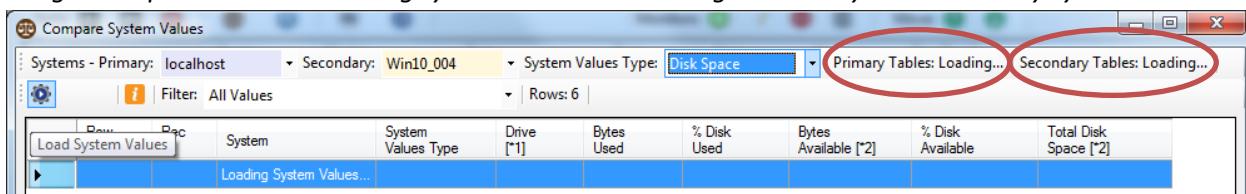
To load system values for both the Primary and Secondary systems, click on the “Load System Values” button  on the Control Toolbar and this reloads both tables. In the case where the system value type requires parameters or criteria (Event Logs..., File/Folder... and Registry...) a criteria form is displayed as follows with the Primary System selected:



You can fill in the required information, and click load values. This loads the system values and a second criteria form pops up with the Secondary system selected. Fill in the required information and click “Load Values” again to load the second set of system values. Clicking the “Cancel” button on any form closes the form and does not prompt for additional information.

When the system values are being loaded, the status is updated on the Comparison Info Toolbar. In the image below, you see the “Primary Tables: Loading...” and “Secondary Tables: Loading...” messages.

Image: Comparison Table showing system values are loading on Primary and Secondary systems.



Once all of the information has loaded, the information is automatically displayed in the table.

7.4 Comparing Disk Space Values

The image below shows the Disk Space system values being compared between the Primary system (localhost in this example) and the Secondary system (Win10_004 in this example).

Image: Comparing Disk Space system values

The screenshot shows a software window titled "Compare System Values". The "System Values Type" dropdown is set to "Disk Space". The primary system is "localhost" and the secondary system is "Win10_004". The table displays six rows of disk space information, comparing drives C:, D:, and G: across both systems. The columns are: Row #, Rec #, System, System Values Type, Drive [*1], Bytes Used, % Disk Used, Bytes Available [*2], % Disk Available, and Total Disk Space [*2].

Row #	Rec #	System	System Values Type	Drive [*1]	Bytes Used	% Disk Used	Bytes Available [*2]	% Disk Available	Total Disk Space [*2]
1	1	localhost	Disk Space	C:	242,002,935,808	92.73%	18,986,577,920	7.27%	260,989,513,728
2	2	Win10_004	Disk Space	C:	13,556,875,264	31.96%	28,866,408,448	68.04%	42,423,283,712
3	3	localhost	Disk Space	D:	15,094,784,000	6.37%	221,817,327,616	93.63%	236,912,111,616
4		Win10_004	Disk Space						
5	4	localhost	Disk Space	G:	6,973,358,080	43.58%	9,027,403,776	56.42%	16,000,761,856
6		Win10_004	Disk Space						

- **Unique Key Field:** The field that makes the entry unique is the “Drive” column. The column header has the [*1] suffix to indicate this.
- **Comparison Fields between systems:** The fields that determine whether the record is equal or not between the systems have a “[*2]” in the column header. These fields are:
 - Bytes Available
 - Total Disk Space

7.5 Comparing Environment Variables Values

The image below shows the Environment Variables system values being compared between the Primary system (Win10_004 in this example) and the Secondary system (Win10_005 in this example).

Image: Comparing Environment Variables system values

Compare System Values

Systems - Primary:		Win10_004	Secondary:	Win10_005	System Values Type:	Environment Vars	Primary Tables: 1	Secondary Tables: 1
		Filter:	All Values					
							Rows: 34	
Row #	Rec #	System	System Values Type	Env Var Name [*1]	Env Var Value [*2]			
1	1	Win10_004	Environment Vars	ComSpec	%SystemRoot%\system32\cmd.exe			
2	2	Win10_005	Environment Vars	ComSpec	%SystemRoot%\system32\cmd.exe			
3	3	Win10_004	Environment Vars	NUMBER_OF_PROCESSORS	4			
4	4	Win10_005	Environment Vars	NUMBER_OF_PROCESSORS	4			
5	5	Win10_004	Environment Vars	OS	Windows_NT			
6	6	Win10_005	Environment Vars	OS	Windows_NT			
7	7	Win10_004	Environment Vars	Path	%SystemRoot%\system32;%SystemRoot%;%SystemRoot%\System32\Wbem;%SYS1			
8	8	Win10_005	Environment Vars	Path	%SystemRoot%\system32;%SystemRoot%;%SystemRoot%\System32\Wbem;%SYS1			
9	9	Win10_004	Environment Vars	PATHEXT	.COM;.EXE;.BAT;.CMD;.VBS;.VBE;.JS;.JSE;.WSF;.WSH;.MSC			
10	10	Win10_005	Environment Vars	PATHEXT	.COM;.EXE;.BAT;.CMD;.VBS;.VBE;.JS;.JSE;.WSF;.WSH;.MSC			
11	11	Win10_004	Environment Vars	PROCESSOR_ARCHITECTURE	AMD64			
12	12	Win10_005	Environment Vars	PROCESSOR_ARCHITECTURE	AMD64			

- **Unique Key Field:** The field that makes the entry unique is the “Env Var Name” column. The column header has the [*1] indicator that indicates this.
 - **Comparison Fields between systems:** The field that determines whether the record is equal or not between the systems has a “[*2]” in the column header. The field is “Env Var Value”.

7.6 Comparing Event Logs Values

The image below shows the Event Logs... system values being compared between the Primary system (Win10_004 in this example) and the Secondary system (Win10_005 in this example).

Image: Comparing Event Logs system values

Compare System Values										
Systems - Primary: Win10_004			Secondary: Win10_005	System Values Type: Event Logs...		Primary Tables: 1	Secondary Tables: 1			
	Row #	Rec # [*2]	System	System Values Type	Log File	Level [*1]	Date/Time	Source [*1]	Event ID [*1]	Task Category [*1]
▶	1	1	Win10_004	Event Logs...	Application	Warning	2015/08/18 00:31:43	VMware Tools	1000	[warning] [vmsvc auto]
	2	2	Win10_004	Event Logs...	Application	Warning	2015/08/17 20:02:24	VMware Tools	1000	[warning] [vmsvc auto]
	3	3	Win10_005	Event Logs...	Application	Warning	2015/08/18 00:31:54	VMware Tools	1000	[warning] [vmsvc auto]
	4	4	Win10_005	Event Logs...	Application	Warning	2015/08/17 21:39:35	VMware Tools	1000	[warning] [vmsvc vmsv]
	5	5	Win10_005	Event Logs...	Application	Warning	2015/08/17 20:48:20	VMware Tools	1000	[warning] [vmsvc auto]
	6	6	Win10_004	Event Logs...	Application	Error	2015/08/17 21:41:33	Microsoft-Windows-Security-SPP	8198	License Activation (slui)
	7	7	Win10_004	Event Logs...	Application	Error	2015/08/17 18:56:39	Microsoft-Windows-Security-SPP	8198	License Activation (slui)
	8	8	Win10_005	Event Logs...	Application	Error	2015/08/17 22:13:32	Microsoft-Windows-Security-SPP	8198	License Activation (slui)
	9	9	Win10_005	Event Logs...	Application	Error	2015/08/17 21:39:52	Microsoft-Windows-Security-SPP	8198	License Activation (slui)
	10	10	Win10_005	Event Logs...	Application	Error	2015/08/17 21:39:41	Microsoft-Windows-Security-SPP	8198	License Activation (slui)
	11	11	Win10_005	Event Logs...	Application	Error	2015/08/17 20:49:43	Microsoft-Windows-Security-SPP	8198	License Activation (slui)
	12	12	Win10_005	Event Logs...	Application	Error	2015/08/17 20:48:18	Microsoft-Windows-Security-SPP	8198	License Activation (slui)
	13	13	Win10_005	Event Logs...	Application	Error	2015/08/17 18:56:04	Microsoft-Windows-Security-SPP	8198	License Activation (slui)
	14	14	Win10_004	Event Logs...	Application	Error	2015/08/18 13:49:22	Microsoft-Windows-PerfLib	1023	Windows cannot load t
	15		Win10_005	Event Logs...						
	16	15	Win10_004	Event Logs...	Application	Error	2015/08/18 13:49:20	Microsoft-Windows-PerfLib	1008	The Open Procedure fo
	17		Win10_005	Event Logs...						
	18	16	Win10_004	Event Logs...	Application	Error	2015/08/17 19:09:30	Microsoft-Windows-Immersive-Shell	5973	Activation of app Micro
	19	17	Win10_004	Event Logs...	Application	Error	2015/08/17 19:09:30	Microsoft-Windows-Immersive-Shell	5973	Activation of app Micro
	20		Win10_005	Event Logs...						
	21		Win10_004	Event Logs...						
	22	18	Win10_005	Event Logs...	Application	Warning	2015/08/17 20:48:07	Microsoft-Windows-Security-SPP	8225	The existing scheduler
	23		Win10_004	Event Logs...						
	24	19	Win10_005	Event Logs...	Application	Warning	2015/08/17 20:46:51	Microsoft-Windows-Winlogon	6004	The winlogon notificati

- **Unique Key Fields:** The fields that make the entries unique are the following:
 - Level
 - Source
 - Event ID
 - Task Category

The fields listed above are all used to determine the uniqueness of a record. Note that all specified fields have a column header that has the [*1] suffix to indicates this.

- **Comparison Fields between systems:** The field that determines whether the record is equal or not between the systems has a “[*2]” in the column header. The field is “Rec #”

One or more Event Logs records that have identical values for all the unique key fields on one system are compared with the records that have the same unique key fields on the second system. If the same number of records exist on both systems, then the records are considered equal on both systems, otherwise the records are not considered equal.

7.7 Comparing File/Folder Values

The image below shows the File/Folder... system values being compared between the Primary system (Win10_004 in this example) and the Secondary system (Win10_005 in this example).

Image: Comparing File/Folder system values

Row #	Rec #	System	System Values Type	File Name [*1]	File Date/Time [*2]	File Size [*2]	Path
1	1	Win10_004	File/Folder...	Text1.txt	2015/08/10 14:38:47	19	\Win10_004\CC
2	2	Win10_005	File/Folder...	Text1.txt	2015/08/10 15:14:26	21	\Win10_005\CC
3	3	Win10_004	File/Folder...	Text2.txt	2015/08/10 15:14:38	252	\Win10_004\CC
4	4	Win10_005	File/Folder...	Text2.txt	2015/08/10 15:14:38	252	\Win10_005\CC
5	5	Win10_004	File/Folder...	Text3.txt	2015/08/10 18:08:12	2,223	\Win10_004\CC
6		Win10_005	File/Folder...				
7		Win10_004	File/Folder...				
8	6	Win10_005	File/Folder...	Text4.txt	2015/08/10 18:07:22	12	\Win10_005\CC

- **Unique Key Field:** The field that makes the entry unique is the “File Name” column. The column header has the [*1] indicator that indicates this.
- **Comparison Fields between systems:** The fields that determine whether the record is equal or not between the systems have a “[*2]” in the column header. These fields are:
 - File Date/Time
 - File Size

A file is considered to be equal on both systems if the file size and the modified date/time are equal. The content of the file is not checked.

Since the File/Folder... system values require parameters or criteria to load, it is possible to load multiple sets of system values for any given target host system. Since multiple tables can exist for the same server, both the “Criteria Info” button is visible to display the criteria used to load the sets of system values, and the “Select Record” button is visible to allow the user to select which system value record is to be compared for each of the Primary and Secondary systems. A complete description of these buttons appears earlier in this section under the heading: [Control Toolbar](#).

7.8 Comparing Installed Applications Values

The image below shows the Installed Apps system values being compared between the Primary system (Win10_004 in this example) and the Secondary system (Win10_005 in this example).

Image: Comparing Disk Space system values

The screenshot shows a software window titled "Compare System Values". The primary system is set to "Win10_004" and the secondary system to "Win10_005". The "System Values Type" dropdown is set to "Installed Apps". The table displays 10 rows of data, each representing an installed application. The columns are: Row #, Rec # [*2], System, System Values Type, Application Name [*1], Version [*1], Vendor, Install Date, and Description. The data includes various applications like Adobe Acrobat Reader DC, Adobe Refresh Manager, Microsoft Visual C++ 2008 Redistributable, and VMware Tools, comparing their presence and details across the two systems.

Row #	Rec # [*2]	System	System Values Type	Application Name [*1]	Version [*1]	Vendor	Install Date	Description
1	1	Win10_004	Installed Apps	Adobe Acrobat Reader DC	15.008.20082		20150810	Adobe Acrobat Reader DC
2	2	Win10_005	Installed Apps	Adobe Acrobat Reader DC	15.008.20082		20150810	Adobe Acrobat Reader DC
3	3	Win10_004	Installed Apps	Adobe Refresh Manager	1.8.0		20150810	Adobe Refresh Manager
4	4	Win10_005	Installed Apps	Adobe Refresh Manager	1.8.0		20150810	Adobe Refresh Manager
5	5	Win10_004	Installed Apps	Microsoft Visual C++ 2008 Redistributable - x64 9.0.30729.6161	9.0.30729.6161		20150814	Microsoft Visual C++ 2008 Redistribut
6	6	Win10_005	Installed Apps	Microsoft Visual C++ 2008 Redistributable - x64 9.0.30729.6161	9.0.30729.6161		20150814	Microsoft Visual C++ 2008 Redistribut
7	7	Win10_004	Installed Apps	Microsoft Visual C++ 2008 Redistributable - x86 9.0.30729.4148	9.0.30729.4148		20150814	Microsoft Visual C++ 2008 Redistribut
8	8	Win10_005	Installed Apps	Microsoft Visual C++ 2008 Redistributable - x86 9.0.30729.4148	9.0.30729.4148		20150814	Microsoft Visual C++ 2008 Redistribut
9	9	Win10_004	Installed Apps	VMware Tools	9.10.0.2476743		20150814	VMware Tools
10	10	Win10_005	Installed Apps	VMware Tools	9.10.0.2476743		20150814	VMware Tools

- **Unique Key Fields:** The fields that make the entries unique are the following:
 - Application Name
 - Version

The fields listed above are all used to determine the uniqueness of a record. Note that all specified fields have a column header that has the [*1] indicator that indicates this.

- **Comparison Fields between systems:** The field that determines whether the record is equal or not between the systems has a "[*2]" in the column header. The field is "Rec #".

One or more Installed Apps records that have identical values for all the unique key fields on one system are compared with the records that have the same unique key fields on the second system. If the same number of records exist on both systems, then the records are considered equal on both systems, otherwise the records are not considered equal.

7.9 Comparing Memory Performance Values

The image below shows the Memory Performance system values being compared between the Primary system (Win10_004 in this example) and the Secondary system (Win10_005 in this example).

Image: Comparing Memory Performance system values

The screenshot shows a software interface titled "Compare System Values". The primary system is set to "Win10_004" and the secondary system to "Win10_005". The "System Values Type" dropdown is set to "Memory Perform". The table displays 78 rows of data, comparing memory performance values between the two systems. The columns are: Row #, Rec #, System, System Values Type, Key [*1], and Value [*2]. The data includes various memory metrics like AvailableBytes, AvailableKBytes, AvailableMBytes, CacheBytes, CacheBytesPeak, and CacheFaultsPerSec.

Row #	Rec #	System	System Values Type	Key [*1]	Value [*2]
1	1	Win10_004	Memory Perform	AvailableBytes	3562029056
2	2	Win10_005	Memory Perform	AvailableBytes	3541131264
3	3	Win10_004	Memory Perform	AvailableKBytes	3478544
4	4	Win10_005	Memory Perform	AvailableKBytes	3458136
5	5	Win10_004	Memory Perform	AvailableMBytes	3397
6	6	Win10_005	Memory Perform	AvailableMBytes	3377
7	7	Win10_004	Memory Perform	CacheBytes	32911360
8	8	Win10_005	Memory Perform	CacheBytes	29421568
9	9	Win10_004	Memory Perform	CacheBytesPeak	144015360
10	10	Win10_005	Memory Perform	CacheBytesPeak	144699392
11	11	Win10_004	Memory Perform	CacheFaultsPerSec	179522

- **Unique Key Field:** The field that makes the entry unique is the “Key” column. The column header has the [*1] indicator that indicates this.
- **Comparison Fields between systems:** The field that determines whether the record is equal or not between the systems has a “[*2]” in the column header. The field is “Value”

7.10 Comparing Operating System Values

The image below shows the Operating System values being compared between the Primary system (Win10_004 in this example) and the Secondary system (Win10_005 in this example).

Image: Comparing Operating System values

The screenshot shows a software window titled "Compare System Values". The "System Values Type" dropdown is set to "Operating System". The primary system is listed as "Win10_004" and the secondary system as "Win10_005". The table displays 12 rows of operating system values, with the first row highlighted in blue.

Row #	Rec #	System	System Values Type	Key [*1]	Value [*2]
1	1	Win10_004	Operating System	BootDevice	\Device\HarddiskVolume1
2	2	Win10_005	Operating System	BootDevice	\Device\HarddiskVolume1
3	3	Win10_004	Operating System	BootUpTime	20150818104552.495847-420
4	4	Win10_005	Operating System	BootUpTime	20150818104554.964156-420
5	5	Win10_004	Operating System	BuildNumber	10240
6	6	Win10_005	Operating System	BuildNumber	10240
7	7	Win10_004	Operating System	BuildType	Multiprocessor Free
8	8	Win10_005	Operating System	BuildType	Multiprocessor Free
9	9	Win10_004	Operating System	Caption	Microsoft Windows 10 Enterprise
10	10	Win10_005	Operating System	Caption	Microsoft Windows 10 Enterprise
11	11	Win10_004	Operating System	CodeSet	1252
12	12	Win10_005	Operating System	CodeSet	1252

- **Unique Key Field:** The field that makes the entry unique is the “Key” column. The column header has the [*1] indicator that indicates this.
- **Comparison Fields between systems:** The field that determines whether the record is equal or not between the systems has a “[*2]” in the column header. The field is “Value”.

7.11 Comparing Processes System Values

The image below shows the Processes system values being compared between the Primary system (Win10_004 in this example) and the Secondary system (Win10_005 in this example).

Image: Comparing Processes system values

The screenshot shows a software window titled "Compare System Values". The interface includes dropdown menus for "Systems - Primary: Win10_004" and "Secondary: Win10_005", and a "System Values Type" dropdown set to "Processes". Below these are buttons for "Primary Tables: 1" and "Secondary Tables: 1", and a "Filter: All Values" button. A status bar at the bottom indicates "Rows: 76". The main area is a grid table with 11 rows and 12 columns. The columns are labeled: Row #, Rec # [*2], System, System Values Type [*1], Process Name, Process ID, Parent PID, Priority, Thread Count, Handle Count, Handle, Creation Class Name, and Creation Date. The data in the grid represents process records from both systems, with some rows colored yellow and others blue.

Row #	Rec # [*2]	System	System Values Type [*1]	Process Name	Process ID	Parent PID	Priority	Thread Count	Handle Count	Handle	Creation Class Name	Creation Date
1	1	Win10_004	Processes	armsvc.exe	1720	584	8	2	110	1,720	Win32_Process	20150818104
2	2	Win10_005	Processes	armsvc.exe	1572	564	8	2	110	1,572	Win32_Process	20150818104
3	3	Win10_004	Processes	cars.exe	384	376	13	11	302	384	Win32_Process	20150818104
4	4	Win10_004	Processes	csrss.exe	472	448	13	9	118	472	Win32_Process	20150818104
5	5	Win10_005	Processes	csrss.exe	380	372	13	10	304	380	Win32_Process	20150818104
6	6	Win10_005	Processes	cars.exe	468	444	13	10	120	468	Win32_Process	20150818104
7	7	Win10_004	Processes	dasHost.exe	980	1000	8	3	368	980	Win32_Process	20150818104
8	8	Win10_005	Processes	dasHost.exe	1988	880	8	3	367	1,988	Win32_Process	20150818104
9	9	Win10_004	Processes	dllhost.exe	2716	584	8	10	202	2,716	Win32_Process	20150818104
10	10	Win10_005	Processes	dllhost.exe	3000	564	8	10	201	3,000	Win32_Process	20150818104
11	11	Win10_004	Processes	dwm.exe	836	548	13	12	259	836	Win32_Process	20150818104

- **Unique Key Field:** The field that makes the entry unique is the “Process Name” column. The column header has the [*1] indicator that indicates this.
- **Comparison Fields between systems:** The field that determines whether the record is equal or not between the systems has a “[*2]” in the column header. The field is “Rec #”

One or more Processes records that have identical values for all the unique key fields on one system are compared with the records that have the same unique key fields on the second system. If the same number of records exist on both systems, then the records are considered equal on both systems, otherwise the records are not considered equal.

7.12 Comparing Processor System Values

The image below shows the Processor system values being compared between the Primary system (Win10_004 in this example) and the Secondary system (Win10_005 in this example).

Image: Comparing Processor system values

The screenshot shows a software window titled "Compare System Values". The top menu bar includes "File", "Edit", "View", "Compare", "Help", and "About". The toolbar contains icons for "New", "Open", "Save", "Print", "Compare", "Filter", and "Exit". The main interface has tabs for "Systems - Primary: Win10_004" and "Secondary: Win10_005", and dropdowns for "System Values Type: Processor" and "Primary Tables: 1 | Secondary Tables: 1". A filter dropdown shows "Filter: All Values" and a rows counter shows "Rows: 96". The data grid displays 16 rows of processor system values, with the first row (AddressWidth) highlighted in blue.

Row #	Rec #	System	System Values Type	Key [*1]	Value [*2]
1	1	Win10_004	Processor	AddressWidth	64
2	2	Win10_005	Processor	AddressWidth	64
3	3	Win10_004	Processor	Architecture	9
4	4	Win10_005	Processor	Architecture	9
5	5	Win10_004	Processor	Availability	3
6	6	Win10_005	Processor	Availability	3
7	7	Win10_004	Processor	Caption	Intel64 Family 6 Model 45 Stepping 7
8	8	Win10_005	Processor	Caption	Intel64 Family 6 Model 45 Stepping 7
9	9	Win10_004	Processor	ConfigManagerErrorCode	
10	10	Win10_005	Processor	ConfigManagerErrorCode	
11	11	Win10_004	Processor	ConfigManagerUserConfig	
12	12	Win10_005	Processor	ConfigManagerUserConfig	
13	13	Win10_004	Processor	CpuStatus	1
14	14	Win10_005	Processor	CpuStatus	1
15	15	Win10_004	Processor	CreationClassName	Win32_Processor
16	16	Win10_005	Processor	CreationClassName	Win32_Processor

- **Unique Key Field:** The field that makes the entry unique is the “Key” column. The column header has the [*1] indicator that indicates this.
- **Comparison Fields between systems:** The field that determines whether the record is equal or not between the systems has a “[*2]” in the column header. The field is “Value”.

7.13 Comparing Registry System Values

The image below shows the Registry system values being compared between the Primary system (Win10_004 in this example) and the Secondary system (Win10_005 in this example).

Image: Comparing Registry system values

The screenshot shows a software interface titled "Compare System Values". At the top, it displays "Systems - Primary: Win10_004" and "Secondary: Win10_005", "System Values Type: Registry...", and "Primary Tables: 1 | Secondary Tables: 1". A toolbar at the top includes icons for refresh, search, and filter, with a dropdown set to "All Values" and a "Rows: 16" button. The main area is a grid table with the following columns: Row #, Rec #, System, System Values Type, Key Name [*1], Key Value [*2], Key Type [*2], Registry Tree, and Registry Path. The data rows show various registry keys like BuildNumber, BuildType, Com+Enabled, CurrentSchemaVersion, and RegDBAutoBackUp, comparing their values and types across the two systems.

Row #	Rec #	System	System Values Type	Key Name [*1]	Key Value [*2]	Key Type [*2]	Registry Tree	Registry Path
1	1	Win10_004	Registry...	BuildNumber	4720	4 (REG_DWORD)	HKEY_LOCAL_MACHINE	software\microsoft\com3
2	2	Win10_005	Registry...	BuildNumber	4720	4 (REG_DWORD)	HKEY_LOCAL_MACHINE	software\microsoft\com3
3	3	Win10_004	Registry...	BuildType	Free	1 (REG_SZ)	HKEY_LOCAL_MACHINE	software\microsoft\com3
4	4	Win10_005	Registry...	BuildType	Free	1 (REG_SZ)	HKEY_LOCAL_MACHINE	software\microsoft\com3
5	5	Win10_004	Registry...	Com+Enabled	1	4 (REG_DWORD)	HKEY_LOCAL_MACHINE	software\microsoft\com3
6	6	Win10_005	Registry...	Com+Enabled	1	4 (REG_DWORD)	HKEY_LOCAL_MACHINE	software\microsoft\com3
7	7	Win10_004	Registry...	CurrentSchemaVersion	84	4 (REG_DWORD)	HKEY_LOCAL_MACHINE	software\microsoft\com3
8	8	Win10_005	Registry...	CurrentSchemaVersion	84	4 (REG_DWORD)	HKEY_LOCAL_MACHINE	software\microsoft\com3
9	9	Win10_004	Registry...	PartitionsEnabled	0	4 (REG_DWORD)	HKEY_LOCAL_MACHINE	software\microsoft\com3
10	10	Win10_005	Registry...	PartitionsEnabled	0	4 (REG_DWORD)	HKEY_LOCAL_MACHINE	software\microsoft\com3
11	11	Win10_004	Registry...	RegDBAutoBackUp	1	4 (REG_DWORD)	HKEY_LOCAL_MACHINE	software\microsoft\com3
12	12	Win10_005	Registry...	RegDBAutoBackUp	1	4 (REG_DWORD)	HKEY_LOCAL_MACHINE	software\microsoft\com3

- **Unique Key Field:** The field that makes the entry unique is the “Key Name” column. The column header has the [*1] indicator that indicates this.
- **Comparison Fields between systems:** The fields that determine whether the record is equal or not between the systems have a “[*2]” in the column header. These fields are:
 - Key Value
 - Key Type

A registry entry is considered to be equal on both systems if the Key Value and the Key Type are equal.

Since the Registry... system values require parameters or criteria to load, it is possible to load that multiple system value tables for any given target host system. Since multiple tables can exist for the same system, both the “Criteria Info” button is visible to display the criteria used to load the system values table, and the “Select Record” button is visible to allow the user to select which table is to be compared for Primary and Secondary systems. A complete description of these buttons appears earlier in this section under the heading: [Control Toolbar](#).

7.14 Comparing Services System Values

The image below shows the Services system values being compared between the Primary system (Win10_004 in this example) and the Secondary system (Win10_005 in this example).

Image: Comparing Registry system values

Row #	Rec # [*2]	System	System Values Type	Service Name [*1]	State	Start Mode	Process ID	Description
1	1	Win10_004	Services	AdobeARMService	Running	Auto	1720	Adobe Acrobat Updater keeps your Adobe software up-to-date.
2	2	Win10_005	Services	AdobeARMService	Running	Auto	1572	Adobe Acrobat Updater keeps your Adobe software up-to-date.
3	3	Win10_004	Services	AJRouter	Stopped	Manual	0	Routes AllJoyn messages for the local AllJoyn clients.
4	4	Win10_005	Services	AJRouter	Stopped	Manual	0	Routes AllJoyn messages for the local AllJoyn clients.
5	5	Win10_004	Services	ALG	Stopped	Manual	0	Provides support for 3rd party protocol plug-ins for Internet Protocol traffic.
6	6	Win10_005	Services	ALG	Stopped	Manual	0	Provides support for 3rd party protocol plug-ins for Internet Protocol traffic.
7	7	Win10_004	Services	AppIDSvc	Stopped	Manual	0	Determines and verifies the identity of an application.
8	8	Win10_005	Services	AppIDSvc	Stopped	Manual	0	Determines and verifies the identity of an application.
9	9	Win10_004	Services	Appinfo	Stopped	Manual	0	Facilitates the running of interactive applications with the operating system.
10	10	Win10_005	Services	Appinfo	Stopped	Manual	0	Facilitates the running of interactive applications with the operating system.
11	11	Win10_004	Services	AppMgmt	Stopped	Manual	0	Processes installation, removal, and enumeration requests.

- **Unique Key Field:** The field that makes the entry unique is the “Service Name” column. The column header has the [*1] indicator that indicates this.
- **Comparison Fields between systems:** The field that determines whether the record is equal or not between the systems has a “[*2]” in the column header. The field is “Rec #”

One or more Services that have identical values for all the unique key fields on one system are compared with the records that have the same unique key fields on the second system. If the same number of records exist on both systems, then the records are considered equal on both systems, otherwise the records are not considered equal.

8 Sharing Information via Email, FTP and Files

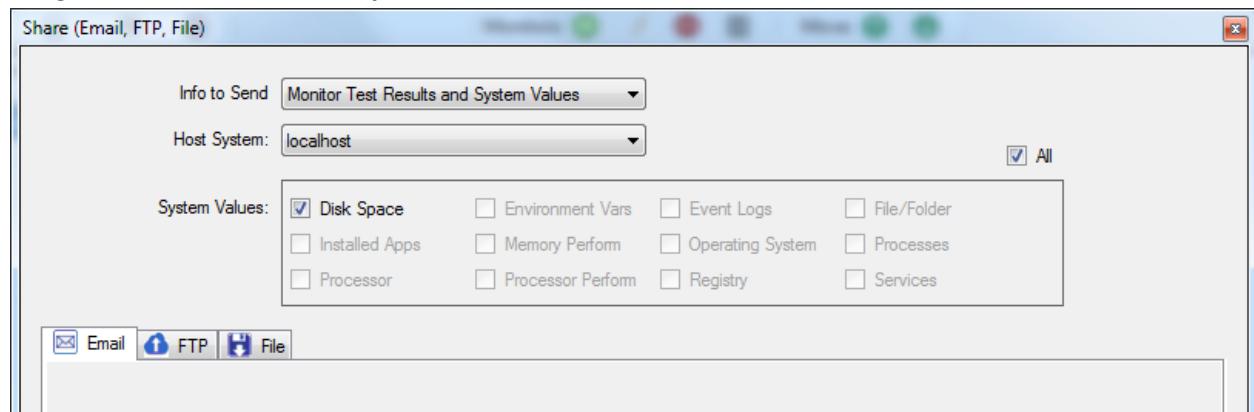
Monitor test results and system values can be shared via email, uploaded using FTP, and saved to files. Each of these methods is described in detail in the sections below.

8.1 Common Settings and Information

This section outlines the fields that are common between Emails, FTP Uploads, and Files. You need to specify the information to be shared using the fields at the top of the form. These fields are described below.

Once monitors have been tested, and system values have been loaded click the “Share (Email, FTP, File)” button , and this displays the “Share (Email, FTP, File)” form as illustrated in the image below.

Image: Share (Email, FTP, File) form



The screenshot shows a Windows-style application window titled "Share (Email, FTP, File)". At the top left, there are dropdown menus for "Info to Send" (set to "Monitor Test Results and System Values") and "Host System" (set to "localhost"). To the right of these is a checked checkbox labeled "All". Below this, under "System Values:", there is a grid of checkboxes. The first row contains "Disk Space" (checked), "Environment Vars" (unchecked), "Event Logs" (unchecked), and "File/Folder" (unchecked). The second row contains "Installed Apps" (unchecked), "Memory Perform" (unchecked), "Operating System" (unchecked), and "Processes" (unchecked). The third row contains "Processor" (unchecked), "Processor Perform" (unchecked), "Registry" (unchecked), and "Services" (unchecked). At the bottom of the window, there is a toolbar with three buttons: "Email" (selected), "FTP", and "File".

- **Info To Send:** This drop down list allows the user to select what information is to be shared.
Possible values are:
 - Monitor Test Results
 - System Values
 - Monitor Test Results and System Values

Note that when sending Monitor Test Results, the system values corresponding to the “host system” and “system value type” of the monitor are included in the email in order to provide complete backup details of the monitor evaluation performed.

For example, if a Disk Space monitor is evaluated, the Disk Space system values for the host system is included in the information to provide complete information to back up the monitor test result.

- **Host System:** This drop down list allows the user to select specify the host system for which the Monitor Test Results and/or System Values is shared.
- **System Values:** This table is a complete list of all system value types and is visible if the “Info To Send” control selection includes system values. Each system value checkbox is enabled only if the corresponding system values have been loaded for the specified host system. In the image above, the “Disk Space” checkbox is enabled as this information has been loaded for the “localhost” system.
- **All:** The “All” checkbox can be used to quickly check or uncheck all enabled system value checkboxes. Individual checkboxes can be clicked as well to fine tune the information to be sent.

8.1.1 System Warnings

The system warns if there are any issues with the information specified. For example, the system warns if:

- 1) There are monitors that have not been tested and Monitor Test Results has been specified. To correct this, simply click the “Test All Monitors” button ➤. Once the test results are obtained, proceed to resend the information.
- 2) No system value checkboxes are checked and System Values has been specified. To correct this, load all of the required system values (this enables the corresponding checkboxes) and make sure that at least one of the system values checkboxes is checked.

8.2 Content of Shared Information

Table: Sample information contained in the email for Monitor Test Results.

[MONITOR VALIDATION RESULTS]
Data saved: 2015/08/19 15:06:04
Monitor File:
C:\HD\Dev_2014\WidgetCode\Monitor\..._010\bin\Release\Data\2015_08_19_TestDiskSpace001.mfs
1. Summary of Monitor
[Validation Results]
Total Monitor Lines..... 1
Monitors Processed With Alarms..... 1
Monitors Processed Without Alarms..... 0
Monitors Processed That Could Not Be Validated.... 0
Monitors Not Processed..... 0
2. Monitors listed by Result
[MONITORS PROCESSED WITH ALARMS]
1.
[Monitor Table Row]... 1
[Monitor Type]..... Disk Space
[Host System]..... localhost
[Monitor Description]. Any Drive with Free space < 50 Percent
[Validation Result]... Total: 1 drive(s) with Disk Free % < specified Percent value: 50 %.
[Alarm Type]..... Error
[Alarm Level]..... 5
[Alarm]..... Processed: Alarm Triggered
[Monitor Tag]..... 5001; 5002
[Monitor Reference]... 25500; 25600
3. Summary of System Values
Number of System Values:
Total System Values - Disk Space..... 3
4. System Values
[SYSTEM VALUES - DISK SPACE]
1.
[System]..... localhost
[Drive]..... C:
[Used Disk Space]... 142,834,380,800
[Used Disk %]..... 54.73
[Free Disk Space]... 118,155,132,928
[Free Disk %]..... 45.27
[Total Disk Space].. 260,989,513,728
2.
[System]..... localhost
[Drive]..... D:
[Used Disk Space]... 64,280,281,088
[Used Disk %]..... 27.13
[Free Disk Space]... 172,631,830,528
[Free Disk %]..... 72.87
[Total Disk Space].. 236,912,111,616
3.
[System]..... localhost
[Drive]..... G:
[Used Disk Space]... 6,973,358,080
[Used Disk %]..... 43.58
[Free Disk Space]... 9,027,403,776
[Free Disk %]..... 56.42
[Total Disk Space].. 16,000,761,856

Note that when sending Monitor Test Results, the system values corresponding to the “host system” and “system value type” of the monitor is appended to the monitor test results to provide complete backup information regarding the monitor test performed.

The sections of the information sent (identified by arrows in the table above) are detailed below.

1. **Summary of Monitors:** This section breaks down the summary of monitor results as follows:
 - a) Total Monitor Lines: The total number of lines in the Monitor Table.
 - b) Monitors Processed With Alarms: The total number of monitors that triggered an alarm.
 - c) Monitors Processed Without Alarms: The total number of monitors that did not trigger an alarm.
 - d) Monitors Processed that Could Not Be Validated: The total number of monitors that could not be validated.
 - e) Monitors Not Processed: The total number of monitors that did not contain any test results in the table.
2. **Monitors Listed by Result:** The validated monitors are listed by order of test results as follows:
 - a) Monitors Processed With Alarms
 - b) Monitors Processed Without Alarms
 - c) Monitors Processed that Could Not Be Validated
 - d) Monitors Not Processed
3. **Summary of System Values:** This section provides summary details of the system value records that were returned by the host system.
4. **System Values:** This section details the system values that were returned by the host system.

The monitor that produced the information appears in the image below.

Image: Monitor used to produce information in email.

The screenshot shows the Explorer Dashboard v4.0 interface with the title bar [2015_08_19_TestDiskSpace001.mfs]. The menu bar includes File, Monitors, Configuration, System, Share, View, and Help. The top status bar displays: Monitor Type: Disk Space, System: localhost, Recs: 1 | Alarms: 1 No Alarm: 0 Could not eval: 0, Tests: [icons], Monitors: [icons], Move: [icons].

The main window contains two tables:

#	System	Monitor Type	Monitor Description	Test Status	Alarm	Test Result	Alarm Level	Alarm Type	Test Result Details
1	localhost	Disk Space	Any Drive with Free space < 50 Percent	Processed: Alarm Triggered	!	Total: 1 drive(s) with Disk Free % < specified Percent value: 50 %.. 5	Error	C:	

System Values Type: Disk Space								
#	System	Monitor Type	Disk	Bytes Used	% Disk Used	Bytes Available	% Disk Available	Total Disk Space
1	localhost	Disk Space	C:	142,834,380,800	54.73%	118,155,132,928	45.27%	260,989,513,728
2	localhost	Disk Space	D:	64,280,281,088	27.13%	172,631,830,528	72.87%	236,912,111,616
3	localhost	Disk Space	G:	6,973,358,080	43.58%	9,027,403,776	56.42%	16,000,761,856

When System Values is selected to be shared, the content is similar to the information in the table below.

Table: Sample information contained in the email for System Values.

Number of System Values:	1. Summary of System Values
Total System Values - Disk Space..... 3	
Total System Values - Environment Variables... 20	
[SYSTEM VALUES - DISK SPACE]	2. Disk Space values
1.	
[System]..... localhost	
[Drive]..... C:	
[Used Disk Space]... 150,020,833,280	
[Used Disk %]..... 57.48	
[Free Disk Space]... 110,968,680,448	
[Free Disk %]..... 42.52	
[Total Disk Space].. 260,989,513,728	
2.	
[System]..... localhost	
[Drive]..... D:	
[Used Disk Space]... 64,618,414,080	
[Used Disk %]..... 27.28	
[Free Disk Space]... 172,293,697,536	
[Free Disk %]..... 72.72	
[Total Disk Space].. 236,912,111,616	
3.	
[System]..... localhost	
[Drive]..... G:	
[Used Disk Space]... 6,973,358,080	
[Used Disk %]..... 43.58	
[Free Disk Space]... 9,027,403,776	
[Free Disk %]..... 56.42	
[Total Disk Space].. 16,000,761,856	
[SYSTEM VALUES - ENVIRONMENT VARIABLES]	3. Environment Variables values
1.	
[System]..... localhost	
[Env Var Name]... ComSpec	
[Env Var Value].. %SystemRoot%\system32\cmd.exe	
2.	
[System]..... localhost	
[Env Var Name]... FP_NO_HOST_CHECK	
[Env Var Value].. NO	
3.	
[System]..... localhost	
[Env Var Name]... NUMBER_OF_PROCESSORS	
[Env Var Value].. 4	
...	
19.	
[System]..... localhost	
[Env Var Name]... XNAGSShared	
[Env Var Value].. C:\Program Files (x86)\Common Files\Microsoft Shared\xna\	
20.	
[System]..... localhost	
[Env Var Name]... XNAGSV4	
[Env Var Value].. C:\Program Files (x86)\Microsoft XNA\xna Game Studio\v4.0\	

The sections of the information sent (identified by arrows in the table above) are detailed below.

1. **Summary of System Values:** This section lists the total values that are sent for each system value type. In the table above there are 3 Disk Space values and 20 Environment Variable values.

After the summary, the selected system values are listed. In the table above, the Disk Space and Environment Variables were selected; therefore we have the following sections:

2. **Disk Space values:** This section lists the individual Disk Space system values on the server.
3. **Environment Variable values:** This section lists the Environment Variable system values on the server.

8.3 Emailing System Information

Monitor test results and system values can be shared via email. To do so, at least one Email profile needs to be configured. For details on how to configure an email profile, refer to the section: [10. Email Profile Configuration](#). Once an email profile exists, you are able to send information via email using the profile.

In the lower portion of the screen, click on the “Email” tab. Use the email profile drop down list to select the email profile to use. Key values are displayed in read-only mode to provide details of the selected profile. Profile information fields displayed are:

- To
- Cc
- Bcc
- From
- SMTP Email Server
- Email user

These fields provide key email profile information.

Image: Email Tab of the “Share (Email, FTP, File) form

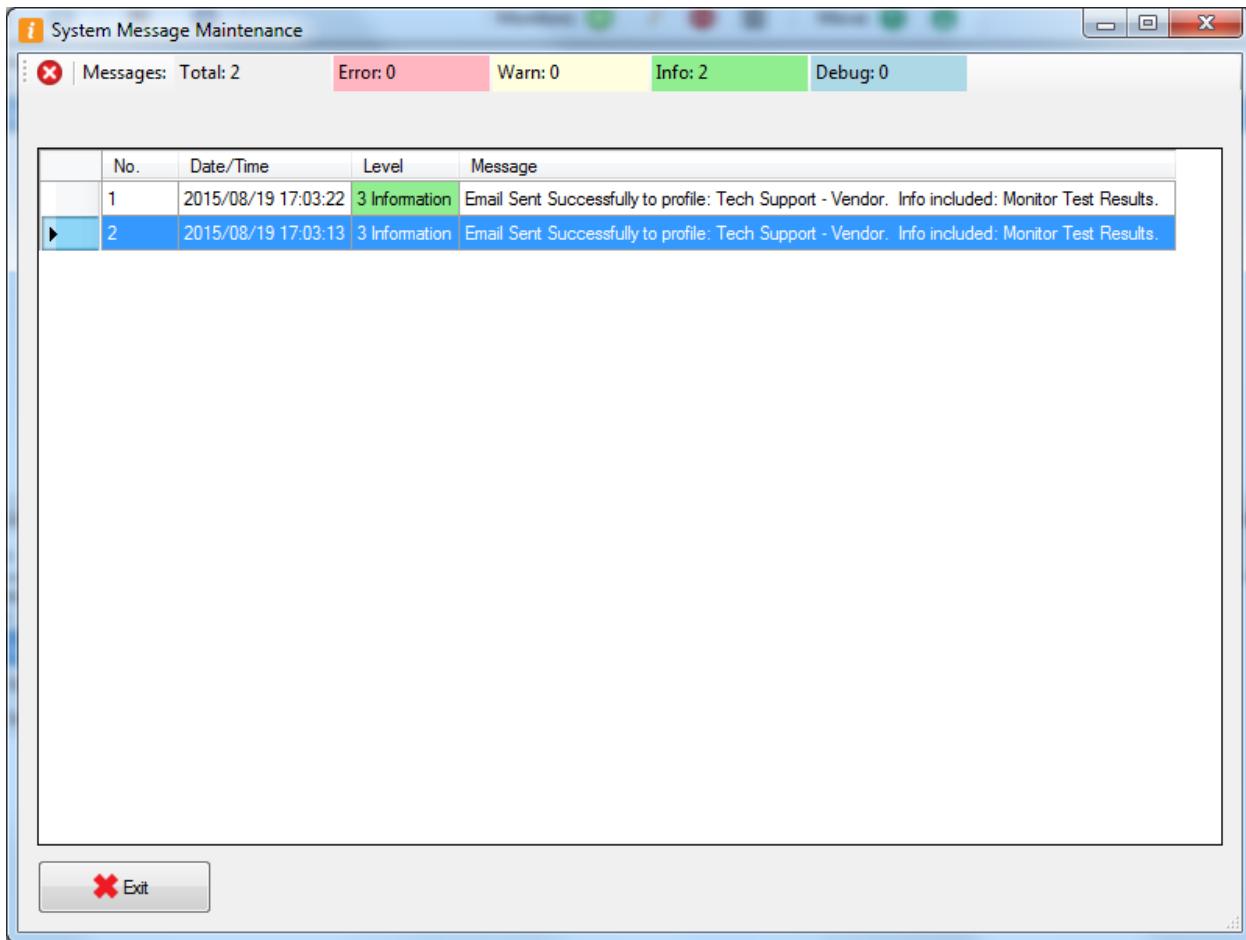
The screenshot shows the 'Share (Email, FTP, File)' dialog box with the 'Email' tab selected. At the top, there are dropdown menus for 'Info to Send' (set to 'Monitor Test Results') and 'Host System' (set to 'localhost'). Below these are sections for 'Email Profile' (set to 'Main Tech Support Email'), 'To' (containing 'recipient1@emaildomain.com; recipient2@emaildomain.com'), 'Cc' (containing 'recipient3@emaildomain.com;'), 'Bcc' (empty), 'From' (containing 'firstname.lastname@emaildomain.com'), 'SMTP Email Server' (containing 'smtp@yoursmtphost.com'), and 'Email User' (containing 'user1@emaildomain.com'). At the bottom are 'Send' and 'Cancel' buttons.

Click “Send” to send an email.

8.3.1 Email Send Status

When “Send” is clicked, the system attempts to send the email using the specified profile. A status message is logged to the Message Center to indicate the status of the operation, as illustrated in the image below.

Image: Status message after an email is sent.



From the image above, both lines 1 and 2 contain Information messages that indicate that the Monitor Test results were successfully sent via email using the “Tech Support – Vendor” profile. In the case of an email send error, the error message is logged instead.

8.4 FTP Upload of System Information

Monitor test results and system values can be shared via FTP upload. To do so, at least one FTP profile needs to be configured. For details on how to configure an email profile, refer to the section: [11. FTP Profile Configuration](#). Once an FTP profile exists, you are able to send information via FTP upload using the profile.

In the lower portion of the screen, click on the “FTP” tab. Use the FTP profile drop down list to select the email profile to use. Key values are displayed in read-only mode to provide details of the selected profile. Profile information fields displayed are:

- FTP Server Name/IP
- Description
- FTP Upload Folder
- FTP User

Image: FTP Tab of the “Share (Email, FTP, File) form

The screenshot shows the 'Share (Email, FTP, File)' dialog box. The 'FTP' tab is selected. The 'Info to Upload' dropdown is set to 'Monitor Test Results'. The 'Host System' dropdown is set to 'localhost'. The 'FTP Profile' dropdown is set to 'FTP Server - tech support.2'. Below these, key values are displayed in read-only mode:
FTP Server Name/IP: ftp://ftp.ftpdomain.com
Description: Technical Support FTP Server
FTP Upload Folder: client1
FTP User: ftouser1

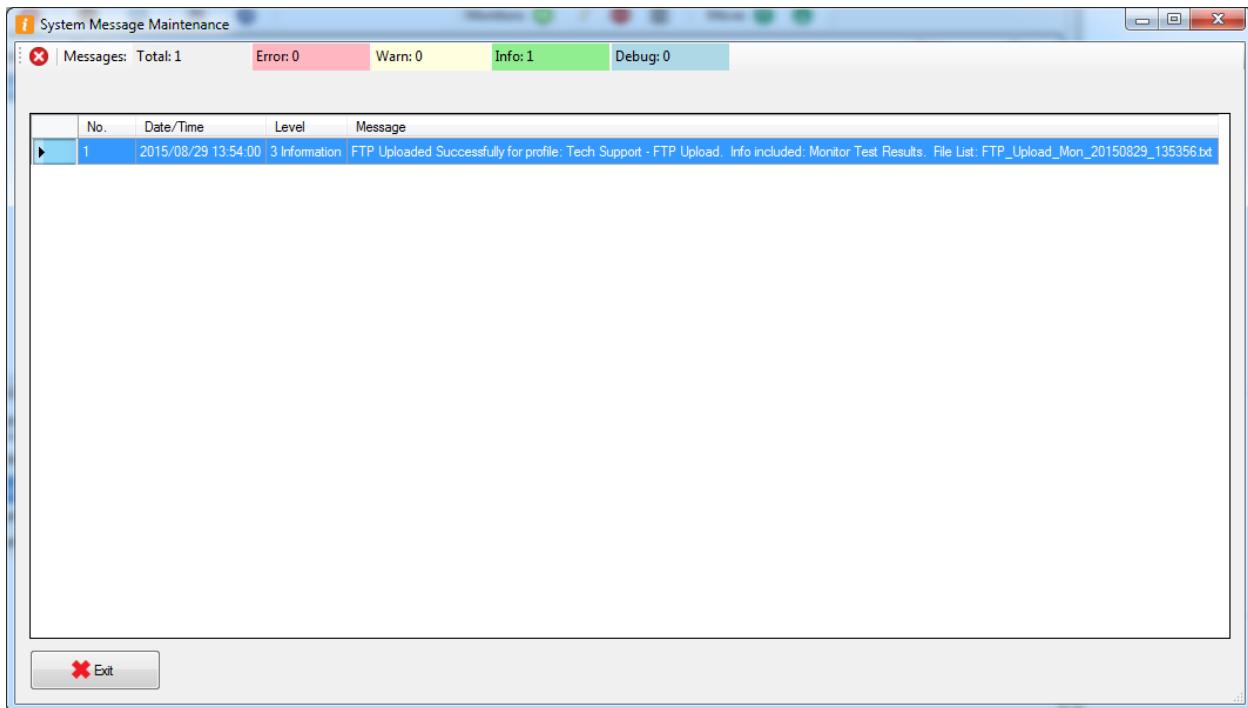
These fields provide key FTP profile information.

Click “Upload” to upload the information file(s).

8.4.1 FTP Upload Send Status

When “Upload” is clicked, the system attempts to upload the information via FTP using the specified profile. A status message is logged to the Message Center to indicate the status of the operation, as illustrated in the image below.

Image: Status message after an FTP upload.



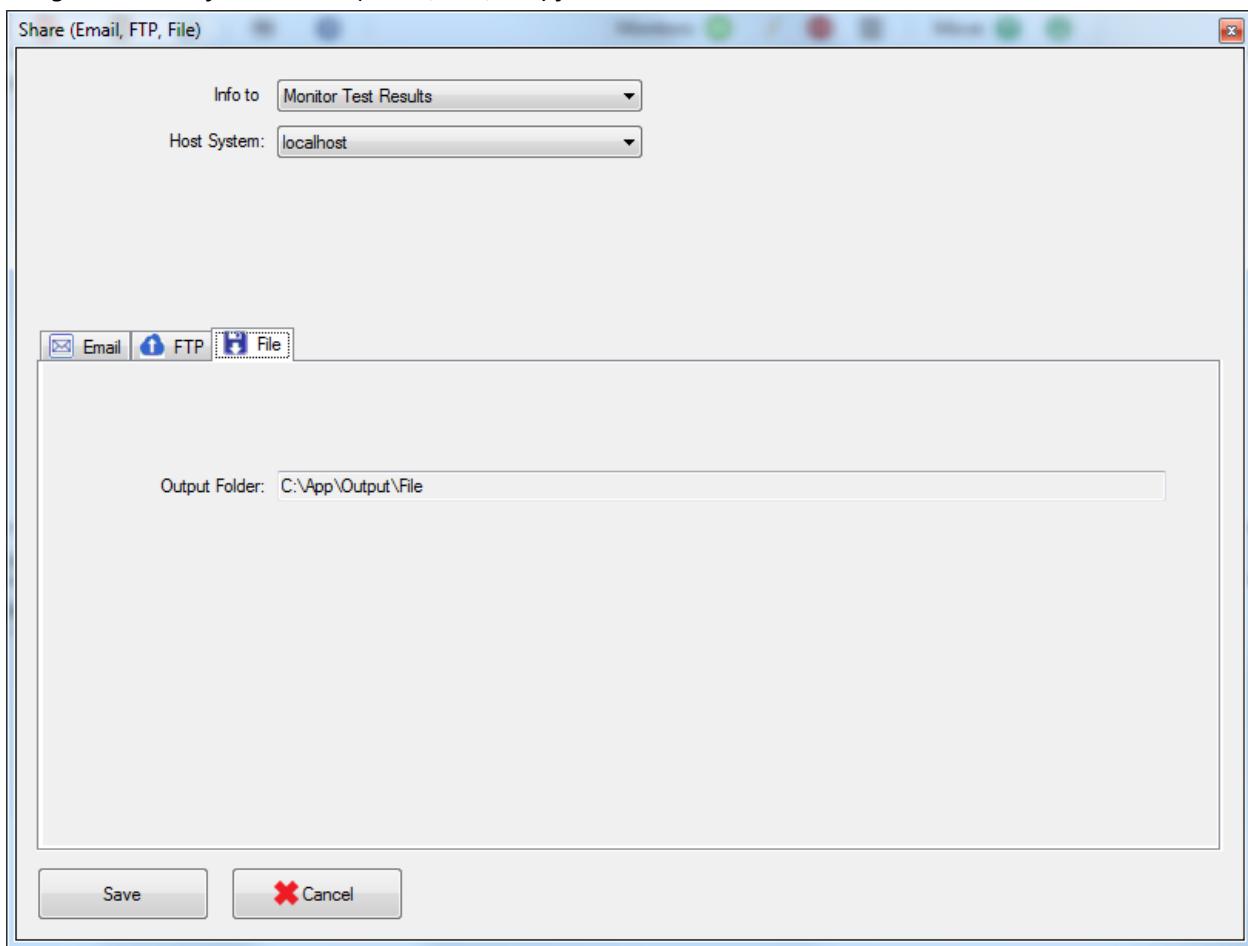
From the image above, both lines 1 and 2 contain Information messages that indicate that the Monitor Test results were successfully uploaded via FTP using the “Tech Support – FTP Upload” profile. The file(s) that are created locally to upload the information are listed in the message. In the case of an email send error, the error message is logged instead.

8.5 Saving System Information to Files

Monitor test results and system values can be saved to files.

In the lower portion of the screen, click on the “File” tab. The form displays the folder in which the files are created.

Image: File Tab of the “Share (Email, FTP, File) form

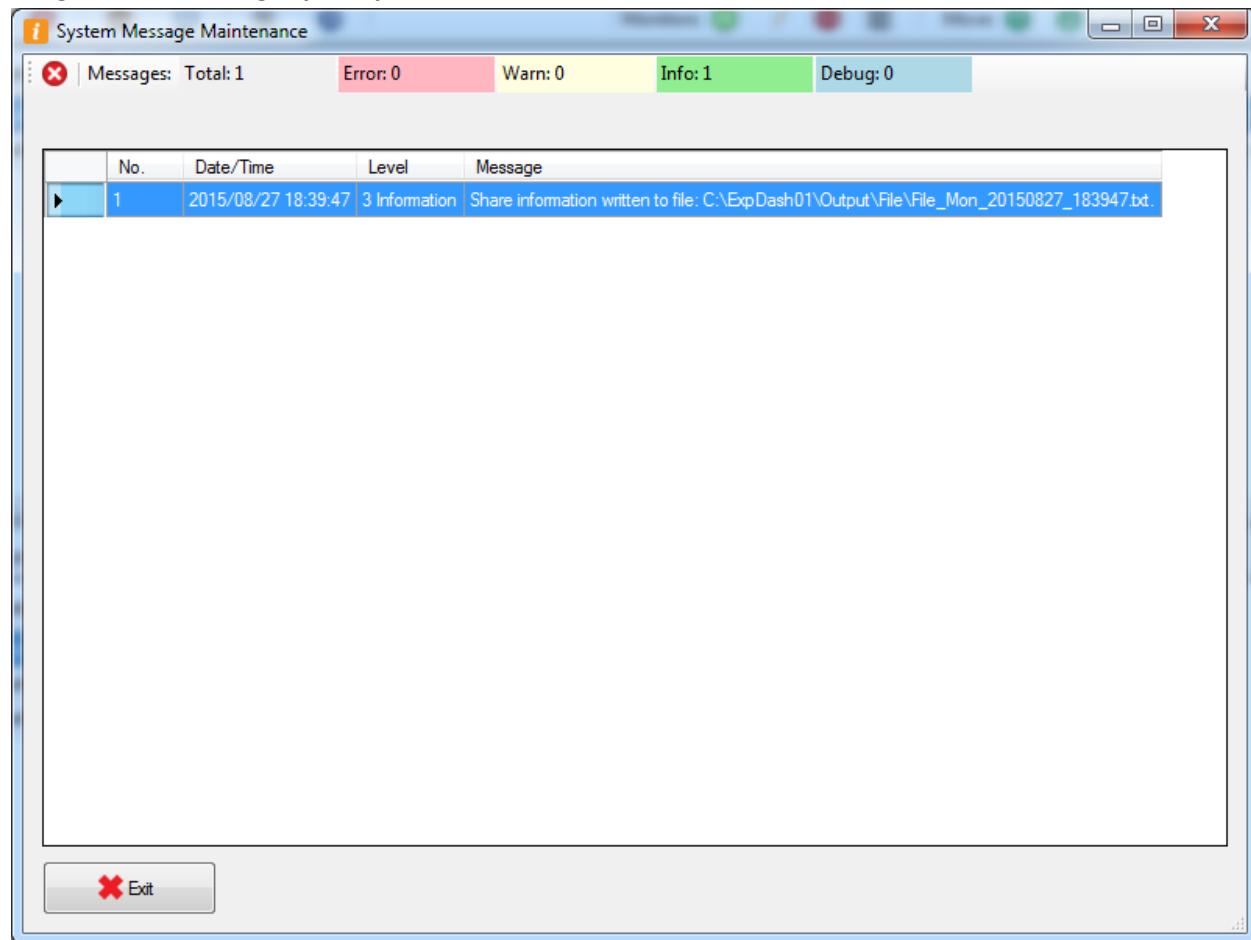


Click “Save” to save the information to file(s) in the specified “Output Folder”.

8.5.1 File Save Status

When “Save” is clicked, the system saves the file to the “Output Folder”. A status message is logged to the Message Center to indicate the status of the operation, as illustrated in the image below.

Image: Status message after a file is saved..



The image above illustrates the message that is displayed in the message center. The message contains the files that have been created with the system information.

9 Host Systems

You must define all systems in Explorer Dashboard before any analysis or testing can be done. By default, the system has “localhost” defined. This refers to the machine on which Explorer Dashboard is running on. This entry cannot be deleted, and does not count towards the total number of servers configured on the system for licensing purposes. The localhost entry does not require a user name or password for local WMI queries.

To configure a system, click **Configuration -> Host Systems** on the main menu. This brings up the Host System Configuration form. Image 4 shows a sample form.

Image 4: Host System Configuration form

The screenshot shows a Windows-style dialog box titled "Host System Configuration". At the top left, there is a label "Host System:" followed by three icons: a green plus sign for adding, a yellow minus sign for deleting, and a grey square for editing. Below this is a dropdown menu labeled "Host System Name/IP:" containing the value "localhost". Underneath the dropdown are three input fields: "Description:", "User Name:", and "Password:", each with a corresponding empty text box. At the bottom left of the dialog is a button labeled "Exit" with a red X icon.

9.1 Configuring Host Systems

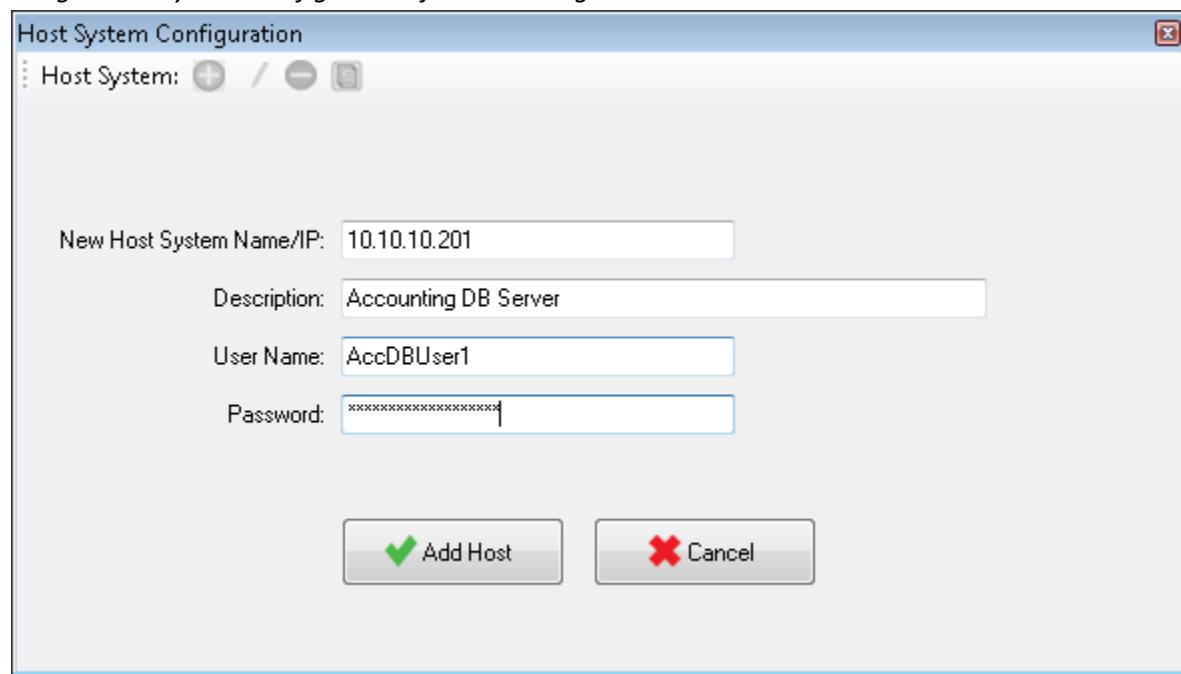
Host systems are servers or target systems that Explorer Dashboard will gather information from. Each server or system must be configured before any analysis or diagnostic can be performed. The following sections outline how to create and maintain host systems.

9.1.1 Adding a new Host System

Click **Configuration -> Host Systems** on the main menu. This brings up the Host System Configuration form.

To add a new Host System, click on the “Add New Host System”  button . The Host System Configuration form prompts for the new host system information, as illustrated in the image below.

Image: Host System Configuration form – adding a new server



The screenshot shows the "Host System Configuration" dialog box. At the top left, it says "Host System Configuration" and "Host System:". There are three buttons: a green plus sign for adding a new host, a minus sign for deleting, and a refresh icon. The main area contains four input fields:

- New Host System Name/IP:
- Description:
- User Name:
- Password:

At the bottom are two buttons: "Add Host" with a green checkmark icon and "Cancel" with a red X icon.

In the **New Host System Name/IP** field, enter the system name or IP address of the new system.

In the **Description** field, you can add a system descriptor like “DB Server - Accounting” to help distinguish between systems. On the main page, when a server is selected from the drop down list, simply hovering over the “System” label displays the description field entered here.

In the **User Name** field, enter the user name with the appropriate credentials to retrieve information from the server via WMI and file system object.

In the **Password** field, enter the password associated with the user entered in the User Name field.

When completed, click “Add Host” to add the host and exit to close the form. The newly added server is now available to be selected in the main form. Simply hovering on the “System” label displays the description defined, as illustrated in the image below.

Cancel can be clicked any time to exit the “Add Mode” and discard all changes.

Image: Newly Added Server with description showing when mouse is hovered over System label.

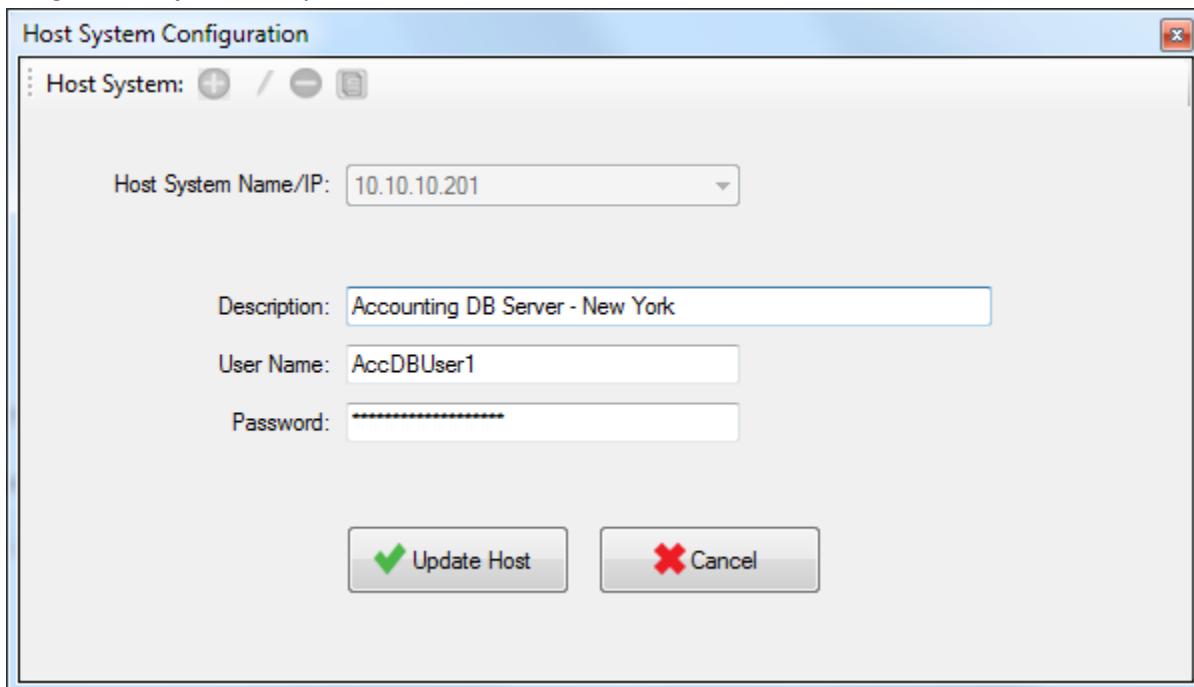


9.1.2 Editing a Host System

Click **Configuration -> Host Systems** on the main menu. This brings up the Host System Configuration form.

To edit a Host System, use the “Host System Name/IP” drop down list to select the Host Name. Next, click on the “Edit Host System” button . The Host System Configuration form enters edit mode allowing the modification of the Description, User Name and Password fields. Note that the Host System Name/IP field cannot be changed. The host name can be deleted and re-created if necessary. Image 6 below shows the modified Host System Profile.

Image 6: Modified Host System



To save the changes, click “Update Host” and the form exits the edit mode. To discard all changes, simply click “Cancel” and the form exits the edit mode and discard the changes.

9.1.3 Deleting a Host System

Click **Configuration -> Host Systems** on the main menu. This brings up the Host System Configuration form.

To delete a Host System, use the “Host System Name/IP” drop down list to select the Host Name. Note that “localhost” cannot be deleted. This refers to the machine on which Explorer Dashboard is running on. This entry cannot be deleted, and does not count towards the total number of servers configured on the system for licensing purposes.

Next, click on the “Delete Host System” button . The system will confirm the deletion.

9.1.4 Cloning a Host System

Click **Configuration -> Host Systems** on the main menu. This brings up the Host System Configuration form.

To clone a Host System, use the “Host System Name/IP” drop down list to select the Host Name. Next, click on the “Clone Host System” button . The Host System Configuration form enters edit mode allowing the modification of the New Host System Name/IP, Description, User Name and Password. Note that the field “New Host System Name/IP” must be changed before saving the changes. The system does not allow multiple records with the same Host System Name or IP address.

When the changes are completed, click “Add Host” to save the changes. The form exits the edit mode. To discard all changes, simply click “Cancel” and the form exits the edit mode and discards the changes.

10 Email Profiles

You must define at least one email profile in order to share information from the Monitor and System Values Tables via email.

To configure an email profile, click **Configuration > Email Profiles** on the main menu. Image 20 shows a sample form.

Image 20: Email Profile Configuration form

The screenshot shows the 'Email Profile Configuration' dialog box. At the top left, there is a toolbar with icons for creating (+), deleting (-), and saving (disk). The title bar says 'Email Profile Configuration'. The main area contains fields for email communication settings:

- Email Profile Name/ID: Test Account
- From: firstname.lastname@emaildomain.com
- To: recipient1@companydomain.com
- Cc: recipient1@companydomain.com
- Bcc: (empty)
- Priority: Normal
- Subject: Explorer Dashboard

A note below the subject field states: "Email addresses must be separated by a semi-colon ;".

Below these fields, there are fields for SMTP settings:

- SMTP Email Server: smtp.yoursmtpserver.com
- Email User: firstname.lastname@emaildomain.com
- Email Password: (redacted)
- SMTP Port: 587
- Enable SSL

At the bottom left of the dialog is a button labeled 'Exit' with a red X icon.

10.1 Configuring Email Profiles

Email profiles are required in order to share Monitor Test Results and System Values via email. The following sections outline how to create and maintain email profiles.

10.1.1 Adding a new Email Profile

Click **Configuration -> Email Profiles** on the main menu. This brings up the Email Profile Configuration form.

To add a new Email Profile, click on the “Add New Email Profile” button . The Email Profile Configuration form prompts for the new email profile information, as illustrated in the image below.

Image: Email Profile Configuration form – adding a new profile

Email Profile Configuration

Email Profile:

New Email Profile Name/ID:

From:

To:

Cc:

Bcc:

Priority:

Subject:

* Email addresses must be separated by a semi-colon ";"

SMTP Email Server:

Email User:

Email Password:

SMTP Port:

Enable SSL

In the **New Email Profile Name/ID** field specify a descriptive name for the email profile.

In the **From** field, specify the originating email address.

In the **To** field, specify the email addresses of the main recipients of the email. Multiple email addresses may be specified in this field and must be separated by a semi-colon “;”.

In the **Cc** field, specify the email address of the email recipients that need to be copied. Multiple email addresses may be specified in this field and must be separated by a semi-colon “;”.

In the **Bcc** field, specify the email address of the email recipients that need to be blind copied. Multiple email addresses may be specified in this field and must be separated by a semi-colon “;”.

In the **Priority** drop down, you can specify the priority flag of this message. The default value is normal. A priority of “Low”, “Normal” or “High” can be selected.

In the **Subject** field, specify the subject of the email that is sent.

In the **SMTP Email Server** field, specify the outbound SMTP email server of your email provider. For example to set up a Google Gmail account, specify smtp.gmail.com

In the **Email User** field, specify the valid user name or email account used to login to your email provider.

In the **Email Password** field, specify the valid password corresponding to the Email User specified.

In the **SMTP Port** field, specify the port used by your email provider. For example Gmail uses port 587.

The Enable SSL checkbox must be checked for all email providers that require a secure connection.

When completed, click “Add Profile” to add the email profile and click exit to close the form. Cancel can be clicked any time to exit the “Add Mode”.

The newly added email profile is now available to receive emails from the system.

10.1.2 Editing an Email Profile

Click **Configuration -> Email Profiles** on the main menu. This brings up the Email Profile Configuration form.

To edit an Email Profile, use the “Email Profile Name/ID” drop down list to select the Email Profile. Next, click on the “Edit Email Profile” button  . The Email Profile Configuration form enters edit mode allowing the modification of the From, To, Cc, Bcc, Priority, Subject, SMTP Email Server, Email User, Email Password, and SMTP Port fields . Note that the Email Profile Name/ID field cannot be changed. The email profile can be deleted and re-created if necessary.

The image below shows the modified Host System Profile.

Image: Modified Email Profile

The screenshot shows the 'Email Profile Configuration' dialog box. At the top, there is a toolbar with icons for adding (+), deleting (-), and saving (disk). Below the toolbar, the title bar says 'Email Profile Configuration' and 'Email Profile: Main Tech Support Email'. The main area contains fields for email communication settings:

- Email Profile Name/ID: Main Tech Support Email
- From: firstname.lastname@emaildomain.com
- To: recipient1@emaildomain.com; recipient2@emaildomain.com
- Cc: recipient3@emaildomain.com;
- Bcc:
- Priority: Normal
- Subject: Explorer Dashboard - System Information for technical support - NY

A note below the subject field states: "Email addresses must be separated by a semi-colon ;".

Below these fields, there are SMTP configuration options:

- SMTP Email Server: smtp@yoursmtphost.com
- Email User: user1@emaildomain.com
- Email Password: [REDACTED]
- SMTP Port: 587
- Enable SSL

At the bottom of the dialog are two buttons: 'Update Profile' with a green checkmark icon and 'Cancel' with a red X icon.

To save the changes, click “Update Profile” and the form exits the edit mode. To discard all changes, simply click “Cancel” and the form exits the edit mode and discards the changes.

10.1.3 Deleting an Email Profile

Click **Configuration -> Email Profiles** on the main menu. This brings up the Email Profile Configuration form.

To delete an Email Profile, use the “Email Profile Name/ID” drop down list to select the Email Profile. Next, click on the “Delete Email Profile” button . The system prompts to confirm the deletion.

10.1.4 Cloning an Email Profile

Click **Configuration -> Email Profiles** on the main menu. This brings up the Email Profile Configuration form.

To clone an Email Profile, use the “Email Profile Name/ID” drop down list to select the Email Profile. Next, click on the “Clone Email Profile” button . The Email Profile Configuration form enters edit mode allowing the modification of the New Email Profile Name/ID, From, To, Cc, Bcc, Priority, Subject, SMTP Email Server, Email User, Email Password, and SMTP Port fields. Note that the field “New Email Profile Name/ID” must be changed before saving the changes. The system does not allow multiple records with the same Email Profile Name /ID.

Once the changes are complete, click “Add Profile” to save the changes to the new entry. The form exits the edit mode. Click “Cancel” to exit the edit mode and discard all changes.

11 FTP Profiles

You must define at least one FTP profile in order to share information from the Monitor and System Values Tables via FTP uploads.

To configure an FTP profile, click **Configuration -> FTP Profiles** on the main menu. The image below shows a sample form.

Image: FTP Profile Configuration form

The screenshot shows a Windows-style dialog box titled "FTP Profile Configuration". At the top left, there is a label "FTP Profile:" followed by four icons: a green plus sign, a yellow exclamation mark, a red minus sign, and a blue clipboard. Below this is a section for defining the profile, with a dropdown menu showing "FTP Server - tech support". The main configuration area contains the following fields:

FTP Server Name/IP:	ftp://ftp.ftpdomain.com
Description:	Technical Support FTP Server
FTP Upload Folder:	client1
FTP User:	ftpuser1
FTP Password:	*****
FTP Port:	21
ASCII/Binary:	<input type="radio"/> ASCII <input checked="" type="radio"/> Binary
Active/Passive:	<input type="radio"/> Active <input checked="" type="radio"/> Passive
<input type="checkbox"/> Enable SSL	
<input type="checkbox"/> Ignore Certificate Errors	

At the bottom left of the dialog is a button labeled "Exit" with a red X icon.

11.1 Configuring FTP Profiles

FTP profiles are required in order to share Monitor Test Results and System Values via FTP uploads. The following sections outline how to create and maintain FTP profiles.

11.1.1 Adding a new FTP Profile

Click **Configuration** -> **FTP Profiles** on the main menu. This brings up the FTP Profile Configuration form.

To add a new Email Profile, click on the “Add New FTP Profile” button . The FTP Profile Configuration form prompts for the new email profile information, as illustrated in the image below.

Image: FTP Profile Configuration form – adding a new profile

The screenshot shows the 'FTP Profile Configuration' dialog box. At the top left is a tree view labeled 'FTP Profile' with icons for '+' (Add), '-' (Delete), and a refresh symbol. The main area contains the following fields:

- New FTP Profile Name/ID:
- FTP Server Name/IP:
- Description:
- FTP Upload Folder:
- FTP User:
- FTP Password:
- FTP Port:
- ASCII/Binary: ASCII Binary
- Active/Passive: Active Passive
- Enable SSL
- Ignore Certificate Errors

At the bottom are two buttons: Add Profile and Cancel.

In the **New FTP Profile Name/ID** field specify a descriptive name for the FTP profile.

In the **FTP Server Name/IP** field specify the full FTP server URL.

In the **Description** field, specify a description of the FTP profile

In the **FTP Upload Folder** field, you can optionally specify the folder on the FTP server you wish to upload the files to.

In the **FTP User** field, specify the user name that has access to the FTP server.

In the **FTP Password** field, specify the password corresponding to the FTP User.

In the **FTP Port** field, specify the FTP port to be used to communicate with the FTP server.

For the **ASCII/Binary** field, specify whether the transfer uses ASCII or Binary transfer.

For the **Active/Passive** field, specify whether the connection type to the FTP server is active or passive.

For the **Enable SSL** checkbox, check it if the FTP server connection requires a secured connection.

For the **Ignore Certificate Errors** checkbox, this should be left unchecked. This feature can be enabled to override certificate errors and continue to upload FTP servers. Using this feature is not recommended and is provided for debugging purposes only.

When completed, click “Add Profile” to add the FTP profile and click exit to close the form. The newly added FTP profile is now available to upload system information to.

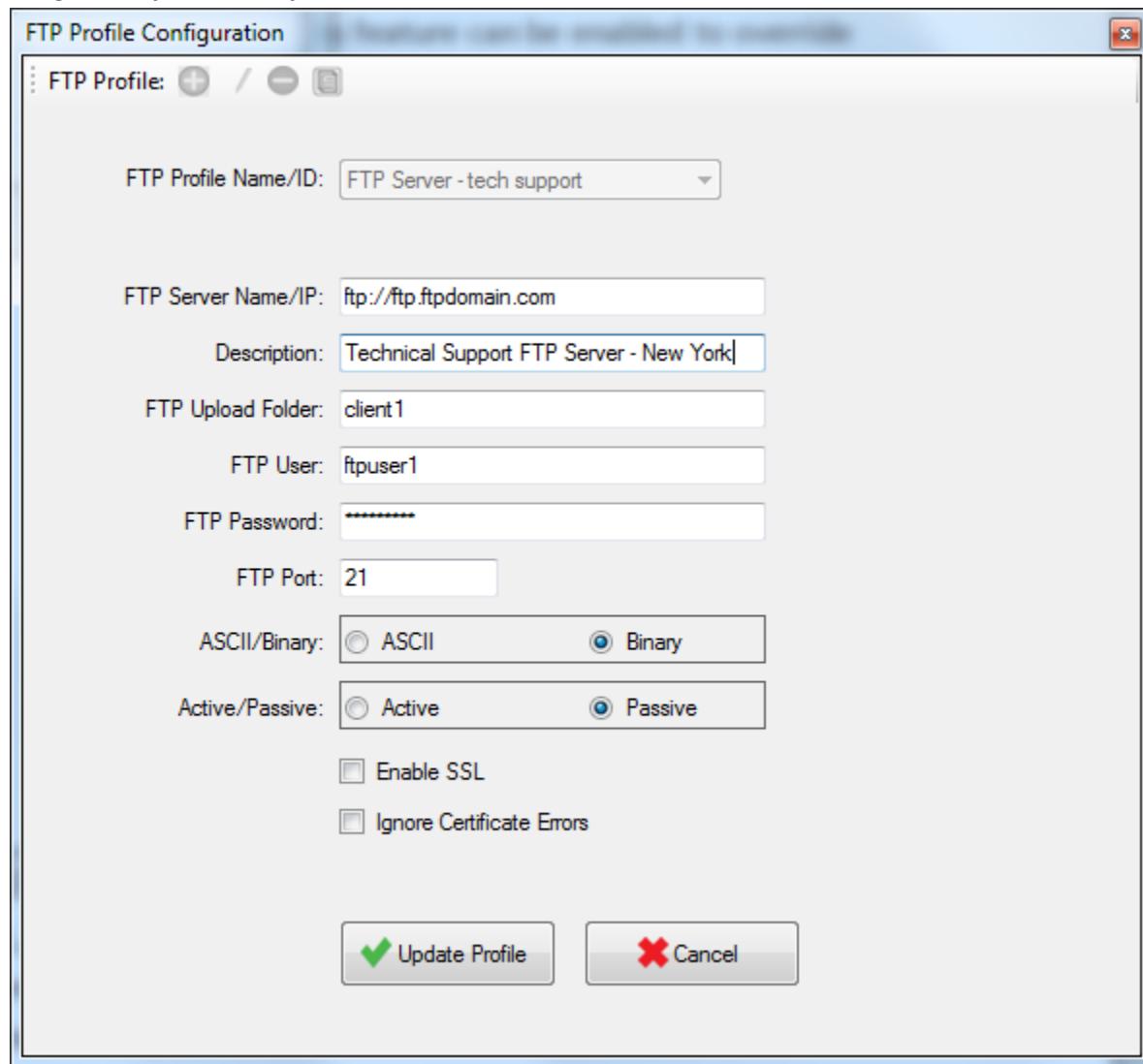
Click cancel to exit the “Add Mode” and discard all changes.

11.1.2 Editing an FTP Profile

Click **Configuration -> FTP Profiles** on the main menu. This brings up the FTP Profile Configuration form.

To edit an FTP Profile, use the “FTP Profile Name/ID” drop down list to select the FTP Profile. Next, click on the “Edit FTP Profile” button . The FTP Profile Configuration form enters edit mode allowing the modification of the FTP Server Name/IP, Description, FTP Upload Folder, Ftp User, FTP Password, FTP Port, ASCII/Binary, Active/Passive, Enable SSL, and Ignore Certificate Errors fields. Note that the FTP Profile Name/IP field cannot be changed. The FTP profile can be deleted and re-created if necessary. The image below shows the modified FTP System Profile.

Image: Modified FTP Profile



The screenshot shows the 'FTP Profile Configuration' dialog box. At the top left, it says 'FTP Profile:' followed by a dropdown menu showing 'FTP Server - tech support'. To the right are standard window controls: a red 'X', a grey square, and a minimise/maximise button. Below this is a toolbar with three icons: a plus sign, a minus sign, and a refresh symbol. The main area contains several input fields and radio buttons:

- 'FTP Server Name/IP:' text box containing 'ftp://ftp.ftpdomain.com'
- 'Description:' text box containing 'Technical Support FTP Server - New York'
- 'FTP Upload Folder:' text box containing 'client1'
- 'FTP User:' text box containing 'ftpuser1'
- 'FTP Password:' text box containing '*****'
- 'FTP Port:' text box containing '21'
- 'ASCII/Binary:' radio button group with 'Binary' selected (radio button has a blue outline)
- 'Active/Passive:' radio button group with 'Passive' selected (radio button has a blue outline)
- 'Enable SSL' checkbox (unchecked)
- 'Ignore Certificate Errors' checkbox (unchecked)

At the bottom are two buttons: 'Update Profile' with a green checkmark icon and 'Cancel' with a red X icon.

To save the changes, click “Update Profile” and the form exits the edit mode. Click “Cancel” to exit the edit mode and discard all changes.

11.1.3 Deleting an FTP Profile

Click **Configuration -> FTP Profiles** on the main menu. This brings up the FTP Profile Configuration form.

To delete an FTP Profile, use the “FTP Profile Name/ID” drop down list to select the FTP Profile. Click on the “Delete FTP Profile” button . The system prompts to confirm the deletion.

11.1.4 Cloning an FTP Profile

Click **Configuration -> FTP Profiles** on the main menu. This brings up the FTP Profile Configuration form.

To clone an FTP Profile, use the “FTP Profile Name/ID” drop down list to select the Email Profile. Next, click on the “Clone Email Profile” button . The FTP Profile Configuration form enters edit mode allowing the modification of the FTP Server Name/IP, Description, FTP Upload Folder, FTP User, FTP Password, FTP Port, ASCII/Binary, Active/Passive, Enable SSL, and Ignore Certificate Errors fields. Note that the field “New FTP Profile Name/ID” must be changed before saving the profile. The system does not allow multiple records with the same FTP Profile Name /ID.

Once the changes are complete, click “Add Profile” to save the changes to the new entry. The form exits the edit mode. Click “Cancel” to exit the edit mode and discard all changes.

12 Explorer Dashboard File Structure

This section describes the Explorer Dashboard file structure, and details the location of system files.

- Root folder
 - Config folder
 - Data Folder
 - Logs Folder
 - Output Folder
 - Email folder
 - File folder
 - FTP folder
 - Temp Folder

Application Data Root folder: This is the parent folder where the application data resides, and can be accessed with "%APPDATA%\Navia Studios\Explorer Dashboard\4.0.0.0, for example C:\Users\<username>\AppData\Roaming Navia Studios\Explorer Dashboard\4.0.0.0. All subsequent folders are subfolders.

Config folder: This folder is reserved for system configuration files.

Data folder: This folder contains system data including the monitor files (*.mfs).

Logs Folder: This folder contains the system logs. All messages displayed in the message center are logged to this folder to files ending with yyyy_mm_dd.txt (where yyyy/mm/dd is the date the message was generated).

Output Folder: This folder contains 3 subfolders where information that is shared via Email, FTP, or file are saved.

- **Email Folder:** Not used in this version
- **File Folder:** Contains information saved to file
- **FTP Folder:** Contains the files that contain the information uploaded via FTP.

Note that when the application is uninstalled, the Application Data folder is not removed to preserve user-defined files and configurations. You may delete the folder manually if it is no longer needed.

12.1 System File Backups

It is very important to take regular backups of the system to prevent data loss in case of an outage. It is highly recommended to make backups before and after significant changes are made.

A complete system backup can be made by coping the root folder and all of its subfolders. This will save system, configuration, data, and output files.

Copies of individual folders can be taken to make backups of different system files. For example, to back up the monitor files, make a copy of the Data folder.

Appendix A – System Value Types

This section outlines the types of system values and monitors that are available in Explorer Dashboard. Each one of these system value types corresponds to a specific set of values or settings that are extracted from the target host server. Windows Management Instrumentation (WMI) and file system objects are used to extract information from the servers. The following sections detail the available system values.

1 Disk Space

The Disk Space system value type is used to retrieve disk utilization information from the target system. WMI is used to extract the information using the Win32_LogicalDisk class. The fields retrieved from the system are:

- Disk ID
- Bytes Used
- % Disk Used
- Bytes Available
- % Disk Available
- Total Disk Space

2 Environment Variables

The Environment Variables (Environment Vars) system value type is used to retrieve the Environment Variables defined on the target system. WMI is used to extract the information using the Win32_Environment class. The fields retrieved from the system are:

- Environment Variable Name (Env Var Name)
- Environment Variable Value (Env Var Value)

3 Event Logs

The Event Logs system value type is used to retrieve the Windows Event Logs from the target system. WMI is used to extract information using the Win32_NTLogEvent class. The fields retrieved from the system are:

- Log File
- Log Level
- Date/Time Generated
- Source
- Event ID
- Task Category
- Description

4 File & Folder

The File / Folder system value type is used to retrieve file and folder information from the target system. File System Objects are used to extract the information. The fields retrieved from the system are:

- File Name
- File Date/Time (modified)
- File Size
- Folder or Path

5 Installed Applications

The Installed Applications (Installed Apps) system value type is used to retrieve information about applications that are installed on the target system. WMI is used to extract information using the Win32_Product class. The fields retrieved from the system are:

- Application Name
- Version
- Vendor
- Install Date
- Description

6 Memory Performance

The Memory Performance system value type (Memory Perform) is used to retrieve information about the system's memory performance. WMI is used to extract information using the Win32_PerfRawData_PerfOS_Memory class. The fields retrieved from the system are:

- Available Bytes
- Available Kbytes
- Available Mbytes
- Cache Bytes
- Cache Bytes Peak
- Cache Faults Per Sec
- Caption
- Commit Limit
- Committed Bytes
- Demand Zero Faults Per Sec
- Description
- Free System Page Table Entries
- Frequency Object
- Frequency PerfTime
- Frequency Sys100NS
- Name
- Page Faults Per Sec
- Page Reads Per Sec
- Pages Input Per Sec
- Pages Output Per Sec
- Pages Per Sec
- Page Writes Per Sec
- Percent Committed Bytes In Use
- Percent Committed Bytes In Use Base
- Pool Nonpaged Allocs
- Pool Nonpaged Bytes
- Pool Paged Allocs
- Pool Paged Bytes
- Pool Paged Resident Bytes
- System Cache Resident Bytes
- System Code Resident Bytes
- System Code Total Bytes
- System Driver Resident Bytes
- System Driver Total Bytes
- Timestamp Object
- Timestamp PerfTime
- Timestamp Sys100NS
- Transition Faults Per Sec
- Write Copies Per Sec

7 Operating System

The Operating System - system value type is used to retrieve information about the system's operating system. WMI is used to extract information using the Win32_OperatingSystem class. The fields retrieved from the system are:

- Boot Device
- Build Number
- Build Type
- Caption
- Code Set
- Country Code
- Creation Class Name
- CS Creation Class Name
- CSD Version
- CS Name
- Current Time Zone
- Data Execution Prevention - 32 Bit Applications
- Data Execution Prevention – Available
- Data Execution Prevention – Drivers
- Data Execution Prevention - Support Policy
- Debug
- Description
- Distributed
- Encryption Level
- Foreground Application Boost
- Free Physical Memory
- Free Space In Paging Files
- Free Virtual Memory
- Install Date
- Large System Cache
- Boot Up Time
- Local Date Time
- Locale
- Manufacturer
- Max Number Of Processes
- Max Process Memory Size
- MUI Languages
- Name
- Number Of Licensed Users
- Number Of Processes
- Number Of Users
- Operating System SKU
- Organization
- OS Architecture
- OS Language
- OS Product Suite
- OS Type
- Other Type Description
- PAE Enabled
- Plus Product ID
- Plus Version Number
- Primary
- Product Type
- Registered User
- Serial Number
- Service Pack Major Version
- Service Pack Minor Version
- Size Stored In Paging Files
- Status
- Suite Mask
- System Device
- System Directory
- System Drive
- Total Swap Space Size
- Total Virtual Memory Size
- Total Visible Memory Size
- Version
- Windows Directory

8 Processes

The Processes system value type is used to retrieve information about the processes running on the target system. WMI is used to extract information using the Win32_Process class. The fields retrieved from the system are:

- Process Name
- Process ID
- Parent PID
- Priority
- Thread Count
- Handle Count
- Handle
- Creation Class Name
- Creation Date
- Kernel Mode Time
- Maximum Working Set Size
- Minimum Working Set Size
- OS Creation Class Name
- Other Operation Count
- Other Transfer Count
- Page Faults
- Page File Usage
- Peak Page File Usage
- Peak Virtual Size
- Peak Working Set Size
- Private Page Count
- Quota Non Paged Pool Usage
- Quota Paged Pool Usage
- Quota Peak Non Paged Pool Usage
- Quota Peak Paged Pool Usage
- Read Operation Count
- Read Transfer Count
- Session ID
- Status
- User Mode Time
- Virtual Size
- Working Set Size
- Write Operation Count
- Write Transfer Count
- Executable Path

9 Processor

The Processor system value type is used to retrieve information about the target system's processor. WMI is used to extract information using the Win32_Processor class. The fields retrieved from the system are:

- Address Width
- Architecture
- Availability
- Caption
- Config Manager Error Code
- Config Manager User Config
- Cpu Status
- Creation Class Name
- Current Clock Speed
- Current Voltage
- Data Width
- Description
- Device ID
- Error Cleared
- Error Description
- Ext Clock
- Family
- Install Date
- L2 Cache Size
- L2 Cache Speed
- L3 Cache Size
- L3 Cache Speed
- Last Error Code
- Level
- Percentage
- Manufacturer
- Max Clock Speed
- Name
- Number Of Cores
- Number Of Logical Processors
- Other Family Description
- PNP Device ID
- Power Management Capabilities
- Power Management Supported
- Processor Id
- Processor Type
- Revision
- Role
- Socket Designation
- Status
- Status Info
- Stepping
- System Creation Class Name
- System Name
- Unique Id
- Upgrade Method
- Version
- Voltage Caps

10 Processor Performance (Processor Perform)

The Processor system value type is used to retrieve information about the target system processor's performance. WMI is used to extract information using the Win32_PerfRawData_PerfOS_Processor class. The fields retrieved from the system are:

- Name
- C1 Transitions Per Sec
- C2 Transitions Per Sec
- C3 Transitions Per Sec
- DPC Rate
- DPCs Queued Per Sec
- Frequency Object
- Frequency Perf Time
- Frequency Sys 100 NS
- Interrupts Per Sec
- Percent C1 Time
- Percent C2 Time
- Percent C3 Time
- Percent DPC Time
- Percent Idle Time
- Percent Interrupt Time
- Percent Privileged Time
- Percent Processor Time
- Percent User Time
- Timestamp Object
- Timestamp Perf Time
- Timestamp Sys 100 NS
- Caption
- Description

11 Registry

The Registry system value type is used to retrieve information about the target system's registry. WMI is used to extract information using the StdRegProv class. The fields retrieved from the system are:

- Key Name
- Key Value
- Key Type
- Registry Tree
- Registry Path
- 32 or 64 bit value

12 Services

The Services system value type is used to retrieve information about the target system's services. WMI is used to extract information using the Win32_Service class. The fields retrieved from the system are:

- Service Name
- State
- Start Mode
- Process ID
- Description

Appendix B – Explorer Dashboard Main Menu

The Explorer Dashboard's Main Menu provides a complete list of options needed to interact with the system. This section describes each of the menu options.

Main Menu Options:

1. File
 - 1.1. New
 - 1.2. Open
 - 1.3. Save
 - 1.4. Save As
 - 1.5. Exit
2. Monitors
 - 2.1. Add
 - 2.2. Edit
 - 2.3. Delete
 - 2.4. Delete All
 - 2.5. Clone
 - 2.6. Test Monitor
 - 2.7. Test All Monitors
 - 2.8. Clear All results
3. Configuration
 - 3.1. Host Systems
 - 3.2. Email Profiles
 - 3.3. FTP Profiles
4. System
 - 4.1. Load System Values
 - 4.2. Clear System Values
 - 4.3. Compare System Values
5. Share
6. View
 - 6.1. Show/Hide System Values
 - 6.2. Resize Tables
7. Help
 - 7.1. License Info
 - 7.2. About

1 File

This option groups all of the file functions.

1.1 New

“New” clears the Monitor Table entries. It prompts the user to save if monitors have been modified.

1.2 Open

“Open” provides the dialog necessary to open a monitor file. Depending on the system options, “Open” may simply load the default monitor file without additional input.

1.3 Save

“Save” will save the information in the Monitor Table to a monitor file. If a current file has not been specified, the system prompts for a file name. Depending on system options, this option may simply save the information to a default file without additional input.

1.4 Save As

“Save As” prompts the user to specify a new file name. Depending on system options, this option may not be present. The “Save” option may be used in this case.

1.5 Exit

“Exit” terminates the application. If the Monitor Table has been modified, the user is prompted to save before exiting.

2 Monitors

This option groups all Monitor functions

2.1 Add

“Add” is used to add a monitor to the Monitor Table based on the Monitor Type selected in the drop-down list. “Add” displays the “Add Monitor” form specific to the Monitor Type specified.

2.2 Edit

“Edit” is used to modify the highlighted entry in the Monitor Table. “Edit” displays the appropriate Edit Monitor form.

2.3 Delete

“Delete” is used to remove a highlighted entry from the Monitor Table. The user is prompted to confirm the deletion.

2.4 Delete All

“Delete All” will delete all of the entries in the Monitor Table. The user is prompted to confirm the deletion.

2.5 Clone

“Clone” is used to make a duplicate copy of the highlighted entry in the Monitor Table. The appropriate Edit Monitor form is displayed so the necessary changes can be made to the entry.

2.6 Test Monitor

“Test Monitor” is used to test or evaluate a highlighted monitor against the server specified in the System dropdown list.

2.7 Test All Monitors

“Test All Monitors” tests or evaluates all of the entries in the Monitor Table against the server specified in the System dropdown list.

2.8 Clear All Results

“Clear All Results” clears all of the test results in the Monitor Table. The “Alarm”, “Test Result” and “Test Result Details” columns are cleared.

3 Configuration

This option groups all of the configuration options.

3.1 Host Systems

“Host Systems” displays the Host System Configuration form where Host Systems can be added, edited and deleted. Adding a host system allows the testing of monitors against the system.

3.2 Email Profiles

“Email Profiles” displays the Email Profile Configuration form where email profiles can be added, edited or deleted. Email profiles are required to be able to email Monitor Table test results and System Values Table results.

3.3 FTP Profiles

“FTP Profiles” displays the FTP Profile Configuration form where FTP profiles can be added, edited or deleted. FTP profiles are required to be able to upload Monitor Table test results and System Values Table results via FTP.

4 System

This option groups all of the system values options.

4.1 Load System Values

“Load System Values” loads the System Values for the specified System Values specified in the dropdown list from the server specified in the System drop down list.

4.2 Clear System Values

“Clear System Values” clears any system values currently displayed in the System Values Table corresponding to the System Value type specified in the System Values drop down list, and to the server specified in the System drop down list.

4.3 Compare System Values

“Compare System Values” displays the Compare System Values form where system values from different servers can be compared using various filters.

5 Share

“Share” displays the Share (Email, FTP, File) form which can be used to email, FTP, or save to a file the Monitor Table test results and the System Values Table information.

6 View

This option groups all of the user interface (UI) view display functions.

6.1 Show/Hide System Values

“Show/Hide System Values” toggles whether the System Values Table is displayed or not. The Monitor Table is expanded if the System Values Table is not visible.

6.2 Resize Tables

“Resize Tables” displays the Resize View Tables form which allows the resizing of the Monitor Table and the System Values Table.

7 Help

This option groups all of the Help options

7.1 License Info

“License Info” will show the license dialog window that indicates whether a valid license file is available, and will display license details including the license status, duration, and the assets delivered with the license file.

7.2 About

“About” displays information about Explorer Dashboard including version number.

Appendix C – Resizing Monitor and System Values Tables

Hiding System Values Table

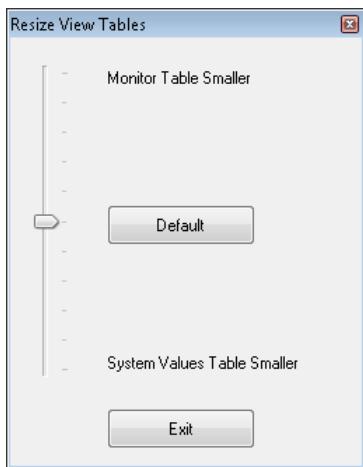
When working with Monitors, the user may want to temporarily hide the System Values Table to maximize the amount of space available to the Monitor Table. The system can be set to hide the System Values Table by clicking on the main menu's **View -> Show/Hide System Values** this toggles whether the System Values Table is visible or not. Additionally, with the System Values Table showing, simply right-clicking the System Values Table and selecting "Hide System Values Table" hides the System Values Table. The "Show/Hide System Values" button  can be used to toggle the System Values Table's visibility.

Resizing Monitor and System Values Tables

The proportion of vertical screen space allotted to the Monitor Table and the System Values Table can be modified. The user may choose to increase/decrease space given to a particular table depending on the nature of the work being done and the number of records in each table.

To resize the tables, click on the main menu's **View -> Resize Tables**. The "Resize Tables" button  displays the "Resize View Tables" form with a vertical slider. Moving the slider up decreases the Monitor Table height and increases the System Values Table height while moving the slider down increases the Monitor Table height and decreases the System Values Table height. Clicking the Default button resets the form with equal distribution between the tables.

Image: Resize View Tables form.



Appendix D – Select System Values by Criteria form

Select System Values by Criteria form overview

When working with system value types that require criteria or parameters to load (Event Logs..., File/Folder... and Registry...), it is possible to load multiple tables for a given target host system. For example, a user may load multiple File/Folder... system values on a particular system.

For the remainder of system values, only one table can be loaded per system. For example, only one the Operating System table is loaded per target host system. Reloading the table overrides the previous table. This is because there is only one set of Operating System values per system.

Image: Select System Values by Criteria form showing 2 File/Folder records.

The screenshot shows a Windows application window titled "Select System Values by Criteria". The monitor type is set to "File/Folder..." and the host system is "Win10_004". The main area displays a table with two rows of data:

Curr Rec	No.	System	Monitor Type	Path	Records	Data Timestamp	Result Code	Result Message
>>>	1	Win10_004	File/Folder...	\\\Win10_004\DD	3	2015/08/12 14:19:47	0	
	2	Win10_004	File/Folder...	\\\Win10_004\CC	3	2015/08/12 14:19:53	0	

At the bottom, there are two buttons: "Select Record" with a green checkmark icon and "Exit" with a red X icon.

The image above shows 2 File/Folder system value records in memory that can be loaded into the System Values Table. The section below details the table columns.

- **Curr Rec:** Indicates the active record ">>>" that is displayed in the System Values Table.
- **No.:** Contains the row number.
- **System:** Contains the target host system from which the system values were loaded.

- **Monitor Type:** Contains the System Values/Monitor type.
- **Path:** Contains the path used to extract the file/folder information on the target host system.
- **Records:** Indicates the number of rows that are loaded into the table
- **Data Timestamp:** Indicates the date/time that the system values were loaded from the target host system.
- **Result Code:** This is the result code returned when loading the system values. This column is typically 0 (success) but contains the error or warning code in the case of an error.
- **Result Message:** This column is typically empty when system values are loaded successfully. This column contains the error or warning description in case the system values could not be loaded successfully.

Selecting a Record

If you need to select a different record than the current record (denoted by “>>>” in the “Curr Rec” column), click the new record to highlight the table row and click “Select Record” button which closes the form and update the System Values Table with the new record.

Appendix E – Key Comparison Table Fields

This section outlines the Key Comparison Table Fields (used in the Comparison Table) which determine:

1. The key field that makes the record unique
2. The fields that are used to evaluate whether the record on the Primary system is the same as the record on the Secondary system

On the “Compare System Values” form, the table column headers that have the [*1] suffix indicate the key field that makes the record unique. The table column headers that have the [*2] suffix indicate the fields that are used to determine whether the record on the Primary system is the same as the record on the Secondary system.

Image: Comparing System Values – File/Folder

The screenshot shows a Windows application window titled "Compare System Values". The window has tabs for "Systems - Primary" (Win10_004) and "Secondary" (Win10_005). The "System Values Type" dropdown is set to "File/Folder...". The table displays 8 rows of data, each representing a file or folder. The columns are: Row #, Rec #, System, System Values Type, File Name [*1], File Date/Time [*2], File Size [*2], and Path. The data is as follows:

Row #	Rec #	System	System Values Type	File Name [*1]	File Date/Time [*2]	File Size [*2]	Path
1	1	Win10_004	File/Folder...	Text1.txt	2015/08/10 14:38:47	19	\Win10_004\CC
2	2	Win10_005	File/Folder...	Text1.txt	2015/08/10 15:14:26	21	\Win10_005\CC
3	3	Win10_004	File/Folder...	Text2.txt	2015/08/10 15:14:38	252	\Win10_004\CC
4	4	Win10_005	File/Folder...	Text2.txt	2015/08/10 15:14:38	252	\Win10_005\CC
5	5	Win10_004	File/Folder...	Text3.txt	2015/08/10 18:08:12	2,223	\Win10_004\CC
6		Win10_005	File/Folder...				
7		Win10_004	File/Folder...				
8	6	Win10_005	File/Folder...	Text4.txt	2015/08/10 18:07:22	12	\Win10_005\CC

The image above illustrated the Comparison Table loaded with File/Folder system values.

Unique Key Field: The File Name [*1] column determines the key field that makes the record unique (File Name).

Fields used to compare system values between systems: The “File Date/Time [*2]” column and the “File Size [*2]” column are used to evaluate whether the value is equal on the Primary and Secondary systems

Each System Values type has its own set of fields. The table below lists the key Comparison Table fields for each system value type.

Table: Key Comparison Table fields by system value type

System Value Type	Unique Key Fields	Fields used to compare system values
Disk Space	▪ Drive	▪ Bytes Available ▪ Total Disk Space
Environment Vars	▪ Env Var Name	▪ Env Var Value
Event Logs...	▪ Level ▪ Source ▪ Event ID ▪ Task Category	▪ Rec # (Event logs are deemed to be the same if the same number of records are logged on both systems with the same set of Unique Key Fields).
File/Folder...	▪ File Name	▪ File Date/Time ▪ File Size
Installed Apps	▪ Application Name ▪ Version	▪ Rec # (Installed Apps are deemed to be the same if the same number of records appear on both systems with the same set of Unique Key Fields).
Memory Perform	▪ Key	▪ Value
Operating System	▪ Key	▪ Value
Processes	▪ Process Name	▪ Rec # (Processes are deemed to be the same if the same number of records appear on both systems with the same set of Unique Key Fields).
Processor	▪ Key	▪ Value
Processor Perform	▪ Name	▪ All fields returned by the system except the Caption and Exception fields.
Registry	▪ Key Name	▪ Key Value ▪ Key Type
Services	▪ Service Name	▪ Rec # (Services are deemed to be the same if the same number of records appear on both systems with the same set of Unique Key Fields).

Appendix F – Troubleshooting WMI connections to remote servers

Making Sure Target System is defined

The first step is to make sure that the server has been properly configured in Explorer Dashboard before trying to connect to it. Refer to the section: [9. Host System Configuration](#) for more information. Make sure that the correct IP address, user name and password are specified. If using the system name, make sure that the name can be resolved. If the name cannot be resolved, try using the IP address of the machine. Your network administrator should be contacted for network-specific issues.

Loading System Values

Proceed to load system values from the server. Refer to the section: [6. Loading System Values](#) for more information.

Troubleshooting - RPC Server is unavailable

If the system returns with the message: "... RPC server is unavailable" then there is an issue connecting to the remote server. This can be due to various factors including the server, network, firewall etc...

Step 1 – Make sure that the server is visible on the network

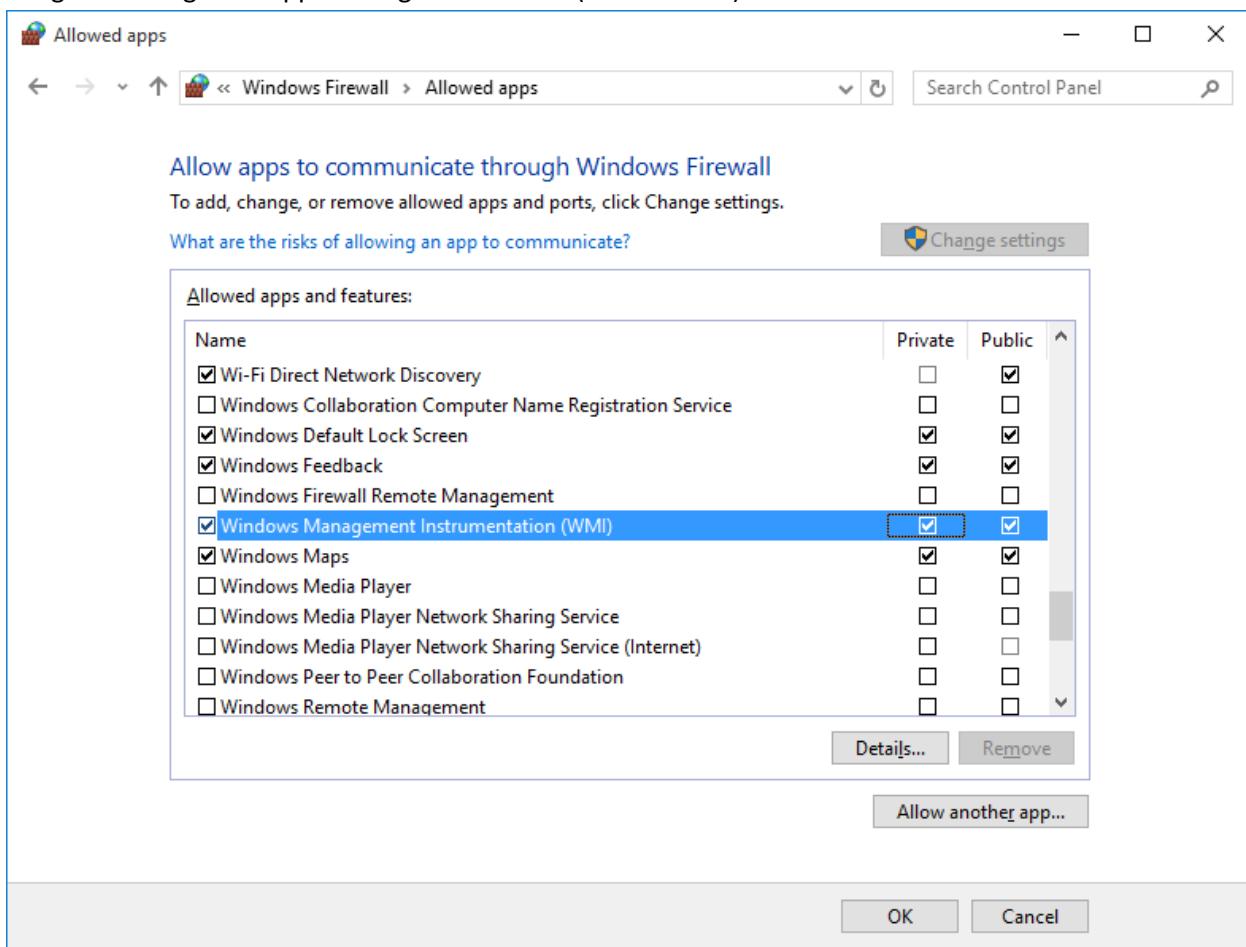
Try to ping the server IP address or the server name by using the ping command in a command prompt window. If the server name is being used, and the ping requests time out, try using the server's IP address. If the server IP address cannot be pinged successfully contact your network administrator. Note that Port 135 is the default port used by WMI.

Step 2 – Verifying the firewall

If you can successfully ping the server, and are still getting the "...RPC server is unavailable" message, you need to verify the Firewall settings on the server. If the firewall is enabled, you need to allow WMI traffic through.

To do so, on the remote server access **Control Panel -> Windows Firewall** and click on "Allow an app or feature through Windows Firewall". You may have to click on "Change Settings" and make sure that Windows Management Instrumentation (WMI) has the "Public" and/or "Private" check boxes are checked depending on what network is used to access the server via WMI.

Image: Allowing WMI apps through the firewall (Windows 10)

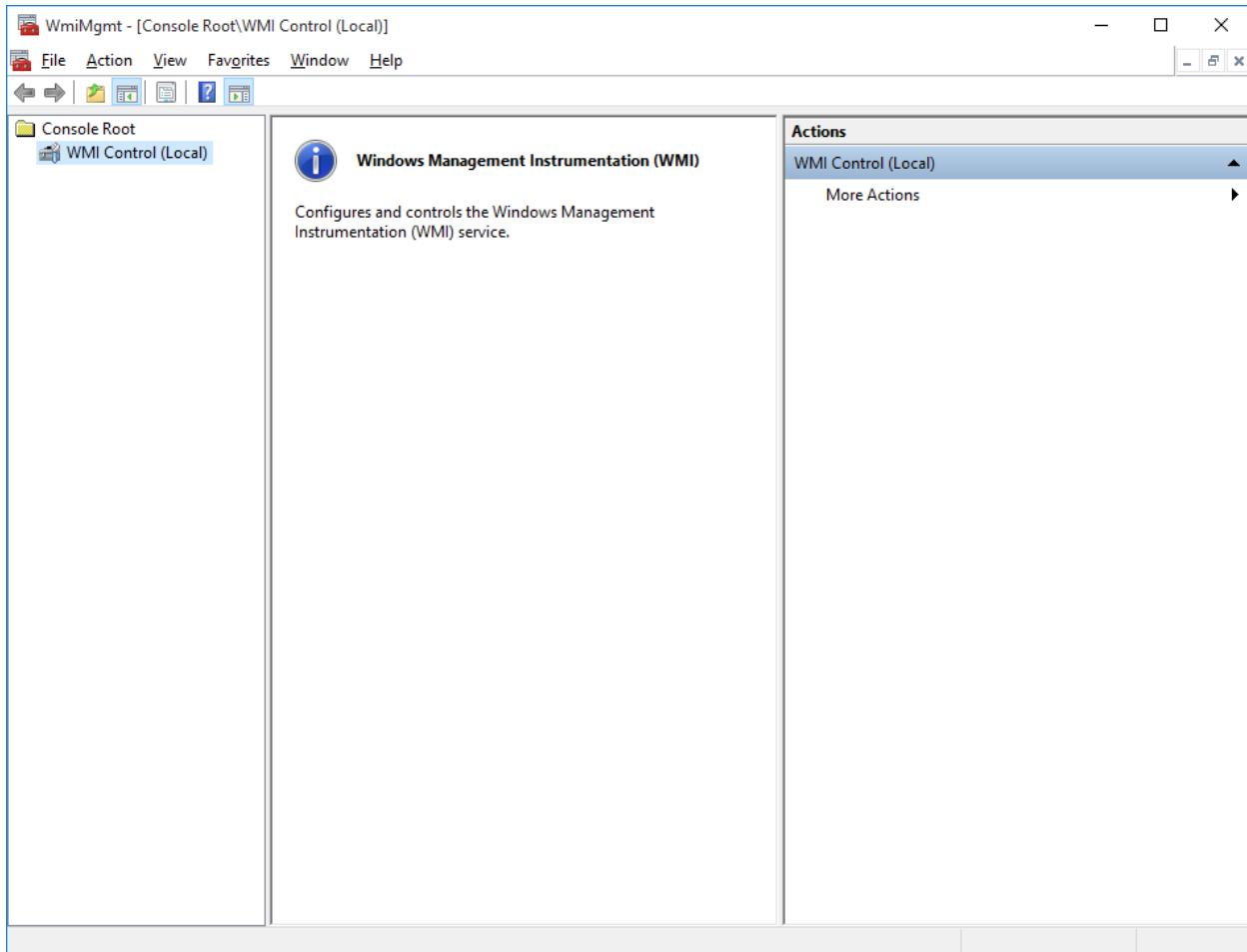


If the “...RPC server is unavailable” message persists, you may need to contact your network administrator.

Troubleshooting - Access is Denied

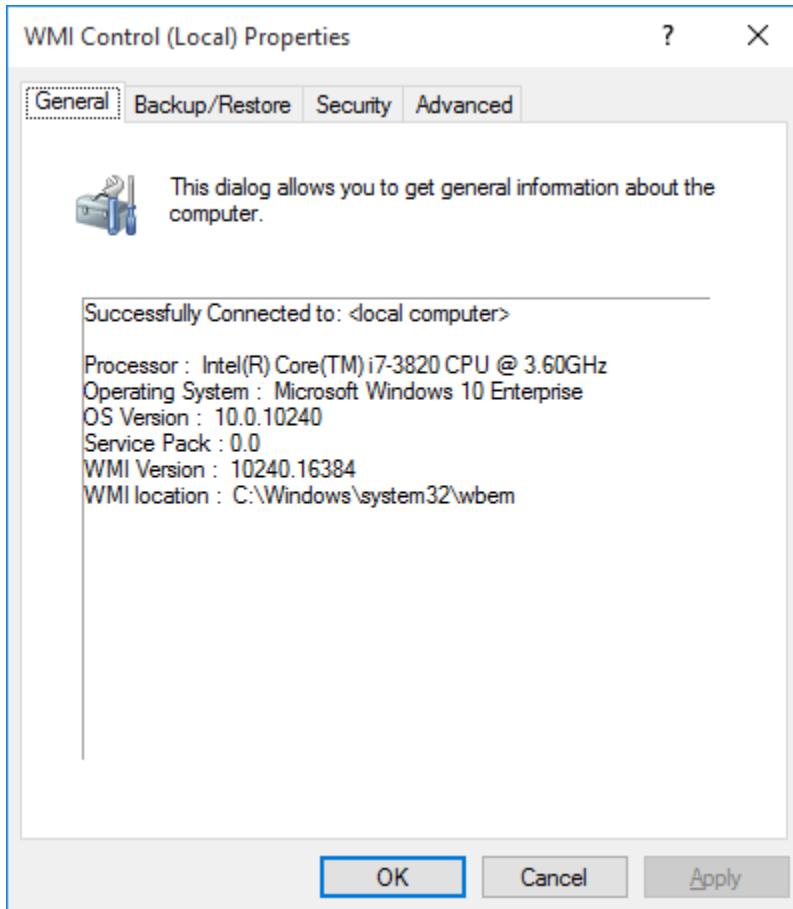
Step 1 – Verifying WMI locally on the remote server

On the remote server, run “wmimgmt.msc”, this displays the WMI Management Console.



Right-click on WMI Control (local) and click on properties, there should be a successfully connected as illustrated in the image below.

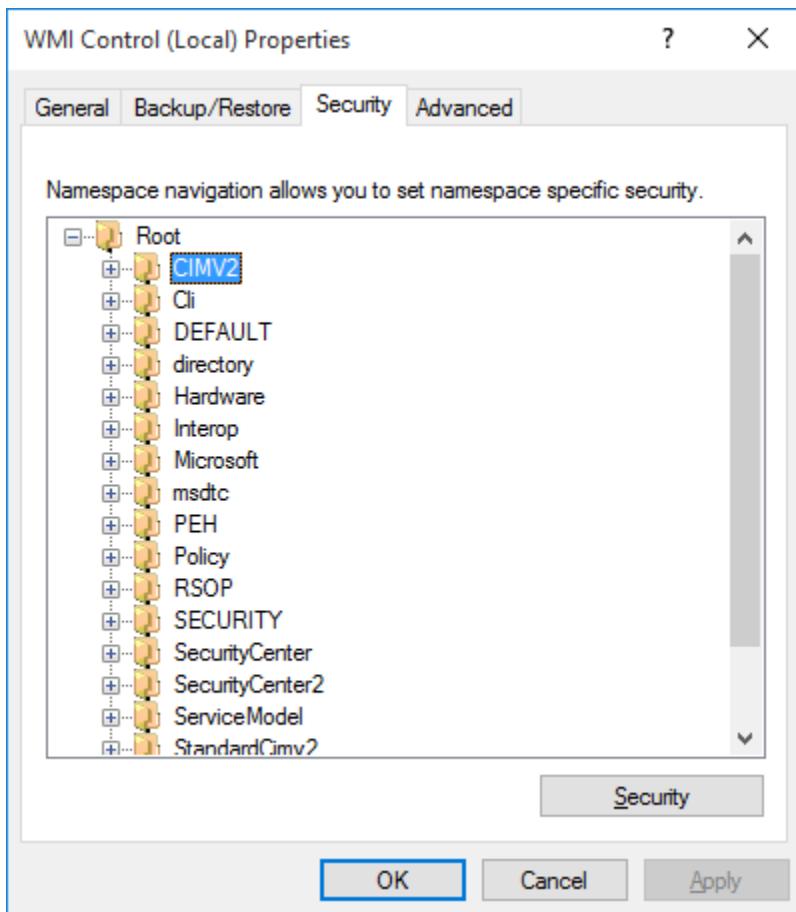
Image: WMI Control local properties successfully reported.



If an error is reported, verify that the Administrator's group has "Service" added as a member. The server administrator should be contacted.

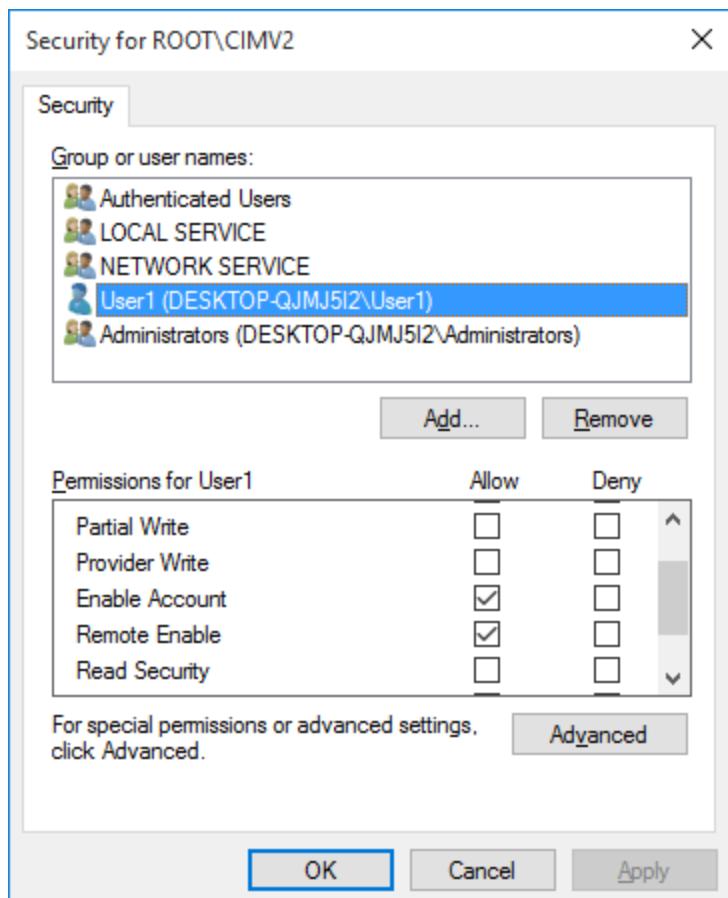
Step 2 – Verifying WMI rights on the remote server

In the WMI Control (Local) Properties form, (outlined in Step 1) click on the security tab.

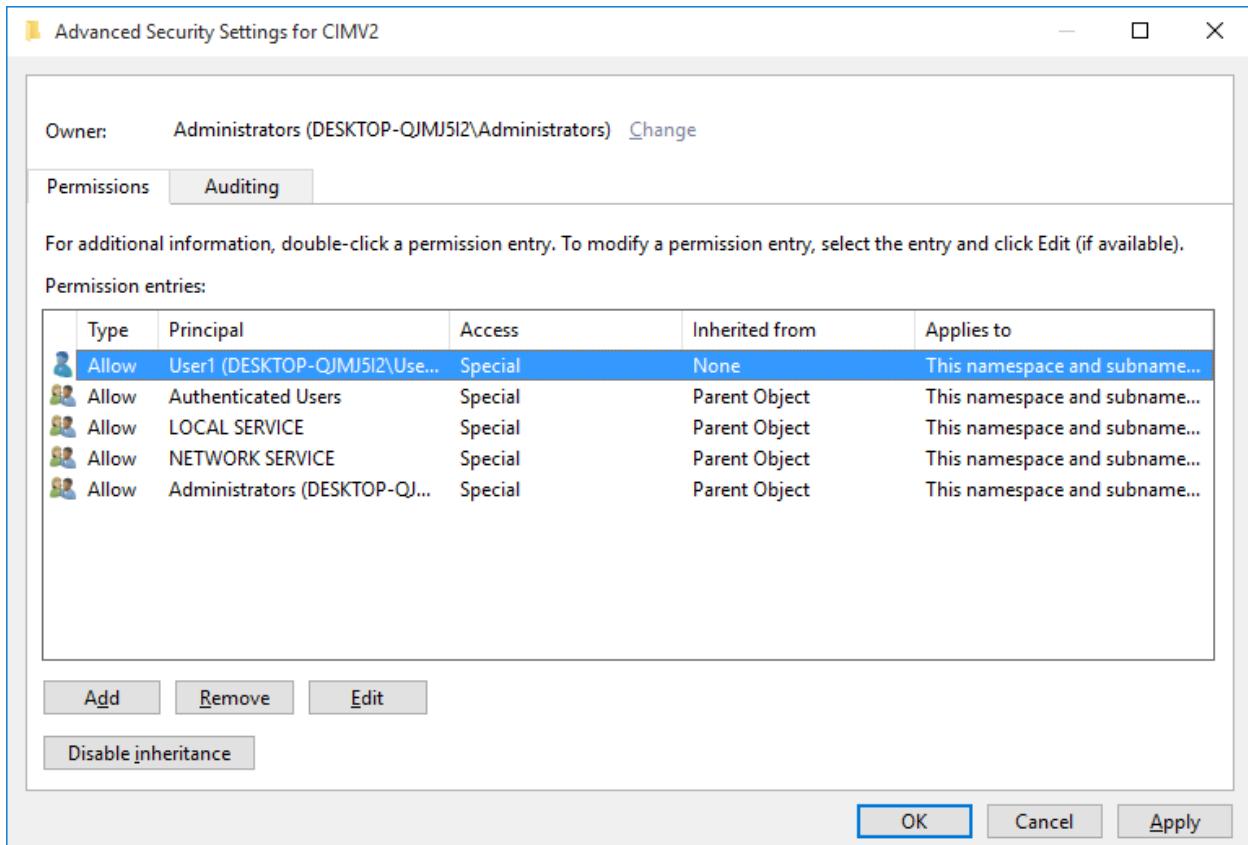


Click and highlight **CIMV2** and click **Security** it brings up “Security for ROOT\ CIMV2”.

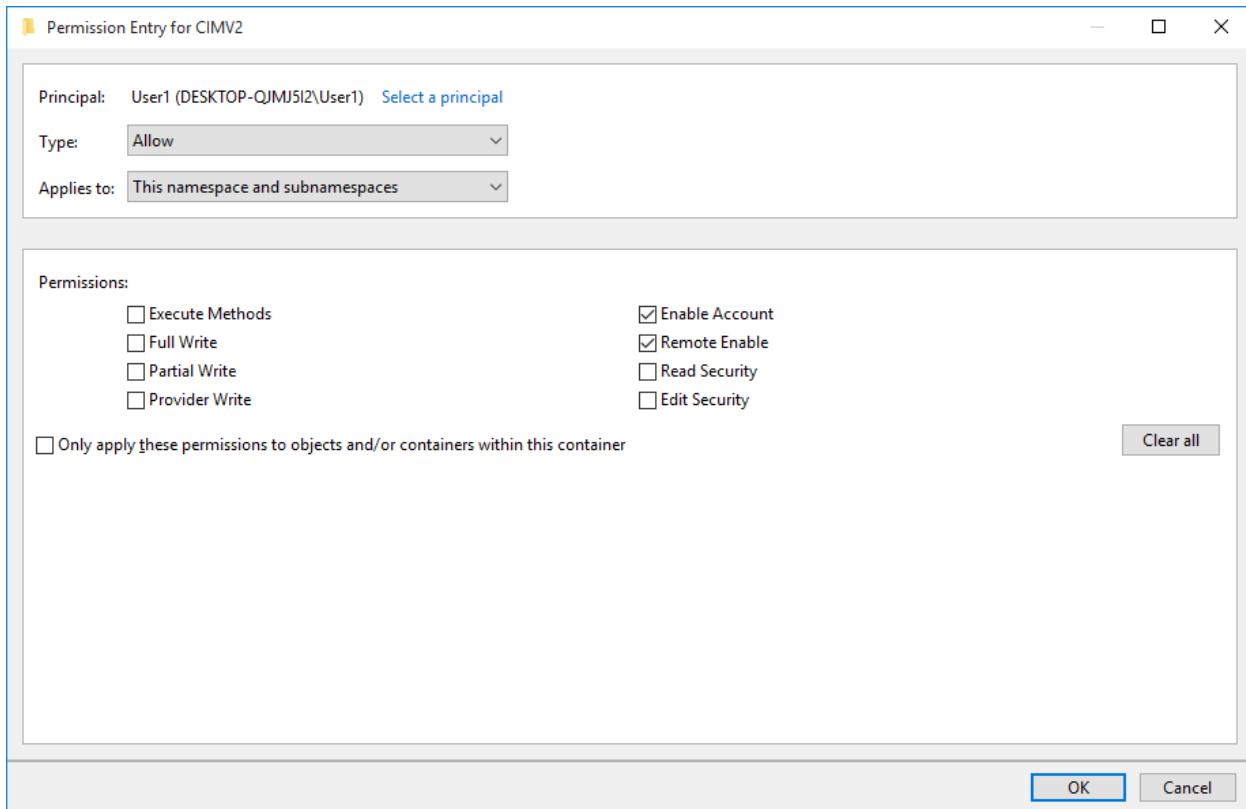
Click **Add** to select the user account on the server that is used to access the WMI information from Explorer Dashboard. Make sure that **Enable Account** and **Remote Enable** are checked.



Click **Advanced** and make sure that for the user being added (User1 in our case), which displays the **Advanced Security Settings for CIMV2** form.



Highlight the user being configured (User1 in this case), and click **Edit**. From the Permission Entry for CIMV2, make sure that the **Applies To:** drop down is set to “**This namespace and subnamespaces**”.



Click OK to close **Permission Entry for CIMV2** form.

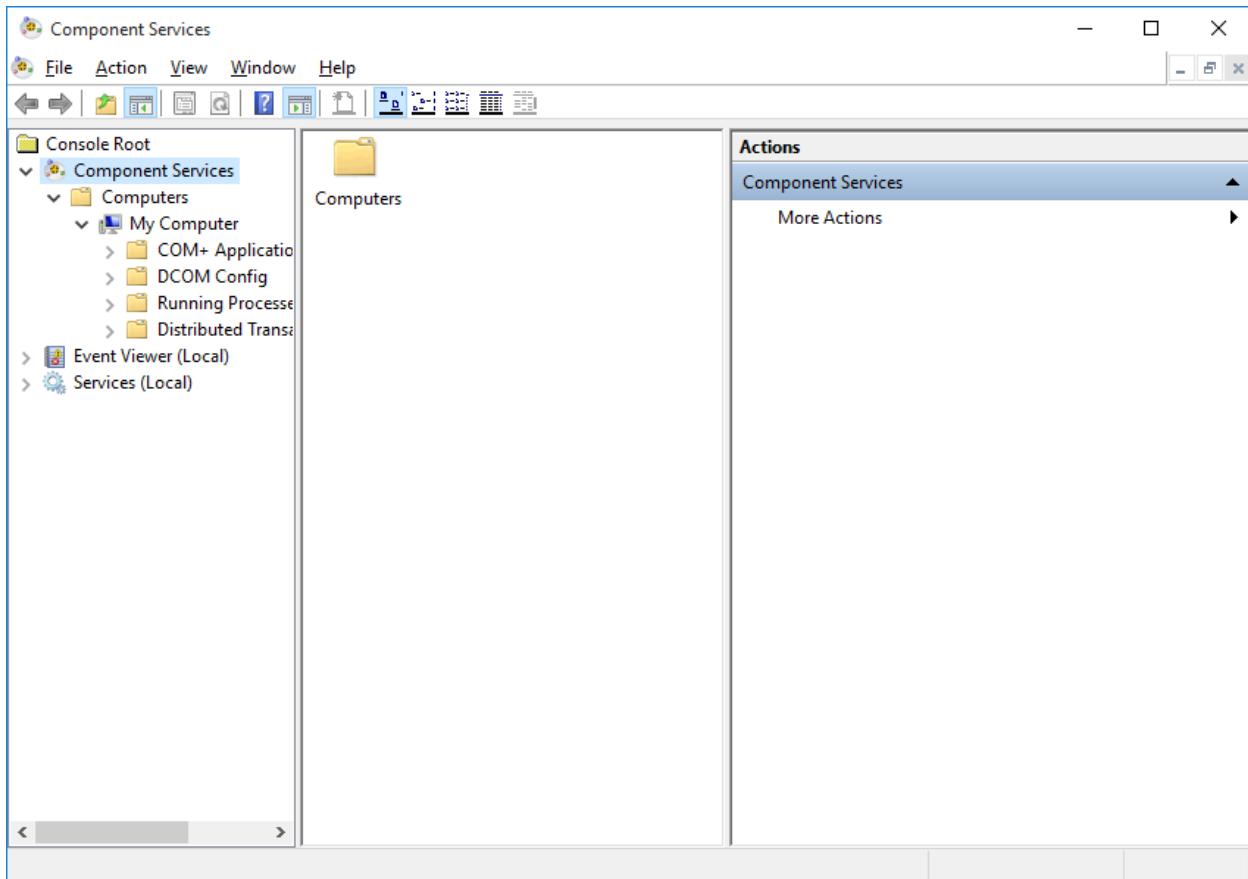
Click OK to close **Advanced Security Settings for CIMV2** form.

Click Apply and OK to close **Security for ROOT\CIMV2** form.

Click OK to close **WMI Control (Local) Properties** form.

Step 3 – Verifying DCOM permissions

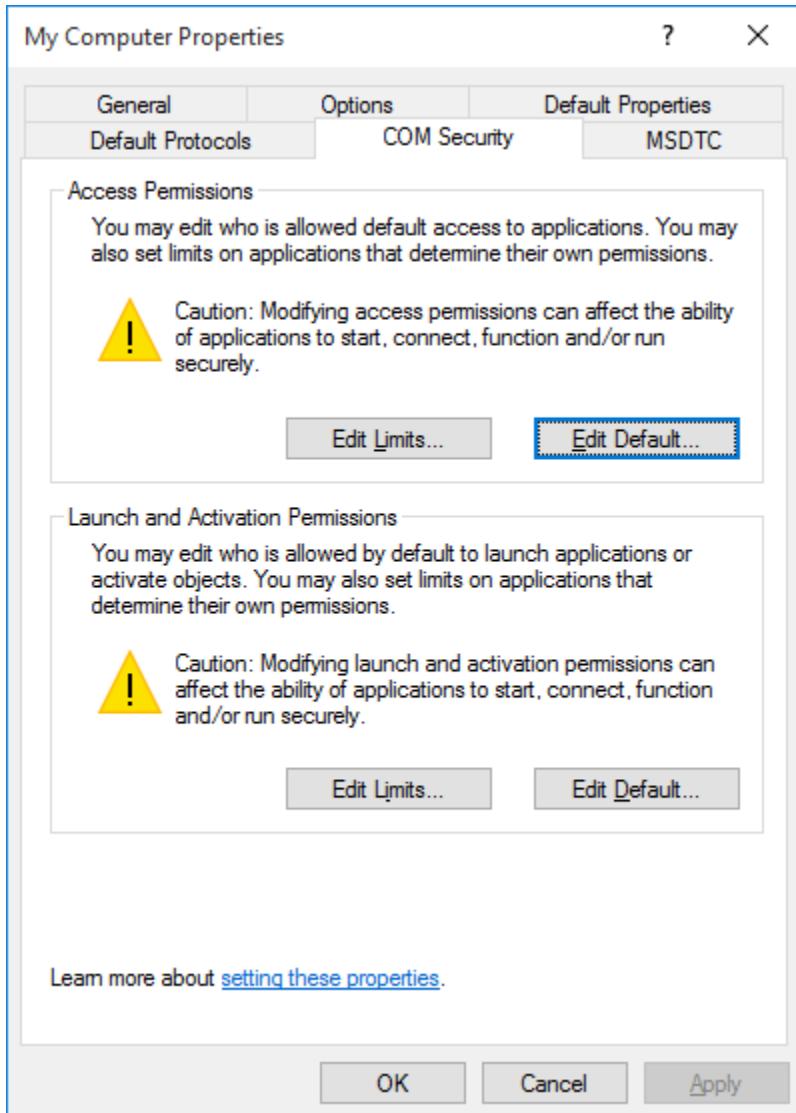
On the remote server, run dcomcnfg. The Component Services form is displayed.



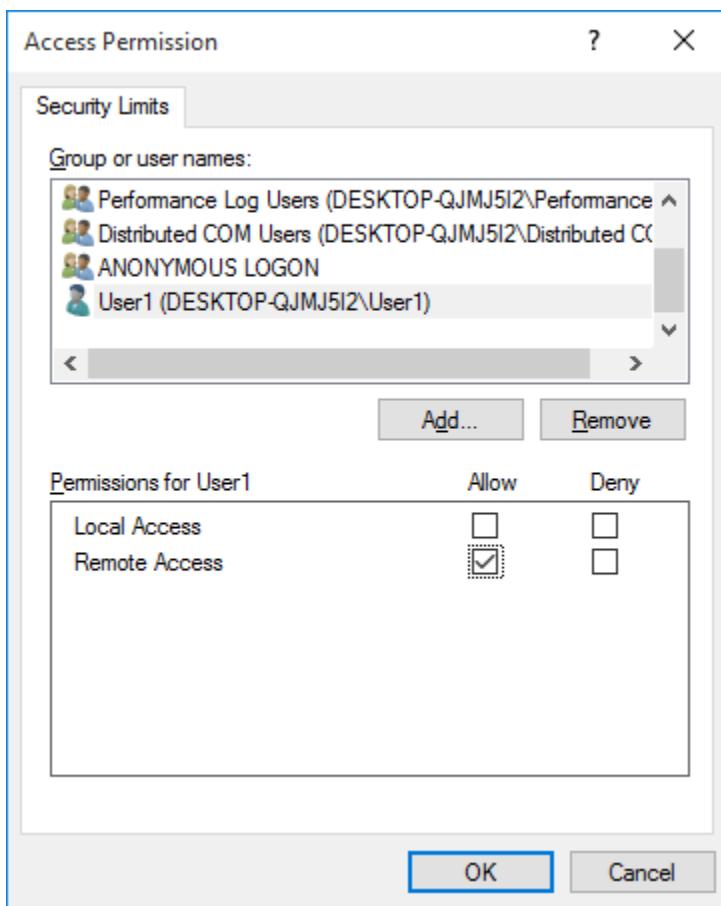
Expand **Component Services** -> **Computers** -> **My Computer**

Right-click **My Computer** and click **Properties**. The **My Computer Properties** form is displayed.

Click the **COM Security** tab

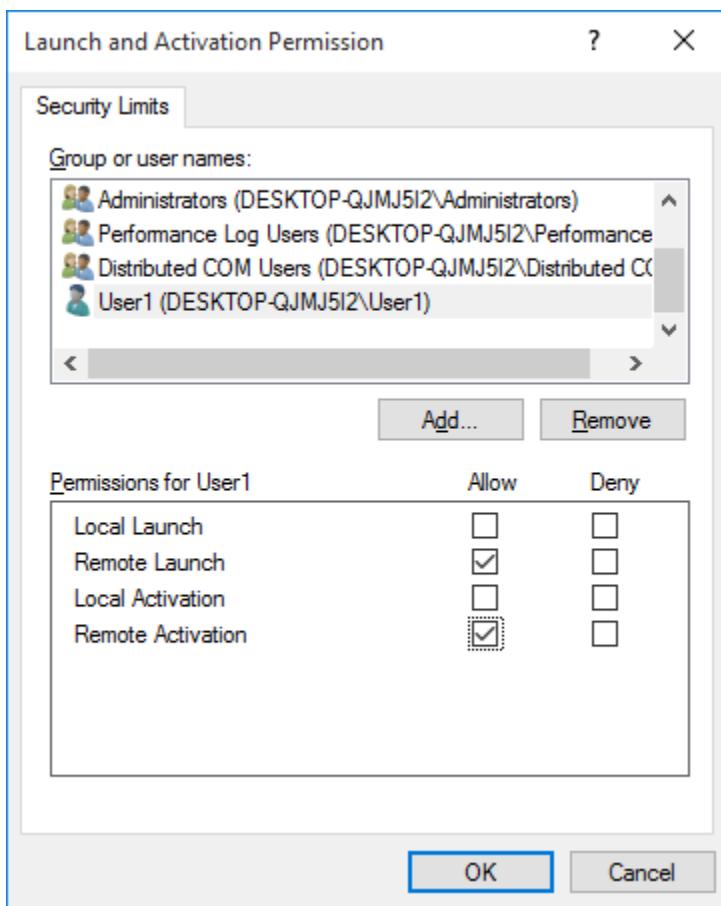


For Access Permissions, click **Edit Limits**



Click **Add** to add the user (User1 in this case), making sure that **Remote Access** is checked in **Permissions for User1**. Click **OK** to close.

For Launch and Activation Permissions, click **Edit Limits**.



Click **Add** to add the user (User1 in this case), making sure that **Remote Launch** and **Remote Activation** is checked in **Permissions for User1**.

Click **OK** to close

Click **Apply** and **OK** to commit the changes and to close the **My Computer Properties** form.

In some instances, a full system reboot may be required after configuration changes are complete.

Troubleshooting - Access Denied when querying WMI

This section refers to errors that may be encountered when extracting WMI information from the system. A sample error may read as follows:

```
Process: Loading Monitor Type: Services on host 1190.168.1.110
Message received: Process: Extracting fields from server 190.168.1.110 with query:
Select name, State, ProcessID, StartMode, Description from Win32_Service
Error received: Access denied
```

Step 1 – Verify that user is part of administrators group

Verify that the user that is being used to query the remote server is part of the Administrators group on the remote server. Please contact your system administrator to verify the user credentials.

Step 2 – Verify UAC remote restrictions

This error is typically encountered for some of the System Value types (namely Event Logs, Memory Performance, Processor Performance, Registry or Services) you may need address the UAC remote restrictions. The following is outlined in the Microsoft Knowledgebase #951016.

Follow the instructions set forth by Microsoft. The information in the table below is provided as-is for your convenience.

Table: Creating the “LocalAccountTokenFilterPolicy” registry key

On the remote server, create the following registry key:

Locate the following registry Key:

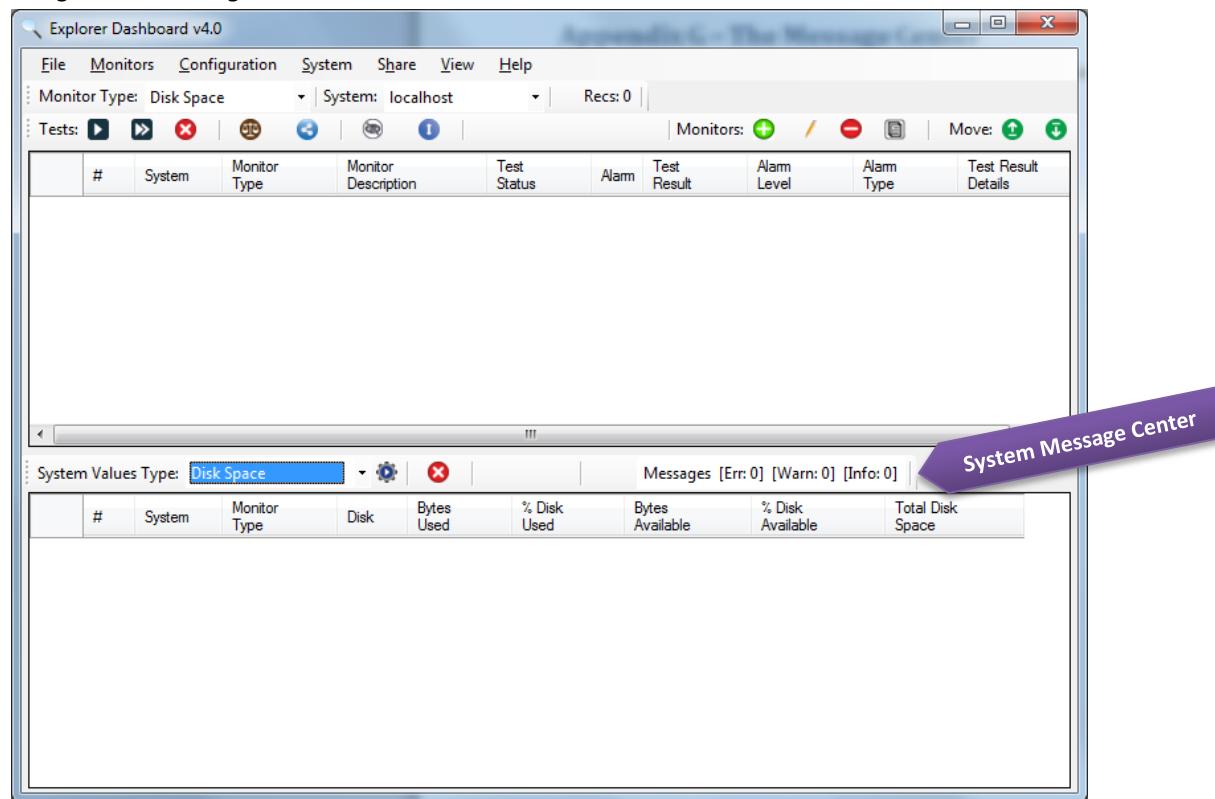
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Policies\System

If the **LocalAccountTokenFilterPolicy** registry entry does not exist, create it as a DWORD and set its value to 1.

Appendix G – The Message Center

The message center is a control on the System Values Toolbar used to inform the user of important system messages.

Image: The Message Center



Message Center Control

The Message Center control provides a summary of the total number of messages that have occurred since the messages were last cleared. In the image above, we can see the following information:

Messages [Err: 0] [Warn: 0] [Info: 0]

This means that there are 0 Error messages, 0 Warning Messages, and 0 Information messages.

When the system logs messages to the message center, the totals are updated accordingly.

Additionally, the Message center control changes color depending on the highest priority message that was logged.

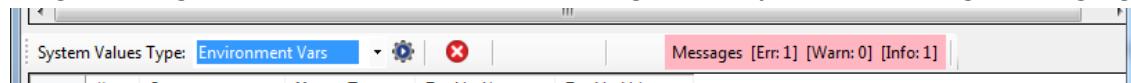
If an “information” message is logged (low priority), the control turns green. If a “warning” message is logged (medium priority), the control turns yellow. If an error message is logged (high priority), the control turns red.

If multiple messages with different priorities are logged, then the control turns the color of the highest priority message. Once the Message Center control is clicked to read the messages, the control returns to its normal color until the next message is logged.

Getting Message Details

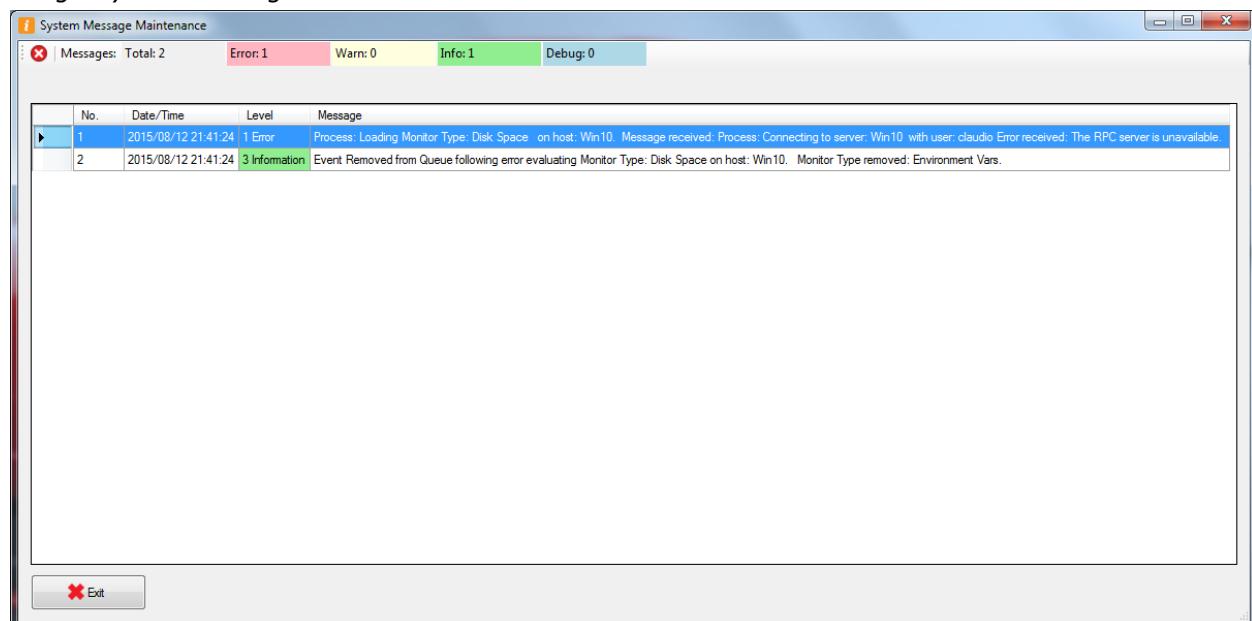
Hovering the mouse over the Message Center control, will display a window with a summary of the 5 most recent messages. To get a complete list of messages, simply click on the Message Center control and System Message Maintenance form is displayed.

Image: Message Center control shows 1 Error message and 1 Information message (red highlight)



In the image above, we can see 1 Error message and 1 Information message. The control turns red, the color of the highest priority message. Clicking on the control opens the System Message Maintenance screen as illustrated in the image below.

Image: System Message Maintenance screen



The messages indicate an attempt to load Disk Space information from an unreachable system (Win10) followed by a request to load Environment Vars from the same system.

Line 1 indicates that the server Win10 is unreachable so the error is logged.

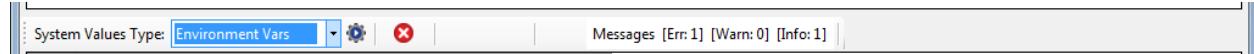
Line 2 indicates that the system removed the pending (Environment Vars) request from server Win10 since an error occurred on that server.

Clearing System Messages

To clear the system messages, click the “Clear All Messages” button  or right-click the message table and click on “Clear All Messages”. Click the “Exit” button to close the form.

Note that once the System Message Maintenance form is opened, the color is reset on the Message Center control as illustrated in the image below.

Image: Message Center control shows 1 Error message and 1 Information message (no highlight)



Appendix H – Sample Google Mail (Gmail) Account Setup

This section outlines an Email Profile setup required to send emails via your Google Mail (Gmail) account.

Make sure that you create a Google Mail (Gmail) account. Note the user name (email address) that you have created. You can replace the “user.name@gmail.com” used below by your Gmail address.

On the Main Menu, click **Configuration -> Email Profiles**. This brings up the “Email Profile Configuration” form. To add the new profile, click the “Add New Email Profile” button .

The section below outlines the key fields to fill in.

Key Fields

- **Email Profile ID/Name:** Specify a unique descriptive name for this email profile.
- **From:** Use your Gmail email address here.
- **To:** Specify the list of emails to send the email to (separated by semi-colons “;”).
- **Cc:** Specify the list of emails to copy (separated by semi-colons “;”).
- **Bcc:** Specify the list of emails to blind copy (separated by semi-colons “;”).
- **Priority:** Set the priority to set for the emails sent (Low, Normal, High).
- **Subject:** Specify the subject of the email that is sent.
- **SMTP Email Server:** Use “smtp.gmail.com” for Google mail.
- **Email User:** Specify the user name to log into server – your email address in this case.
- **Email Password:** Specify the password used to log into your Gmail account.
- **SMTP Port:** Specify the SMTP Port to use or 587 for Gmail.
- **Enable SSL:** This checkbox needs to be checked for Gmail accounts.

These settings are provided as-is for your convenience. Please contact your email provider to obtain the settings that are correct for your accounts.

A sample setup of a Gmail account is illustrated in the image below.

Image: Email Profile for a sample Gmail account

Email Profile Configuration

Email Profile:    

Email Profile Name/ID: Sample GMail Account

From: user.name@gmail.com

To: user1@yourdomain.com

Cc: user2@yourdomain.com

Bcc:

Priority: Normal

Subject: System Info - Tech Support - Dashboard Explorer

* Email addresses must be separated by a semi-colon ;

SMTP Email Server: smtp.gmail.com

Email User: user.name@gmail.com

Email Password: 

SMTP Port: 587

Enable SSL

 Exit

Appendix I – Creating a sample Monitor from a System Values Entry

Creating a monitor from a System Values Table entry is a quicker and easier way to create a monitor. Field values on the “Add Monitor” form are pre-loaded with information from the System Values Table entry, and suggestions are offered when filling in the form fields.

In the example below, we create an Operating System monitor from an entry in the System Values Table. The steps are:

1. Select “Operating System” in the “Monitor Type” control and set the “System” on the Monitor Info Toolbar.
2. Click on the “Load System Values” button on the System Values Toolbar below.
3. Once the system values are loaded, highlight the entry from which you wish to create the monitor.
4. Click the “Add Monitor” button to bring up the “Add Monitor” form.

Image: Operating System values are loaded in the System Values Table

The screenshot shows the Explorer Dashboard v4.0 interface. At the top, there's a toolbar with various icons for file operations like Open, Save, Print, and Help. Below the toolbar, a menu bar includes File, Monitors, Configuration, System, Share, View, and Help. A status bar at the bottom displays "Messages [Err: 0] [Warn: 0] [Info: 0] Recs: 63".

The main area contains two tables. The top table is titled "Monitors" and has columns for #, System, Monitor Type, Monitor Description, Test Status, Alarm, Test Result, Alarm Level, Alarm Type, and Test Result Details. It currently shows 0 records. The bottom table is titled "System Values Type: Operating System" and has columns for #, System, Monitor Type, Key, and Value. It shows 63 records. The row for entry #5, which corresponds to the highlighted row in the monitors table, is selected and highlighted in blue. This row contains the key "Caption" with the value "Microsoft Windows 7 Ultimate".

#	System	Monitor Type	Key	Value
1	localhost	Operating System	Boot Device	\Device\HarddiskVolume1
2	localhost	Operating System	Boot Up Time	2015/08/20 14:12:17
3	localhost	Operating System	Build Number	7601
4	localhost	Operating System	Build Type	Multiprocessor Free
5	localhost	Operating System	Caption	Microsoft Windows 7 Ultimate
6	localhost	Operating System	Code Set	1252
7	localhost	Operating System	Country Code	1
8	localhost	Operating System	Creation Class Name	Win32_OperatingSystem
9	localhost	Operating System	CS Creation Class Name	Win32_ComputerSystem
10	localhost	Operating System	CS Name	CM
11	localhost	Operating System	CSD Version	Service Pack 1

Image: Add Operating System Monitor form displayed with context-sensitive data

The screenshot shows the 'Add Operating System Monitor' dialog box. At the top, there are two dropdown menus: 'Component' set to 'Caption' and 'Comparison Type' set to 'String'. Below these are fields for 'Condition' (set to 'Caption component starts with string'), 'String' (containing 'Microsoft Windows 7 Ultimate'), and 'Case Sensitive' (unchecked). Further down are dropdowns for 'Alarm Level' (set to '5') and 'Alarm Type' (set to 'Error'). There are also fields for 'Monitor Tag' and 'Monitor Reference'. At the bottom are two buttons: 'Add Monitor' with a green checkmark icon and 'Cancel' with a red X icon.

The image above illustrates that after having clicked on “Add Monitor”, the “Add Operating System Monitor” form is displayed with information set from the System Values Table.

- The component is set to “Caption” from the highlighted entry.
- If you select a Condition that specifies a string, the value “Microsoft Windows 7 Ultimate” is filled in from the highlighted entry.
- Typing in the “String” control suggests all entries that match the string that has been typed, as illustrated in the image below.

Image: System when typing a value that has corresponding entries, matching entries are listed

The screenshot shows the 'Add Operating System Monitor' dialog box. At the top, there are two dropdown menus: 'Component' set to 'Caption' and 'Comparison Type' set to 'String'. Below these are fields for 'Condition' (set to 'Caption component starts with string'), 'String' (containing 'M'), 'Alarm Level' (containing 'Microsoft Windows 7 Ultimate |C:\Windows\Device\Harddisk0\Partition2'), and 'Alarm Type' (containing 'Multiprocessor Free'). Further down are fields for 'Monitor Tag' and 'Monitor Reference'. At the bottom are 'Add Monitor' and 'Cancel' buttons. A dropdown menu is open over the 'String' field, listing suggestions starting with 'M': 'Microsoft Corporation', 'Microsoft Windows 7 Ultimate', and 'Microsoft Windows 7 Ultimate |C:\Windows\Device\Harddisk0\Partition2'. The 'Multiprocessor Free' entry from the main list is also visible below the suggestions.

The image above illustrates that when the user types “M” in the “String” field; all values that start with the typed text will be suggested, reducing the amount of typing required and minimizing possible errors.

This functionality is offered in various fields on all “Add Monitor” forms.

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