

# About

## Centralized Drive Monitoring and Directory Monitoring

SMART Disk Monitor is a network wide drive space monitor tool enabling System Administrators to centrally monitor disk utilization, SMART predictive failure notifications, directory sizes, user access permissions, file extension break down, and recently accessed files.

### Features at a Glance

- Monitors disk utilization, SMART predictive disk failure notifications, and online status.
- Sends fully customizable email alerts to system administrators.
- Schedule executive summary reports that include disk utilization and SMART status for multiple computers and disks.
- Graphically displays multiple disks' utilization percentage.
- Stores and graphically displays disk utilization over time. Historical data is stored in CSV format optimized for Microsoft Excel.
- Monitor directory sizes and send fully customizable email notifications to users and customers.
- Create directory and file access permission reports simplifying Sarbanes Oxley auditing of mission critical data access.
- Generate file extension break down reports.
- Identify recently or rarely accessed files using our recently accessed files reports.
- Sub-directory size reports enable system administrators to quickly identify large or growing sub-directories.
- Automatically publish reports to your Intranet web server.
- Group computers by logical groups.
- Includes tray icon status.
- Sends email notification when drive monitors fail.
- Supports SMTP authentication.
- No installation requirements on managed computers or devices.

## *Architecture*

SMART Disk Monitor consists of three major components:

**User Interface:** The user interface is used to configure the disks to monitor, configure the reports to generate, and create on-demand reports.

**Windows Service:** The service monitors disks and generates scheduled reports using multi-threaded code enabling hundreds of drives and reports to run relatively fast. All non-user interface alerts are fired from the service.

**Tray Icon:** The tray icon is responsible for firing user interface dependent alerts (message box, sound, system tray popup, etc.) including application status. When the service polls disk drive usage the highest alert level is reflected in the tray icon. When the alerts status is cleared, the tray icon changes its image back to normal.

# User Interface Components

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The SMART Disk Monitor user interface is made up of several views that enable you to configure disk for monitoring, view selected item details, and view status messages.

## Network

The [Network View](#) contains four (4) root tree nodes.

### *Network*

Use the Network node to locate and configure monitoring for remote disks.

### *Local Disks*

Use the Local Disks node to configure monitoring for the local disks.

### *Mapped Computers*

Use the Mapped Computers node to add computers that are not visible from the Network node or to assign specific logon credentials for a computer.

### *Monitored Disks*

Once you configure a disk to be monitored, the disk displays under this node. Use this node to quickly re-configure or display properties of configured disks.

## Detail

The Detail view contains detailed information about the selected node in the Network view.

## History

The History view displays the selected disk's utilization history. Utilization history is only available for configured disks.

## Directory Utilization

The Directory Utilization view displays the each sub-directory's percentage utilization as a part of Network view's selected disk or directory. To display the sub-directory utilization, select the disk or directory in the Network view and the click Calculate Directory Size from the Tools menu item.

## Output

This window displays application status messages.

## Service Output

The windows service writes status messages to a log file in the program data directory. This window tails the log file and displays each status message. This file is located in the following directory:

- *Window XP/2000:* 'documents and settings\all users\application data\CornerBow\DiskMonitor\dm.log'
- *Windows Vista:* '\programdata\CornerBow\DiskMonitor\dm.log'

# System Requirements

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## **.Net Framework 2.0**

The installation detects if .Net Framework 2.0 is already installed. If not, the framework is automatically downloaded from Microsoft and then installed.

## **Domain administrator account credentials**

To access admin shares from the user interface, your login must have domain administrator rights. When scheduling the service to monitor a drive, the service must be run with domain administrator rights. The first time the application is run, you will be prompted to assign domain administrator rights to the service. For more information see [Security](#).

## **Microsoft Windows Management Instrumentation (WMI) Support**

SMART Disk Monitor uses the Microsoft Windows Management Instrumentation (WMI) API to monitor SMART predictive failure and to generate access permissions reports. WMI is preinstalled in Windows Server 2008, Vista, Windows Server 2003, Windows XP, and Windows 2000.

**Windows NT Workstation 4.0 SP4 and later:** WMI is available through "Add/Remove Windows components" in Control Panel, as WBEM option install. A later, more comprehensive, version is available as an Internet download from <http://www.microsoft.com/downloads>. See "WMI CORE 1.5 (Windows 95/98/NT 4.0)".

If WMI is not an option, SMART status will not be available and you will not be able to run access permission reports.

For information on troubleshooting WMI see [Troubleshooting](#).

# Licensing

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Corner Bowl Software offers 6 different licenses:

## Desktop

This license allows you to install the software on a single workstation and monitor disks on 20 computers. Please note, this license can not be installed on a Windows Server operating systems, however; the software can still remotely manage Windows Server computers.

## Server

This license allows you to install the software on a single server or workstation and monitor disks on 50 computers.

## Unlimited

This license allows you to install the software on a single server or workstation and manage disks on an unlimited number of computers.

## 5 Pack

Includes 5 Unlimited licenses enabling your organization to load balance, install SMART Disk Monitor on alternate networks or on various System Administrators' computers.

## Enterprise

Includes 20 Unlimited licenses and includes an additional year of support and updates for a total of 2 years of support and updates.

## Single Server

This license allows you to install the software on a single server or workstation and manage local disks only.

## *Support and Maintenance*

Your purchase of Network Event Viewer includes:

- Email and phone support for 1 year.
- Product updates for both maintenance builds and major releases for 1 year.
- In addition, annual maintenance contracts can be purchased for 50% the original list price.

## Registration

To register your software, visit <http://www.cornerbowl.com> and purchase a license. Once purchased, we will automatically email you a license key. After you receive your license key, select *Register* from the *Help* menu item. When prompted, specify the email address the license key was emailed to and the license key. Click *Submit*. Our software will transmit the email address, license key, and the active IP address's MAC address to our registration web service running on our web server. Once verified a digitally signed license file will be transmitted back to you. This file will automatically be saved to your program data directory. Licenses can be transferred to another computer upon request.

## **Update Service**

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All of our software supports automatic updates. At startup, each of our user interfaces downloads an XML file from our web server. Using version information, our software determines if an update is necessary. License information may be transmitted to our registration web service, also running on web server, to determine upgrade eligibility. If eligible, our software will download the latest version from our web server.

Each license comes with access to updates and major releases for 1 year. After that, you can purchase a maintenance contract that provides you access to updates and major releases for 1 more year.

# About Corner Bowl Software

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## *Who We Are*

Corner Bowl Software is a privately held company located in Park City, Utah, USA. We have been developing and selling software specifically for Information Technology professionals for over 7 years now. Our products are designed, developed, and continually updated in direct response to user feedback. All of our software tools are developed and supported in Park City.

## *Our Software*

Corner Bowl Software offers 4 distinct software tools that enable System Administrators to monitor and maintain their servers and workstations. We offer event log, text log, and syslog management applications as well as disk monitoring and server monitoring software tools. Our oldest and most popular applications are our event log management and disk monitoring applications (Network Event Viewer and SMART Disk Monitor). Both our text log and server monitoring tools (Text Log Monitor and Internet Server Monitor) are relatively new and quickly gaining traction. We welcome you to evaluate our software tools and very much appreciate feedback enabling us to update our applications to meet your demanding needs.

## *Development Cycles*

Corner Bowl Software prides itself on producing high quality usable software that utilizes the latest user interface components. We receive feature requests on a daily basis and in response have implemented a development system that enables us to quickly add, test, and release new features. Over the years, we have worked closely with System Administrators during Sarbanes Oxley compliance audits providing them with new features that enable them to more quickly respond to auditor requests.

## *How to Contact Us*

### **Our Address**

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### **Support Inquiries**

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# Monitoring Disks

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## Selecting disks

Disks can be selected via the Network View or the Configuration Wizard. If you select the disks via the Network View, the list of selected disks is displayed in the Disks tab of the Configuration Wizard. If no disks are selected when the Configuration Wizard is opened, you must first select the disks to configure from the Disks tab of the Configuration Wizard.

## To open the configuration wizard

Select Configuration Wizard from the File menu item or select the toolbar button.

Please note when viewing and updating configurations for multiple disks the following rules apply:

- Text fields and combo-boxes that have different configuration values are empty.
- Check boxes that have different configuration values display with a square rather than empty or with a check box.
- Setting a value in a control sets the value for all the selected disks.

## Specifying a schedule

The Schedule tab enables you to schedule the frequency to poll disks and automatically clear alerts.

Check the *Enabled* check box to schedule automatic polling.

Use the *Frequency* group box to specify the schedule.

**Note:** If you monitor every X minutes or once an hour, you have the option to exclude a single period during each day. For example, you can monitor a disk every 15 minutes excluding 11:00 PM – 2:00 AM.

To limit email spam, the service can be configured to automatically clear alerts. At any time the next higher level of alert is fired if appropriate, however; once a higher level alert is fired, lower or equal level alerts are not fired until the duration you configure has exceeded. Alerts levels are defined in the following order:

- Warning
- Critical
- SMART
- Error

## To configure alerts to automatically clear

Check the *Automatically clear alerts after* check box and specify the duration to wait till alerts are cleared enabling alerts to re-fire.

Use the *Configuration* combo box to fine tune parameters for each disk selected.

## Configuring warning and critical alerts

Alerts can be disabled by de-selecting *Enable warning/critical alerts*.

Warning thresholds must be higher than critical thresholds.

If you enable these alerts, but do not assign an action, notification is limited to the tray icon.

## Configuring SMART alerts

SMART alerts enable System Administrators to receive notification before a disk fails. When a disk is about to fail, it may provide warning. To receive notification of this warning you must enable SMART alerts.

If you enable this alert, but do not assign an action, notification is limited to the tray icon.

## Configuring error alerts

Error alerts enable System Administrators to receive notification when a computer or disk is down or

un-reachable. If the service is unable to poll a disk, an error alert can be fired.

If you enable this alert, but do not assign an action, notification is limited to the tray icon.

### **Configuring history reporting**

By default, disk utilization information is saved to a CSV (comma separated) file. The CSV file includes the time, space used, and free space. The CSV format has been optimized for use with Microsoft Excel. Use the History tab to either disable history reporting, provide an alternate filename or location, and set the maximum number of days to retain. The CSV file is used by SMART Disk Monitor to display the disk utilization history. If you choose to disable history reporting, you will not be able to see the historical charts.

#### *Data retention*

Over time the history file may become quite large ultimately slowing down the user interface. Use this tab to configure the maximum number of days to retain. The software will automatically truncate the history file when ever the service updates the historical chart or you view the historical chart within the user interface.

### **Configuring directories to monitor**

Although the Directory Monitor tab can be used to add new directories to monitor, this tab is ideal for displaying all directories configured for the disk as well as removing currently monitored directories. To monitor a directory's size or access permissions, click the *Add* button. To modify a configuration, select directory and click the *Properties* button. To remove a configuration, select the directory and click the *Remove* button. For more information see [Monitoring Directories](#).

### **Creating and using templates**

Templates enable you to easily configure disks with pre-set values. Schedule and alert configuration parameters are saved to the template. The history and directory monitor parameters are not included in the template. Once you have setup email addresses, messages, and thresholds click *Save As Template*. Specify the template name and click *OK*. To load the template into a new configuration, click *Load Template*, select the template, and lastly click *OK*.

### **Verifying configurations**

The Verify dialog enables you to review the configuration being set for each disk.

## Monitoring Directories

SMART Disk Monitor enables System Administrators to monitor the size of particular directories, fire warning and critical alerts, generate email, CSV and XML directory utilization reports, and generate access permissions reports.

### How to monitor a directory

From the *Monitored Disks* tree node within the *Network View*, expand to the directory of interest, right click, and select *Directory Monitor Wizard*.

### How to exclude sub-directories

From the Directory tab, add and directories to exclude from the recursion.

During runtime, '.' is replaced with the UNC path being monitored. For example, if you want to exclude the Program Files directory, specify:

```
c:\program files
```

or

```
.\program files.
```

During runtime, '.' is replaced with any directory at the level. For example, if you want to exclude the 'Temporary Internet Files' directory for all users on the target system you would use the following format:

```
C:\Documents and Settings\..\Local Settings\Temporary Internet Files
```

or

```
.\Documents and Settings\..\Local Settings\Temporary Internet Files
```

### Specifying the schedule

The Schedule tab enables you to schedule the frequency to recurse the disk or directory.

Check the *Enabled* check box to schedule automatic polling.

Use the *Frequency* group box to specify the schedule.

**Note:** If you monitor every Xminutes or once an hour, you have the option to exclude a single period during each day. For example, you can monitor a directory once an hour excluding 11:00 PM – 2:00 AM.

### Configuring directory size reports

Directory size reports can be emailed and saved to HTML, CSV, TXT, or XML. Directory size reports include the computer name, disk drive, path, directory names, sizes, file counts, and sub-directory counts. When saved to file, previous reports can be backed up to a sub-directory called backup, appended to (TXT and XML only), or overwritten.

#### *Email and HTML templates*

Directory size reports utilize HTML templates when emailed and saved to file. HTML templates enable users to define their own content and look and feel. For more information see [Email and HTML Templates](#).

### Configuring history reporting

Directory size information is saved to a CSV (comma separated) file. The CSV file includes the time, root directory size, total directory and sub-directory file count, and total sub-directory count. The CSV format has been optimized for use with Microsoft Excel. The CSV file is used by SMART Disk Monitor to display the directory size history.

Over time the history file may become quite large ultimately slowing down the user interface. Use the *Size Reports* tab to configure the maximum number of days to retain. The software will automatically truncate the history file when ever you view the historical chart within the user interface.

To view the historical chart right click on the directory and select *Properties*.

### **Configuring access permissions reports**

Access permission reports contain user rights assigned to the directory, sub-directory, and/or files. Access permission reports were developed for customers that needed print outs of users with any type of access to a particular directory. Very specifically, the reports were needed for Sarbanes Oxley auditors. Access permissions reports can be emailed and exported to XML or CSV.

To exclude sub-directories and files from the report, de-select the appropriate check boxes.

To concatenate all sub-directory and file rights into one line item in the report, de-select *Detail sub-directories and files*.

To hide the detailed column information about the particular Ace types, Ace flags, and rights, de-select the appropriate check boxes.

To limit the report to a particular set of rights, de-select the rights you are not interested in.

For information on on-demand access permission reports see, [Access Permissions Reports](#).

#### *HTML templates*

Access permissions reports utilize HTML templates when emailed. HTML templates enable users to define their own content and look and feel. For more information see [Email and HTML Templates](#).

### **Configuring warning and critical alerts**

SMART Disk Monitor enabled users to set thresholds based on both a maximum size and a change in size.

#### **Monitoring the maximum size**

Check either *Enable warning alerts* or *Enable critical alerts* depending on the threshold level.

Specify the maximum allowed size in either GB, MB, KB, or bytes.

#### **Monitoring a change in a directory's size**

You may find it advantageous to receive notification when a directory size significantly increases or decreases between checks. For example, if a directory increases by 5 GBs since the previous check, SMART Disk Monitor can fire an alert notifying you of this increase.

#### **Automatically clearing alerts**

Unlike the disk monitoring, directory size alerts can independently clear the warning and critical alerts. Independent alert clearing was developed so customers, ISPs specifically, could fire critical alerts at a high frequency while firing warning alerts at a lower frequency. While developing this functionality, we added the ability to select user defined email templates. The templates are HTML based and include tags that SMART Disk Monitor parses and replaces with the appropriate values. A different template may be assigned to each directory if necessary enabling, for example, a customer's name to be present. Please refer to the default template for a sample. All available tags are included in the file and are wrapped with {}. The default HTML template is located in the following location:

```
C:\Program Files\DiskMonitor\HtmlTemplates\directory_alert.html
```

For more information see [Email and HTML Templates](#).

#### **Configuring error alerts**

Error alerts enable System Administrators to receive notification when a computer or disk is down or un-reachable. If the service is unable to recurse the directory, an error alert can be fired.

If you enable this alert, but do not assign an action, notification is limited to the tray icon.

#### **Monitoring a directory for changes**

SMART Disk Monitor enables system administrators to receive notification when files are created, modified, deleted, or renamed within a specific directory or sub-directory. Use the *File Monitor* tab to enable real-time monitoring of directory changes. Use the mask list boxes to create new masks to include or exclude in your results. For example, specify \*.txt to receive notification for all text files. Changes can be logged to a file or emailed. Please note you will receive one email for each change event fired by the operating system.

### **Creating and using templates**

Templates enable you to easily configure directory reports with pre-set values. All parameters including directory exclusions are saved to the templates. Once you have setup all aspects of the report that you want to include in the template, click *Save As Template*. Specify the template name and click *OK*. To load the template into a new configuration, click *Load Template*, select the template, and lastly click *OK*.

### **Verifying configurations**

The Verify dialog enables you to review the configuration being set for each directory.

## Clearing Alerts

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You can specify a warning threshold and a critical threshold. When a threshold is crossed, the assigned actions are fired. When ever a critical threshold is crossed, only the critical threshold actions are fired, even if the warning threshold action was never sent. Only one notification is fired per threshold until you clear the alert state. This format prevents unintentional notification spamming.

If you want the assigned actions to be automatically re-fired when a disk remains beyond its configured threshold, you can specify the frequency to automatically clear the alerts. On the *Schedule* tab of the *Configuration Wizard* dialog, Check the *Automatically clear alerts after* check box and specify the frequency to clear warning or critical alerts.

The user interface denotes a disk in an alert state with either a yellow or red icon over the disk icon. SMART Disk Monitor supports 4 states, warning, critical, S.M.A.R.T., and error. To clear the alert state, select the disk, and click *Clear Alerts* from the *Edit* menu. Once the alert state is cleared, notifications will resume.

# Tray Icon

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Icons in the lower right corner of Windows Taskbar are called Tray Icons. Tray Icons display application status. The Internet Server Monitor tray icon has three states:

## **Service Running**

This is the normal state and indicates all monitors are operational.

## **Service Stopped**

This state indicates the DiskMonitor service is not running. Either use the Windows Service Control Manager or SMART Disk Monitor to turn the DiskMonitor service on. Once running, the icon will change to the Service Running state.

## **Warning Threshold Crossed**

At least one disk and/or directory have crossed a warning threshold.

## **Critical Threshold Crossed**

At least one disk and/or directory have crossed a critical threshold.

## **SMART status degraded**

At least one disk has returned a degraded SMART status.

## **General Monitor Error**

At least one scheduled disk and/or directory monitor failed to execute.

### **To turn the tray icon off**

Select *Close Tray Icon* from the *Service* menu.

### **To turn the tray icon on**

Select *Start Tray Icon* from the *Service* menu.

**Note:** If you close the tray icon, the tray icon application will exit and you will no longer be able to receive user interface alerts. These alert types include, message box alerts, sound alerts, and tray icon popups.

## Summary Reports

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SMART Disk Monitor can be configured to generate summary reports that can be automatically emailed per a user defined schedule. By default, summary reports include the computer name, disk drive, status, capacity, free size and percent, used size and percent, and S.M.A.R.T. status.

### HTML templates

Two HTML templates have been provided that enable you to receive tabular summary or detailed summary including utilization pie charts and disk history charts. The file names are 'report.html' and 'report\_with\_charts.html'. The default templates are stored under the installation directory in a sub-directory called HtmlTemplates. The templates are HTML files that must contain <ODD> and <EVEN> tags. Each file contains replacement tags denoted with {}. Please review the supplied templates for your reference. For more information see [Email and HTML Templates](#)

### How to create a new report

Select *Summary Reports* from the *Tools* menu item.

Select the *New* button to open the *Summary Report Wizard*.

Provide a name for the report.

Specify all email addresses to include.

Modify the subject to your liking.

Specify the HTML template to apply. Click *Next*

Check the logical group or disks to include in the report. Click *Next*.

Specify the frequency to run and email the report.

When you are finished, click *Finished*.

### How to modify a report

Select *Summary Reports* from the *Tools* menu item.

Select the report of interest and click *Properties*.

Make the necessary changes within the *Summary Report Wizard*.

### How to remove a report

Select *Summary Reports* from the *Tools* menu item.

Select the report of interest and click *Delete*.

## Directory Summary Reports

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SMART Disk Monitor can be configured to generate directory summary reports that can be automatically emailed per a user defined schedule. Directory summary reports include detailed information about each configured directory monitor. This function was specifically added so System Administrators could easily display directory and sub-directory size information from multiple servers within a single email report. For example, a directory summary report can list detailed information about the Windows folder on each domain controller.

### HTML templates

An HTML template has been provided to enable you to receive tabular summary. The file name is 'directory\_report.html' and is stored under the installation directory in a sub-directory called HtmlTemplates. The template is an HTML file that must contain a <DIRECTORY> tag that wraps <ODD> and <EVEN> tags. Each file contains replacement tags denoted with {}. Please review the supplied templates for your reference. For more information see [Email and HTML Templates](#).

### How to create a new report

Select *Directory Summary Reports* from the *Tools* menu item.

Select the *New* button to open the *Directory Summary Report Wizard*.

Provide a name for the report.

Specify all email addresses to include.

Modify the subject to your liking.

Specify the HTML template. Click *Next*.

Check the logical group, disks, or monitored directories to include in the report. Click *Next*.

Specify the frequency to run and email the report.

When you are finished, click *Finished*.

### How to modify a report

Select *Directory Summary Reports* from the *Tools* menu item.

Select the report of interest and click *Properties*.

Make the necessary changes within the *Directory Summary Report Wizard*.

### How to remove a report

Select *Directory Summary Reports* from the *Tools* menu item.

Select the report of interest and click *Delete*.

## Access Permissions Reports

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Access permission reports list user rights assigned to the directory, sub-directory, and files. Access permission reports were developed for customers that needed print outs of users with any type of access to a particular directory. Very specifically, the reports were needed for Sarbanes Oxley auditors. Access permissions reports can be emailed and exported to XML or CSV.

### To create an on-demand report

From the *Network* view, select the disk or directory of interest. Right click and select, *Generate Access Permissions Report*.

To exclude sub-directories and files from the report, de-select the appropriate check boxes.

To concatenate all sub-directory and file rights into one line item in the report, de-select *Detail sub-directories and files*.

To hide the detailed column information about the particular Ace types, Ace flags, and rights, de-select the appropriate check boxes.

To limit the report to a particular set of rights, de-select the rights you are not interested in.

### Filtering the report

Once the report is complete, use the Directory combo box (if include sub-directories was selected) and the Users combo box to filter the report view.

### Printing the report

Once you have generated the report and filtered it to your liking, you can print the report. Select *Page Setup* to select the page orientation and margins. Once dismissed, select the *Print* button.

### Exporting the report to XML or CSV

Once you have generated the report and filtered it to your liking, you can export the report to an XML or CSV file. Select the *Export* button and specify the filename.

### Scheduling reports

For more information on scheduling access permissions reports, see [Monitoring Directories](#).

## File Extension Reports

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System Administrators have the option of generating file extension reports on demand. File extension reports recurse a selected disk or directory and calculate the count and total size for each file type. The output is a Windows Explorer style form. When selecting a directory within the report, the detail view contains a list of all extensions found within the selected directory and within each sub-directory. Navigate through the tree to find the actual location within a directory that contains the files.

### To generate a file extension report

From the *Network View*, right click a disk or directory to recurse and select *Calculate Directory Size and Extension Detail*.

### To print the report results

Once a report is complete you have the option to print the report directory to your printer. Use the *Page Setup* button to specify your printer and page orientation.

Click the *Print* button to print the report.

### To export the report results

Once a report is complete you have the option to export the report to CSV or XML. The CSV export is optimized for Microsoft Excel.

Click the *Export* button and specify the path, filename, and file type.

**Note:** When printing or exporting the report, the contents are limited to the currently selected directory.

## Last Accessed Files Reports

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The last accessed files report function enables System Administrators to recurse a directory structure and view a list of the last access files as well as a list of files not accessed since a specified date.

### To run a last access files report

From the *Network View*, right click a disk or directory to recurse and select *Last Access Files Report*.

Select the *Show the last X access files* option.

Specify the number of files to include in the report.

Click *Run Report*.

### To run a report that lists files not accessed since a specified date

From the *Network View*, right click a disk or directory to recurse and select *Last Access Files Report*.

Select the *Show all files that have not been accessed since X* option.

Specify the date.

Click *Run Report*.

### To print the report results

Once a report is complete you have the option to print the report directory to your printer. Use the *Page Setup* button to specify your printer and page orientation.

Click the *Print* button to print the report.

### To export the report results

Once a report is complete you have the option to export the report to CSV or XML. The CSV export is optimized for Microsoft Excel.

Click the *Export* button and specify the path, filename, and file type.

## Actions

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Actions provide notification when a disk is running low on space, a degraded SMART status is detected, a directory expands quickly, a directory reaches a specific size, or a monitor fails to execute.

### Monitor Types

When assigning actions to monitors you will only be prompted with actions that match the monitor type. 4 types are available, Disk Space, Directory Size, SMART Status, and Error. For example, when configuring a disk space monitor critical threshold you will only see Disk Space actions within the available actions list box.

### Replacement Tags

Many of the available actions support inserting replacement tags. Replacement tags enable users to see specifics about the disk or directory within their action. For example, when creating a Message Box action, users can insert disk size and utilization tags that will be replaced with the disk specific information when fired. For more information see [Replacement Tags](#).

### Email and HTML output Actions

Both email and HTML output actions use HTML templates to generate the content. Users can create their own HTML templates enabling them to fully customize not only the content displayed but the look and feel as well. For more information see [Email and HTML Templates](#).

### To create a new action

Select *Configure Actions* from the *File* menu.

Specify a name.

Select the type of action, for example Email, Message Box, or Syslog.

Select the monitor type.

### To assign an action to a disk monitor

From the *Network View*, select the disk, right click and select *Configure Selected Computers*.

Select the appropriate tab and assign your actions.

### To assign an action to a directory monitor

From the *Network View*, select the directory, right click and select *Directory Monitor Wizard*.

Select the appropriate tab and assign your actions.

### For more information, see:

[Monitoring Disks](#)

[Monitoring Directories](#)

[Email and HTML Templates](#)

[Replacement Tags](#)

## Calculating Directory Sizes

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One of the key features of SMART Disk Monitor is the ability to recurse a disk's directory structure. This recursion enables you to view usage across all multiple directories. You can then sort the detailed view by size, export the data to XML or CSV, or print a report.

For more information on exporting the detailed view, see [Saving the Detailed View to File](#).

For more information on printing the detailed view, see [Printing](#).

### Recursing a disk or directory

Select the disk or directory of interest and click *Calculate Directory Size* from the Tools menu item. The recursion will begin. Please note that this recursion may take several minutes or even longer depending on the size of the target disk or directory.

### Graphically viewing directory utilization

Once you have calculated the directory size, you can graphically view the utilization relative to the parent directory or disk. To view the utilization graphic, select *Windows | Directory Utilization* from the *View* menu item.

### Monitoring directory sizes

For more information on automatically monitoring directory sizes see, [Monitoring Directories](#).

## Copying Detail View Items to the Clipboard

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To copy a line in the detailed view to the clipboard, select the line and press Ctrl-C, or Copy from the Edit menu, or select the toolbar button.



The entry contents are copied to the system clipboard in string format. Once in the system clipboard, you can paste the contents to an email message or ASCII editor by pressing Ctrl-V or selecting Paste from the target application's Edit menu.

## Directory Size History

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By default, directory size information is saved to a CSV (comma separated) file. The CSV file includes the time, root directory size, total directory and sub-directory file count, and total sub-directory count. The CSV format has been optimized for use with Microsoft Excel. Use the *Directory Size* tab in the *Directory Configuration Wizard* to set the maximum number of days to retain. The CSV file is used by SMART Disk Monitor to display the directory size history.

### Viewing directory size history

The history can be viewed in two ways:

- Select *Windows | History* from the *View* menu. From the *Network* or *Detailed* view, select the monitored directory.
- From the *Network* or *Detailed* view, right click on the monitored directory and select *Properties*.

### Emailing the history through Microsoft Outlook

The history can be emailed using Microsoft Outlook. To email the history, select the monitored directory from the *Network* or *Detailed* view. Right click and select *Properties*. Select *Email History*. The image is exported to a JPG and the chart data is exported to CSV. The files are then added as email attachments.

## Disk Utilization History

---

By default, disk utilization information is saved to a CSV (comma separated) file. The CSV file includes the time, space used, and free space. The CSV format has been optimized for use with Microsoft Excel. Use the *History* tab in the *Configuration Wizard* to disable history reporting, provide alternate file names and file locations, and set the maximum number of days to retain. The CSV file is used by SMART Disk Monitor to display the disk utilization history. If you choose to disable history reporting, you will not see the historical charts.

### Viewing disk utilization history

The history can be viewed in several ways:

- Select *Windows | History* from the *View* menu. From the *Network* or *Detailed* view, select the monitored disk.
- From the *Network* or *Detailed* view, right click on the monitored disk and select *Disk History*.
- Open your Internet browser and open the index.html file located in your HTML output directory. For more information, see [Web Server](#).

### Emailing the history through Microsoft Outlook

The history can be emailed using Microsoft Outlook. To email the history, select the monitored disk from the *Network* or *Detailed* view. Right click and select *Disk History*. Select *Email History*. The image is exported to a JPG and the chart data is exported to CSV. The files are then added as email attachments.

## Email and HTML Templates

Email and HTML templates provide System Administrators the flexibility of creating custom alerts and reports. Not only can custom look and feel be implemented but content can be customized as well. The templates use custom section tags and content tags to define sections and content to include. The best way to customize your alerts and reports is to copy the template for the associated function and make your change within the copied file. Once you have completed your changes, apply the template to the alert or report via the appropriate configuration dialog.

The following table lists the available HTML templates and their intended use.

HTML Template	Description
access_permissions.html	Used by the directory monitor when emailing access permission reports.
directory_alert.html	Used by the directory monitor when emailing directory size alerts.
directory_report.html	Used when emailing directory summary reports.
directory_size.html	Used by the directory monitor when emailing directory size reports.
disk.html	Used by the disk monitor when updating the HTML output for use by web servers. Configured via the Options dialog.
disk_alert.html	Used by the disk monitor when emailing disk space alerts.
error_alert.html	Used by both the disk and directory monitors when a failure occurs during the polling process.
report.html	Used when updating the HTML output and emailing disk summary reports.
report_with_charts.html	Used when updating the HTML output and emailing disk summary reports. Includes a disk utilization pie chart and disk history chart for each disk. Please note this template is not assigned by default but is provided as an option for users to apply.
smart_status_alert.html	Used by the disk monitor when emailing SMART status alerts.

The following references list the tags supported by each function. For more information see [Replacement Tags](#)

## Disk Space Alerts and HTML Output

Required sections:

NONE

The following tags are supported:

ALERT\_STATE  
ALERT\_STATE\_IMG  
DATE  
DISK  
DISK\_HISTORY\_IMG  
DISK\_UTILIZATION\_IMG  
ERROR  
FILE\_SYSTEM  
FREE  
HOST  
LOCALHOST  
PATH  
PERCENT\_FREE  
PERCENT\_USED  
PREVIOUS\_SIZE  
SCHEDULE  
SMART\_STATUS  
THRESHOLD

TIME  
TOTAL  
USED

## SMART Status Alerts

Required sections:

NONE

The following tags are supported with each section of the HTML template:

All disk space alert tags are supported.

## Directory Size Alerts

Required sections:

NONE

The following tags are supported:

ALERT\_STATE  
ALERT\_STATE\_IMG  
DATE  
DISK  
FREE  
HOST  
LOCALHOST  
PATH  
PATH\_SIZE  
PERCENT\_FREE  
PERCENT\_USED  
PREVIOUS\_SIZE  
SCHEDULE  
SMART\_STATUS  
THRESHOLD  
TIME  
TOTAL  
USED

## Directory Size Reports

Required sections:

<ODD>  
</ODD>  
<EVEN>  
</EVEN>

The following tags are supported:

### Header

All directory size tags are supported.

### Even and Odd Rows

DIRECTORY  
PATH\_SIZE  
FILE\_COUNT  
DIRECTORY\_COUNT

## Access Permissions Reports

Required sections:

```
<ODD>  
</ODD>  
<EVEN>  
</EVEN>
```

The following tags are supported:

### Header

All directory size tags are supported.

### Even and Odd Rows

```
DIRECTORY  
USER  
ACE_FLAGS  
ACE_TYPE  
RIGHTS
```

## Disk Summary Reports

Required sections:

```
<ODD>  
</ODD>  
<EVEN>  
</EVEN>
```

The following tags are supported:

### Header and Footer

```
REPORT  
SCHEDULE  
DATE  
TIME  
LOCALHOST
```

### Even and Odd Rows

```
ALERT_STATE  
ALERT_STATE_IMG  
DATE  
DISK  
DISK_HISTORY_IMG  
DISK_UTILIZATION_IMG  
ERROR  
FILE_SYSTEM  
FREE  
HOST  
PATH  
PERCENT_FREE  
PERCENT_USED  
PREVIOUS_SIZE  
SCHEDULE  
SMART_STATUS  
THRESHOLD  
TIME  
TOTAL  
USED
```

## Directory Summary Reports

Required sections:

```
<DIRECTORY>
<ODD>
</ODD>
<EVEN>
</EVEN>
</DIRECTORY>
```

The following tags are supported:

### Header and Footer

```
REPORT
SCHEDULE
DATE
TIME
LOCALHOST
```

### Directory Sub-Section Header and Footer

```
ALERT_STATE
ALERT_STATE_IMG
HOST
PATH
PATH_SIZE
PREVIOUS_SIZE
ERROR
```

### Directory Even and Odd Rows

```
DIRECTORY
PATH_SIZE
FILE_COUNT
DIRECTORY_COUNT
```

## Error Alerts

Required sections:

NONE

The following tags are supported:

```
ALERT_STATE
ALERT_STATE_IMG
DATE
DISK
ERROR
HOST
LOCALHOST
PATH
TIME
```

For more information, see:

[Replacement Tags](#)

## Logical Groups

---

Logical groups enable you to group disk configurations together. For example, you may want to group all your servers together.

### **To create a logical group**

Select *New Logical Group* from the *File* menu.

Specify the name and click *OK*.

### **To add disks to a logical group**

From the *Network View*, drag and drop the disk from current group to the new group. By default all configurations are added to the (*Unassigned Logical Group*).

### **To move multiple disk monitors to another logical group**

Select the source logical group. From the detail view highlight the disk monitors to move. Drag and drop the monitors to the target logical group.

# Mapping Computers

The most common reason users map computers is to provide login credentials, however; computers online but undiscoverable can also be specified.

## To map a computer

Select Map Computer from the File menu or select the toolbar button.



From the map computer dialog, specify the hostname or IP address of the machine, the username, password, and domain or workgroup.



## To modify login credentials

From the Network view, select the computer under the Mapped Computers tree node.

Select *Properties* from the File menu item or click the properties toolbar button.



Update the username and password as necessary.



**To remove a mapping**

If you are no longer monitoring a computer that was previously mapped, or you no longer need to specify login credentials, you can remove the mapping. From the Network view, select the computer under the Mapped Computers tree node. Press the Delete key, select Delete from the Edit menu, or click the delete toolbar button.

**For more information, see:**

[Security](#)

## Network View

---

The Network View contains four (4) root tree nodes.

### *Network*

Use the Network node to locate and configure monitoring for remote disks.

### *Local Disks*

Use the Local Disks node to configure monitoring for the local disks.

### *Mapped Computers*

Use the Mapped Computers node to add computers that are not visible from the Network node or to assign specific logon credentials for a computer.

### *Monitored Disks*

Once you configure a disk to be monitored, the disk displays under this node. Use this node to quickly re-configure or display properties of configured disks.

## **Navigation**

SMART Disk Monitor enables you to navigate your network just as if you were in Windows Explorer. The big difference is, however; once you click on a computer all available shares are displayed. Hidden root shares display a disk icon while directory based shares display a folder icon.

If you receive an access denied error after selecting a computer, you can manually map a computer and specify login credentials. For more information see [Mapping Computers](#).

When navigating your network, computers online but undiscoverable can be manually added. For more information see [Mapping Computers](#).

## Printing

---

SMART Disk Monitor enables you to print the current detailed view. This is useful when you want a print out of all disk utilization information for a specific logical group or after you have re-cursed a disk (calculated the directory size) or directory and want a print out of the directory utilization.

### **To print the current view**

Select Page Setup from the File menu. Use the Page Setup dialog to select the page orientation and margins. Once you have dismissed the Page Setup dialog, press Ctrl-P, or select Print from the File, or select the toolbar button.



## Replacement Tags

Replacement tags are used for actions such as message box alerts, email alerts, email reports, and HTML output for use by your web server. From the *Actions Manager* you have the ability to select from a list of available tags. Depending on the type of action, disk, directory, SMART, or error, you are prompted with different tags. Tags for use within actions are wrapped with <> signs. For more information see [Actions](#).

Replacement tags are also used within HTML templates. Tags for use within HTML templates are wrapped with {} signs. For more information see [Email and HTML Templates](#).

The following table lists available tags and a corresponding description:

Tags	Description
ACE_FLAGS	Used by access permission reports to display ACE FLAGS associated with a directory, file and user. For use with email and HTML output only.
ACE_TYPE	Used by access permission reports to display ACE TYPES associated with a directory, file and user. For use with email and HTML output only.
ALERT_STATE	Replaced with the disk or directory's current alert state. (CRITICAL, WARNING, ERROR, SMART).
ALERT_STATE_IMG	Replaced with the image filename associated with the alert. For use with email and HTML output only.
DATE	Replaced with a short date string.
DIRECTORY	Replaced with a directory name used by directory summary reports, directory size reports, and access permission reports. For use with email and HTML output only.
DIRECTORY_COUNT	Replaced with the total sub-directory count. Used by directory summary reports and directory size reports. For use with email and HTML output only.
DISK	Replaced with the monitored disk name.
DISK_HISTORY_IMG	Replaced with the filename the disk history chart is contained. For use with email and HTML output only.
DISK_UTILIZATION_IMG	Replaced with the filename the disk utilization chart is contained. For use with email and HTML output only.
ERROR	Replaced with the error generated when a monitor fails.
FILE_COUNT	Replaced with the total file count. Used by directory summary reports and directory size reports. For use with email and HTML output only.
FILE_SYSTEM	Replaced with the file system. For example NTFS.
FREE	Replaced with the free space. For example 150.24 MB.
HOST	Replaced with the monitored hostname.
LOCALHOST	Replaced with the hostname of the machine the software is installed. Typically used to identify the machine alerts are fired from.
PATH	Replaced with the UNC path for the disk or directory depending on the monitor type.
PATH_SIZE	Replaced with a directory's size. Used by directory monitors only.
PERCENT_FREE	Replaced with the percent free. For example 13%.
PERCENT_USED	Replaced with the percent used. For example 87%.
PREVIOUS_SIZE	Replaced with a directory's previous size. Typically used when an alert is fired in response to a massive change in a directory's size since the previous poll. Used by directory monitors only.
RIGHTS	Used by access permission reports to display user rights associated with a directory or file. For use with email and HTML output only.
SCHEDULE	Replaced with a description of the monitor's schedule.
SMART_STATUS	Replaced with current SMART status. For example, OK or Degraded.
THRESHOLD	Replaced with a description of the monitor's threshold that caused the alert to fire.
TIME	Replaced with a short time string.
TOTAL	Replaced with the disk's capacity. For example 80 GB.

USED	Replaced with the used space. For example 25.67 GB.
USER	Used by access permission reports to display the user name associated with a set of rights. For use with email and HTML output only.

**For more information, see:**

[Actions](#)

[Email and HTML Templates](#)

## **Saving the Detailed View to File**

---

At any time you can export the current detailed view contents to a CSV or XML file. Select Save Current View As from the File menu. Specify the file name and type. CSV, or XML are supported. The CSV export is optimized for Microsoft Excel. Lastly, click Save.

## Automatically Configuring New Computers

SMART Disk Monitor enables you to configure the service to monitor Active Directory organizational units for new computers. When new computers are added, a pre-configured configuration template you create is assigned and automatic monitoring commences.

Step 1: Create a disk monitor configuration template.

Step 2: Select an Active Directory Entry.

Step 3: Assign a template to the directory entry, add computer exclusions, specify a schedule, and optionally configure an email report to be generated upon completion.

### Creating a disk monitor configuration template

The first step is to save a current disk monitor configuration to a template. From the *Network* view, right click a disk and select *Configure Selected Disks*.

Select the *Schedule* tab.

From the *Configuration* combo box at the top, select a single disk if not already selected.

Click *Save As Template*.

Specify a name and click *OK*.

Close the *Configuration Wizard*.

### Selecting an Active Directory Entry

Select *Automatically Configure New Computers* from the *File* menu item.

The Active Directory Entry selection dialog will open automatically connecting to the domain's Active Directory tree. If you are off domain click the *Add* button to manually configure your Active Directory connection. For more information see [Configuring Active Directory](#).

Navigate to the organizational unit of interest and select *Configure Selected Entry*. The Active Directory Auto Configurator will now load.

### Configuring the Active Directory Auto Configurator

Select the Active Directory Entry to configure from the list.

Check the *Enable* check box to enable the path to be polled.

Select a template to apply to discovered computers and then click *Next*.

Add computers you do not want to monitor and then click *Next*.

Specify a schedule.

Optionally specify an email address to send a report to.

**For more information, see:**

[Configuring Active Directory](#)

## Configuring Active Directory

---

SMART Disk Monitor enables you to configure the service to monitor Active Directory organizational units for new computers. When new computers are added, a pre-configured configuration template you create is assigned and automatic monitoring commences.

When configuring the [Active Directory Auto Configurator](#) SMART Disk Monitor automatically connects to your domain's Active Directory tree. If you are off domain or you want to connect to an alternate Active Directory tree you can manually configure multiple Active Directory trees.

### **To configure alternate trees or credentials**

Select *Options* from the *Tools* menu. At the bottom of the dialog, click the Configure Active Directory button. Specify the appropriate Active Directory or LDAP connection string and credentials.

Please note when specifying alternate credentials the service will use these credentials to map and connect to each discovered computer.

**For more information, see:**

[Automatically Configuring New Computers](#)

## Options

---

Use the options dialog to set configuration parameters.

To open the Options dialog, select Options from the Tools menu item.

The options dialog contains the following pages:

[Mail Connection](#)

[Web Server](#)

[Syslog](#)

## **Mail Connection**

---

Mail Connection parameters are set via the Options dialog. To open the Options dialog, select Options from the Tools menu item. Once open, select the Mail Connection tab.

### **Server Information**

Specify the name of the SMTP server. For example: mail.yourserver.com. If your server runs on a port other than 25, for example 2000, use the following format: mail.yourserver.com:2000

### **Logon Information**

If your SMTP server requires authentication to send messages, specify your username and password.

### **Mail From Information**

Optionally, specify the name and from address to appear in outgoing mail.

### **Testing Account Settings**

When ever you change the mail server settings, it is a good idea to test the settings. To test the account settings, specify a test email address then click the Send Test Email button.

## Syslog

---

SMART Disk Monitor uses Syslog in 2 ways. First, you can configure a monitor to forward alerts to a syslog server. Second, the DiskMonitor Windows Service optionally logs status messages to a syslog server.

Use the [Actions Manager](#) to create an action that forwards alerts to your syslog server.

Use the Options dialog to configure the DiskMonitor Windows Service to enable or disable syslog messaging as well as assign the host and facility to log to.

### Configuring the DiskMonitor Windows Service to Syslog

Select Options from the Tools menu item.

#### *Enabled*

Check to forward service messages to your syslog server.

#### *Host*

Specify the host name of your syslog server. For example: yoursyslogserver.

#### *Facility*

Specify the syslog facility. The default value is Local1.

**Note:** If you change any settings, you must restart the service for the changes to take effect.

**For more information, see:**

[Actions](#)

RFC 3164 available at <http://www.faqs.org/rfcs/rfc3164.html>

## Web Server

---

SMART Disk Monitor automatically creates HTML pages that contain an index of all monitored disks. When the disk is selected in your browser, the utilization, status, and history is displayed.

Use the *Web Server* tab on the *Options* dialog to enable/disable automatic HTML document generation, specify an alternate HTML template, override the output directory, and enable/disable HTML email when emailing disk and directory summary reports.

### To configure web server options

Select *Options* from the *Tools* menu item. Select the *Web Server* tab.

### HTML template

The HTML template enables users to create and apply their own HTML when exporting to their web server. Users can specify not only the content displayed using tags but the look and feel as well. For more information see [Email and HTML Templates](#).

### To change the location to output the HTML files

Specify the location to output the HTML files.

### Disk and directory summary reports

SMART Disk Monitor uses both HTML and text when sending emails for disk and directory summary reports, directory size reports, and access permissions reports enabling non-html email clients to display the reports. If you only want to see reports using text, turn off the HTML email option.

**Note:** This option is unrelated to disk and directory monitoring alerts. For more information see [Actions](#).

## Change Service Login

---

SMART Disk Monitor uses a service to execute scheduled functionality. This service is called Disk Monitor. In order for the Disk Monitor service to access network resources, it must run with domain administrator rights.

### **To change the service login credentials**

Select Change Service Login from the Service menu item.

Specify a domain administrator username and password. Lastly, specify the domain. When you are finished, click the *Next* button. The service configuration will be modified with these rights and the service restarted.

**For more information, see:**

[Security](#)

## Starting and Stopping the Windows Service

---

SMART Disk Monitor uses a Windows Service to monitor disks and generate reports. To aid in troubleshooting, the service can be started in verbose (debug) mode. In this mode, extra messages are logged.

### To Start the Service

Select *Start* from the *Service* menu item.

If you are unable to start the service because of a login failure, you must reset the login credentials. For more information see [Change Service Login](#).

### To Start the Service in Verbose Mode

Select *Start (Verbose)* from the *Service* menu item.

### To Stop the Service

Select *Stop* from the *Service* menu item.

**For more information, see:**

[Change Service Login](#)

[Windows Service Log File](#)

## Windows Service Log File

The Disk Monitor Service logs all significant activity to a log file called 'dm.log'. This information is invaluable when trouble shooting the service. This file is located in the installation directory. The default location is:

- *Window XP/2000*: 'documents and settings\all users\application data\CornerBow\DiskMonitor\dm.log'
- *Windows Vista*: '\programdata\CornerBow\DiskMonitor\dm.log'

### To View the Log File

Select *View Log* from the *Service* menu or select the toolbar button.



The entries are sorted from oldest to latest. The log file can also be viewed in any text editor.

### To Clear the Log File

The service automatically truncates the log file to a little less than 1 MB every hour on the hour. The service will log an error when attempting to truncate the log file when the user interface is open. To manually clear or delete the entire log file, the service must be stopped and the user interface closed. Once the service is stopped and the user interface is closed, manually delete the log file. After the file has been deleted, re-start the service. For more information on starting and stopping the service see [Starting and Stopping the Windows Service](#).

**For more information, see:**

[Starting and Stopping the Windows Service](#)

## Troubleshooting

SMART Disk Monitor uses a Microsoft technology known as WMI to access SMART status and access permissions on your networked computers. The most common error reported by the operating system for WMI problems are:

- The RPC server is unavailable
- Access Denied

We have found it is beneficial to tell customers to first verify the connection or access failure from within the WMI Control Panel on the computer SMART Disk Monitor is installed.

### Connecting to a remote computer within the WMI Control Panel

From the run menu or a command-prompt, type: `wmimgmt.msc`. This command will open the WMI Control Panel within the Microsoft Management Console (MMC).

Right click on the *WMI Control (Local)* node located in the left pane. Select *Connect to another computer*. If running on an OS prior to Windows Vista, you have the option to specify credentials. If running on Vista, you no longer have this option. Specify credentials as necessary. Lastly, click OK.

Once the dialog closes, right click on the *WMI Control* node again and select *Properties*. Most users will receive the *RPC server is unavailable* or *access denied* error at this point.

### *The RPC Server is Unavailable*

Typically an RPC error means the remote computer is not allowing WMI packets through its firewall or the remote computer does not allow remote administration. The Windows firewall, a third party firewall, or virus protection software can all block WMI packets.

At this point if you think the remote computer's Windows firewall is blocking WMI packets or remote administration is not enabled, please follow this link for more information:

[Configuring the Windows XP Firewall](#)

Otherwise, please continue reading the sections labeled *Access Denied* and *Other Things to Look At* below. If you are still unable to resolve the error, please read the following MSDN articles:

[Connecting to WMI on a Remote Computer](#)

[Connecting to WMI Remotely Starting with Vista](#)

[Connecting Through Windows Firewall](#)

### *Access Denied*

Typically an access denied error means the account you are logged in under or the account the Windows Service is running under does not have the appropriate credentials to run WMI commands.

1. If monitoring disks from another computer on the network, make sure that the account you are logged in as and the account the service is running under both have administrative privileges. For more information see [Security](#). If the account you are logged in does not have administrator rights or you are attempting to access a computer not on the domain, you must map the computer to specify the appropriate credentials. For more information see [Mapping Computers](#).
2. Ensure WMI permissions have been set correctly. From the remote computer throwing the error, open a command-prompt and type: `wmimgmt.msc`. Right click on the *WMI Control (local)* node and select *Properties*. Select the *Security* tab and navigate to *root/CIMV2*. Click the *Security* button. Grant the account you and the service are using to access logs *Remote Enable* and *Read Security* rights.
3. When accessing a Windows Vista computer that has joined a workgroup rather than a domain, the remote Windows Vista computer must disable User Access Control (UAC). To disable UAC on a Windows Vista computer, search for *Turn UAC off* within the Windows help system.

## ***Other Things to Look At***

1. If you have other internal firewalls on your network, you may need to configure them to allow WMI packets. Many virus protection solutions such as McAfee and Symantec contain their own firewalls which must be configured to allow WMI packets.
2. If the remote computer is running Windows XP Pro, make sure remote logons are not being coerced to the GUEST account. From the computer you are unable to download logs from, open a command-prompt and type *secpol.msc*. Expand the *Local Policies* node and select *Security Options*. Scroll down to the setting titled *Network access: Sharing and security model for local accounts*. If this is set to *Guest only*, change it to *Classic* and restart your computer.
3. From the computer you are unable to download logs from, open a command-prompt and type *dcomcnfg*. Expand the *Component Services/Computers/My Computer* node. Right click *My Computer* and then select *Properties*. Select the *COM Security* tab. From the *Launch and Activation Permissions*, select *Edit Limits*. Add the appropriate account and assign all permissions.
4. Check that DCOM is enabled on both the local and the remote computer. Check the following registry value on both computers: Key: HKLM\Software\Microsoft\OLE, value: EnabledDCOM, should be set to 'Y'
5. Check that WMI is installed on both the local and remote computer. WMI is present by default in all flavors of Windows 2000 and later operating systems, but must be installed manually on NT4 systems. To check for the presence of WMI, open a command-prompt and type *wbemtest*. If the WMI Tester application starts up, WMI is present, if not, it must be installed. Consult Microsoft for more information.
6. Make sure no remote access or WMI-related services have been disabled on either the local or remote computer. On an XP machine, the following services should be running or enabled:
  - COM+ Event System
  - Remote Access Auto Connection Manager
  - Remote Access Connection Manager
  - Remote Procedure Call (RPC)
  - Remote Procedure Call (RPC) Locator
  - Remote Registry Server
  - Windows Management Instrumentation
  - Windows Management Instrumentation Driver Extensions
  - WMI Performance Adapter
  - Workstation

**For more information, see:**

[Security](#)

[Mapping Computers](#)

[Configuring the Windows XP Firewall](#)

[Connecting to WMI on a Remote Computer](#)

[Connecting to WMI Remotely Starting with Vista](#)

[Connecting Through Windows Firewall](#)

<http://support.microsoft.com/kb/323076/en-us>

## Configuring the Windows XP Firewall

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Windows XP service pack 2 (SP2) and later include an improved version of the Windows Firewall which is now enabled by default.

In its default configuration, the Windows Firewall prevents access to WMI commands across the network. This will typically be reported by SMART Disk Monitor as "access denied".

In order to restore access, you'll have to configure the firewall on your XP SP2 computers to allow remote administration via Windows Management Instrumentation (otherwise known as WMI).

The simplest way to do this is to open up a command prompt and type the following:

```
netsh firewall set service RemoteAdmin
```

The effect is immediate and there is no need to restart.

To read more about this, consult the following Microsoft article:

<http://msdn2.microsoft.com/en-us/library/aa389286.aspx>

If you are still unable to download or monitor remote logs see [Troubleshooting](#).

**For more information, see:**

<http://msdn2.microsoft.com/en-us/library/aa389286.aspx>

[Security](#)

[Troubleshooting](#)

## Security

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To access administrator shares from the user interface your login must have domain administrator rights. If your account does not have domain administrator rights, you can map a computer and specify appropriate login credentials. For more information see [Mapping Computers](#).

When scheduling the service to monitor disks the service must be run with domain administrator rights. The first time the application is run, you will be prompted to assign domain administrator rights to the service.

When the password assigned to the account the service is running under changes you must update the service to use the latest password. For more information see [Change Service Login](#).

SMART Disk Monitor uses a Microsoft technology known as WMI to monitor SMART status and execute access permissions reports on your networked computers. The most common error reported by the operating system for WMI problems are:

- The RPC server is unavailable
- Access Denied

For more information see [Troubleshooting](#).

**For more information, see:**

[Change Service Login](#)

[Mapping Computers](#)

[Troubleshooting](#)

## Technical Support

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If you have any problems with SMART Disk Monitor you can contact our tech support by emailing us at: [support@cornerbowl.com](mailto:support@cornerbowl.com)

Please make sure you tell us as much information as you can about the problem you are experiencing, including any error or warning messages that may have been displayed.

Please include the following information with all support requests:

- The version you are running. This information can be obtained from the About box.
- The 'dm.log' file. This file is located in the installation directory. The default location is:
  - *Window XP/2000*: 'documents and settings\all users\application data\CornerBowl\DiskMonitor\dm.log'
  - *Windows Vista*: '\programdata\CornerBowl\DiskMonitor\dm.log'
- The operating system version.
- If applicable, your license key.
- Description of your problem. Please provide as much information as possible so we can reproduce the problem if necessary.

We'll try to help you as fast as possible, usually in one or two business days.

If you have any comments or suggestions for the next releases, please feel free to post them to us.

### ***Contact Information***

Website: [www.cornerbowl.com](http://www.cornerbowl.com)

Email: [support@cornerbowl.com](mailto:support@cornerbowl.com)

Phone: 1-(866)-543-9470 (TOLL FREE)