

Utility-SAP Monitor

USER Guide

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Utility-SAP Monitor

1. Utility-SAP Monitor

Overview

The Single Admin Portal (SAP) utility is a Windows-based management program specifically designed for use in managing server RAID systems. SAP utility can use to manage any of Areca SATA or SAS RAID controllers.

The SAP monitor utility provides a real-time reporting on status of the complete array, it making the task of monitoring disk arrays virtually effortless. The SAP monitor utility can scan for multiple RAID units in the network and monitor controller set status.

The SAP monitor utility sends notifications to administrators for reporting event occurrences and status changes of the disk array system. These notifications can be sent via the Internet as E-mail messages, via a LAN as broadcast packets or via Windows system log. Any number of notification destinations can be set with messages user-configurable through the address book.

Configuration Utility	Operating System supported
SAP Monitor (Single Admin portal to scan for multiple RAID units in the network, Via Http proxy server or Ethernet port on the RAID controller)	Windows 2000/XP/2003/Vista/2008/7

Windows Only

At the moment, SAP Monitor utility only supported on following Microsoft Windows operating systems: Windows 2000, Windows XP, Windows 2003, Windows Vista, Windows 2008 and Windows 7.

SAP Monitor Installation

You must have administrative level permission for on OS to install SATA or SAS SAP utility software. Before this procedure began, we assume that the SATA or SAS RAID hardware and windows are installed and operational in your system.

1. Insert the ship CD-ROM in the CD-ROM drive.
2. Run the setup.exe file that resides at: <CD-ROM root> \Windows\Utility\
3. Continue and follow the on-screen prompts to complete the installation.

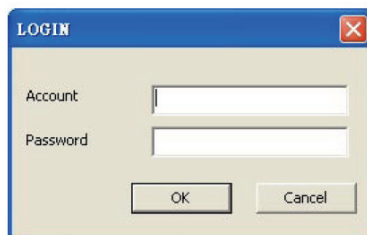
1.1 Start-up SAP Monitor for Local Administration

With SAP monitor utility, you can local monitor a system containing a SATA or SAS RAID controller Windows system.

A locally managed system requires all of the following components:

- The managed system must contain a SATA or SAS RAID controllers.
- Installing an ArchHttp proxy server on the managed system.

Click on the "Start Button" in the Windows 2000/XP task bar and then click "Program", select the SAP and run "SAP Monitor". The "LOGIN" dialog box appears.

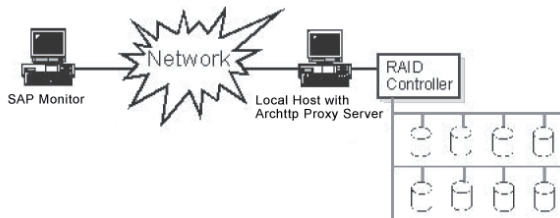


The SATA or SAS RAID controller default user name is "admin" and the password is "0000".

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1.2 Start-up SAP Monitor for Remote Administration

You can monitor a SATA or SAS RAID controller system remotely from a system that does not contain a SATA or SAS RAID controller. The SAP monitor utility supports remote management of the ARECA PCI-X/PCI-Express bus disk array controllers over a LAN. Management over the LAN is achieved through the exchanges of broadcast packets between the remote SAP monitor utility station and the Archttp proxy server or controller ethernet port on the local host controller system. The remote SAP monitor utility sends broadcast packets requests to the Archttp proxy server or controller ethernet port, which in turn checks the connected controller, and then sends back a reply to the requesting manager. The following figure shows a typical SAP monitor utility and remote host connection:



A remotely managed system requires all of the following components:

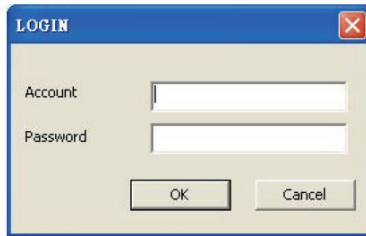
- The managed system must contain a SATA or SAS RAID controllers.
- Installing an ArchHttp proxy server on the managed system.
- Remote and managed systems must have a TCP/IP connection.

- (1). To monitor SATA or SAS RAID controller on a remote machine, you must first start up your local ArchHttp proxy server.
- (2). Check to ensure that the local host is properly connected on the network.

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- (3). Launch your SAP monitor utility in the remote system.
Click on the "Start Button" in the Windows 2000/XP task bar and then click "Program" and select the SAP and run " SAP Monitor".
- (4). When connection to the remote system is established, the system "LOGIN" screen appears.

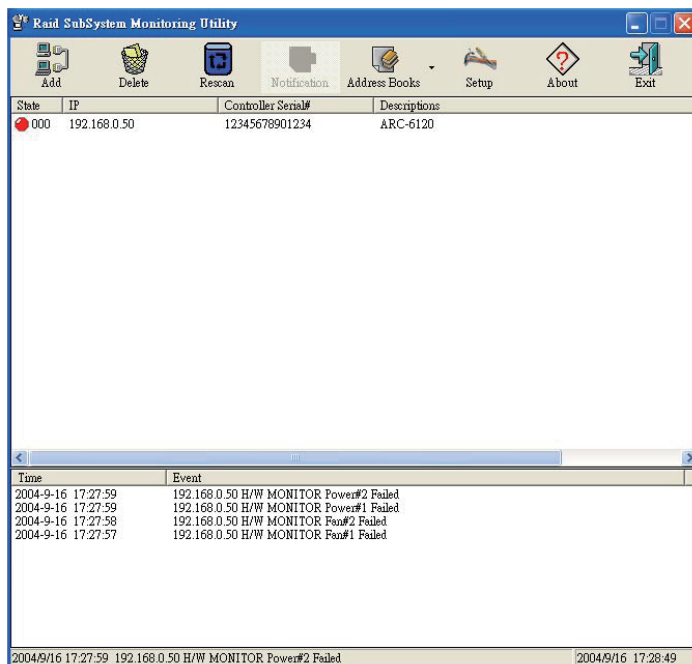
The SAP monitor utility provides password protection for guarding against users from monitoring of the disk array system. This security feature is put into effect the first time an attempt is made to modify the disk array configuration after turning on the SAP monitor utility station.



The SATA or SAS RAID controller default user name is "admin" and the password is "0000". Please note that you must be logged in as administrator with local admin rights on the remote machine to remotely configure it.

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1.3 SAP Monitor Main Menu



The list below summarizes the SAP monitor utility features.

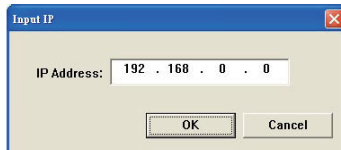
Configurable latency time between event occurrence and notification sequence initiation provides local administrator the option to abort issuance of the notification sequence.

- E-Mail notification via the MAPI service of Windows 2000/XP/2003/Vista/2008/7:
 - Provides editable-configurable address book for keeping names, E-mail addresses to be sent.
- Broadcast notification over the LAN:
 - Provides windows message address book containing names/groups and network addresses to which the specified message will be broadcast.

Supports multiple instances of RAID managers over the network, allowing multiple management sessions with a disk array system.

1.3.1 Add and Delete from a RAID Controller

The SAP monitor utility provides a feature that facilitates 'Add' and 'Delete' from SATA or SAS RAID controllers. Before monitor can be performed on a particular RAID system, you need to add first a connection between your SAP monitor station and the target system. Once a connection is established successfully, monitor can be started. "Delete" is used for breaking the link between the SAP monitor station and the RAID system.



1.3.2 Rescan

Beside the "Add" and "Delete" features, the "Rescan" function allow you to rescan the local network, and find any new RAID controllers added or removed.

1.3.3 Notification Configuration

The SAP monitor utility provides four methods of sending notifications:

- By E-mail
- By Windows Messages
- By Beeper
- By Flashing Windows

You can use any of the notification methods mentioned above; be reminded though that before you can use a particular method, you should have the proper hardware and software installed in your system.

When SAP monitor utility configure with one of the methods mention in above. The SAP monitor utility notifications to occur in response to various disk array events. For example, if you configure an email notification, the SAP monitor utility will send an e-mail to selected computers on the network if the event (that

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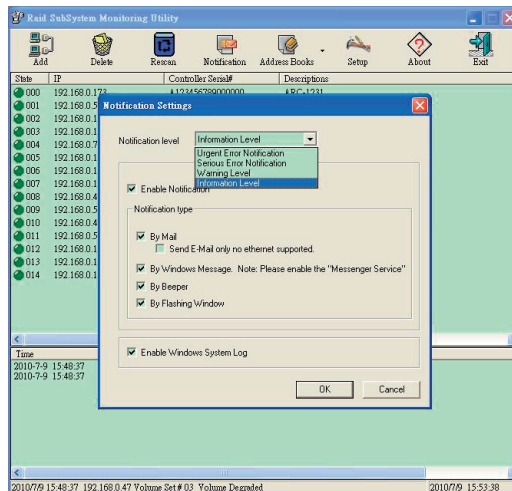
just occurred) falls within the selected notification level. If the notification is detailed enough, the recipient can respond accordingly.

When properly configured, this function can notify the administrator of event occurrences in the managed disk array system instantly even when he or she is at home, or in other places around the globe.

1.3.3.1 Notification Levels

The SAP monitor utility classifies disk array events into four levels depending on their severity. These include: Information Level, Warning Level, Serious Level and Urgent Level. From the "Notification Level" drop-down list box, select the notification level. To select, click on the down-arrow button at the right of this box, then select the option you want. The all events option includes "Information Level", "Warning Level", "Serious Error Notification" and "Urgent Error Notification". The default notification level is "Information Level".

Information Level covers notification events such as initialization of the controller and initiation of the rebuilding process.



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Warning Level includes events which require the issuance of warning messages.

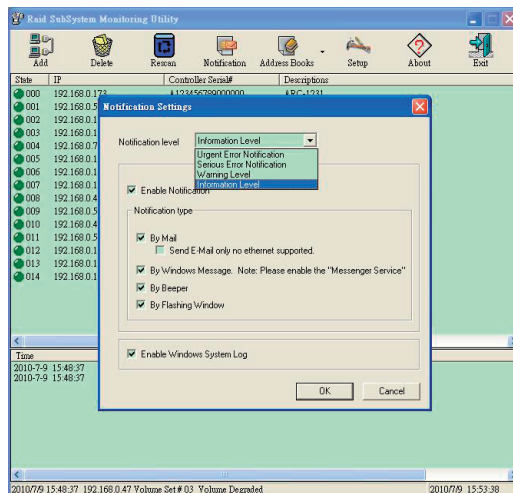
Serious Error Notification Level covers events that need immediately attention from the administrator

Urgent Error Notification Level is the critical level, need immediately action from the administrator.

1.3.3.2 Enable Notification

The "Enable Notification" box allows you to enable or disable the notification function of the SAP monitor utility. The notification type includes: By mail, By Windows Message, By Beeper and By Flashing Windows.

To enable the notification function of the SAP monitor utility, make a check mark in the box beside the "Enable Notification" field. If "Enable Notification" is enabled, select the notification type.



1.3.3.2.1 Configuring an E-Mail Notification

The SAP monitor utility sends e-mail messages to particular people on the local network or through the internet by using the Mail services or others e-mail server. You will need these

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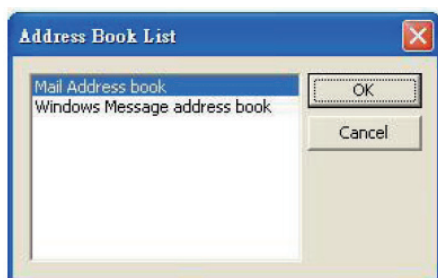
e-mail services to enable the e-mail notification function of the SAP monitor utility. The SAP monitor utility only allows you to select the users who will receive the notification messages, and specify the notification message for each recipient. For more information on how to configure users for e-mail reception and other relevant information about the Microsoft Mail and Microsoft Internet Mail services in Microsoft Exchange, refer to the Microsoft Exchange manual. Be sure that these services are configured properly, and functioning before using the e-mail notification function of the SAP monitor utility.

1.3.3.2.1.1 Selecting the Destinations

You can configure the e-mail notification function to send a notification to multiple users. This can be done through "Address Book List" provided by the SAP monitor utility. From this book, you can add and remove entries, and select which of these entries will receive notification from the system.

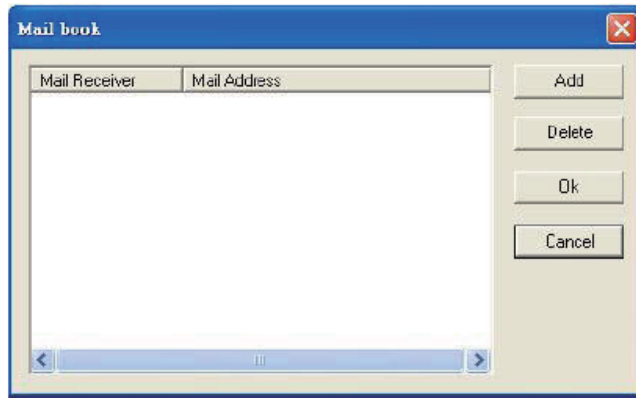
- To maintain the "Address Book List"

1. From the "Notification Setting" menu, enable notification type, and select "By Mail".
2. Click on the "Address Book List" command button. The "Address Book List" for notification dialog box appears:
3. Select "Mail Address Book", and click on the "OK" button.

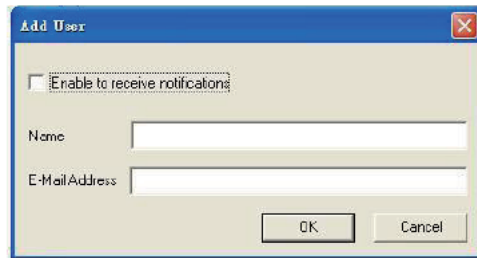


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- The "Mail Book" dialog box appears: Click on the "Add" button to add a new entry.



- (1). The "Add User" dialog box appears:



Type the receiver name in the "Name" column, and type the receiver email address to enable e-mail notification for this particular entrance, select the "Enable to receive notification" option. To disable, clear the "Enable to receive notification" option.

- (2). Repeat the same procedure to add the other entries you want.
- (3). To delete the email address entry from the address book, select the email address and click on the "Delete" button.
- (4). Select the "OK" to exit the "Address Book List" command function and save the value.

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1.3.3.2.2 Configuring a Windows Message Notification

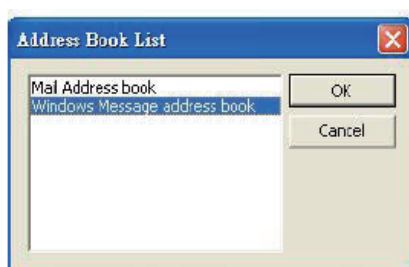
The SAP RAID monitor utility provides another way to notify selected users on the network by sending windows messages to their respective stations.

1.3.3.2.2.1 Selecting the Destinations

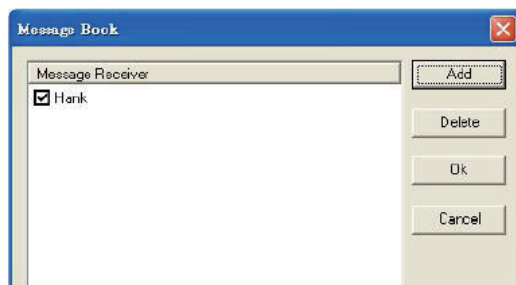
You can configure the windows message notification function to send messages to multiple users. This is achieved through the windows message address book provided by the SAP monitor utility. From this book, you can add and remove entries, and select which of these entries will receive notification from the system.

- To add/revise the windows message address book.

1. Click on "Address Book List" command button, select "Windows Message address book" from the "Address Book List" dialog.



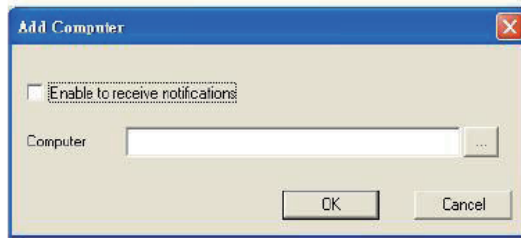
2. The "Message Book" dialog box will appear:



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The list box on the left of this dialog box displays the current contents of the windows message address book.

3. Click on the "Add" button to add a new entry. The "Add Computer" dialog box will appear:



4. In the "Computer" text box, type in the name of the computer that will receive a windows message. Make sure that the name you specify has a network account with Windows.

5. To enable windows message notification for this particular entry, make a check mark in the box beside the "Enable" option button. To disable, clear the check mark in the box beside the "Enable" option button.

6. Click "OK" to add the specified entry to the address book.

7. Repeat the same procedure to add the other entries you want.

8. If you want to delete an entry from the address book, select it from the list box and then click on the "Delete" button.

9. Select the "OK" to exit the "Address Book" command function and save the value.

1.3.3.2.3 Configuring a Beeper

When make a check mark in the box beside the "Beeper", the SAP screen will enable the system beeper to occur in response to various disk array events.

1.3.3.2.4 Configuring a Flashing Windows

When make a check mark in the box beside the "Flashing Windows", the SAP screen will flash to occur in response to various disk array events.

1.3.3.2.5 Enable Windows System Log

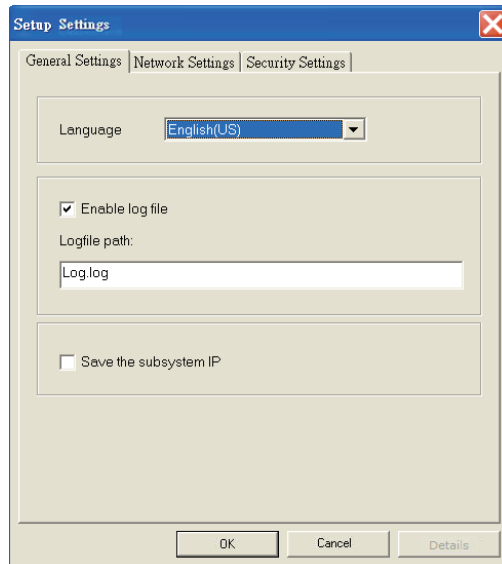
If you wish to create a windows system log, make a check mark in the box beside the "Enable Windows System Log" dialog box.

1.3.4 Setup

1.3.4.1 General Settings

This over all settings is to setup the language, enable log file & logfile path.

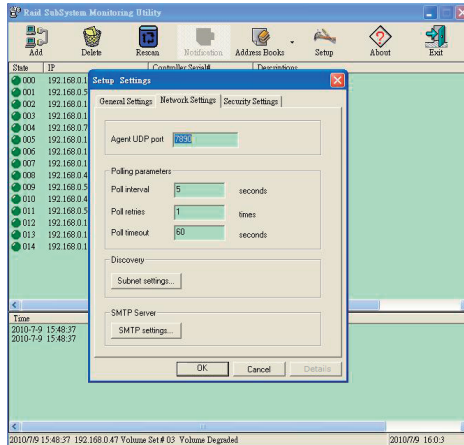
- To select your own language, just pull down the menu and select the language which you comfortable with.
- If you want to enable the log file, make a check mark in the box beside the "Enable log file".
- Also, type in the log.log file path if you wish to change the logfile path.
- Make a check mark in the box beside the "Save the Subsystem IP" option button, the SAP will automatically save the currently IP list into a file. It will firstly scan the saved file IP address on the next startup the SAP monitor utility.



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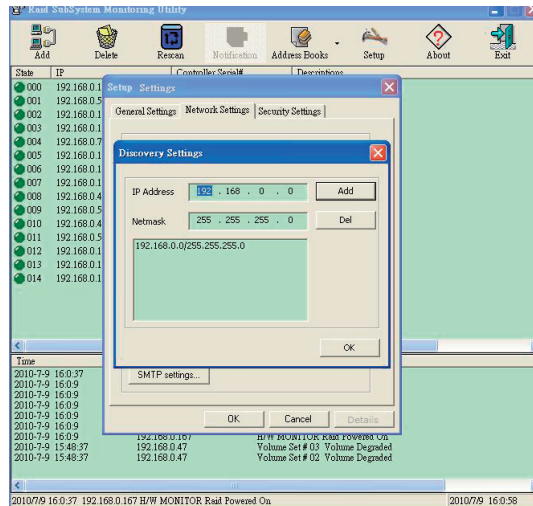
1.3.4.2 Network Settings

You can pre-schedule the broadcast message notification for a particular destination to occur automatically at specific intervals. This notification will be sent regardless of the events occurring in the disk array system.



1.3.4.2.1 Discovery Settings

Network discovery is a network setting that affects whether your computer can see (find) other computers or devices on the network. By default, the SAP utility automatically discovers Areca RAID controllers that are directly connected to your system. SAP utility also has the ability to discover Areca RAID controllers that are on a network after the network device discovery service has been enabled. After enabling this feature, the discovered network devices will be displayed in network map.



1.3.4.2.2 SMTP Sever Setting

SMTP Server: Enter the SMTP server IP address.
Ex. 192.168.0.2

If your IP or e-mail service provider requires SMTP authentication for outgoing mail, you will need to use the "Use name and password" option for that SMTP server.

To set up SAP monitor utility to use authentication with your SMTP server. Make the "Need Authentication" check box in the "SMTP Server Information" and add your username and password. Clear the "Need Authentication" check box in the SMTP server setting. No User Account/Password is required to access this resource.

Account: enter the valid account if your mail server need authentication.

Password: enter the valid password if your mail server need authentication.

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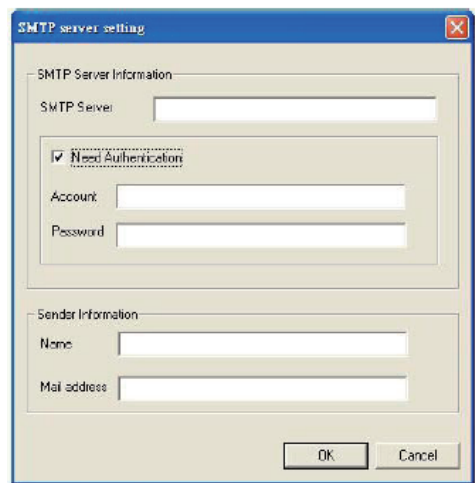
Sender Information

Name: enter the sender name that will be shown in the outgoing mail.

Ex: RaidController_1

Mail address: enter the sender email that will be shown in the outgoing mail.

Ex: RaidController_1@areca.com.tw



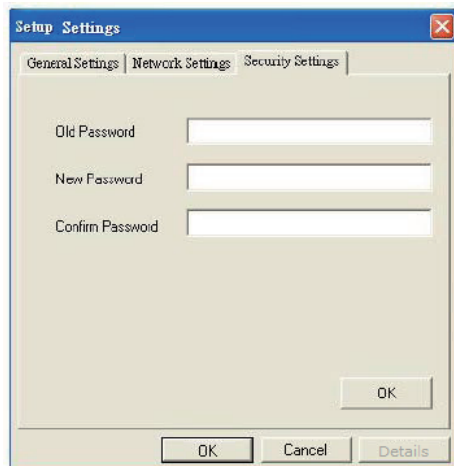
1.3.4.3 Security Settings

The password option allows user to set or clear the SAP monitor utility password protection feature. Once the password has been set, the user can only monitor and change setting by providing the correct password. The password is used to protect the SAP monitor utility from unauthorized entry. The monitor utility will check the password only when entering the main menu from the initial screen.

- Changing a password

1. Display the "Setup" windows by clicking on the "Setup" button from the main menu.

2. Move the mouse cursor to "Setup" screen, and click on the "Security Settings" link. The SAP monitor utility "Security Settings" dialog box appears:



To change the password, enter the “Old password” in the box and key the new password in both the “New Password” and “Confirm Password” box. Once the user confirms the operation and clicks the “OK” button. To disable the password, enter the old password in the box and leave blank in both the “New Password” and “Confirm Password” column. Once the user confirms the operation and clicks the “OK” submit button. The existing password will be cleared. No password checking will occur when entering the main menu from the starting screen.

Utility-DST Monitor

2. Utility-DST Monitor

Overview

ARECA offers a full line of RAID controller products with both internal and external options for high throughput operating environments, such as network and internet servers, multimedia production and digital video processing.

The prime purpose of DST is to test hard disk drives while they remain inside a personal computer. This Windows based utility to kick out disks meeting marginal spec before the RAID unit is actually put on-line for real business. Drive Stress Test (DST) utility saves time, data and money by putting healthy disc drives into your system.

Windows Only

At this time, only the following Microsoft Windows operating systems are supported by DST utility: Windows 2000 and Windows XP, Windows 2003, Vista, 2008 and 7.

Before you Start

Before starting with setup, read through the notes listed below, and ensure that you understand it.

- The DST utility can only start the RAID system disks in the free state. This utility cannot test the disks, which assign to the RAID set.
- The DST utility is the hidden function of SAP utility.

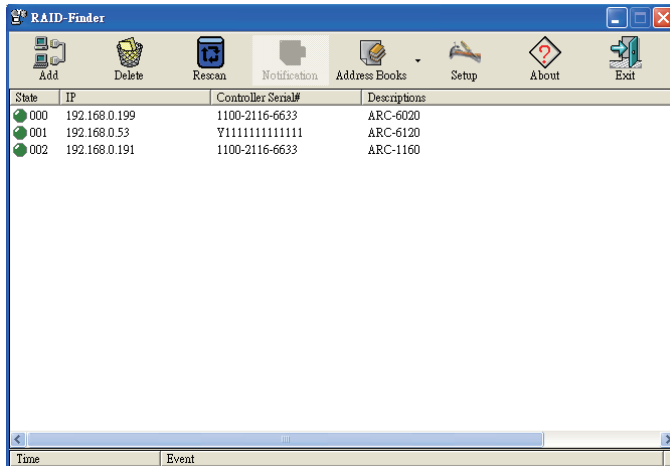
Installation the SAP (including DST function) utility

Follow these steps to set up the SAP utility on your system:

1. Insert ship CD-ROM into the CD-ROM drive or download program from the web site **www.areca.com.tw**.
2. Run STmonHT.EXE.

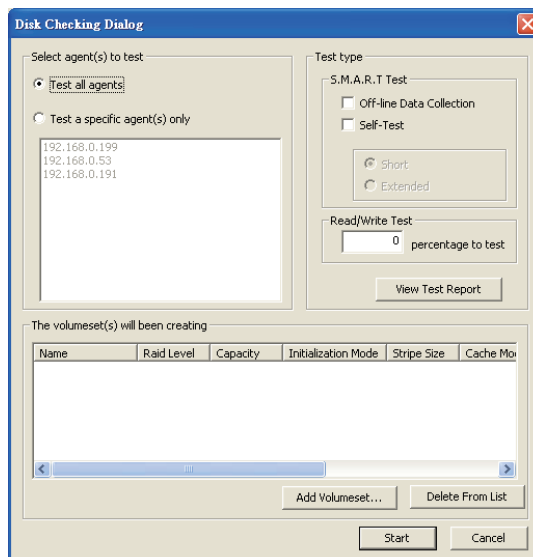
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2.1 DST Monitor Main Menu



2.2 Starting the DST utility function

Move the cursor to the test target and click right button of the mouse. You will see two options. Select "Disk Checking". The following screen appears.



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2.2.1 The SAP utility allows you to select agents to test

- **Test all agents**

The single Admin Portal (SAP) monitor utility can support one application to scan all Areca RAID units in the network. This option allows you to disk stress testing all units in the network.

- **Test a specific agent only**

This option allows you to disk stress testing units which have selected by mouse, in the network.

2.2.2 The SAP utility allows you to do

- **S.M.A.R.T test**

Self-Test : Current S.M.A.R.T selective self-tests provides for a short self-test and an extended self-test option. The short self-test does read scan of a small area of the media in a short time. The area of the media scanned is vendor specific. The extended self-test does read scan of the entire media. As the capacity of disk drives increases, the time to complete the extended self-test becomes exceedingly long.

Off-line data collection: After the scan of the selected spans described above, a user may wish to have the rest of media read scanned as an off-line scan. In this case, the user shall set the flag to enable off-line scan in this settings. If an error occurs during the scanning of the test spans, the error is reported in the test result and the off-line scan is not executed.

- **Read/Write test**

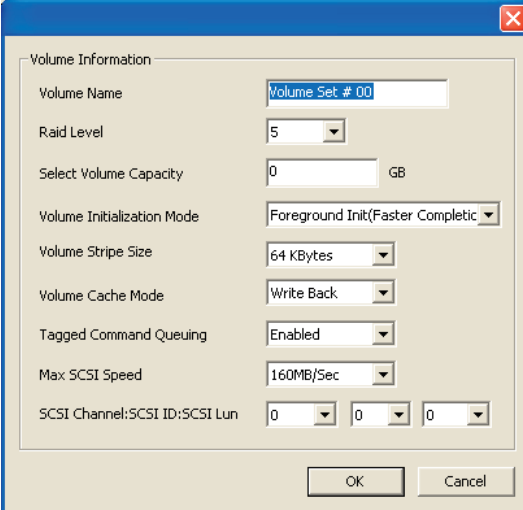
Select Percentage to Test - Allow you to change the percentage of the disk drive for utility to test. Enter the zero in this option means without needing read/write test the target.

- **Create volume set**

After you have completed the test, you can also base on the number of physical disk installed to create a RAID set and Volume set. The RAID set and Volume set information will write to all test

Utility-DST Monitor

agents which pass HDD stress test. You can also create RAID set and volume set information to all test agents ignore HDD stress test. The DST can create one RAID set and up to 5 volume sets. This can reduce the RAID configuration time in production stage.



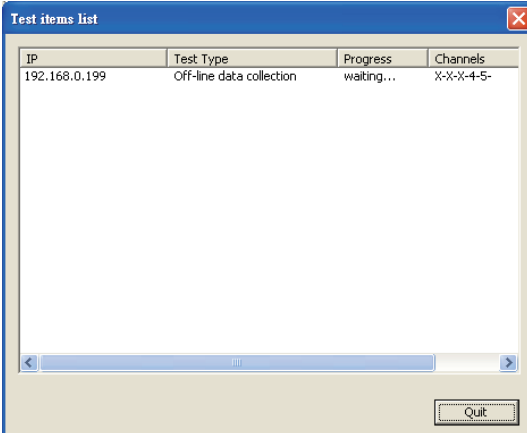
A dialog box titled "Volume Information" with a close button (X) in the top right corner. It contains several configuration options for a volume set:

- Volume Name:
- Raid Level:
- Select Volume Capacity: GB
- Volume Initialization Mode:
- Volume Stripe Size:
- Volume Cache Mode:
- Tagged Command Queuing:
- Max SCSI Speed:
- SCSI Channel:SCSI ID:SCSI Lun:

At the bottom are "OK" and "Cancel" buttons.

2.3 Test items list

When you complete the setting of the "Disk Checking Dialog" menu, click the "Start" button. The following Test items list screen shows all information that you are currently processing. It also



A dialog box titled "Test items list" with a close button (X) in the top right corner. It displays a table of test items:

IP	Test Type	Progress	Channels
192.168.0.199	Off-line data collection	waiting...	X-X-X-4-5-

Below the table is a horizontal scrollbar. At the bottom right is a "Quit" button.

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shows the target IP address, test type, percentage of testing, and channels no being tested. Channels show x-x-x-4-5. "X" means this driver can not be tested, but drive 4 and drive 5 still free can be tested.

After the test procedure has been completed, the test result will create html in the program or you can click on the "View Test Report" button in the "Disk Checking Dialog" screen.

The test result shows channels drive information, included Model Name, Serial Number, Firmware Revision, and Capacity; it also displays the test result.