

# Preface

## Notice

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Manual version 2.3

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## About this manual

Congratulations on your selection of the ACSView graphical user interface. ACSView enables web-based real time local or remote monitoring of a RAID. It is designed to be used in conjunction with up to four Accusys InneRAID linked to each host. Single Host and Multiple Host Versions of ACSView are available. This manual covers both in detail.

- Users of the Single Host Version should refer to **Part 1**
- Multiple Host Version users should turn to **Part 2**

### Intended user

This manual is designed and written for users installing and using ACSView. The intended user should have working knowledge of RAID planning and data storage.

### Organization of the manual

#### **PART ONE: Part 1 deals with the ACSView Single Host Version.**

- Chapter 1: **Introduction to ACSView Single Host Version** provides details of key features, checklists of requirements and pre-installation assumptions.
- Chapter 2: **Setting up ACSView in Windows** guides Windows XP and Windows 2000/2003 users through the entire setup process. In addition to installation of the GUI, this chapter explains how to view the history log, set up backup schedule, and configure email alert settings. Users of other operating systems should skip this chapter.
- Chapter 3: **Uninstall ACSView in Windows** guides Windows users through the entire process to uninstall ACSView software
- Chapter 4: **Setting up ACSView in Linux** guides Linux users through the entire setup process. In **addition** to installation of the GUI, this chapter explains how to view the history log and configure email alert settings. Users of other operating systems should skip this chapter.
- Chapter 5: **Monitoring a Single Host with ACSView** gives full details of the monitoring capabilities of ACSView.

#### **PART TWO: Part 2 deals with the ACSView Multiple Host Version.**

- Chapter 6: **Introduction to ACSView Multiple Host Version** provides details of key features, checklists of user requirements and pre-installation assumptions.
- Chapter 7 **Setting Up ACSView Server** gives setup instructions for Windows 2000/NT/XP and Linux operating systems.
- Chapter 8 **Setting Up ACSView Gateway** gives full setup instructions and guides users through configuration of server groups and mail alert settings.
- Chapter 9: **Monitoring Multiple Hosts with ACSView** gives full details of the monitoring capabilities of ACSView.

Appendix A: **FAQ** helps you deal with encountered problems in the form of Q&A.

Appendix B: **Glossary** defines relevant technical terms used in this manual.

Appendix C: **Contact Accusys** lists contact details of Accusys business units around the world.

## Guide to conventions

Important information that users should be aware of is indicated with the following icons:



### Caution

*This icon indicates the existence of a potential hazard that could result in personal injury, damage to your equipment or loss of data if the safety instruction is not observed.*



### Note

*This icon indicates useful tips on getting the most from your RAID Kit.*

Important terms, commands and programs are put in **Boldface** font.

Screen text is given in **Screen** font.

## Related documents for reference

Information provided in the following document may be relevant to the installation and operation of ACSView. You may wish to check this document for more information during the installation/operation process.

- Accusys InneRAID User's Manual.

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# Part 1

## ACSView Single Host Version

ACSView can be used to remotely monitor either a single host with up to four RAID controllers connected or several such hosts. Users who wish to make use of the multiple host monitoring capabilities of ACSView require an extra layer of software to gather information from different hosts. Full installation instructions for the Multiple Host Version are in Part 2. The instructions in Part 1 are for users of the Single Host Version only.

## Using this section

Part 1: ACSView Single Host Version supplements the user's manuals supplied with ACS InneRAID boxes. It is intended to be read in a linear manner. Users may prefer to skip more familiar sections, but each of the steps below must be completed.

### Step 1

**Install:** Install ACSView on your system

### Step 2

**Configure:** Configure email alert settings so that the administrator can be informed whenever an error occurs and configure your web server so that ACSView can be accessed remotely

### Step 3

**Schedule** Schedule the backup frequency by setting time and date or manually backup the data at any time.  
(Only for ACS-76500/76510)

### Step 4

**View:** Learn how to view the History Log of error messages

### Step 5

**Access:** Learn how to access ACSView from any terminal on the Internet

### Step 6

**Monitor:** Familiarize yourself with the real-time monitoring capabilities of ACSView



#### Note

*The set-up procedures in Windows and Linux environments are different although the steps above are the same for both.*

- ⇒ *Windows users should refer to Chapter 2.*
- ⇒ *Linux users should refer to Chapter 3*

## Chapter 1

# Introduction to ACSView Single Host Version

**This chapter introduces the features and capabilities of ACSView (Single Host Version).**

**You will find:**

- ⇒ **Details of key features**
- ⇒ **A checklist of operating systems supported**
- ⇒ **A checklist of pre-installation assumptions**

## Key features

ACSView is designed to be used in conjunction with Accusys InnerRAID.

Supports up to four Accusys InnerRAID per host

- Graphical User Interface (GUI)
- Fault tolerant
- Multi-platform and Operating System support
- Multi-interface support
- Remote monitoring
- Web-based environment
- Event notification

## GUI

The graphical user interface enables easy monitoring of the status of a RAID in an intuitive graphical format.

## Multi-interface

ACSView support in-band (ATA/SATA) and out-band (RS-232) connection. SATA in-band function is since ACSView single host version 2.3. If you want to use SATA in-band connection, please make sure your GUI software version is V2.3 and the firmware version of your RAID box. Please visit Accusys website [www.accusys.com.tw](http://www.accusys.com.tw) to download the RAID box firmware for SATA in-band supported.

## Remote monitoring

ACSView can be accessed from any web-enabled terminal.

## Event notification

Email and popup window event notification keeps the administrator informed of the status of the RAID controller. Popup window notify function is since version 2.2.

#### Operating systems supported

- Windows 98
- Windows ME
- Windows 2000
- Windows XP
- Windows 2003
- Linux Version 7.3 and later (Version 2.2 or earlier)

#### Installation prerequisites

ACSView is designed to be used in conjunction with Accusys InneRAID Box (up to four RAID Box per host). Users require the following:

#### Hardware requirements

- Internet connected computer with CD-ROM drive
- ACS InneRAID Box (installed)
- 3-pin RS232 cable backup connection from RAID box to host computer (optional)
- Monitor display resolution of 800 x 600 (recommended)

#### Software requirements

- ACSView GUI software ( ACS User Kit CD, or you can download from Accusys website <http://support.accusys.com.tw>)
- Supported operating system
- Java-enabled web browser

#### Assumptions

Before the InneRAID Box and ACSView can be used, you must:

- Install the InneRAID Box to your computer.
- Install ACSView on your host computer.
- Initialize the array.
- These steps are described in detail in the InneRAID User's Manual.

## Chapter 2

# Setting up ACSView in Windows

This chapter details the installation, setup and configuration process for ACSView on a Windows XP/2000/2003 operating system. The screens shown are taken from Windows XP.



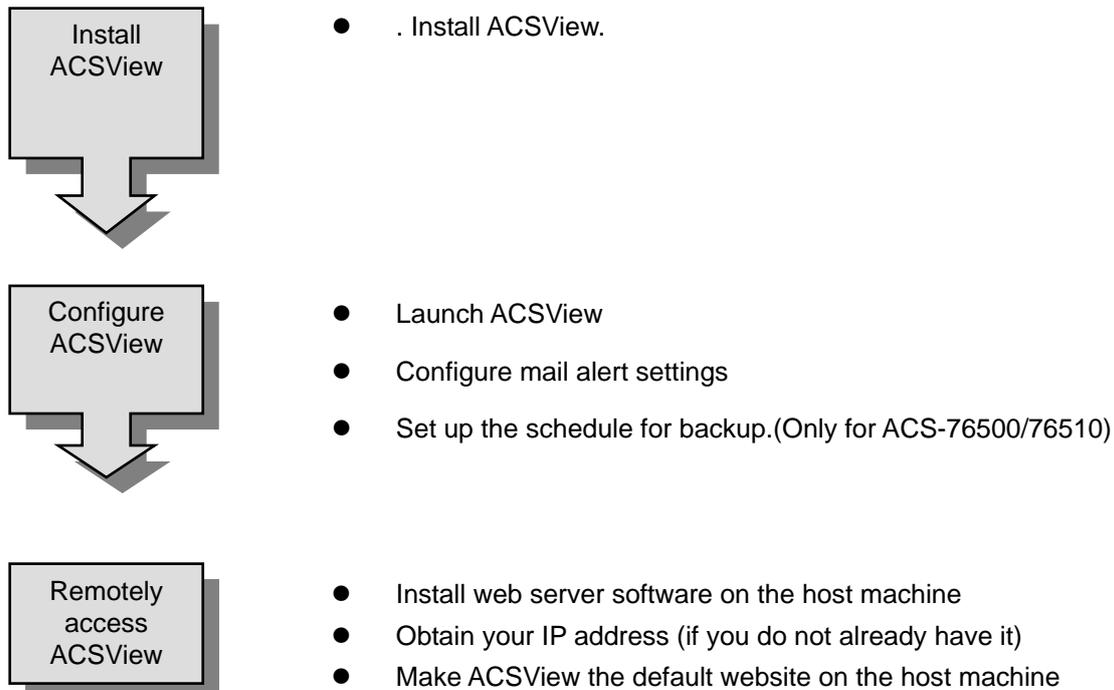
### Note

The set-up procedures in Window and Linux environments are different. This chapter deals exclusively with Windows XP/2000/2003.

⇒ **Linux** users should turn straight to **Chapter 3**.

## Installation flowchart

The set up process follows these steps:

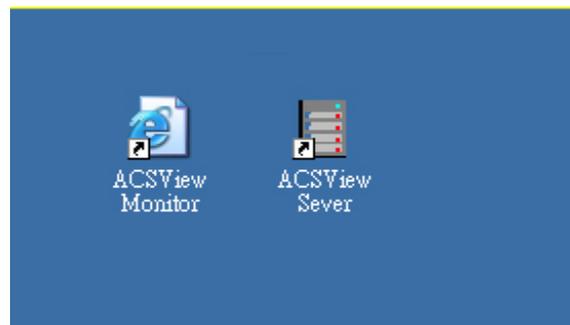
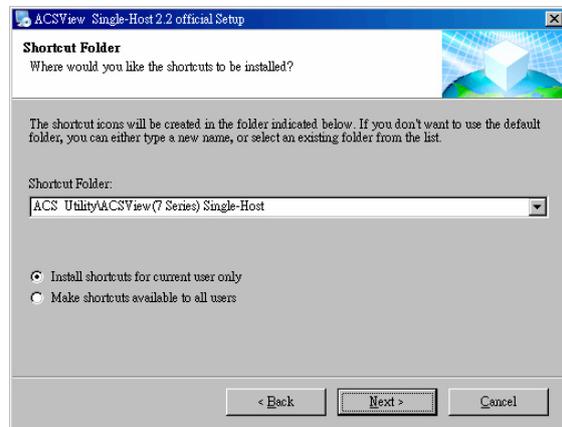
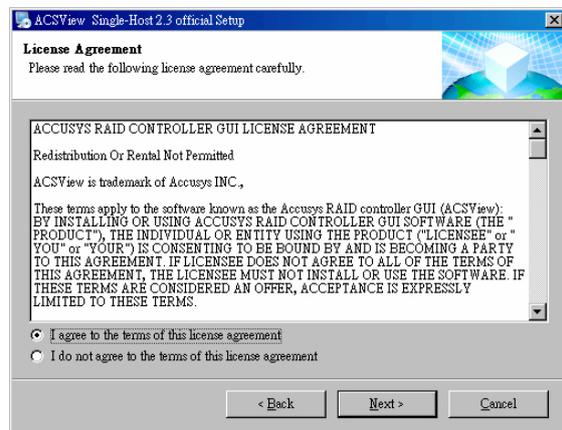


## Software Installation

### Install Acsview

Follow the steps below to install ACSView Server:

1. Insert the Accusys User Kit CD into your computer's CD-ROM. The software install utility will auto appear.
2. Click the button to install ACSView Single Host version. The **Welcome** screen will appear.
3. Click **Next** to continue with the setup.
4. Read the license agreement carefully. Select **Agree** if you accept the terms of the agreement to continue the setup.
5. The setup program will install ACSView to the default location as C:\Program Files\Accusys\ACS Utility\ACSView\_7S. To install to a different location, either type in the new path or click **Change** and select a new location.
6. Once you have confirmed the setup location, click **Next** to continue.
7. The setup utility will add shortcut icons to the default folder as "ACS Utility\ACSView InnerRAID Single-Host". If you do not want to use the default folder, you can either type a new name, or select an existing folder from the list.
8. Once you have confirmed the shortcut icon location, click **Next** to continue. Installation will commence.
9. You will be prompted to Click **Finish** to complete the setup.
10. Two shortcut icons will be created on desktop after software installation. "ACSView Server" is to launch ACSView software program. "ACSView Monitor" is to open ACSView monitor window.

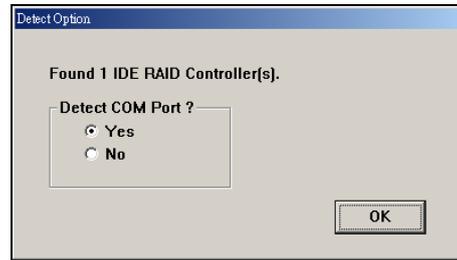


ACSView Single Host Version

### Configure ACSView

1. To launch ACSView Server, go to **Start > Programs > ACS Utility > ACSView InnerRAID Single-Host > ACSView Server**.

2. The Detect Option dialog box will appear prompting you to scan the InnerRAID box. ACSView supports in-band and out-band connection. Select “No” for not detect COM port device if you want to use in-band connection.

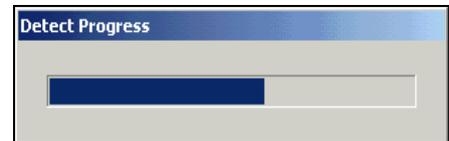


#### Note

ACSView Server can obtain Accusys RAID box information through the ATA/SATA disk connection or through the backup RS232 (COM port) connection. The system always checks first for the ATA/SATA connection, then the RS232 connection. If both connections are present, ATA/SATA is used.

1. RAID detection will commence to obtain information from the RAID box via ATA/SATA or RS232.

The pop-up Detect Process window shows the progress of the system’s detection of RAID box.



2. Once the scan is finished, an **Accusys RAID Information** dialog box appears. This identifies the properties of the RAID boxes) detected and its current status.

RAID box information includes:

**Serial Number:** the serial number of the RAID box.

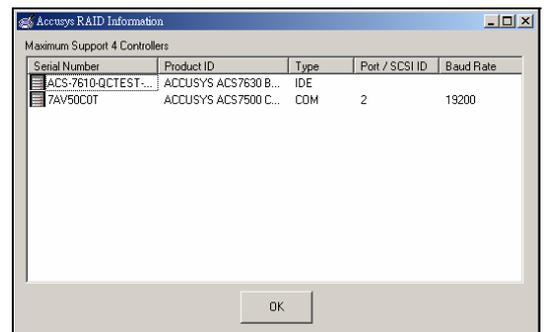
**Product ID:** the product ID of the RAID box.

**Type:** the port that ACSView software uses to communicate with the RAID box., e.g. IDE, SATA, COM.

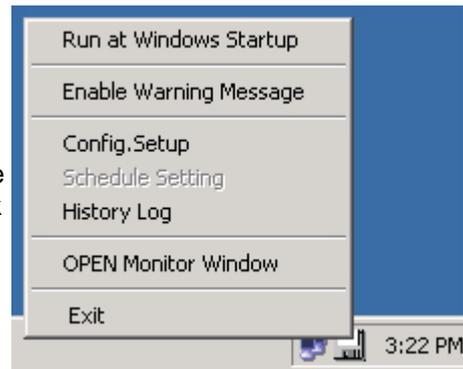
**Port/SCSI ID:** specifying the port detected, e.g. COM1 / COM2.

**Baud Rate:** the number of times per second a signal in a communications channel changes, or makes a transition between states (for COM port only).

After confirming the information, click **OK** to exit.



3. The ACSView icon appears on the Task Bar at the bottom right of the desktop. You can double click left bottom for main window or single click right bottom for option menu.



### Menu Options:

#### Run at Windows startup

Allows ACSView to execute automatically when Windows startup. (Default is unexecuted)

#### Enable / disable warning message

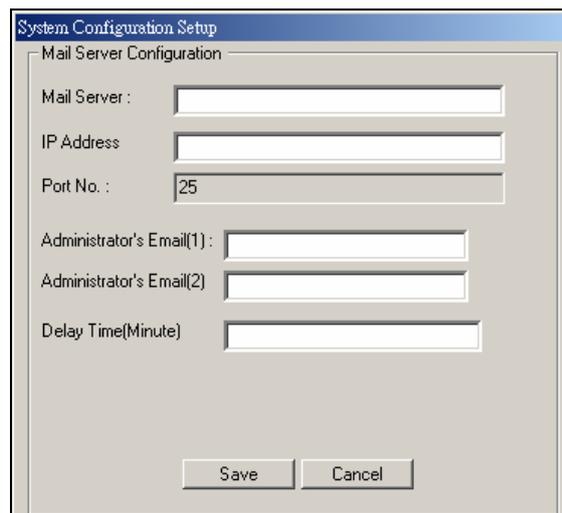
Allows ACSView Server to pop up warning message window when event occur (Default is disable)

#### Config Setup

**Configure mail alert setting.** The mail alert settings should be configured so that, in the event of a RAID failure, the RAID administrator will be notified at once. The mail alert settings allow this to be done via email, so the administrator can passively monitor RAID status from anywhere, without having to keep monitoring ACSView.

To configure the mail alert settings:

1. Click **Config Setup**. The **System Configuration Setup** dialog box will open.



2. Enter the following values:

**Mail Server:** Enter the IP address of the mail server in your network or its FQDN (e.g. accusys.com.tw). If no Mail Server information is added, the mail alert function will be disabled.

**IP Address:** Enter the IP address of the mail server in your network or its

FQDN (Entries in the top two fields should be identical)

**Administrator’s Emails:** Enter email addresses for two administrators.

**Delay Time (Minute):** If a RAID failure occurs, an alert email will be sent immediately to each of the email addresses entered in the above field. Alert emails will continue to be sent until the problem is resolved. The Email will notify events which are fan fail, disk status (off line, fails, rebuilding) and RAID fails. Enter here the desired time lapse between successive emails (minimum = 1 minute)

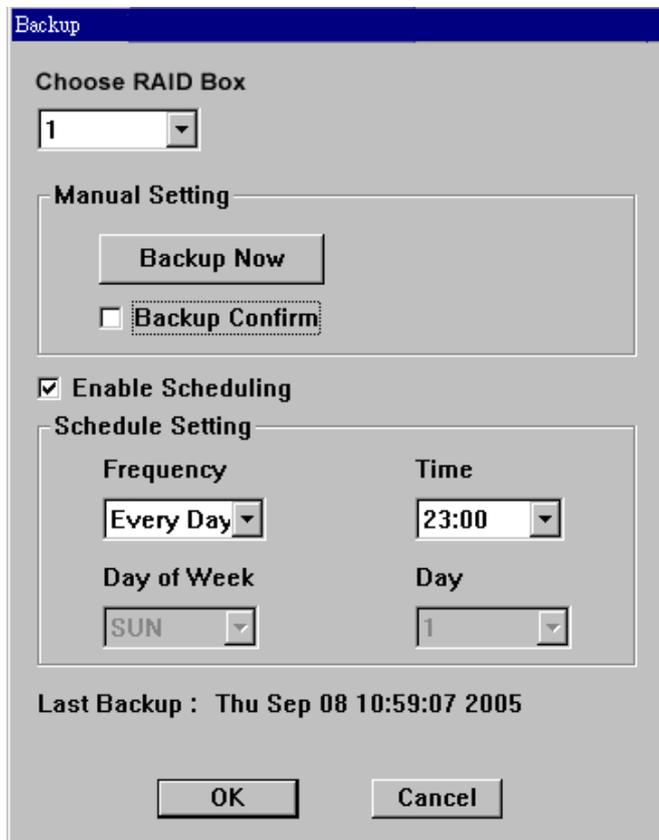
3. Click **Save** to save the new configuration.

**Schedule setting(Only for ACS-76500/76510)**

**Schedule system backup.** This feature support only **ACS-76500/76510**, which allows you to arrange system’s backup schedule so that system data can be periodically saved with a copy. Other than this, you may select manual backup at any time you want.

To set up the schedule;

1. Click **Schedule setting** and the **Backup** dialog box pops out on the screen.



2. Adjust the following settings:

**Choose RAID box:** Specify the target RAID box that you would like to backup your data from.

**Manual Setting:** Allows you to backup system data manually and at any time you need.

**Schedule Setting:** Set up the **Frequency**, **Time**, the **Day of Week** and **Day** for backup work.

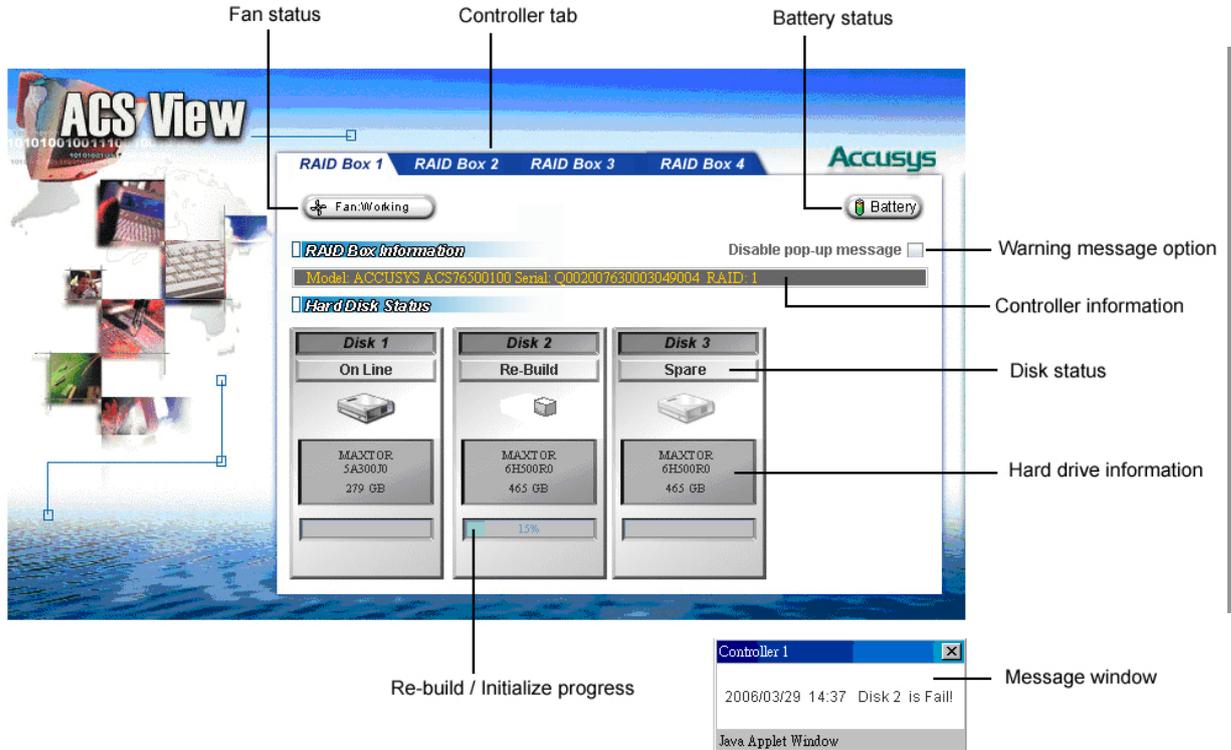
**Last Backup:** Display information about the time and date of last backup.

## History log

**View the history log.** All malfunctions and events triggering an alert email are recorded in the history log. Select the **History Log** menu can view the log of error message.

## Open monitor window

**Monitor your InnerRAID with ACSView.** Click this option to open the monitor window on local computer. The ACSView browser window displays the following information:



ACSView Single Host Version

- Fan status:** Provides alert in case of fan malfunction.
- Controller tabs:** Allow you to select which controller to monitor.
- Battery status:** Provides alert in case of battery malfunction.
- Warning message option:** Enable / Disable pop-up message. ACSView browser will pop-up message window when event occur, if this option is enable. (Default is enabling.)
- Controller information:** Lists model name, serial number and RAID level of the RAID kit.
- Disk status:** Allows you to monitor the status of each of the disk drives.
- Hard drive information:** Lists model name and capacity of each of the disk drives..
- Re-build / initialize progress:** Tracks the re-building or initialization process..
- Message window:** Provides controller number, date, time, error message when event occur.

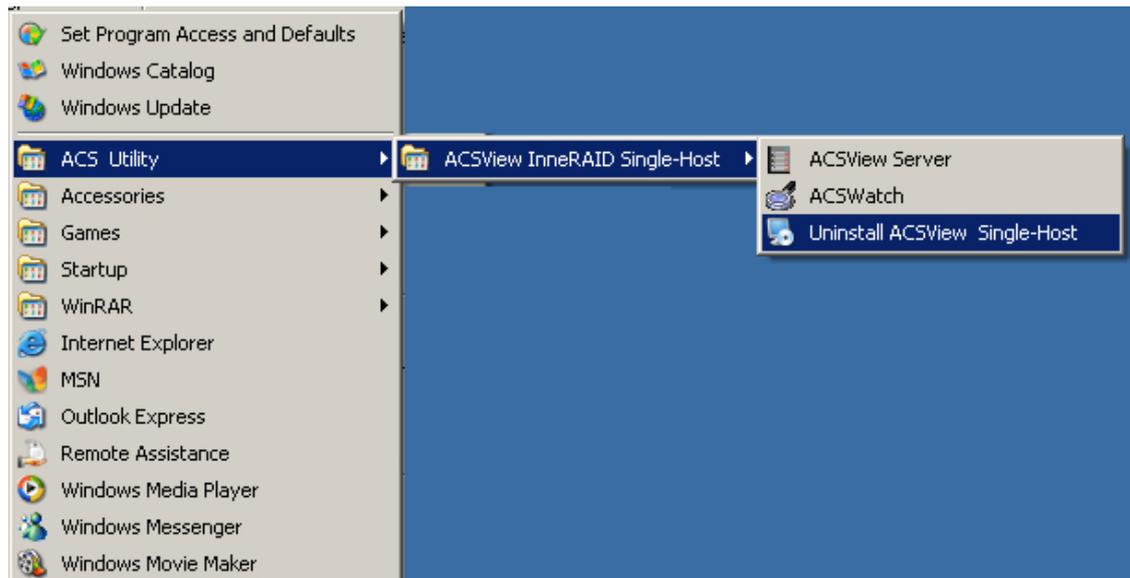
## Chapter 3

# Uninstall ACSView in Windows

This chapter details the software un-installation process for ACSView on a Windows XP/2000/2003 operating system. The screens shown are taken from Windows XP.

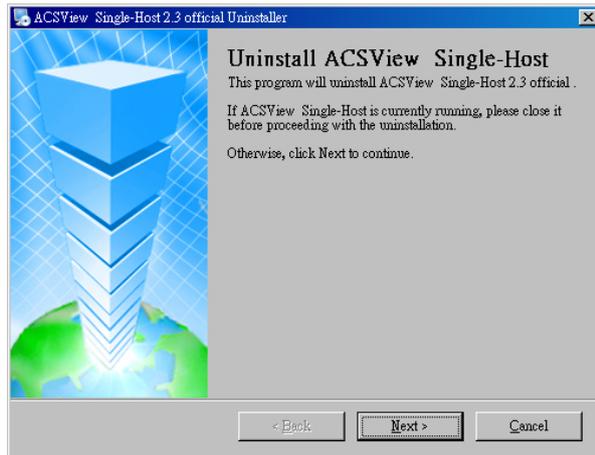
## Uninstall ACSView

Follow the steps below to uninstall ACSView Server:

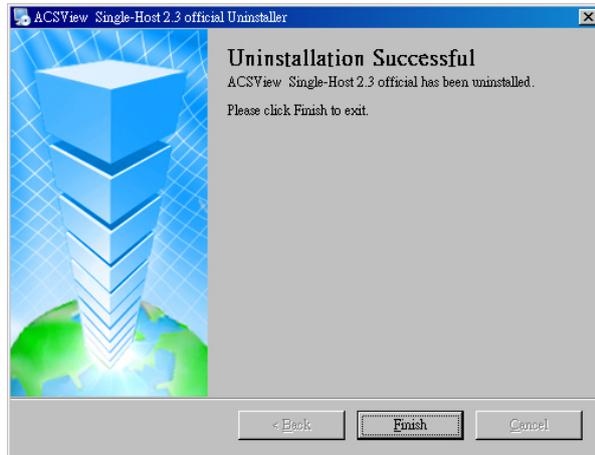


1. Go to **Start > Programs > ACS Utility > ACSView InneRAID Single-Host > Uninstall ACSView Single-Host**

2. The uninstaller dialog box will appear, click **Next** to continue.



3. You will be prompted to Click **Finish** to complete the un-installation and exit.



ACSView Single Host Version

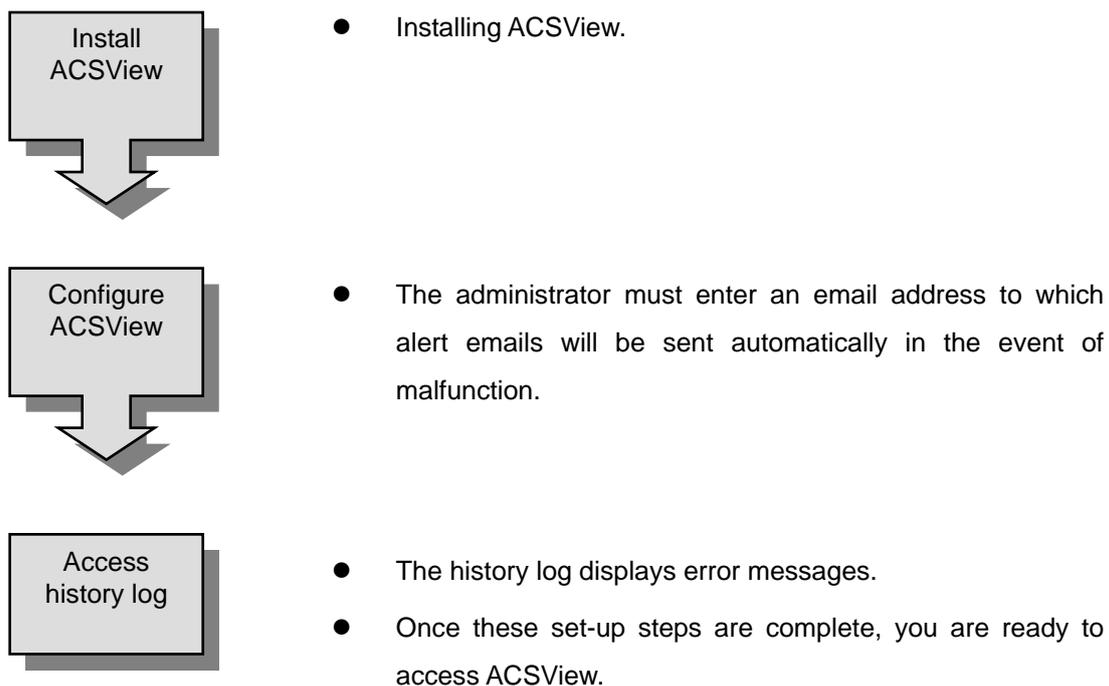
## Chapter 4

# Setting up ACSView in Linux

This chapter details the installation, setup and configuration process for ACSView on a Linux operating system.

## Installation flowchart

The set up process follows these steps:



## Setting up ACSView on Linux

### Software Installation

Follow the steps below to install ACSView on a Linux operating system.

1. Copy file **ACSsrv7\_linux\_SingleHost-1.0-0.i386.rpm** from ACS User Kit CD or download it from the Accusys website <http://support.accusys.com.tw> and save in the `/root` directory.



**Note**

*The name of this file on the CD-ROM may change slightly as updated versions are released.*

2. If operating in the KDE desktop environment, open **Konsole**. In text mode go straight to the next step.
3. Type `rpm -ivh ACSsrv7_linux_SingleHost-1.0-0.i386.rpm` and press enter to run the installation program.



**Note**

*To run ACSView Server, the Linux host operating system must:*

- ⇒ *Include a web server*
- ⇒ *Have a Java Runtime Environment application installed and be configured to run JRE.*

*A web server and JRE are standard features on many Linux operating systems. If your operating system lacks either, they can be installed in one step from the utilities program provided on the ACSView CD-ROM disk To install:*

1. *Copy the utility file (`_FastInstall`) from the disk to the `/root` directory.*
2. *Type `_FastInstall` to begin installation.*

*JRE can also be downloaded free from  
<http://java.sun.com/downloads/>*

### Configuring mail alert settings

Before using ACSView, you **must** set the mail alert values. In the event of a RAID malfunction, an alert email will be sent to the RAID administrator at a specified address.

Open the file **mail.cfg** (located in the directory **/usr/local/sbin/ACSsrv7**).

Enter the following values:

- Mail server:** Enter the IP address of the mail server in your network
- Sender:** Enter an email address to identify the source of the alert email
- Receiver:** Enter up to three email address to which an email will be sent
- Notify time (minutes):** Enter the interval time between successive alert email dispatches (minimum value: 1 / maximum value: 65536)
- COM Port 1~4:** With the default value **1** entered, the host system **will scan** that port. If the number is changed to **0**, the host computer **will not scan** that port.

### Viewing the history log

All malfunctions and events triggering an alert email are recorded in the history log. To view the log of error messages:

Open the file **AcsErrLog** (located in the directory **/usr/local/sbin/ACSsrv7**).

Error messages are stored in the log until deleted by the administrator.



#### Note

*ACSView software does not support ACS-75170, ACS-76130, ACS-76510 and ACS-76500 in Linux operating system.*

## Launching ACSView Server



### Note

ACSView Server can obtain RAID Controller information through the IDE disk connection or through the backup RS232 (COM port) connection. The system always checks first for the IDE connection, then the RS232 connection. If both connections are present, IDE is used.

1. Type `cd /usr/local/sbin/ACSSrv7` to move to the ACSView Server directory.
2. Type `.ACSSrv7` to run the program. As ACSView server launches, the program will automatically scan for RAID controllers. A response similar to that below should appear.

```

root@localhost:usr/local/sbin/ACSSrv7
File Edit View Terminal Go Help
[root@localhost ACSSrv7]# ./ACSSrv7

  77      77777  777777 7777  7777 77777777777 7777 777777
  77      77 77 777 77 777  77 77 777 77 777 77 777
 777 77  77 77  77 77  77 77 77 77 77 77 77
 7 77 77      7      77  77 777  77777 777
77 77 77      7      77  77 77777  7777 7777
77 777 7      7      77  77 77777  777  77777
777777 77      7      77  77  777  77  77
77 77 77  77 77  77 77  77 7  7  77 77  7
77  77 777 77 777 77 777  7 77 77  77 777 7
7777 7777 777777 777777 777777 777777 77777 777777
?

*****
* Found /dev/hdd is linked with RAID_5L709BHG
* Found both /dev/ttyS0 & /dev/hdd are linked with RAID_5L709BHG
*
*****

Accept ?!!<y\n>y
[root@localhost ACSSrv7]#
    
```

3. Once the scan is completed, details of the RAID controllers found will be listed. You will be asked **Accept?!!<y\n>**. If all controllers have been located, type **y** to launch ACSView server.

## Chapter 5

# Monitoring a Single Host with ACSView

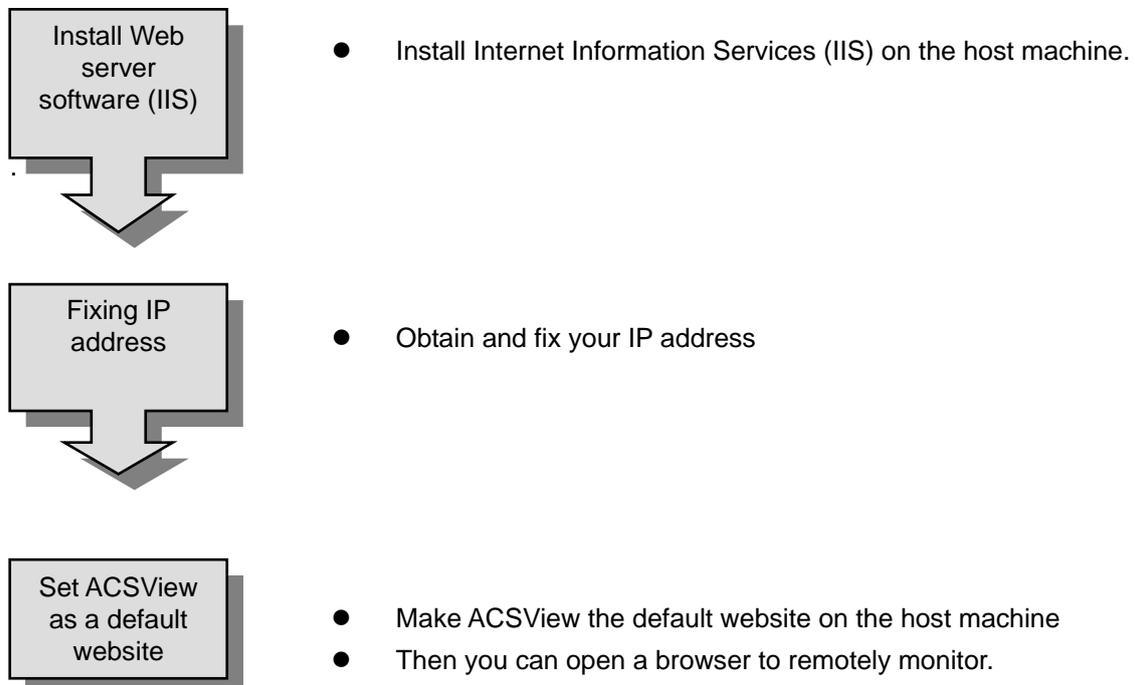
The ACSView browser allows you to remotely monitor the status of your RAID in real time. This chapter introduces you the ACSView monitoring capabilities.

## Remote monitor your RAID in Windows OS

The ACSView browser allows you to remotely monitor the status of your RAID in real time.

### Setup flowchart

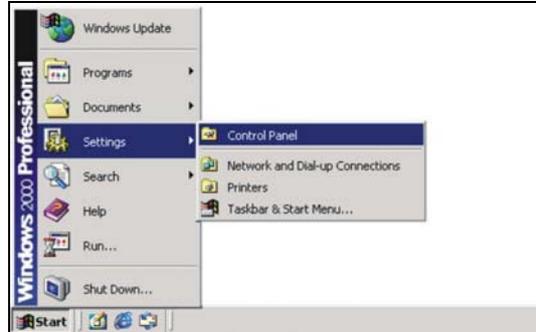
The set up process follows these steps:



## Installing Web server software (IIS)

The RAID host machine should be set up as a web server in order that your RAID box can be remotely monitored. Several web server software packages are available. The example installation instructions given below are for Microsoft's Internet Information Service software on Windows 2000.

1. Insert your Windows 2000 CD in its drive.
2. Open the **Start** Menu.
3. Select **Control Panel**.



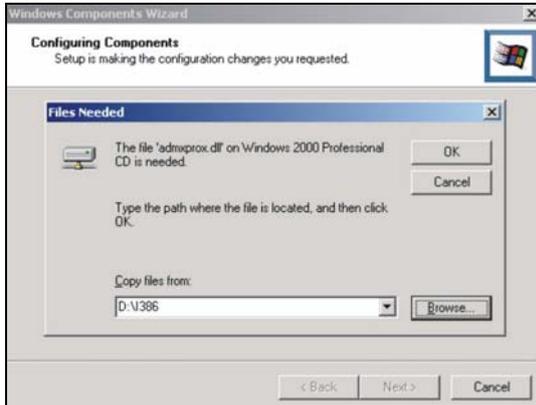
4. Select **Add/Remove Programs**.
5. Select **Add/Remove Windows Component**.



6. Select the **Internet Information Services (IIS)** component.
7. Click **Next**. The component configuration process will start.



8. When prompted by the **Files Needed** dialog box, enter the location **x:/I386** (where **x** is the letter of your CD-ROM drive).



9. The required files will be copied from the CD-ROM.



10. Click **Finish** to complete the installation.

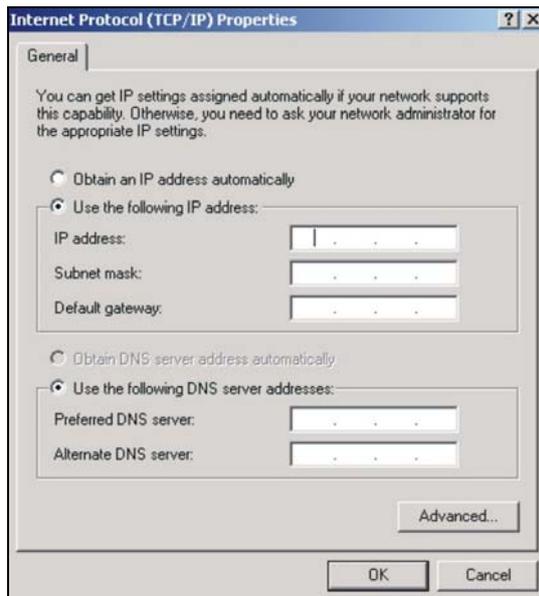
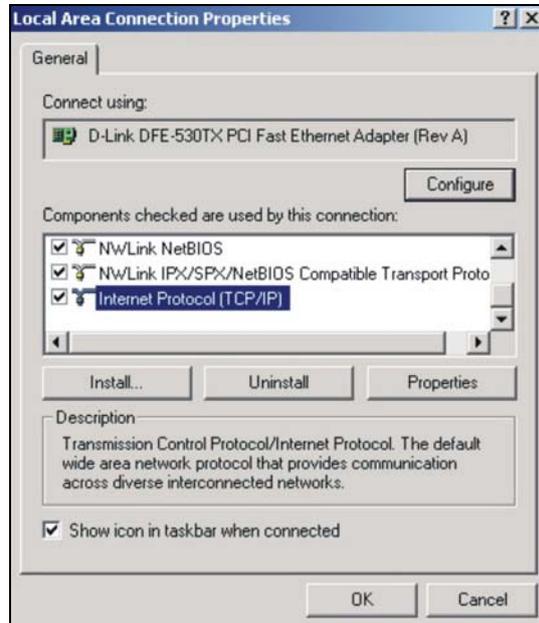


### Fixing your IP address

Once you have installed **Internet Information Services**, you should obtain and fix an IP address to your TCP/IP Properties.

To open the **Internet Protocol (TCP/IP) Properties** dialog box:

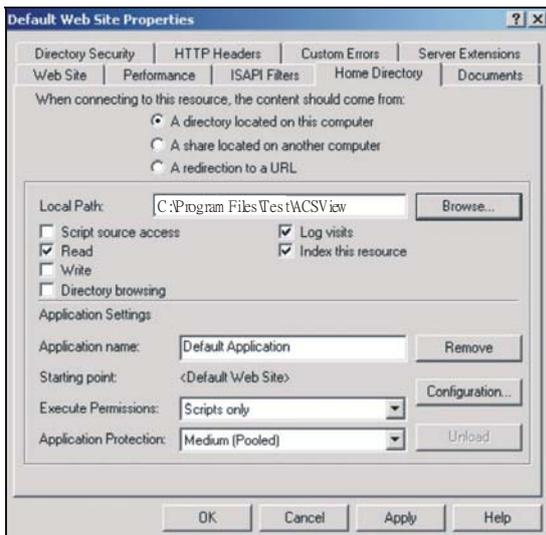
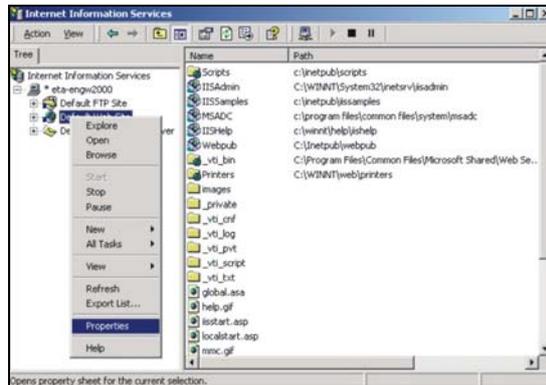
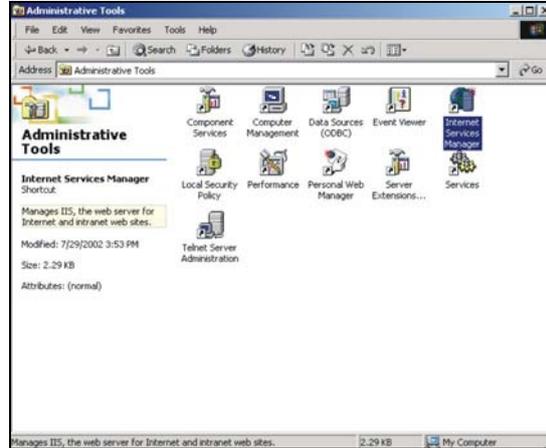
1. Right click on the **My Network Places** icon on the desktop and select **Properties**.
2. The **Local Area Connection** dialog box will appear (The **Local Area Connection** dialog box may also be opened by entering Control Panel, then **Network and Dial-up Connections**, right-clicking on the **Local Area Connection** icon and selecting **Properties**).
3. Highlight **Internet Protocol (TCP/IP)** and click **Properties**.
4. The **Internet Protocol (TCP/IP) Properties** dialog box will appear. Enter the IP address for this terminal and click OK.
5. To determine this terminal's IP address, open the **Start** menu, **Accessories** and then open **Command Prompt**. Type **ip -config**. The IP address, subnet mask and default gateway values will be listed.



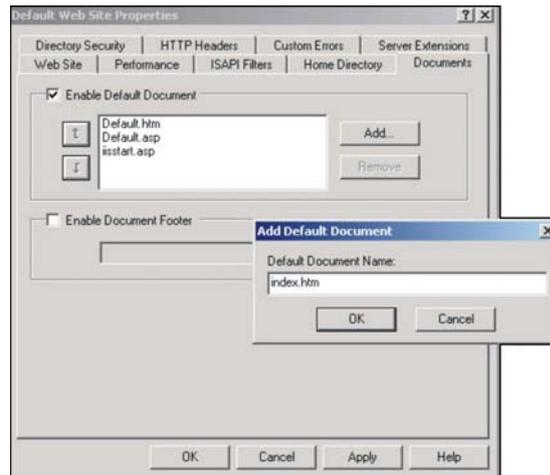
### Setting ACSView as a default website

In order to enable ACSView to be viewed from other computer terminals, you should configure the host computer's web server software to list ACSView as the default website. The example instructions given below are for Microsoft's Internet Information Service software on Windows 2000. For other web server software, refer to the technical support information provided by your supplier.

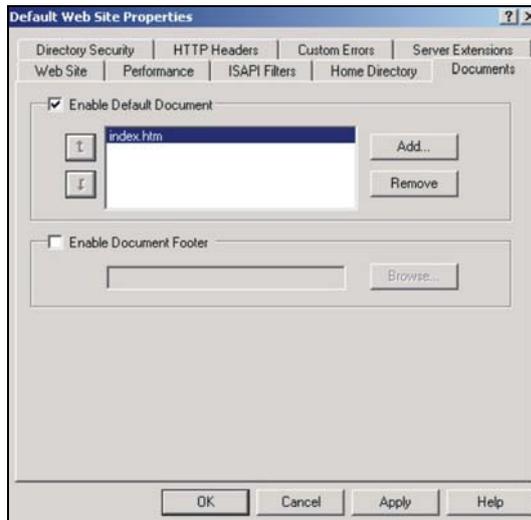
1. Click the **Start** button, and then select **Settings**, and **Control Panel**.
2. In the Control Panel, double click on **Administrative Tools**, and then open **Internet Services Manager**.
3. Click on **Internet Information Service** in the left-hand window to open up the tree. The name of the computer you are using will appear. Double click on the name.
4. Select **Default Web Site**, right click on it and select **Properties**. The **Default Web Site Properties** dialog box will appear.
5. Select the **Home Directory** tab.
6. Enter **C:\Program Files\ACS Utility\ACSView\_7S\Html** in the **Local Path** field (if you installed ACSView at a different location in Installing ACSView above, enter that location).



7. Select the **Document** tab.
8. Click **Add...** and in the **Default Document Name** field, type **index.htm**.



9. If there are other default documents in the list on the **Documents** tab, highlight **index.htm** and use the arrows to move it to the top of the list. Alternatively, remove all other entries.
10. Click **OK** to complete the setting of ACSView as the default website.



### Remotely monitor ACSView

Open a browser on an Internet-connected computer.

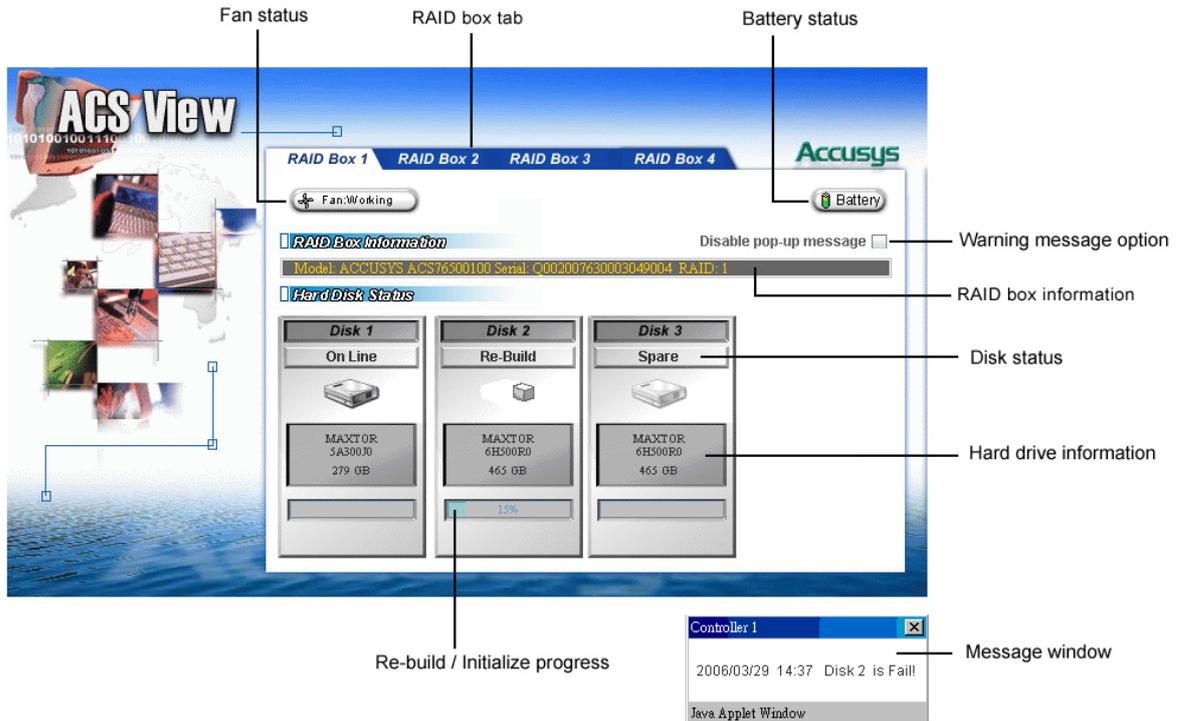
Enter the url **http://ip** where **ip** is the IP address determined in **Installing ACSView** above.



#### Note

*Java Runtime Environment must be installed for ACSView to be successfully displayed on a browser. If JRE is not already installed, the application can be downloaded free from <http://java.sun.com/downloads/>*

The ACSView browser window displays the following information:



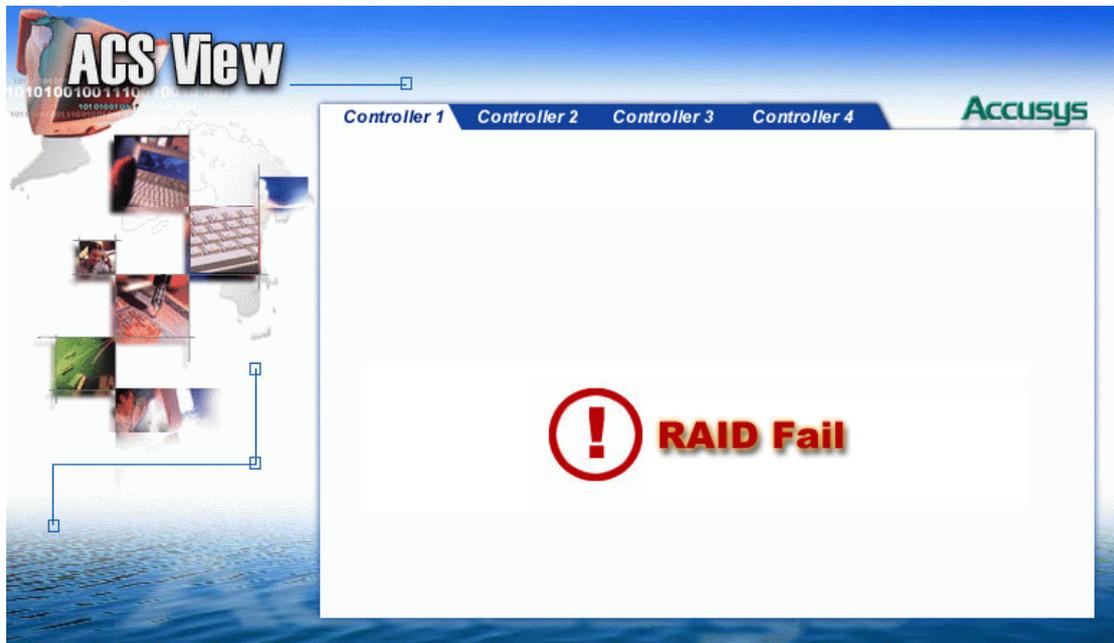
- Fan status:** Provides alert in case of fan malfunction.
- Controller tabs:** Allow you to select which controller to monitor.
- Battery status:** Provides alert in case of battery malfunction.
- Warning message option:** Enable / Disable pop-up message. ACSView browser will pop-up message window when event occur, if this option is enable. (Default is enabling.)
- Controller information:** Lists model name, serial number and RAID level of the RAID kit.
- Disk status:** Allows you to monitor the status of each of the hard disks
- Hard drive information:** Lists model name and capacity of each of the hard disks.
- Re-build / initialize progress:** Tracks the re-building or initialization process.
- Message window:** Provides controller number, date, time, error message when event occur.

## Trouble shooting

ACSView displays following error screens. Please find follow information for trouble shooting or connect Accusys Internet Support Center as <http://support.accusys.com.tw>.

### RAID Fail

If one disk drive in a RAID 0 array fails, or two disk drives in a RAID 5 or RAID 1 array, all data on the array is lost and cannot be recovered.



### What to do if there is a RAID Fail

A RAID failure results in all data on the array being lost. Please refer to your InnerRAID user manual to create a new RAID, or call your vendor.

## RAID Box Fail

If a COM Port fails, ACSView displays one of the following screens:

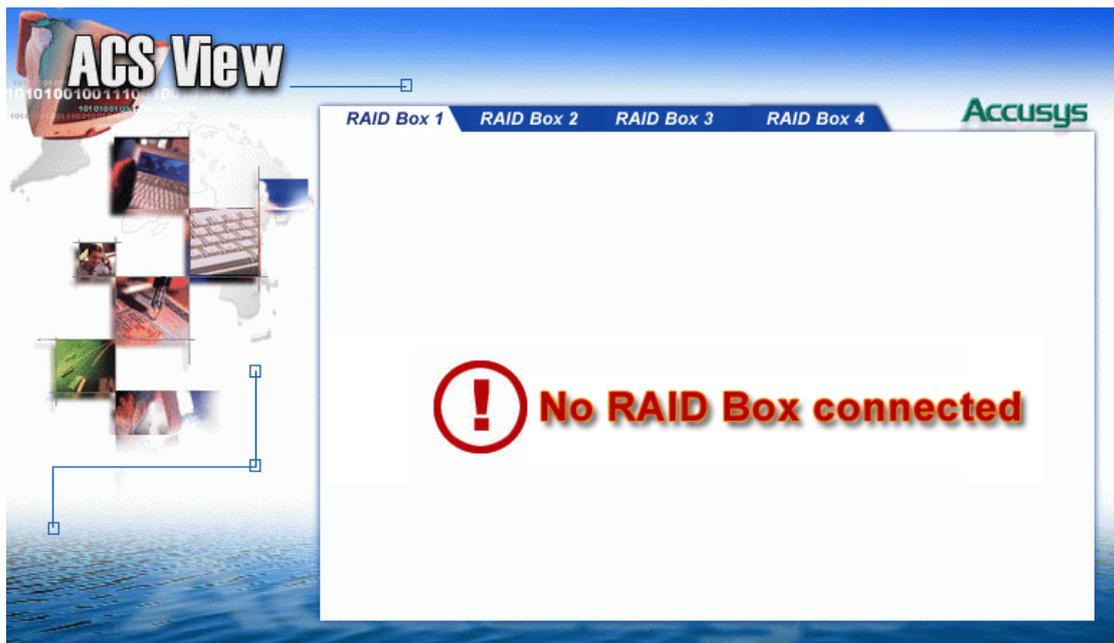
- 1 **RAID Box disconnected:** ACSView has detected a problem with the RAID box.



### What to do if there is this message?

- A. Please refer to your RAID user manual to make sure your RAID box is healthy.
- B. Please check your COM port and RS232 cable.

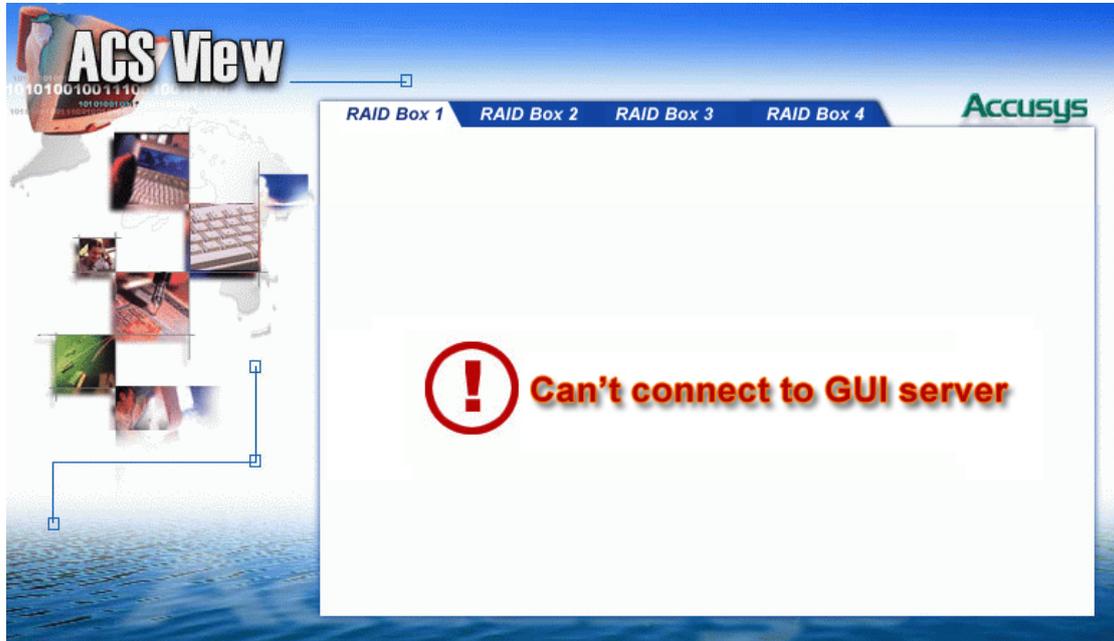
2. **No RAID Box connected:** RAID box is not connected to the host



### What to do if there is this message?

A. Please check your COM port and RS232 cable.

3. **Can't connect GUI server:** ACSView server program error or be closed.



### What to do if there is this message?

A. Restart the ACSView software program.

### Other Messages

Event Message	Description	Action for solve
Fan is abnormal!	FAN Abnormal	Call your vendor or Accusys.
Battery is abnormal	Battery Abnormal	Call your vendor or Accusys.
Disk <No> failed!	Disk Fail	Replace the file disk.
Disk <No> is rebuilding!	Disk Rebuild Start	Just notice that the disk is start to rebuilding.
Disk <No> rebuild OK!	Disk Rebuild Completed	Just notice that the disk is rebuild done.

## Remote monitor your RAID in Linux OS

The ACSView browser allows you to remotely monitor the status of your RAID in real time.

### Setup flowchart

The set up process follows these steps:



- Obtain and fix your IP address.



- Make ACSView the default website on the host machine
- Then you can open a browser to remotely monitor.

### Fixing your IP address

Once you have launched ACSView server, you should obtain and fix an IP address to your network device. The example instructions given below are for Red Hat 9.

To open the **Network Device Control** dialog box:

1. Click the RedHat button and go to **System Tools \ Network Device Control** to open the dialog box.



2. Select the active device and click Configure button to configure the network device.



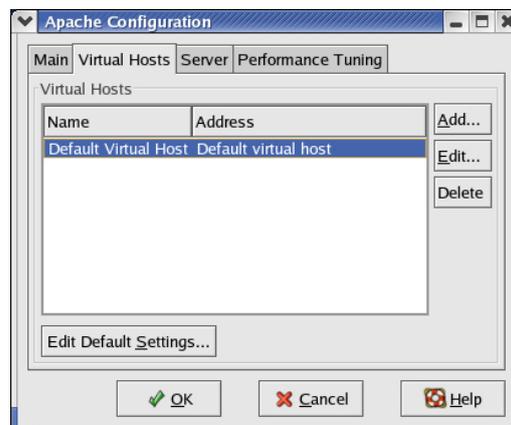
3. The **Network Configuration** dialog box will appear, double click your active device to configure the **Manual IP Address Settings** and click OK to approve it. .



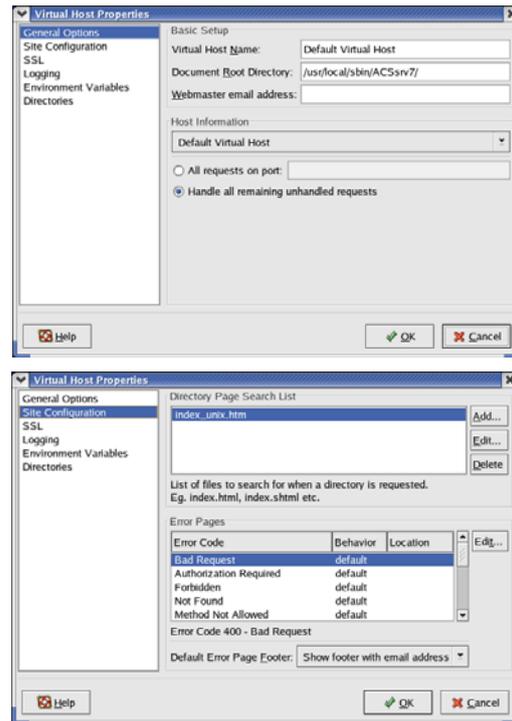
### Setting ACSView as a default website

In order to enable ACSView to be viewed from other computer terminals, you should configure the host computer's web server software to list ACSView as the default website.

1. Click the **RedHat** button, and go to **System Settings / Server settings / HTTP Server** to open the **Apache Configuration** dialog box.
2. In the **Apache Configuration**, select **Virtual Hosts** page and click **Edit** button to configure the Default Virtual Hosts.



3. The **Virtual Hosts Properties** dialog box will appear. Select **General Options**, and then enter your ACSView software install directory in the **Document Root Directory** field. The default directory is `/usr/local/sbin/ACSsrv7/`.
4. Select the **Site Configuration** tab.
5. Click the **Add** button on right side to configure your **Directory Page Search List**. Add a new file as `index_unix.htm`.
6. Click **OK** to save and exit the setting.
7. Restart your host computer to complete the setting of ACSView as the default website.



### Monitor ACSView on local host

Open a browser and enter the URL `http://localhost`

### Remotely monitor ACSView

Open a browser on an Internet-connected computer.

Enter the URL `http://ip` where **ip** is the IP address determined in **Installing ACSView above**.



#### Note

*Java Runtime Environment must be installed for ACSView to be successfully displayed on a browser. If JRE is not already installed, the application can be downloaded free from <http://java.sun.com/downloads/>*

# Part 2

## ACSView Multiple Host Version

ACSView can be used to remotely monitor either a single host with up to four RAID boxes connected or several such hosts. Users who need only to monitor a single host should follow the instructions in Part 1 of this manual. The instructions in Part 2 are for users of the Multiple Host Version only.

## Using this section

Part 2: ACSView Multiple Host Version supplements the user's manuals supplied with ACS InneRAID boxes. It is intended to be read in a linear manner. Users may prefer to skip more familiar sections, but each of the steps below must be completed.

### Step 1

**Install:** Install and launch ACSView Server on each host that you wish to monitor  
Install and launch ACSView Gateway on the designated computer

### Step 2

**Organize:** Locate the servers you want to monitor  
Add, delete and group servers using ACSView Gateway

### Step 3

**Configure:** Configure email alert settings so that the administrator can be informed whenever an error occurs  
Configure web server software to allow remote access to the Gateway.

### Step 4

**Access:** Learn how to access ACSView from any terminal on the Internet

### Step 5

**Monitor:** Familiarize yourself with the real-time monitoring capabilities of ACSView

## Chapter 6

# Introduction to ACSView Multiple Host Version

**This chapter introduces the features and capabilities of ACSView (Multiple Host Version).**

**You will find:**

- ⇒ **Details of key features and ACSView architecture**
- ⇒ **A checklist of operating systems supported**
- ⇒ **A checklist of pre-installation assumptions**

## Key Features

ACSView is designed to be used in conjunction with Accusys InnerRAID box. The Multiple Host Version of ACSView:

Supports up to four Accusys InnerRAID boxes per host

Supports up to 100 hosts

Graphical User Interface (GUI)

Fault tolerant

Multi-server operation

Multi-platform and Operating System support

Remote monitoring

Web-based environment

Event notification

### GUI

The graphical user interface enables easy monitoring of the status of a RAID in an intuitive graphical format.

### Remote monitoring

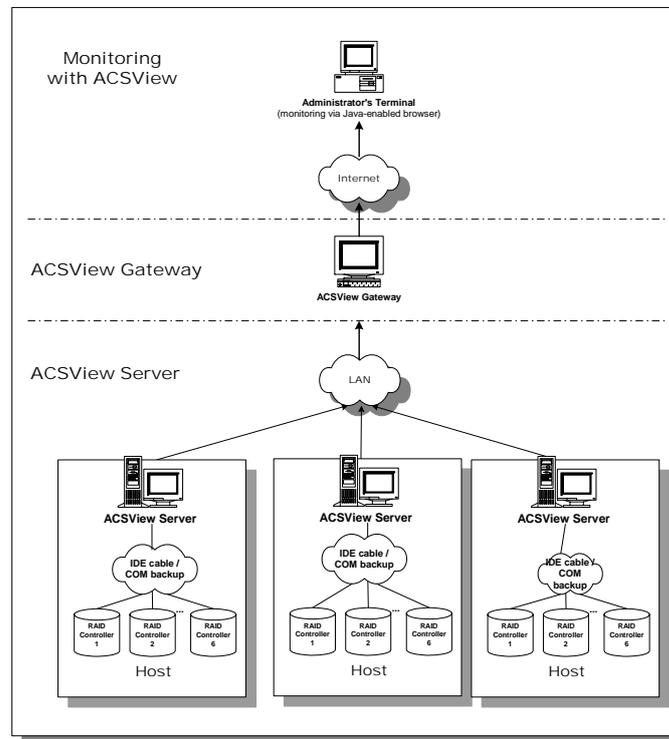
ACSView can be accessed from any web-enabled terminal.

### Event notification

Email event notification keeps the administrator informed of the status of the RAID

## ACSView Architecture

ACSView enables remote, real-time monitoring of multiple servers through a node, the ACSView Gateway.



### ACSView Server:

An application that serves as a multiple platform (Windows and Linux) logical server, obtaining information from RAID controllers and serving this up to access through ACSView Gateway.

### ACSView Gateway:

An application that gathers information from ACSView Servers so that administrators can monitor these servers through a web browser. ACSView Gateway must be installed with a web server.

### ACSView:

A web-based application program that enhances cross-platform monitoring at administrator end. ACSView requires only a browser to run; no other applications need be installed.

### RAID Controller:

Unit controls RAID subsystem. The current edition of ACSView is designed for use with Accusys InnerRAID box.

### Host:

Server or PC that accesses data in the RAID. Each host in ACSView can support up to four RAID boxes.

## Operating systems supported

### ACSView Server

- Windows 98
- Windows ME
- Windows 2000
- Windows XP
- Windows 2003
- Linux (Version 7.3 and later)

### ACSView Gateway

- Windows 2000
- Windows XP
- Windows 2003

## Installation Prerequisites

### Hardware Requirements

- Internet connected computer(s) with CD-ROM drive
- Accusys InneRAID box. (installed)
- 3-pin RS232 cable backup connection from controller to host computer (optional)

Monitor display resolution of 800 x 600 (recommended)

### Software Requirements

- ACSView CD-ROM
- Supported operating system
- Java-enabled web browser

## Assumptions

Before the InneRAID Box and ACSView can be used, you must:

- Install the InneRAID Box to your computer.
- Install ACSView on your host computer.
- Initialize the array.
- These steps are described in detail in the InneRAID User's Manual.



### Note

*ACSView Multiple Host Version 2.0 does not support ACS-75170, ACS-76130, ACS-76510 and ACS-76500.*

## Chapter 7

# Setting up ACSView Server

This chapter details the installation, setup and configuration process for ACSView on Windows 2000/NT/XP and Linux operating systems

## Setting Up ACSView Server on Windows 2000/NT/XP



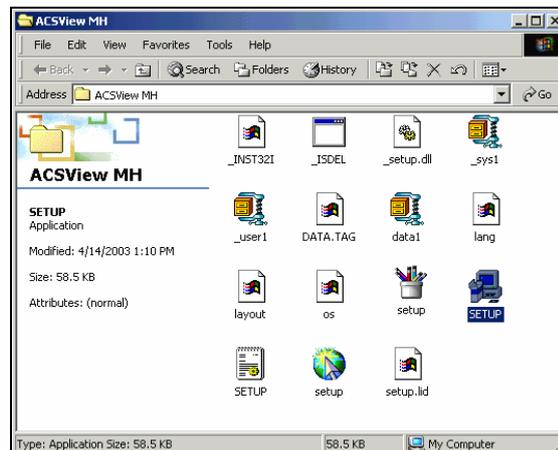
### Note

ACSView Server should be installed on each host connected to a RAID controller(s) that you wish to monitor. Turn to the following section, *Setting Up ACSView Server on Linux*, for installation and configuration instructions on Linux operating systems.

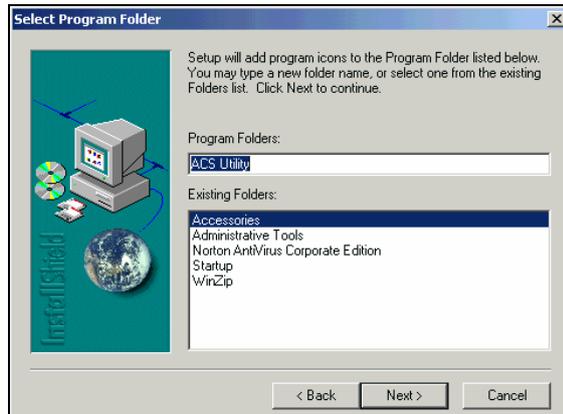
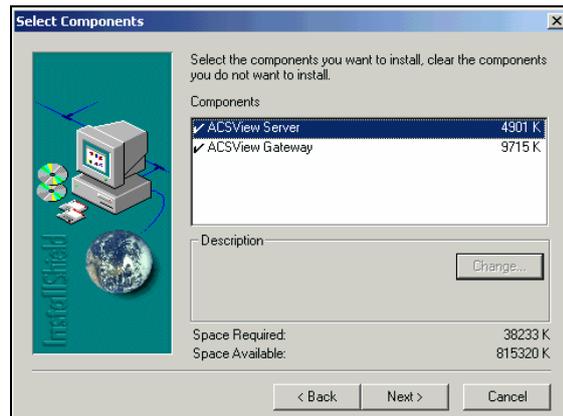
### Software Installation

Follow the steps below to install ACSView Server:

1. Copy the folder **ACSView (7 Series) Multi-Host** from the CD-ROM or download from the Accusys website <http://support.accusys.com.tw> to the local disk of the host computer.
2. Open the **ACSView (7 Series) Multi-Host** folder on the host computer and enter the **Windows** subfolder.
3. Copy the folder inside the **Windows** folder containing all the ACSView Multiple Host version installation files to a new location. Rename this folder with a short name, e.g. **ACSView MH**. For subsequent installations of ACSView Server (and ACSView Gateway) on other computers, you may find it convenient to make copies of this folder, rather than re-downloading the folder onto each host.
4. Double-click the file Setup.exe to run the setup program. The **Welcome** screen will appear.
5. Click **Next** to continue with the setup.



6. Read the license agreement carefully. Click **Yes** if you accept the terms of the agreement to continue the setup, otherwise click **No** to cancel the setup.
7. The setup program will install ACSView to the location shown on the screen. To install to a different location, either type in the new path or click **Browse** and select a new location.
8. Once you have confirmed the setup location, click **Next** to continue.
9. When the **Select Components** dialog box appears, ensure that **ACSView Server** is selected. If you want to install **ACSView Gateway** on the same host machine, make sure that **ACSView Gateway** is also selected. Click **Next** to continue.
10. The setup utility will add shortcut icons to the folder indicated on the **Select Program Folder** dialog box, making access to ACSView from this folder more convenient. If you do not want to use the default folder, you can either type a new name, or select an existing folder from the list.
11. Once you have confirmed the shortcut icon location, click **Next** to continue. Installation will commence.
12. You will be prompted to *Click **Finish** to complete the setup.*

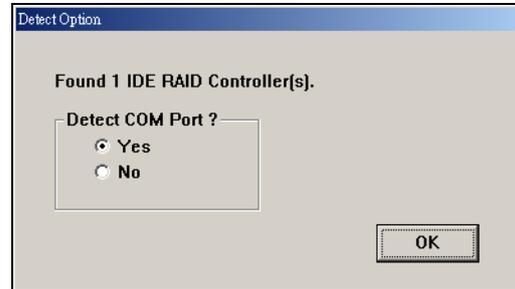


## ACSView Server Setup

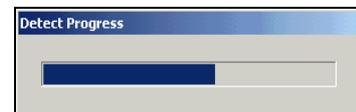
ACSView Server is an application that serves as a logical server to obtain information from RAID controllers via a COM or IDE connection.

1. To set up ACS Server, go to **Start > Programs > ACS Utility > ACSView Server > ACSView Server**.

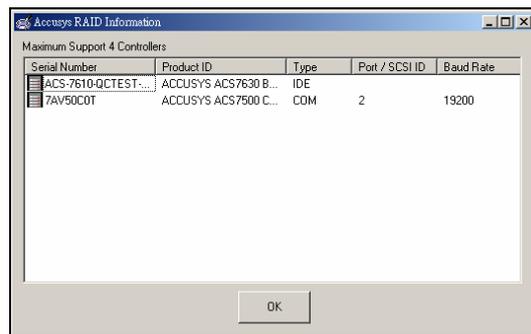
2. The **Detect Option** dialog box will appear prompting you to scan the host computer's COM ports. If you are setting up ACS Server for the first time and have the optional backup RS232 monitoring cable connected, you should scan the COM ports. Select the **Detect COM Port? Yes** radio button then click **OK** to proceed. On subsequent set-ups select **No** if the COM settings and configuration are unchanged since the previous set-up. Select **Yes** if changes have occurred or if you are unsure. Click **OK** to proceed.



3. RAID detection will commence to obtain information from the RAID Controller(s) via IDE/RS232. The pop-up Scan Process window shows the progress of the system's detection of RAID controller(s).



4. Once the scan is finished, an **Accusys RAID Information** dialog box appears. This identifies the properties of the RAID controller(s) detected and its current status.



RAID controller information includes:

**Serial Number:** the serial number of the RAID controller.

**Product ID:** the product ID of the RAID controller.

**Type:** the type of port to which the RAID controller is connected, e.g. IDE, COM.

**Port/SCSI ID:** specifying the port detected, e.g. COM1 / COM2.

**Baud Rate:** the number of times per second a signal in a communications channel changes, or makes a transition between states (for COM port only).

After confirming the information, click **OK** to exit.

5. The ACSView icon appears on the Task Bar at the bottom right of the desktop.



## Setting up ACSView Server on Linux

### Software Installation

Follow the steps below to install ACSView on a Linux operating system.

1. Download file **ACSsrv7\_linux\_MultiHost-1.0-0.i386.rpm** from the Accusys website <http://support.accusys.com.tw> and save in the `/root` directory.



#### Note

*The name of this file on the CD-ROM may change slightly as updated versions are released.*

2. If operating in the KDE desktop environment, open **Konsole**. In text mode go straight to the next step.
3. Type **rpm ACSsrv7\_linux\_MultiHost-1.0-0.i386.rpm** and press enter to run the installation program.



#### Note

*To run ACSView Server, the Linux host operating system must:*

- *Have a Java Runtime Environment application installed and be configured to run JRE.*

*A web server and JRE are standard features on many Linux operating systems. If your operating system lacks either, they can be installed in one step from the utilities program provided on the ACSView CD-ROM disk To install:*

1. *Copy the utility file (`_FastInstall`) from the disk to the `/root` directory.*
2. *Type `_FastInstall` to begin installation.*

*JRE can also be downloaded free from  
<http://java.sun.com/downloads/>*

## Launching ACSView Server

1. Type `cd /usr/local/sbin/ACSSrv7` to move to the ACSView Server directory.
2. Type `.ACSSrv7` to run the program. As ACSServer launches, the program will automatically scan for RAID controllers. A response similar to that below should appear.

```

root@localhost:/usr/local/sbin/ACSSrv7
File Edit View Terminal Go Help
[root@localhost ACSSrv7]# ./ACSSrv7

  77      77777  777777 7777  7777 77777777777 7777 777777
  77      77 77 777 77 777  77 77 777 77  777 77 777
 777     77   77 77   77 77   77 77  77 77 77 77  77
 7 77   77     7     77   77 777   77777 777
77 77  77     7     77   77 77777  7777  7777
77 777 7     7     77   77 77777  777  77777
777777 77     7     77   77   777  77     77
77  77 77   77 77   77 77   77 7  7  77 77  7
77   77 777 77 777 77 777  7 77  77  77 777  7
7777 7777 777777  777777  777777 7777777 77777  777777
?

*****

* Found /dev/hdd is linked with RAID_5L709BHG
* Found both /dev/ttyS0 & /dev/hdd are linked with RAID_5L709BHG
*

*****

Accept ?!!<y\n>y
[root@localhost ACSSrv7]#
    
```

3. Once the scan is completed, details of the RAID controllers found will be listed. You will be asked **Accept?!!<y\n>**. If all controllers have been located, type **y** to launch ACSView server.

ACSView Multiple Host Version

## Chapter 8

# Setting up ACSView Gateway

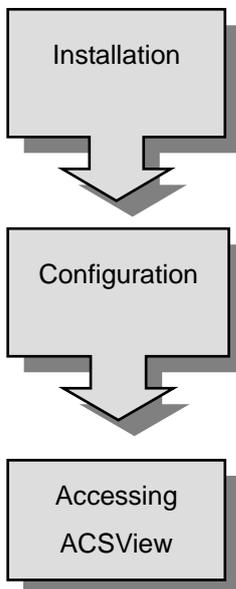
This chapter details the installation, setup and configuration process for ACSView Gateway

## About ACSView Gateway

ACSView Gateway is an application that serves as a data center to gather information from all ACSView Servers so that an administrator can remotely monitor these servers through a web browser. ACSView Gateway should be installed on a separate machine from ACSView Server.

## Installation flowchart

This chapter details the installation process of ACSView Gateway on a Windows 2000 operating system. Similar procedures should be followed for installation on Windows XP.



- Install ACSView Gateway on the designated computer.
- Install web server software on the same computer so the computer can be used as a web server.
- Launch ACSView Gateway and search for servers running ACSView Server.
- Add, delete and group servers as desired.
- Configure mail alert settings so the administrator can be contacted in case of malfunction.
- Configure web server software to allow remote access to the Gateway.
- When ACSView Gateway is up and running, you can start to monitor your RAID(s) remotely.

## Installing ACSView Gateway

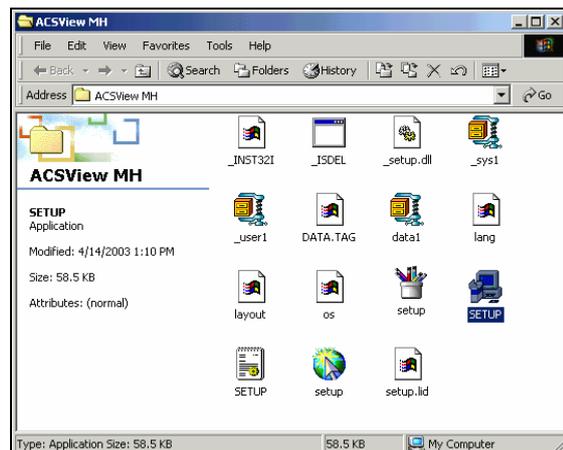


### Note

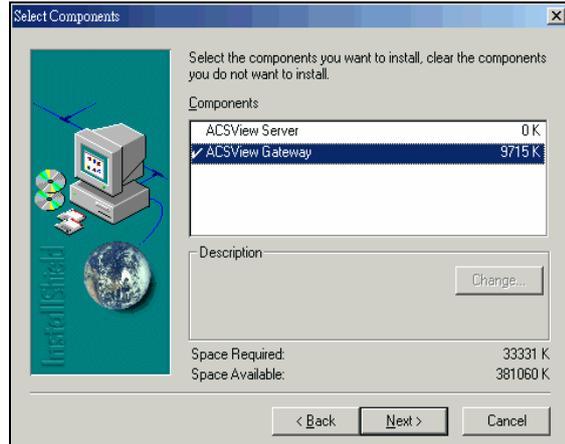
*ACSView Gateway can be installed on the same computer as ACSView Server or on a different computer. Installation of both modules on the same computer can be carried out in a single installation operation. To do this, refer to Software Installation in Chapter 7, Setting Up ACSView Server, and ensure that ACSView Gateway is selected in step 9, **Select Components**.*

*The instructions in the current section are for users wishing to install ACSView Gateway on a separate computer.*

1. Save a copy of the folder containing all the ACSView Multiple Host version Windows installation files on the Gateway computer (either copy the folder that is saved on each of the ACSView Server hosts or download the folder from the Accusys website <http://support.accusys.com.tw>)
2. Double-click the **Setup.exe** file in this folder to run the setup program. The **Welcome** screen will appear.
3. Click **Next** to continue with the setup.
4. Read the license agreement carefully. Click **Yes** if you accept the terms of the agreement to continue the setup, otherwise click **No** to cancel the setup.
5. The setup program will install ACSView to the location shown on the screen. To install to a different location, either type in the new path or click **Browse** and select a new location.
6. Once you have confirmed the setup location, click **Next** to continue.



- When the **Select Components** dialog box appears, ensure that **ACSView Gateway** is selected. Deselect **ACSView Server** since you do not want that component installed on this computer. Click **Next** to continue.



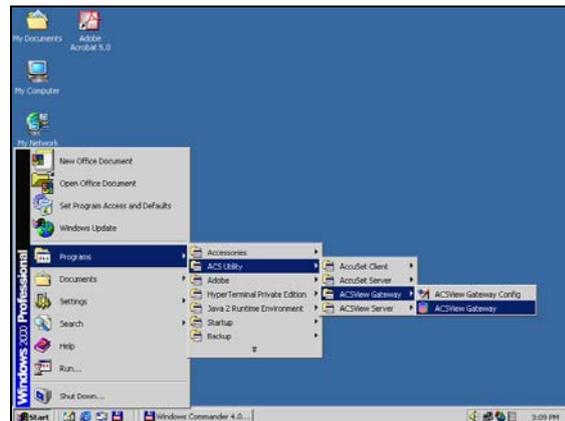
- The setup utility will add shortcut icons to the folder indicated on the **Select Program Folder** dialog box, making access to ACSView from this folder more convenient. If you do not want to use the default folder, you can either type a new name, or select an existing folder from the list.
- Once you have confirmed the shortcut icon location, click **Next** to continue. Installation will commence.
- You will be prompted to *Click **Finish** to complete Setup.*



## ACSView Gateway Setup

ACSView Gateway is an application program that serves as a data center to gather information from all ACSView Servers so that administrator can monitor these servers through a web browser.

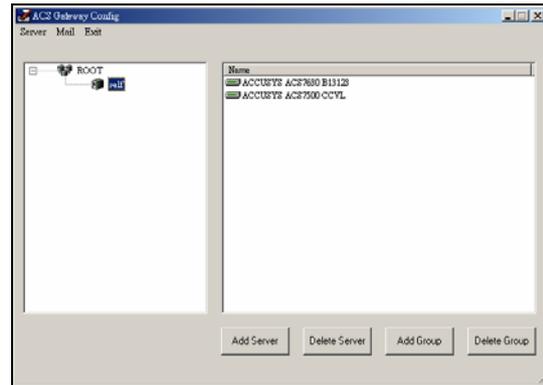
- Go to **Start > Programs > ACS Utility > ACSView Gateway > ACSView Gateway**



- To configure ACS Gateway, double-click the **ACSView Gateway** icon.



3. The configuration window appears, showing a list of ACS servers detected.



### Note

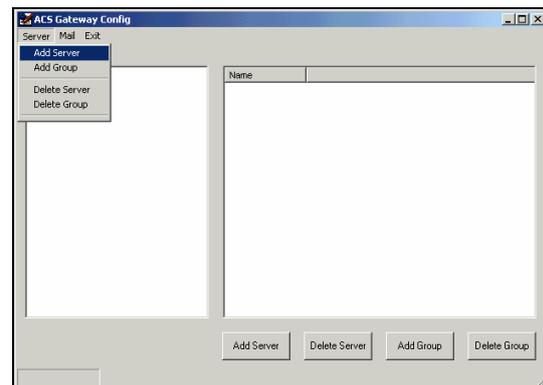
You may create or delete a new RAID server or group using ACSView Manager. See the following section “Basic Configuration” for more details.

## Basic Configuration

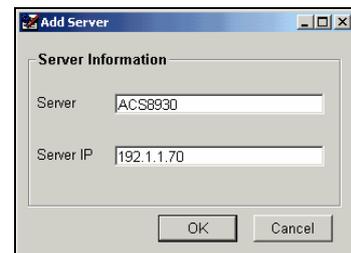
### Adding New Servers

1. To add a new server, click the **Add Server** button or select **Server** and then select **Add Server**.

By taking this step, you can add the server you want to monitor with ACSView.



A **Server Information** dialog box pops up. Input the **Server Name** and its **IP address**. The window shows an example:

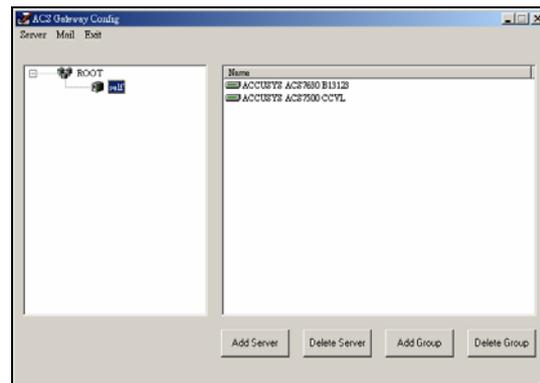




### Note

1. Information given in the above graphic, including IP, Server Name, etc., is for identification and demonstration only.
2. The server name is not the dedicated server name, e.g. the server name in “Network Neighborhood” in Windows.

3. Click **OK** to exit. The new server is added to the directory for grouping. The server appears in the tree on the left of the window. If a server name is selected (highlighted), the details of controllers linked to that server will appear in the right side of the window.



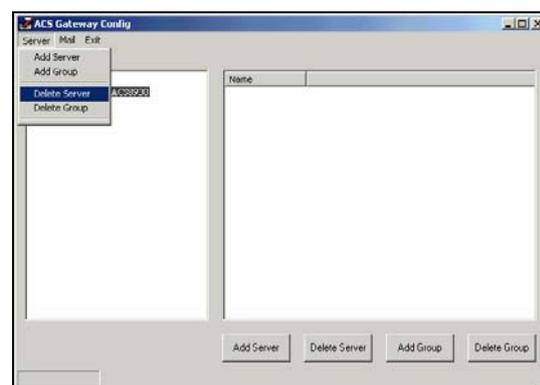
### Note

Information given in the above graphic, including IP, Server Name, etc., is for identification and demonstration only.

## Deleting a Server

To delete a server:

1. Select the name of the server you wish to delete.
2. Click the **Delete Server** button or go to **Server > Delete Server**.





**Note**

*You may also add a group of servers or delete the whole server group. The procedure is similar to “Add New Server” and “Delete Server.”*

### Adding New Groups



**Note**

*Use of Groups allows an administrator to categorize sets of servers on a single network for added convenience. Setting up a group does not affect the configurations of constituent servers. It is purely a means to simplify administration of multi-server networks.*

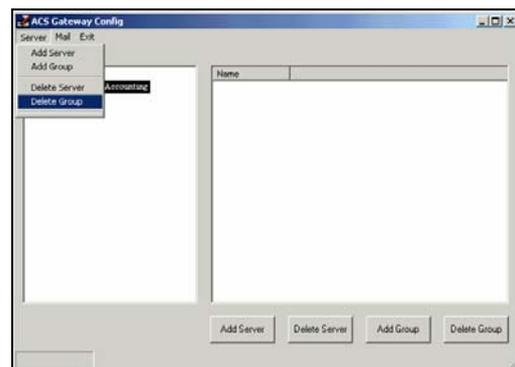
The procedure of adding a new group is similar to adding a new server.

To add a new group, click the **Add Group** button or go to **Server > Add Group**. You will be prompted to enter the name of the group. Click **OK** to add the group. To add a server to the new group, double click on the group name to enter, then click **Add Server**, as explained above.



### Deleting Groups

To delete a group, select the group name and click **Delete Group** (or go to **Server > Delete Group**). Once you confirm your choice, the group will be deleted.



### Controller Information

To view controller information, select and click on a server on the root directory. Controller information will be displayed in the right-side window

## Configuring Mail Alert Settings

The administrator should enter an email address to which alert emails will be sent automatically in the event of malfunction.

Follow the steps below to configure mail alert settings:

1. Click **“Mail”** on the menu to open the **Mail Options** dialog box, as shown here:

2. Enter the following values:

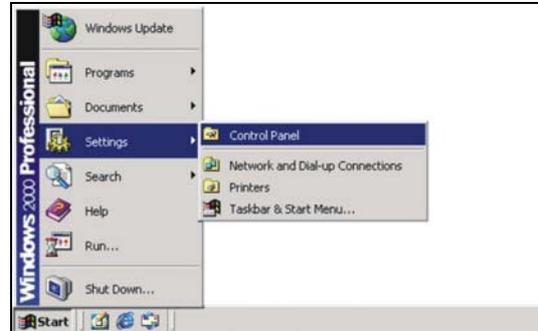
<b>Error conditions:</b>	Select error conditions you want the Gateway to send out an alert e-mail.
<b>Sender Name:</b>	Enter the name of the sender.
<b>Sender E-mail Address:</b>	Enter an email address to identify the source of the alert e-mail.
<b>Recipient Name:</b>	Enter the name of the recipient.
<b>Recipient E-mail Address:</b>	Enter an email address to identify the destination of the alert e-mail.
<b>SMTP Server IP:</b>	Enter the IP of the SMTP server.
<b>UserName:</b>	Enter the User Name.
<b>Password:</b>	Enter the password.
<b>E-mail frequency:</b>	Select how often you want the Gateway to send out alert e-mails (minimum once / maximum 10 times per hour).

3. Click **OK** to exit.

## Installing Web server software

The host of ACSView Gateway should be set up as a web server in order that your RAIDs can be remotely monitored. Several web server software packages are available. The example installation instructions given below are for Microsoft's Internet Information Service software on Windows 2000.

1. Insert your Windows 2000 CD in its drive.
2. Open the **Start** Menu.
3. Select **Control Panel**.



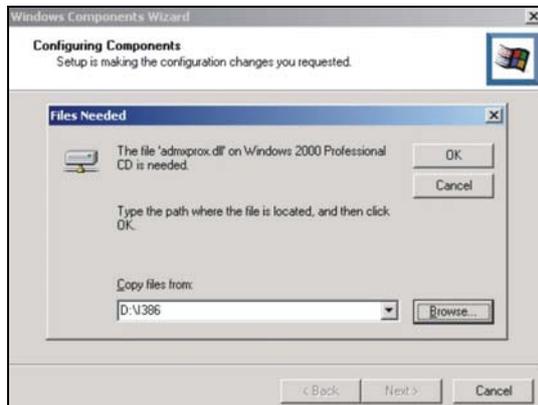
4. Select **Add/Remove Programs**.
5. Select **Add/Remove Windows Component**.



6. Select the **Internet Information Services (IIS)** component.
7. Click **Next**. The component configuration process will start.

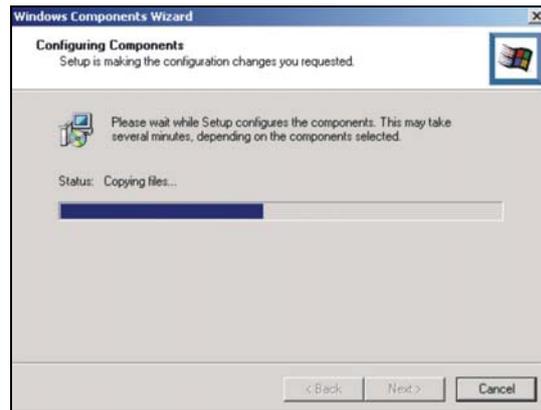


8. When prompted by the **Files Needed** dialog box, enter the location **x:/I386** (where **x** is the letter of your CD-ROM drive).



ACSView Multiple Host Version

9. The required files will be copied from the CD-ROM.

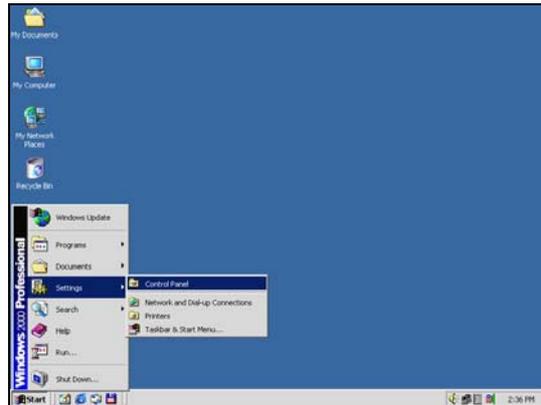


10. Click **Finish** to complete the installation.



## Configuring web server software

1. Go to **Start > Settings > Control Panel**.



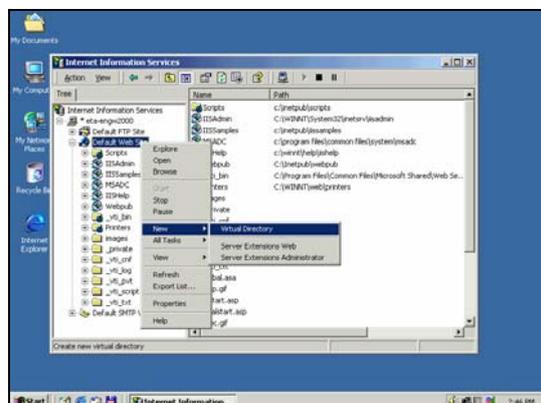
2. Enter **Administrative Tools**.



3. Enter **Internet Service Manager** to configure web server settings



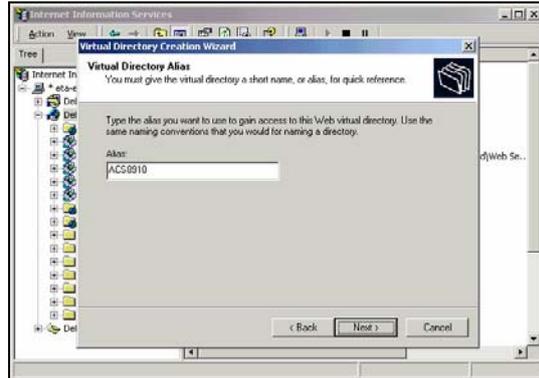
4. Establish a new virtual directory by launching the **Virtual Directory Creation Wizard**.



5. The welcome screen of **Virtual Directory Creation Wizard** appears. Click **Next** to proceed.



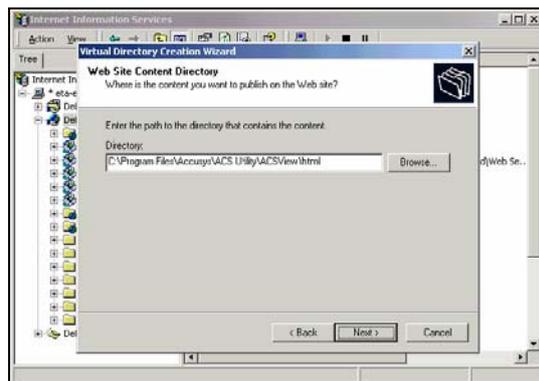
6. Input the **Alias** and click **Next**.



**Note**

*Information given in the above graphic, including IP, Server Name, etc., is for identification and demonstration only.*

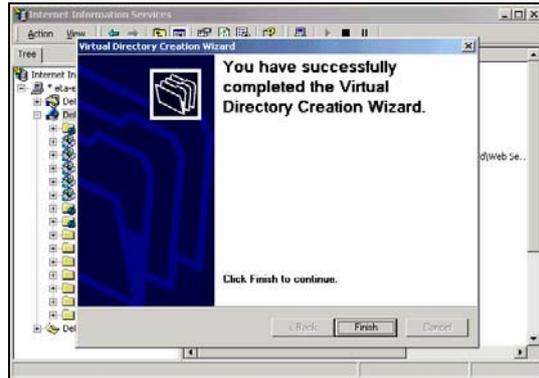
7. Enter the path for the virtual directory you created. The default local path is **C:\Program Files\Accusys\ACS Utility\ACSView\html**



8. Follow the onscreen instructions and click **Next** to proceed until the installation is complete.



9. The onscreen prompt tells you that installation is complete. Click **Finish** to finish the installation and exit the Wizard.

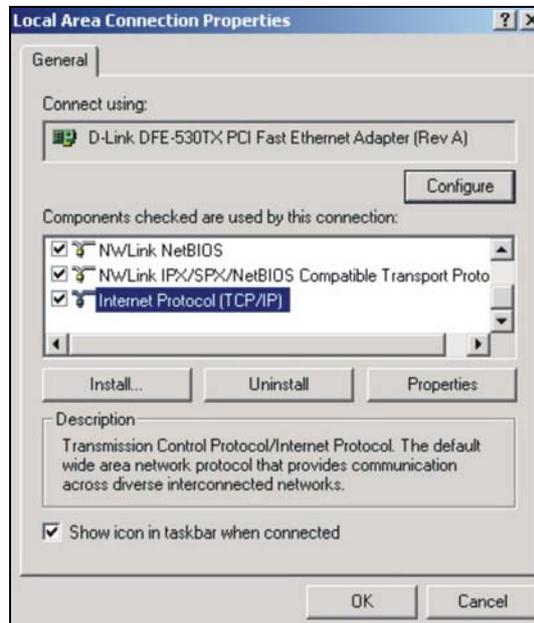


## Fixing your IP address

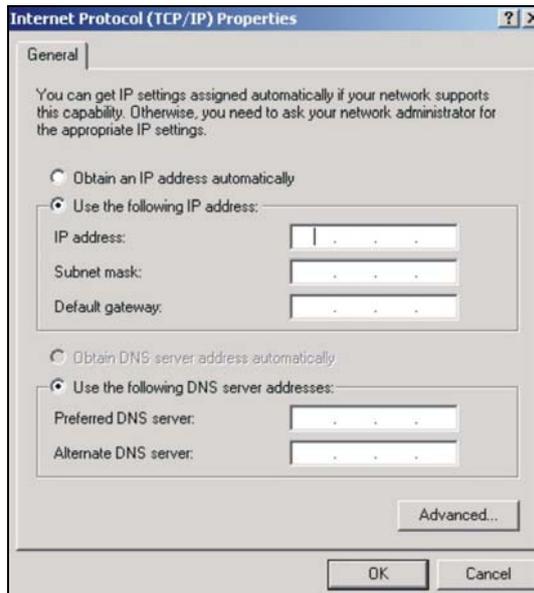
Once you have installed web server software, you should obtain and fix an IP address to your TCP/IP Properties.

To open the **Internet Protocol (TCP/IP) Properties** dialog box:

1. Right click on the **My Network Places** icon on the desktop and select **Properties**.
2. The **Local Area Connection** dialog box will appear (The **Local Area Connection** dialog box may also be opened by entering **Control Panel**, then **Network and Dial-up Connections**, right-clicking on the **Local Area Connection** icon and selecting **Properties**).
3. Highlight **Internet Protocol (TCP/IP)** and click **Properties**.



4. The **Internet Protocol (TCP/IP) Properties** dialog box will appear. Enter the IP address for this terminal and click **OK**.
5. To determine this terminal's IP address, open the **Start** menu, **Accessories** and then open **Command Prompt**. Type **ipconfig**. The IP address, subnet mask and default gateway values will be listed.



## Chapter 9

# Monitoring Multiple Hosts with ACSView

ACSView allows you to remotely monitor the status of your servers and arrays as they initialize and operate in real time. This chapter introduces the ACSView monitoring capabilities.

## Accessing ACSView

ACSView is a web-based GUI that can be accessed using any Java-enabled browser.



### Note

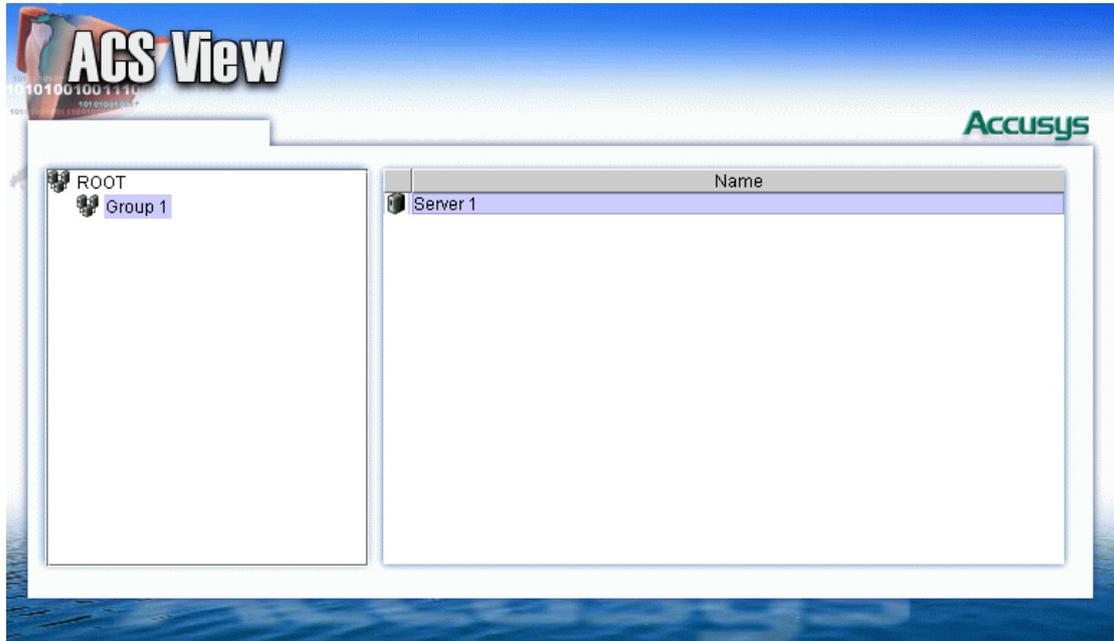
*If you are using a browser that is not Java-enabled, you will be prompted to install the Java plug-in when you try to access ACSView. Click **Accept** when asked to download the program.*

To view ACSView, enter the IP address of the ACSView Gateway Server into the browser address field in the following format:

**http://[Gateway Server IP]/[Virtual Directory Name]/**

The ACSView main screen will appear.

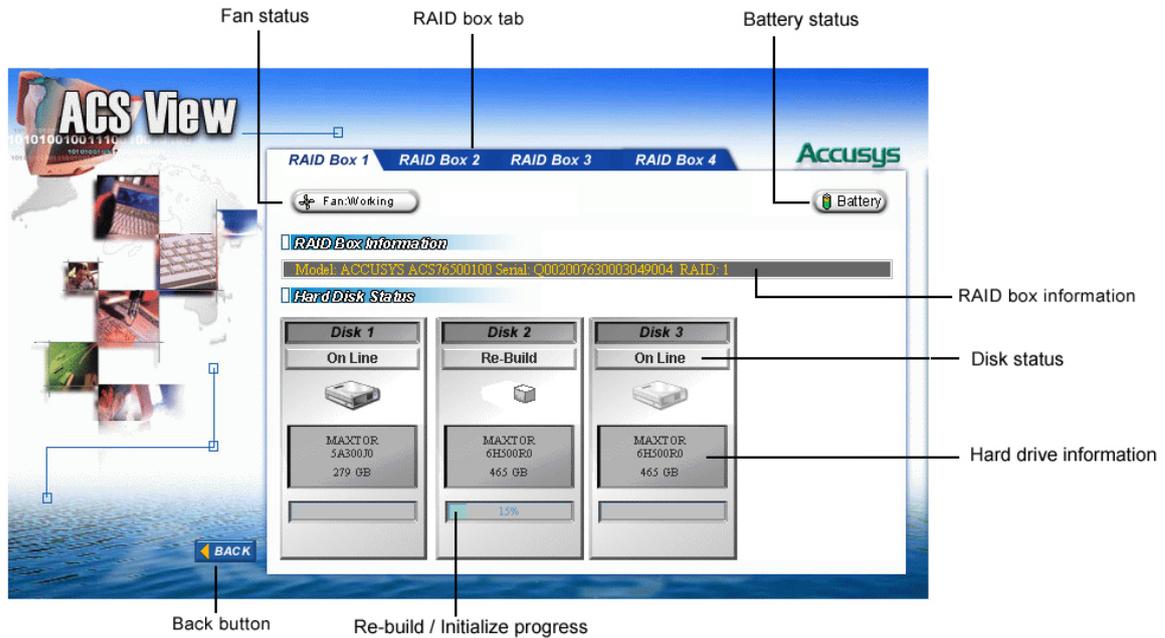
## Overview of ACSView Main Screen



The left side of the screen shows the root directory and any server groups that have been set up on ACSView Gateway. Click on **Root** or the name of a group to display information on all servers (hosts) in the right side window.

## Monitoring hosts

To checking the status of a host, call up its name in the right side window by select its location (either root or group name) from the left. Then double-click the name of the host. The window will display the following information:



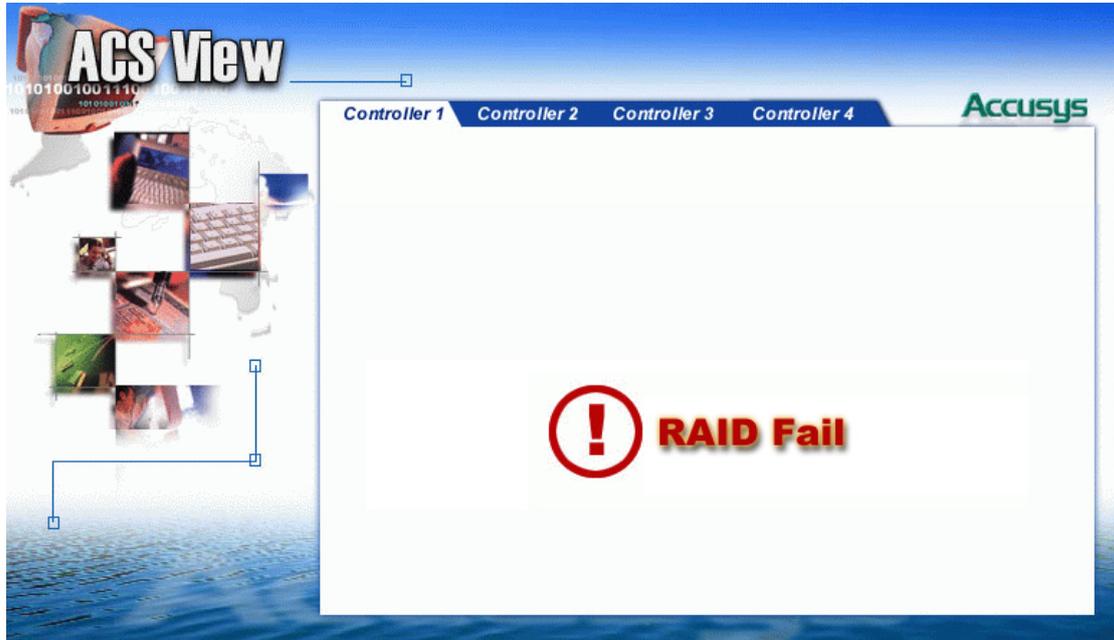
- Fan status:** Provides alert in case of fan malfunction.
- Controller tabs:** Allow you to select which controller to monitor.
- Battery status:** Provides alert in case of battery malfunction.
- Warning message option:** Enable / Disable pop-up message. ACSView browser will pop-up message window when event occur, if this option is enable. (Default is enabling.)
- Controller information:** Lists model name, serial number and RAID level of the RAID kit.
- Disk status:** Allows you to monitor the status of each of the hard disks
- Hard drive information:** Lists model name and capacity of each of the hard disks.
- Re-build / initialize progress:** Tracks the re-building or initialization process.
- Back:** Enables you to return to the ACSView main menu.

## Trouble shooting

ACSView displays following error screens. Please find follow information for trouble shooting or connect Accusys Internet Support Center as <http://support.accusys.com.tw>.

### RAID Fail

If one disk drive in a RAID 0 array fails, or two disk drives in a RAID 5 or RAID 1 array, all data on the array is lost and cannot be recovered.



### What to do if there is a RAID Fail

A RAID failure results in all data on the array being lost. Please refer to your InnerRAID user manual to create a new RAID, or call your vendor.

## RAID Box Fail

If a COM Port fails, ACSView displays one of the following screens:

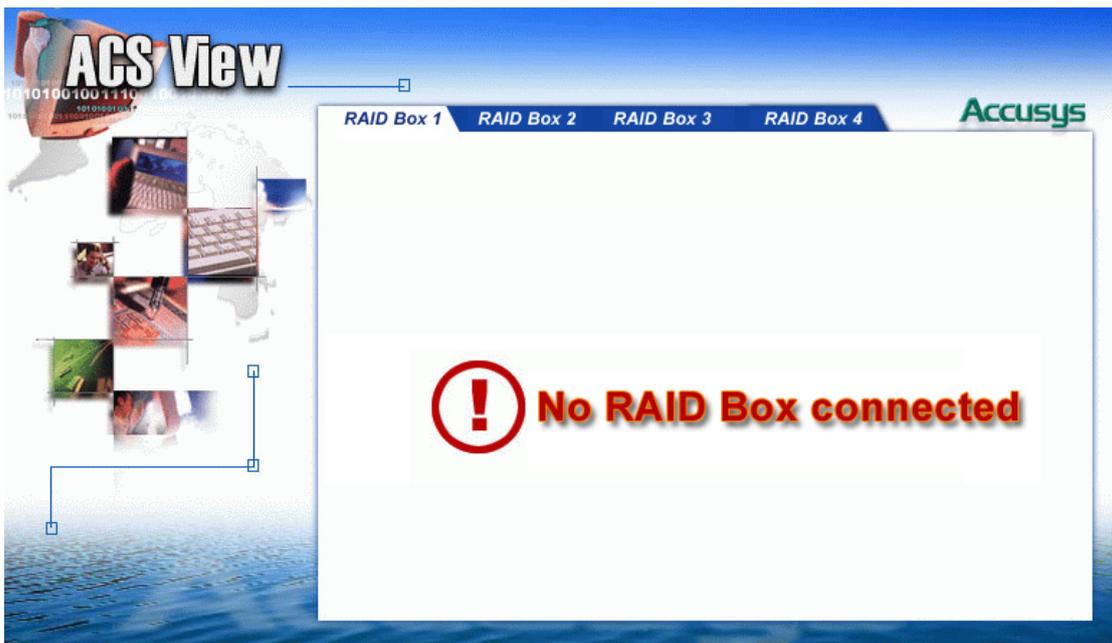
- 1 **RAID Box disconnected:** ACSView has detected a problem with the RAID box.



### What to do if there is this message?

- A. Please refer to your RAID user manual to make sure your RAID box is healthy.
- B. Please check your COM port and RS232 cable.

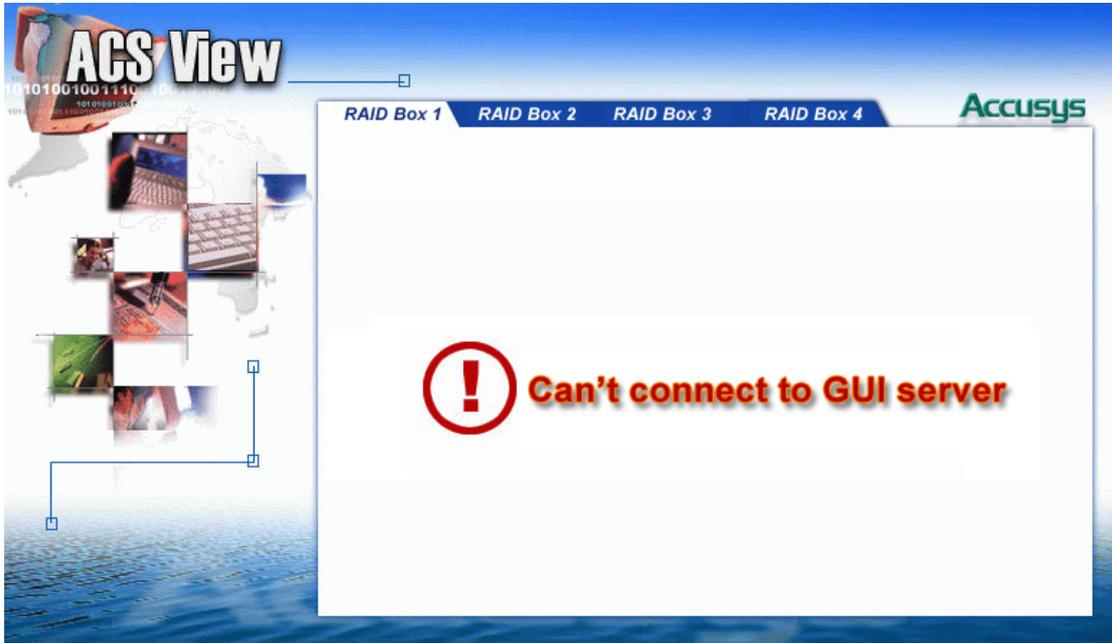
2. **No RAID Box connected:** RAID box is not connected to the host



**What to do if there is this message?**

A. Please check your COM port and RS232 cable.

3. **Can't connect GUI server:** ACSView server program error or be closed.



**What to do if there is this message?**

A. Restart the ACSView software program.

## Appendix A

# FAQ

If you encounter a problem while using ACSView, check this section for help.

### Installation Problems

**1. I have installed the CD but the software installs utility does not appear.**

- (a) The problem may be your CD auto-play option is disabled. Please enable the auto-play option and re-load the CD, or try to login your CD ROM and double click the **setup .exe** file to install ACSView software. For Windows base ACSView single host version, the path is CD-ROM device\Windows\ACSView Single-Host\setup.exe.

**2. I am unable to launch the install file.**

- (b) Errors may have been encountered when trying to access the CD. You can download the software from Accusys website [www.accusys.com.tw](http://www.accusys.com.tw) and re-install it.

### General Problems

**1. Why can't I access ACSView?**

- (a) To access ACSView from a remote computer, enter the url **http://ip** in the browser window. Make sure the IP address you are entering is the correct IP address of the host computer. If this does not work, go to (b).
- (b) The host computer (Single Host Version) / Gateway computer (Multiple Host Version) must be set up as a web server with ACSView set as the default website.

**3. One of the disks in the array is displayed as not installed. I have swapped the disk, but it is still shown as not installed. What should I do?**

- (a) The disk may be faulty. Exchange for a good disk that is at least equal in size to the original three disks. Make sure the new HDD's jumper setting is Master. Then install the new disk in the RAID box according to the instructions in the InneRAID user's manual.
- (b) If you have not already attached them, try connecting 3-pin RS232 cables from the RAID box to their hosts to provide a backup data transmission route. If you already have added these, check to ensure they are not damaged.

**4. ACSView shows RAID fail. What should I do?**

(a) A RAID fail results in loss of all data on the array. The array should be recreated.

Possible causes of RAID fail include:

- i. RAID controller fault
- ii. RAID 5: Failure of two disk drives or failure of one disk drive while another HDD is being rebuilt.
- iii. RAID 0: Failure of a single HDD.
- iv. RAID 1: Failure of two disk drives.

**5. How are administrator email addresses set?**

(a) Open the Mail Server Configuration dialog box shown above. You can only enter one email address in each Administrator's Email field (i.e. a total of two email addresses can be entered). Email addresses may not be entered as a list separated by commas or semi-colons.

**Problems with ACSView Single & Multiple Host Version on Linux OS Hosts**

**1. What is the significance of the terms Port 1,2,3,4 in the file mail.cfg?**

(a) The port numbers represent the host computer's COM ports. With the default value 1 entered, the host system will scan that port. If the number is changed to 0, the host computer will not scan that port.

**2. ACSView is slow to respond. Why?**

(a) When large files are copied to or from an array run on a Linux host, monitoring of the array is suspended until the copying is completed. As a result, ACSView may appear to hang for the duration of the copying.

**Problems with ACSView Single Host Version on Windows OS**

**1. What is the difference in the Mail Server Configuration settings between the Mail Server field and the IP address field? Do I have to enter both?**

(a) You should enter the FQDN of your network's mail server in the Mail Server field and its IP address in the IP address field. If your mail server has no FQDN, the Mail Server field may be left blank.

## *Appendix B*

# Glossary

### **Array**

See Disk Array.

### **Array Management Software**

The body of software provides common control and management for a disk array. Array Management Software most often executes in a disk controller or intelligent host bus adapter, but may also execute in a host computer. When it executes in a disk controller or adapter, Array Management Software is often referred to as Firmware.

### **Disk Array**

A collection of disks from one or more commonly accessible disk controllers, combined with a body of Array Management Software. Array Management Software controls the disks and presents them to the array operating environment as one or more virtual disks.

### **Firmware**

See Array Management Software.

### **Host Computer**

Any computer system to which disks are directly attached and accessible for I/O. Mainframes, and servers, as well as workstations and personal computers, can all be considered host computers in the context of this manual, as long as they have disks attached to them.

## **Parity**

Parity information is redundancy information calculated from actual data values. If there is any single piece of data lost, the data remaining and the parity information can be used together to compute the lost data. Parity information can either be stored on a separate, dedicated drive, or be mixed with the data across all the drives in the array.

## **RAID (Redundant Array of Independent / Inexpensive Disks)**

A disk array in which part of the storage capacity is used to store redundant information about user data stored on the remainder of the storage capacity. The redundant information enables regeneration of user data in the event that one of the array member disks or the access path to it fails. See Parity. Different RAID levels offer different data throughput speed and fault tolerance (data redundancy). RAID 0 does not feature redundant information but is nonetheless considered a special type of RAID.

## Appendix C

# Contact Accusys

### Accusys, Inc.

- 8F, No. 47, Lane 2, Sec. 2, Guangfu Rd., Hsinchu, Taiwan
- Tel : +886-3-575-0668
- Fax : +886-3-575-0866
- Website: [www.accusys.com.tw](http://www.accusys.com.tw)
- Sales : [sales@accusys.com.tw](mailto:sales@accusys.com.tw)
- Support: [support@accusys.com.tw](mailto:support@accusys.com.tw)

### Accusys U.S.A., Inc.

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- Fax:+1-510-661-9800
- Toll-free number:+1-866-277-5888
- Website: [www.accusysusa.com](http://www.accusysusa.com)
- Sales : [sales@accusysusa.com](mailto:sales@accusysusa.com)
- Support: [support@accusysusa.com](mailto:support@accusysusa.com)

### Accusys China, Inc.

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- Tel : 010-6448-2530
- Fax : 010-6448-2233
- Website: [www.accusys.com.cn](http://www.accusys.com.cn)
- Sales: [sales@accusys.com.cn](mailto:sales@accusys.com.cn)
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- Fax : (02)3443-9050
- Website: [www.accusys.co.kr](http://www.accusys.co.kr)
- Email : [sales@accusys.co.kr](mailto:sales@accusys.co.kr)