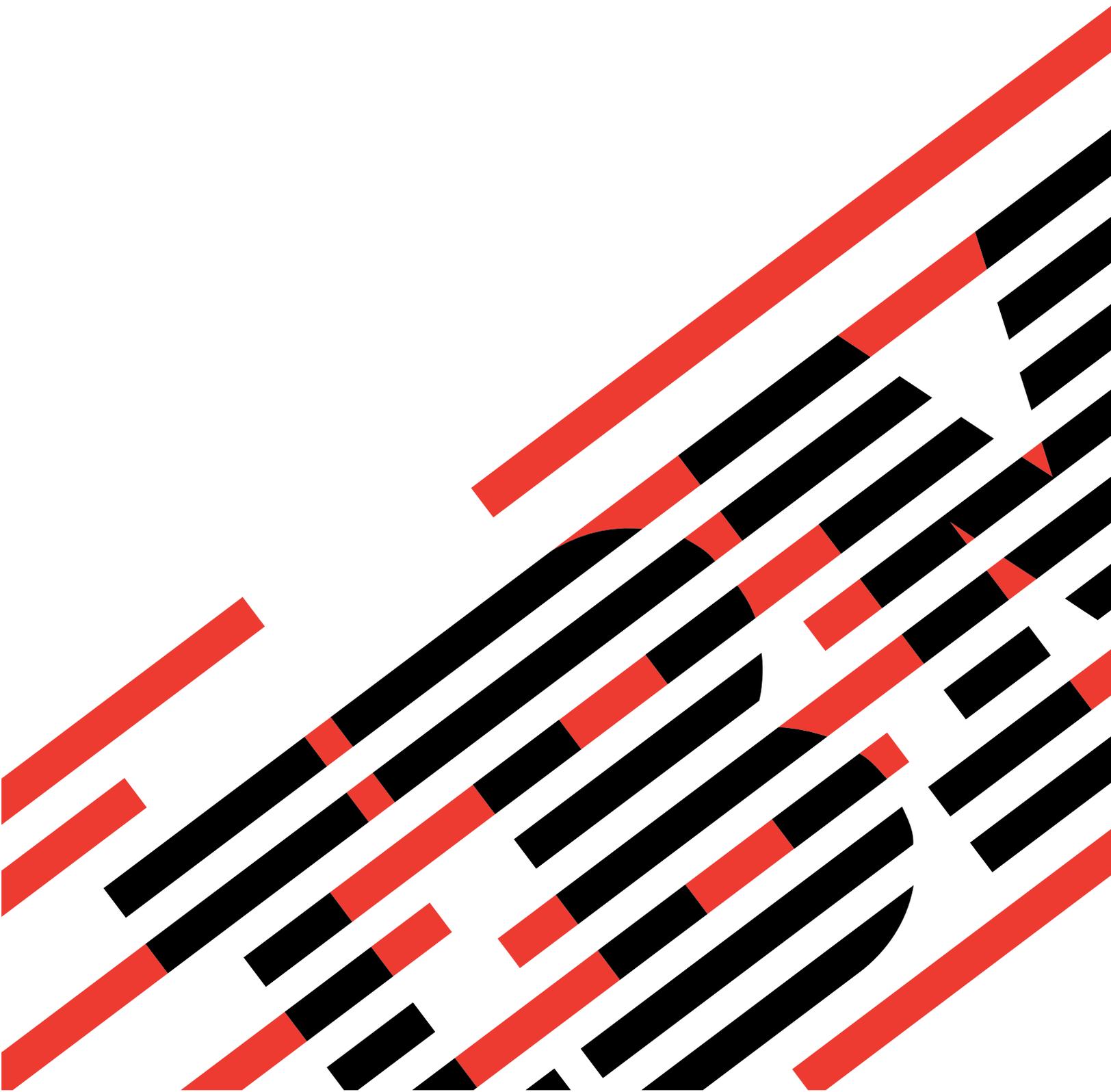




Advanced Settings Utility User's Guide





@server

Advanced Settings Utility User's Guide

Note: Before using this information and the product it supports, read the general information in “Notices,” on page 29.

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Chapter 1. Using the Advanced Settings Utility

The Advanced Settings Utility enables you to modify your firmware settings from the command line on multiple operating system platforms. Using the utility, you can modify user preferences and configuration parameters in the power-on self-test (POST) and basic input/output system (BIOS) code, and service processor firmware without the need to restart the server to access F1 settings. In addition, the Advanced Settings Utility supports scripting environments through its batch processing mode.

For a list of the Advanced Settings Utility commands and their descriptions, see Chapter 2, “Command reference,” on page 9.

Supported firmware types

The utility supports the following firmware types:

- BIOS code
- Remote Supervisor Adapter firmware
- Remote Supervisor Adapter II firmware

The utility retrieves and modifies user settings from the supported firmware types using its command-line interface. The utility does not update any of the firmware code.

Supported operating systems

The utility supports the following operating systems:

- Microsoft® Windows NT® 4.0, Windows® 2000, Windows XP, and Windows Server 2003
- Red Hat® Linux versions 7.x, 8.x, and 9 (see the note following this list)
- Red Hat Enterprise Linux AS 2.1
- Red Hat Enterprise Linux version 3 (see the note following this list)
- SUSE LINUX versions 7.x, 8.x, and 9
- SUSE LINUX Enterprise Server 8
- PC-DOS: 7.0 or later

Note: For Red Hat Enterprise Linux 3.0, Red Hat 9, and other Linux distributions that do not install the compatibility libstdc++ library, the following message might be displayed:

```
./asu: error while loading shared libraries:  
libstdc++-libc6.1-1.so.2: cannot open shared object file:  
No such file or directory.
```

If the previous message is displayed, install the compat-libstdc++*.rpm that is included on the distribution media.

The utility is run on the server that contains the settings you want to view and change. When performing setting configuration, the utility interacts with the physical hardware. On operating systems that require root or administrator access to interact with physical hardware, you must run the utility from an account with root or administrator access. (Windows and Linux require root and administrator access.)

To view and change Remote Supervisor Adapter or Remote Supervisor Adapter II settings, the Remote Supervisor Adapter or Remote Supervisor Adapter II device drivers are used.

Notes:

1. You cannot use the utility to configure Remote Supervisor Adapter II settings from Red Hat Enterprise Linux AS 2.1 because there is no Remote Supervisor Adapter II device driver for the Red Hat Enterprise Linux AS 2.1 operating system.
2. You cannot use the utility to configure Remote Supervisor Adapter or Remote Supervisor Adapter II settings from PC-DOS because there is no Remote Supervisor Adapter or Remote Supervisor Adapter II device driver for PC-DOS.
3. You can view or change settings on a local server only.

Supported servers

The utility supports the following servers:

- IBM® @server xSeries® 235
- IBM @server xSeries 255
- IBM @server xSeries 335
- IBM @server xSeries 345
- IBM @server xSeries 440 (single-node configuration only)
- IBM @server xSeries 445 (single-node configuration only)
- IBM @server BladeCenter™ HS20 Type 8678
- IBM @server BladeCenter HS20 Type 8832

Note: Multinode configurations are not supported.

Obtaining the utility and patch files

The utility and patch files that you need are available from the IBM Support Web site.

Note: Changes are made periodically to the IBM Support Web site to provide timely customer information and better navigation. The search methods in the following procedures are suggestions. You might have to modify the search process depending on the Web site design.

You will need to download the following files:

- Advanced Settings Utility files
- BIOS code patch file
- Remote Supervisor Adapter or Remote Supervisor Adapter II patch file
- Remote Supervisor Adapter or Remote Supervisor Adapter II device drivers (if you want to use the utility to configure Remote Supervisor Adapter or Remote Supervisor Adapter II settings)

You can either download the files individually or you can perform a multiple-file download. (See the download instructions in the following sections.)

Downloading files individually

Complete the following steps to locate and download the files that you need:

1. Go to <http://www.ibm.com/pc/support/>.
2. In the **Download** section, click **Downloads & drivers**.
3. On the “Downloads & drivers” page, in the **Brand** field, select **Servers**.
4. In the **Family** field, select your server.
5. In the **Operating system** field, select your operating system.
6. Click **Continue**.
7. On the Support page, in the **Filter by category** field, select **Utility** and then select **Advanced Settings Utility**.
8. On the Support page, in the **Filter by category** field, select **BIOS** and then select the BIOS patch file.
9. On the Support page, in the **Filter by category** field, select **Remote Supervisor Adapter or Remote Supervisor Adapter II** and then select the Remote Supervisor Adapter or Remote Supervisor Adapter II patch file.

Note: The patch file is the same for the Remote Supervisor Adapter and Remote Supervisor Adapter II.

10. On the “Terms and conditions” page, click **I agree**.
11. Follow the instructions that guide you through the download process.

Using the multiple file download process

Complete the following steps to locate and download the files that you need:

1. Go to <http://www.ibm.com/>.
2. On the top of the page, click **Support & downloads**.
3. On the “Support & downloads” page, in the **Downloads** section, select **Multiple file download for personal computing**.
4. On the “Multiple file download” page, in the **Brand** field, select **Servers**.
5. In the **Family** field, select your server.
6. In the **Operating system** field, select your operating system.
7. Click **Continue**.
8. On the “Multiple file download results” page, select the check box next to the following files:
 - In the **Utility** section, select **Advanced Settings Utility**.
 - In the **BIOS** section, select the BIOS patch file.
 - In the **Remote Supervisor Adapter or Remote Supervisor Adapter II** section, select the Remote Supervisor Adapter or Remote Supervisor Adapter II patch file.

Note: The patch file is the same for the Remote Supervisor Adapter and Remote Supervisor Adapter II.

After you select all of the files that you need, click **Download now**.

9. On the “Terms and conditions” page, click **I agree**.
10. Follow the instructions that guide you through the download process.

Using utility patches

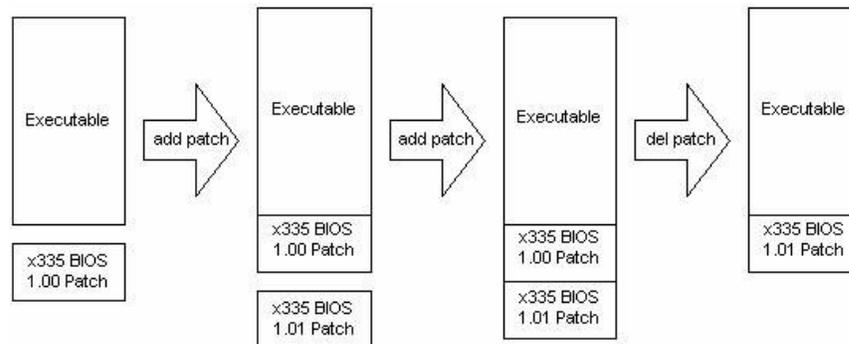
The utility requires a patch for each firmware type. The utility initially contains no patches, and therefore does not initially support any hardware. You cannot use the utility to change or view settings until a patch for that firmware type is applied to the utility.

A single patch adds support for *one* of the following firmware settings:

- A single BIOS version on a server
- The Remote Supervisor Adapter or Remote Supervisor Adapter II on any server

A patch adds binary data in increments to the end of the utility executable. The patch enables the utility to support the designated hardware. You can either add or remove a patch from the utility and you can add any number of patches to the utility.

The following illustration shows how patches are added and removed in the utility binary code.



For each BIOS and firmware type, the internal locations of the settings vary. A patch simply informs the utility where the settings are located for a single BIOS version or Remote Supervisor Adapter or Remote Supervisor Adapter II firmware so it knows how to apply the settings.

When the utility runs, it automatically scans the patches that have been applied to it and determines if the applicable patch exists for the setting that you want. If an applicable patch exists, the utility applies the setting. If the patch does not exist, the utility returns an error.

Unpacking the utility files for Windows

Complete the following steps to unpack the utility files if you are using a Windows operating system:

1. Change to the directory that contains the downloaded utility files.
2. Double-click **file_name.exe**, where *file_name* is the file name for the Advanced Settings Utility for Windows that you downloaded.

The files are automatically extracted to the same directory.

3. At the command prompt, type the following command and press Enter:

d:\directory_name, where *d* is the hard disk drive letter and *directory_name* is the directory that contains the executable file.

Note: You must type the **asu** commands from the directory in which the utility files are located.

Unpacking the utility files for Linux

Complete the following steps to unpack the utility files:

1. Open an xterm or other terminal window.
2. Change to the directory that contains the downloaded utility files.
3. From a shell command prompt, type the following command and press Enter:
"tar -zxvf *file_name.tgz*", where *file_name* is the file name of the Advanced Settings Utility for Linux that you downloaded.
The files are automatically extracted to the same directory.

Note: You must type the **asu** commands from the directory in which the utility files are located.

Using the asu command

The utility uses the **asu** command. You can use the following modes with the **asu** command.

Notes:

1. In the following list of commands, *setting* is the Remote Supervisor Adapter or Remote Supervisor Adapter II setting that you want to view or change, and *value* is the value that you are placing on the setting.
 2. If *value* contains spaces, enclose the value string with quotation marks ("").
 3. If you are using a Linux operating system, you must type `./` before each **asu** command. For example, `./asu`.
- To see all of the **asu** command modes and options, type the following command:
`asu`
 - To change a value, type the following command:
`asu set setting value`
 - To show the current value, type the following command:
`asu show setting value`
 - To show all possible values, type the following command:
`asu showvalues setting value`

You must install the applicable patch to update the utility files before using the **asu** command. Complete the following steps to install the patch:

1. At the command prompt (for Windows) or an xterm or other terminal window (for Linux), change to the directory that contains the utility files.
2. Type
`asu patchadd filename.def`

where *filename* is the file name of the *.def file.

Note: If you are using a Linux operating system, make sure you type `./` before `asu`.

Using the Advanced Settings Utility to configure Remote Supervisor Adapter or Remote Supervisor Adapter II settings

You can use the utility to directly configure a Remote Supervisor Adapter or Remote Supervisor Adapter II.

Note: Be sure to install the Remote Supervisor Adapter or Remote Supervisor Adapter II device drivers *before* using the utility. To install the device drivers, see the *IBM Remote Supervisor Adapter II Installation Instructions for Microsoft Windows Users* or *IBM Remote Supervisor Adapter II Installation Instructions for Linux Users*, which are available at <http://www.ibm.com/pc/support/>.

Example of configuring the Ethernet settings on a Remote Supervisor Adapter II

The Remote Supervisor Adapter II requires configuration to enable remote access to the adapter through the adapter Ethernet and serial connectors.

For detailed information about using the Remote Supervisor Adapter II Web interface for remote access, see the *IBM Remote Supervisor Adapter II User's Guide*.

You can use the utility to configure the Remote Supervisor Adapter II Ethernet settings.

Note: If you have an accessible, active, and configured Dynamic Host Configuration Protocol (DHCP) server on your network, the host name, IP address, gateway address, and subnet mask are set automatically. You can use the Configuration/Setup Utility program that is part of the server BIOS code to select DHCP server settings. For more information, see the *IBM Remote Supervisor Adapter II Installation Instructions for Microsoft Windows Users* or *IBM Remote Supervisor Adapter II Installation Instructions for Linux Users*, which is available at <http://www.ibm.com/pc/support/>.

You can also configure the DHCP setting using the utility. To use the utility, continue with the following procedure.

If you have an enabled DHCP server and you want to configure the serial connector, go to “Example of configuring the serial connection on a Remote Supervisor Adapter II” on page 7.

Complete the following steps to configure the Ethernet settings if you do not have a DHCP server on your network.

Note: If you are using a Linux operating system, make sure you type `./` before `asu`.

1. If you have not already done so, unpack the Advanced Settings Utility files. For more information, see “Unpacking the utility files for Windows” on page 4 or “Unpacking the utility files for Linux” on page 5.
2. At the command prompt, change to the directory that contains the utility files.
3. If you have not already done so, add the Remote Supervisor Adapter/Remote Supervisor Adapter II utility patch. For more information, see “Patchadd command” on page 17 and “Patchlist command” on page 19.

4. To view a list of all settings and their assigned values, type the following command and press Enter:

```
asu show all
```
5. From the following list, select the items that you want to set:
 - To enable the network interface on the Remote Supervisor Adapter II, type the following command and press Enter:

```
asu set RSA_Network1 Enabled
```
 - To set the IP address, type `asu set RSA_HostIPAddress1`, type the IP address of the Remote Supervisor Adapter II, and press Enter.
 - To set the subnet mask, type `asu set RSA_HostIPSubnet1`, type the value for the subnet mask, and press Enter. The default value is 255.255.255.0.
 - To set the gateway IP address, type `asu set RSA_GatewayIPAddress1`, type the IP address of the gateway, and press Enter.
 - To enable DHCP, type `asu set RSA_DHCP1 Enabled`, and press Enter.
 - To set the data-transfer rate, type `asu set RSA_LANDataRate1 "10M Ethernet"` for 10 Mbps data-transfer rate or `asu set RSA_LANDataRate1 "100M Ethernet"` for 100 Mbps data-transfer rate, and press Enter.
 - To set duplex mode, type `asu set RSA_Duplex1 Half`, `Full`, or `Auto`, and press Enter.
6. Type `asu rebootrsa`.
7. To exit the command prompt, type `exit`.

Example of configuring the serial connection on a Remote Supervisor Adapter II

You can use the utility to configure the Remote Supervisor Adapter II serial connection. The serial connector connects to a modem for dial-out support only.

Complete the following steps to configure the Remote Supervisor Adapter II serial connection for access to a modem.

Note: If you are using a Linux operating system, make sure you type `./` before `asu`.

1. If you have not already done so, unpack the Advanced Settings Utility files. For more information, see “Unpacking the utility files for Windows” on page 4 or “Unpacking the utility files for Linux” on page 5.
2. At the command prompt, change to the directory that contains the utility files.
3. If you have not already done so, add the Remote Supervisor Adapter/Remote Supervisor Adapter II utility patch. For more information, see “Patchadd command” on page 17 and “Patchlist command” on page 19.
4. To view a list of all of the settings and assigned values, type the following command and press Enter:

```
asu show all
```

5. You can select from the commands in the following list:
 - To change the modem baud rate, type the following command and press Enter:
asu set RSA_ModemBaudRate1 *value*, where *value* is a number from 2400 to 57600 in increments of 2400 (for example, 2400, 4800, 7200, 9600, ...57600). The default is 57600.

Note: Make sure that the baud rate matches the baud rate of the device you are connecting to the serial connector on the Remote Supervisor Adapter II.
 - To change the modem parity, type the following command and press Enter:
asu set RSA_ModemParity1 *value*, where *value* is None, Odd, Even, Mark, or Space. The default is None.
 - To change modem stop bits, type the following command and press Enter:
asu set RSA_ModemStopBits1 *value*, where *value* is either 1 or 2. The default is 1.
6. Type `asu rebootrsa`.
7. To exit the command prompt, type `Exit`.

Chapter 2. Command reference

This chapter describes the Advanced Settings Utility commands.

Batch command

The **batch** command enables you to write scripts for utility operations. The script file syntax is independent of the operating system.

Syntax

The syntax of the **batch** command is:

```
asu batch batch_filename
```

where *batch_filename* is the name of a file that contains a list of utility commands.

Output

When using the **batch** command on a batch file, the output sent to stdout and stderr will be the collective output of all the commands in the batch file. The output of each command in the batch file will be preceded by the command itself, surrounded by brackets ([]).

```
[command 1]  
output of command 1  
[command 2]  
output of command 2  
  
:  
:  
[command n]  
output of command n
```

Examples

The **batch** command and corresponding output are shown in the following examples:

Example 1:

Batch file:

```
show CMOS_PrimaryBootDevice1  
show CMOS_PrimaryBootDevice2  
show CMOS_PrimaryBootDevice3  
show CMOS_PrimaryBootDevice4
```

Output:

```
[show CMOS_PrimaryBootDevice1]  
CMOS_PrimaryBootDevice1=CD ROM  
[show CMOS_PrimaryBootDevice2]  
CMOS_PrimaryBootDevice2=Diskette Drive 0  
[show CMOS_PrimaryBootDevice3]  
CMOS_PrimaryBootDevice3=Hard Disk 0  
[show CMOS_PrimaryBootDevice4]  
CMOS_PrimaryBootDevice4=Network
```

Example 2:

Batch file:

```
set CMOS_PrimaryBootDevice1 "Network"  
set CMOS_PrimaryBootDevice2 "Hard Disk 0"  
set CMOS_PrimaryBootDevice3 "Diskette Drive 0"  
set CMOS_PrimaryBootDevice4 "CD ROM"
```

Output:

```
[set CMOS_PrimaryBootDevice1 "Network"]  
CMOS_PrimaryBootDevice1=Network  
[set CMOS_PrimaryBootDevice2 "Hard Disk 0"]  
CMOS_PrimaryBootDevice2=Hard Disk 0  
[set CMOS_PrimaryBootDevice3 "Diskette Drive 0"]  
CMOS_PrimaryBootDevice3=Diskette Drive 0  
[set CMOS_PrimaryBootDevice4]  
CMOS_PrimaryBootDevice4=CD ROM
```

Comparedefault command

The **comparedefault** command compares current values to default values for one or all settings.

Syntax

The syntax of the **comparedefault** command is:

```
asu comparedefault (setting | all) [-v]
```

where *setting* is the name of a valid utility setting. If “all” is specified instead of *setting*, all utility settings are processed.

Note: If the optional **-v** parameter is used, the output is verbose.

Output

The output of the **comparedefault** command shows the current and default values for one or all settings.

Without the **-v** parameter:

```
<setting 1>=<current value 1><<default value1>>  
<setting 2>=<current value 2><<default value2>>  
  
:  
:  
<setting n>=<current value n><<default valuen>>
```

With the **-v** parameter:

```
<setting 1>: <setting 1 description> = <current value 1>,  
<default value 1> (default)  
<setting 2>: <setting 2 description> = <current value 2>,  
<default value 2> (default)  
  
:  
:  
<setting n>: <setting n description> = <current value n>,  
<default value n> (default)
```

Examples

The **comparedefault** command and corresponding output are shown in the following examples:

Command line:

```
asu comparedefault CMOS_PrimaryBootDevice1
```

Output:

```
CMOS_PrimaryBootDevice1=Network<CD ROM>
```

Command line:

```
asu comparedefault CMOS_PrimaryBootDevice2 -v
```

Output:

```
CMOS_PrimaryBootDevice2: Second Startup Device = Network, CD  
ROM (default)
```

Command line:

```
asu comparedefault all
```

Output:

```
CMOS_DisketteA=1.44 MB 3.5"<1.44 MB 3.5">  
CMOS_CRTRRequired=Disabled<Enabled>
```

```
⋮
```

```
CMOS_OSUSBControl=Other OS<Other OS>
```

Help command

The **help** command enables you to view help for one or all settings. For BIOS settings, the help information is the same help that you access when you press F1 during setup.

Syntax

The syntax of the **help** command is:

```
asu help (setting | all)
```

where *setting* is the name of a valid utility setting. If “all” is specified instead of *setting*, all utility settings are processed.

Output

The output of the **help** command shows the help text for one or all settings. The name and description of the setting are followed by the help title and the help text.

```
<setting 1>: <setting description 1>
<help title 1>
-----
<help text 1>
<setting 2>: <setting description 2>
<help title 2>
-----
<help text 2>

:
:
<setting n>: <setting description n>
<help title n>
-----
<help text n>
```

Examples

The **help** command and corresponding output are shown in the following examples:

Command line:

```
asu help CMOS_PrimaryBootDevice3
```

Output:

```
CMOS_PrimaryBootDevice3: Third Startup Device
```

```
Help for Startup Device
-----
```

```
The system uses a startup sequence to determine which device
will be the startup device. The startup device is the
diskette drive, hard disk, or network adapter which will be used
to load the operating system. This field specifies the third
device for which a system start will be attempted. If the
start from this device fails, the system will attempt to
start from the fourth startup device.
```

Command line:

```
asu help all
```

Output:

CMOS_DisketteA: Diskette Drive A

Help for Diskette Drive

If you change or add a diskette drive, you might need to use this option to set the correct type.

CMOS_CRTRequired: Displayless Operation

Help for Displayless Operation

This option suppresses the error messages that normally occur when no video device is present.

:

:

CMOS_OSUSBControl: OS USB Selection

Operating System USB Support

Choose which operating system you will be using for RSA II USB support.

Loaddefault command

The **loaddefault** command loads default values for one or all settings.

Syntax

The syntax of the **loaddefault** command is:

```
asu loaddefault (setting | all) [-v]
```

where *setting* is the name of a valid utility setting. If “all” is specified instead of *setting*, all utility settings are processed.

Note: If the optional **-v** parameter is used, the output is verbose.

Output

The output of the **loaddefault** command shows if a setting is changed to the default value. If a setting is already set to the default value, no output is shown. If a setting is not already set to the default value, the value is changed and the output is shown as the output of the set command.

Without the **-v** parameter:

```
<setting 1>=<default value 1>  
<setting 2>=<default value 2>  
  
:  
:  
<setting n>=<default value n>
```

With the **-v** parameter:

```
<setting 1>: <setting 1 description> = <default value 1>  
<setting 2>: <setting 2 description> = <default value 2>  
  
:  
:  
<setting n>: <setting n description> = <default value n>
```

Examples

The **loaddefault** command and corresponding output are shown in the following examples:

Command line:

```
asu loaddefault CMOS_CRTRequired
```

Output:

```
CMOS_CRTRequired=Enabled
```

Command line:

```
asu loaddefault CMOS_KbdRequired -v
```

Output:

```
CMOS_KbdRequired: Keyboardless Operation = Enabled
```

Command line:

```
asu loaddefault all
```

Output:

CMOS_DisketteA=1.44 MB 3.5"
CMOS_CRTRequired= Enabled
CMOS_WakeOnLAN=Enabled

Patchadd command

The **patchadd** command is used to add support for a particular firmware settings to the utility.

Syntax

The syntax of the **patchadd** command is:

```
asu patchadd patch_filename
```

where *patch_filename* is the name of a patch file. For a description of the patch file format, see “Using utility patches” on page 4.

Output

The output of the **patchadd** command shows the success or failure of adding a patch. If the patch succeeded, a message is shown indicating that a new patch was written to the executable, and information about the patch is given. If the patch failed, a message is shown indicating why the patch failed.

If the **patch** command is successful, the output looks similar to:

```
Wrote new patch <<patch identification>> to <executable>  
Wrote patch footer to <executable>
```

If the **patch** command is not successful (duplicate), the output looks similar to:

```
<<patch identification>> already patched.  
Wrote patch footer to <executable>
```

Examples

The **patchadd** command and corresponding output are shown in the following examples:

Successful patch:

Command line:

```
asu patchadd T2C125A.def
```

Output:

```
Wrote new patch <T2[25->25] (BIOS)> to ./asu  
Wrote patch footer to ./asu
```

Duplicate patch:

Command line:

```
asu patchadd T2C125A.def
```

Output:

```
<T2[25->25] (BIOS)> already patched.  
Wrote patch footer to ./asu
```

Patchextract command

The **patchextract** command enables you to extract a patch from the utility to a patch file. Then, you can patch the extracted patch file to another version of the utility.

Syntax

The syntax of the **patchextract** command is:

```
asu patchextract patch_number patch_filename
```

where *patch_number* is the patch number to extract. The patch number for each patch can be shown by using the **patchlist** command. *patch_filename* is the name of the patch file that is extracted.

Output

The output of the **patchextract** command shows the success or failure of the extraction operation. If the extraction is successful, a message is displayed indicating which patch was extracted and the filename to which it was extracted.

```
Extracted patch <patch number>: <<patch identification>> to <patch filename>
```

Example

The **patchextract** command and corresponding output are shown in the following example:

Command line:

```
asu patchextract 1 T2.def
```

Output:

```
Extracted patch 1: <T2[25->25] (BIOS)> to T2.def
```

Patchlist command

The **patchlist** command enables you to display the patches that are applied to the utility.

Syntax

The syntax of the **patchlist** command is:

```
asu patchlist
```

Output

The output of the **patchlist** command is a list of patches. Each patch has a patch number and patch identification.

```
Patch <patch number 1>: <<patch identification 1>>
```

```
Patch <patch number 2>: <<patch identification 2>>
```

```
:
```

```
Patch <patch number n>: <<patch identification n>>
```

Example

The **patchlist** command and corresponding output are shown in the following example:

Command line:

```
asu patchlist
```

Output:

```
Patch 1: <T2[25->25] (BIOS)>
```

```
Patch 2: <GE[00->99] (RSA)>
```

```
Patch 3: <GE[46->46] (BIOS)>
```

Patchremove command

The **patchremove** command enables you to remove a patch from the utility.

Syntax

The syntax of the **patchremove** command is:

```
asu patchremove patch_number
```

where *patch_number* is the patch number to extract. You can use the **patchlist** command to show the patch number for each patch.

Output

The output of the **patchremove** command shows the success or failure of the removal operation. If the removal is successful, messages are shown indicating the removal of a patch and the copying of every other patch to the temporary executable.

Output:

```
Copied patch <<patch identification>> to <temporary executable>  
Removing patch <<patch identification>> from <executable>
```

Example

The **patchremove** command and corresponding output are shown in the following example:

Command line:

```
asu patchremove 2
```

Output:

```
Copied patch <T2[25->25] (BIOS)> to smep2tmp-9yFP0a  
Removing patch <GE[00->99] (RSA)> from ./asu
```

Rebootrsa command

The **rebootrsa** command enables you to restart the Remote Supervisor Adapter. This is useful when you must restart a Remote Supervisor Adapter after making changes to Remote Supervisor Adapter settings for which a restart is necessary for the changes to take effect.

Syntax

The syntax of the **rebootrsa** command is:

```
asu rebootrsa
```

Output

The output of the **rebootrsa** command is a message indicating that the restart of the Remote Supervisor Adapter is complete.

Example

The **rebootrsa** command and corresponding output are shown in the following example:

Command line:

```
asu rebootrsa
```

Output:

```
Rebooting RSA...done
```

Replicate command

The **replicate** command enables you to use the output of one or more show commands to set multiple settings at the same time.

Syntax

The syntax of the **replicate** command is:

```
asu replicate show_output_file
```

where *show_output_file* is the name of a file that contains output from one or more show commands.

Note: The output from show commands is not valid for replication if the **-v** parameter was specified for any of the show commands.

Output

The output of the **replicate** command is a list of outputs from set commands.

```
<setting 1>=<value 1>  
<setting 2>=<value 2>  
  
:  
:  
<setting n>=<value n>
```

Examples

The **replicate** command and corresponding output are shown in the following examples:

Show output file:

```
CMOS_CRTRequired=Enabled  
CMOS_KbdRequired=Enabled  
  
:  
:  
CMOS_OSUSBControl=Other OS
```

Output:

```
CMOS_CRTRequired=Enabled  
CMOS_KbdRequired=Enabled  
  
:  
:  
CMOS_OSUSBControl=Other OS
```

Set command

The **set** command enables you to change the value of a setting.

Notes:

1. If you use the **set** command to change CMOS settings, you must restart the server before the changes take effect.
2. If you use the **set** command to change Remote Supervisor Adapter or Remote Supervisor Adapter II settings, you must restart the Remote Supervisor Adapter or Remote Supervisor Adapter II before the changes take effect.

Syntax

The syntax of the **set** command is:

```
asu set setting_value [-v]
```

where *setting* is the name of a setting to change. Using the command **asu show all** will show a list of available settings and *value* is the exact value string to set for *setting*. The command **asu showvalues *setting*** shows a list of all values for *setting*.

Notes:

1. Values that contain spaces must be enclosed with double quotation marks ("). If a value contains double quotation marks, add a backslash before each double quotation mark (\ ").
2. If the optional **-v** parameter is used, the output is verbose.

Output

The output of the **set** command when the **-v** parameter is not specified is the setting name and the new value. When the **-v** parameter is specified, the description of the setting is also shown.

Without the **-v** parameter:

```
<setting>=<new value>
```

With the **-v** parameter:

```
<setting>: <setting description> = <new value>
```

Examples

The **set** command and corresponding output are shown in the following examples:

Command line:

```
asu set CMOS_CRTRequired Disabled
```

Output:

```
CMOS_CRTRequired=Disabled
```

Command line:

```
asu set CMOS_DisketteA "1.44 MB 3.5\""
```

Output:

```
CMOS_DisketteA=1.44 MB 3.5"
```

Command line:

```
asu set RSAIP_HostIPAddress1 192.168.0.100
```

Output:

```
RSAIP_HostIPAddress1=192.168.0.100
```

Command line:

```
asu set RSAStrng_LoginId2 rsauser
```

Output:

```
RSAStrng_LoginId2=rsauser
```

Show command

The **show** command enables you to see the current value of one or all settings.

Syntax

The syntax of the **show** command is:

```
asu show (setting | all) [-v]
```

where *setting* is the name of a valid utility setting. If “all” is specified instead of *setting*, all utility settings are processed.

Note: If the optional **-v** parameter is used, the output is verbose.

Output

If the **-v** parameter is not specified, the setting and the current value are displayed. If the **-v** parameter is specified, the description of the setting is displayed as well as an indicator that the value is the default value.

Without the **-v** parameter:

```
<setting>=<current value>
```

With the **-v** parameter:

```
<setting>: <setting's description> = <current value> [(default)]
```

Examples

The **show** command and corresponding output are shown in the following examples:

Command line:

```
asu show RSAIP_HostIPAddress1
```

Output:

```
RSAIP_HostIPAddress1=192.168.0.100
```

Command line:

```
asu show CMOS_WakeOnLAN -v
```

Output:

```
CMOS_WakeOnLAN: Wake On Lan = Enabled (default)
```

Command line:

```
asu show all
```

Output:

```
CMOS_DisketteA=1.44 MB 3.5"
```

```
CMOS_CRTRequired=Disabled
```

```
:
```

```
CMOS_OSUSBControl=Other OS
```

Showdefault command

The **showdefault** command enables you to show the default value for one or all settings.

Syntax

The syntax of the **showdefault** command is:

```
asu showdefault (setting | all) [-v]
```

where *setting* is the name of a valid utility setting. If “all” is specified instead of *setting*, all utility settings are processed.

Note: If the optional **-v** parameter is used, the output is verbose.

Output

If the **-v** parameter is not specified, the setting and the default value are displayed. If the **-v** parameter is specified, the description of the setting is also displayed.

Without the **-v** parameter:

```
<setting>=<default value>
```

With the **-v** parameter:

```
<setting>: <setting's description> = <default value>
```

Examples

The **showdefault** command and corresponding output are shown in the following examples:

Command line:

```
asu showdefault CMOS_WakeOnLAN -v
```

Output:

```
CMOS_WakeOnLAN: Wake On Lan = Enabled
```

Command line:

```
asu showdefault all
```

Output:

```
CMOS_DisketteA=1.44 MB 3.5"
```

```
CMOS_CTRRequired=Disabled
```

```
⋮
```

```
CMOS_OSUSBControl=Other OS
```

Showvalues command

The **showvalues** command enables you to list all possible values for one or all settings. This is useful for finding the **value** parameter used for the **set** command.

Syntax

The syntax of the **showvalues** command is:

```
asu showvalues (setting | all) [-v]
```

where *setting* is the name of a valid utility setting. If “all” is specified, all utility settings are processed.

Note: If the optional **-v** parameter is used, the output is verbose.

Output

If the **-v** parameter is not specified, the setting and the its values are displayed. If the **-v** parameter is specified, the description of the setting is also displayed.

Without the **-v** parameter:

```
<setting>=<value 1>=<value 2>=...=<value n>
```

With the **-v** parameter:

```
<setting>: <setting's description> {  
<value 1>  
<value 2>  
:  
<value n>  
}
```

Examples

The **showvalues** command and corresponding output are shown in the following examples:

Command line:

```
asu showvalues CMOS_SerialA
```

Output:

```
CMOS_SerialA=PnP=Auto-configure=<Port 3F8, IRQ 4>=Port 2F8,  
IRQ 3=Port 3E8, IRQ 4=Port 2E8, IRQ 3=Disabled
```

Command line:

```
asu showvalues CMOS_SerialA -v
```

Output:

```
CMOS_SerialA: Serial Port A {  
PnP  
Auto-configure  
Port 3F8, IRQ 4 (default)  
Port 2F8, IRQ 3  
Port 3E8, IRQ 4  
Port 2E8, IRQ 3  
Disabled  
}
```

Version command

The **version** command shows the version and build date of the utility.

Syntax

The syntax of the **version** command is:

```
asu version
```

Output

The output of the **version** command shows the current version and build date of the utility and the department within IBM that made the last revision.

```
eserver xSeries Advanced Settings Utility <version> <build date>  
IBM Corporation  
eserver xSeries Engineering Software
```

Example

The **version** command and corresponding output are shown in the following example:

Command line:

```
asu version
```

Output:

```
eserver xSeries Advanced Settings Utility 0.9.7 Jun 2 2003  
IBM Corporation  
eserver xSeries Engineering Software
```

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