SECTION III:

SETTING SERVICE OPTIONS

Overview of Services

Logging Service

Pages 2-4

ManageUPS maintains event and data log files in non-volatile memory. Log files can be *viewed* via the WEB interface — or downloaded for import and analysis via other utilities.

The default data log interval creates one entry every 10 minutes. This allows for approximately 26 days of history to be available for viewing. Log interval can be adjusted using the *Log Controls* menu.

The reference time source for log entry time stamps is a network timeserver (NTP server). Verify the IP address of a local NTP server in the *Date/Time Settings* menu.

Event Messaging Service

Pages 5-8

The messaging service sends messages on UPS status events via SNMP Trap, e-mail or both.

For e-mail alerts, set e-mail recipients and the address of the SMTP server on your network that will deliver these e-mails.

Set up to ten destinations to receive *SNMP traps*.

If you plan to use the full SNMP agent for to GET or SET MIB objects, set SNMP access-rights using the *SNMP Communities* menu.

Network Shutdown Controller Service

Pages 9-10

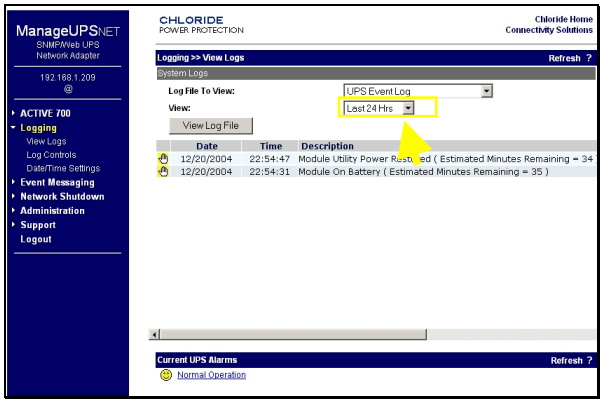
ManageUPS will connect to network computers running MopNSA (Network Shutdown Agent) or RCCMD listener modules and call safe OS shutdown when AC power failures last longer than the specified delay periods.

ManageUPS supports up to four delay groups for network shutdown.

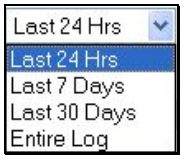
Logging Services

UPS Events Log

When you first access the *Log* viewing area, ManageUPS will load and display UPS events that have occurred in the last 24 hours.



If there are no events to display, the display area will be blank.



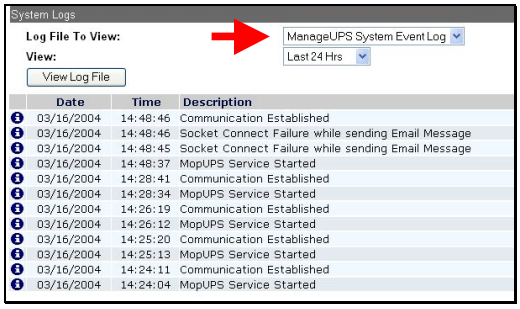
To view older history, select a time period from the dropdown box and press:

If an event is caused by a measured threshold such as input voltage, temperature or %load (as shown), the value of the relevant parameter will be included in the event log entry.

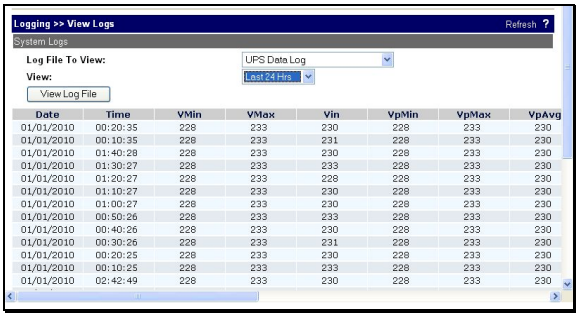
System Events Log

ManageUPS also logs informational records of background system activity.

If a Service fails to perform as expected, these records can sometimes aid in troubleshooting the cause of the problem.



Data Log



ManageUPS accumulates various measures reported by the UPS between log intervals and summarizes this information for each entry.

The following explains each of the fields contained in the data log.

Date	Time
01/01/2010	00:20:35

Date and Time the log entry was made is presented according to your time zone preference. The calendar and clock are synchronized to the network time server (See NETWORK TIME RESOURCE on page III-4).

VMin	VMax	Vin	VpMin	VpMax	VpAvg
228	233	230	228	233	230

Various measures of input voltage. *(See page V-4 for more information)*
VMIN and **VMAX** are long term extremes of voltage variations measured on the input side of the UPS.
VIN is the input voltage reported at the time the log entry was made.
VPMIN, **VPMAX** and **VPAVG** are the minimum, maximum and average input voltage recorded during the period since the last log entry was made

Vout	Vbatt	Freq
230	1837	600

VOUT is AC voltage reported on the UPS output.

VBATT is DC voltage reported at the battery. Some UPS report voltage at the string level. Other UPS report voltage at the cell level. In the example shown, 1837 is interpreted as 183.7 VDC.

FREQ is the frequency of AC voltage on the input of the UPS. 600 is interpreted as 60.0 Hz.

%Load	%LdpMin	%LdpMax	%LdpAvg
35	31	38	34

% LOAD is the UPS output load expressed as a % of UPS capacity as reported at the time the log entry is made..

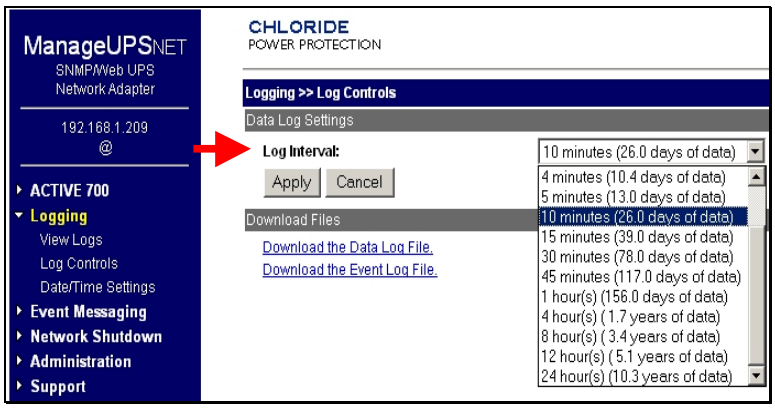
%LdpMIN, %Ldp MAX and **%Ldp AVG** are the minimum, maximum and average % load statistics during the period since the last log entry was made.

Temp
28

TEMP is the temperature (degrees C), reported by the UPS. Generally, the temperature reported reflects a temperature reading within the UPS cabinet - typically either in the inverter (power electronics) region or in the battery compartment.

Log Controls

Changing the *LOG INTERVAL* will change the amount of time ManageUPS waits before making entries in the data log file. Extending the duration between log entries allows ManageUPS



to archive a longer history of data measures. The default data log interval creates one entry for every 10 minute period. This allows for approximately 20-26 days of history to be available for viewing.

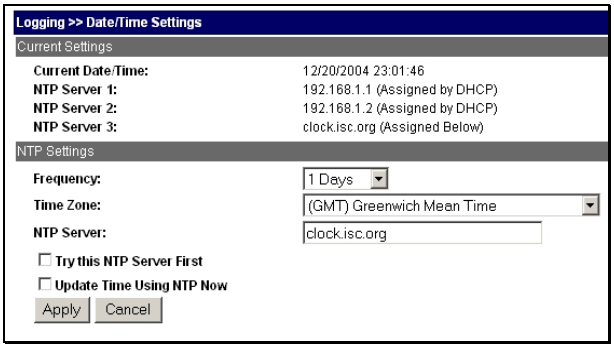
Links are provided to download the raw data and event log files in CSV format. The first record in the file will be a field header record.

Be aware that log entries are *stored* using the GMT time reference.
Log entries are *displayed* in the WEB interface using your TIME ZONE preference (See "Time Zone" help in the *Date/Time Settings* dialog.) When you download a log file, the time stamps will be the GMT reference.

Network Time Resource

The default entry for the network time resource is an internet timeserver - (requires internet access through NTP port 123).

It is usually better practice to use a local time server within your network. ManageUPS will accept a local NTP server from the DHCP server automatically if it is offered.



If the NTP Server 1 is an internet time server, ask your network administrator for the address of the timeserver(s) on the network ManageUPS will be connected to.

If no NTP server can be reached by ManageUPS it will start its clock and calendar reference at:

" Midnight, 1 January 2010 GMT".

If this occurs, ManageUPS will retry to access the NTP server once every 5 minutes until a connection is established — unless NTP is "disabled" in the *FREQUENCY* control.

Frequency: How often ManageUPS will synchronize with the NTP Server.

Time Zone: Log entries are stored using GMT. Select the time zone to be used for displaying data log entries in the WEB interface.

NTP Server: The NTP server to be used to obtain the time. This can be entered using the local DNS name or as an IP address.

Try this NTP Server First Use this control to identify the primary NTP server for ManageUPS to use.

Leave this control empty to identify 2nd and 3rd NTP servers.

Update Time Using NTP Now: Check the box **Update Time Using NTP Now** and press the **Apply** button to update the time immediately.

Event Messaging Services

The messaging service sends messages on UPS status events via SNMP Trap, e-mail or both.

Email Settings

SMTP Server: The IP address or DNS hostname of the SMTP host server that the adapter will use when sending email messages in response to an event.

SMTP Settings

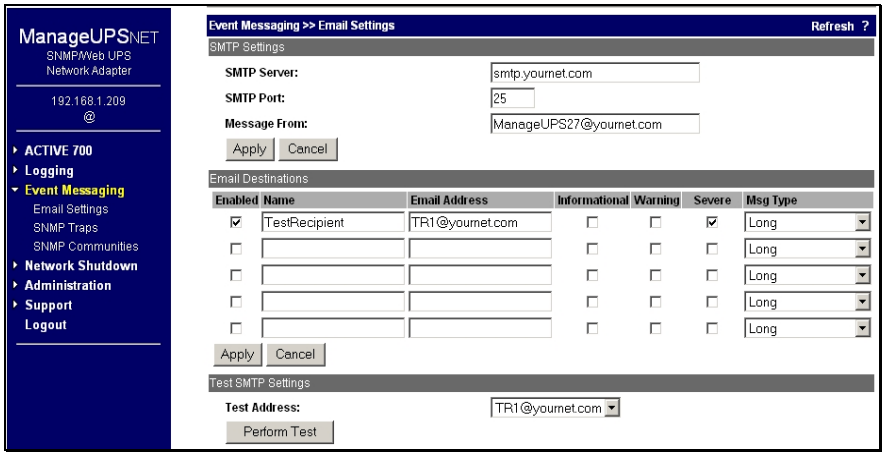
SMTP Port: The port that the SMTP server is listening on (usually 25).

Message From: The *from* email address that the UPS unit will use when sending email messages in response to an event. For example:

```
UPS1@Bld23.yourcompany.com
```

The **APPLY** buttons control only the entries in their form within the page. Press **APPLY** to save changes before configuring email destinations.

Email Destinations



Enter the NAME and EMAIL ADDRESS of message recipients and determine which severity level should trigger email messages to this destination. (See *Appendix B - Alarm Detail* for more information on alarm interpretation).

For regular email recipients, use the LONG message type. Use SHORT or SHORT WITH NO SUBJECT to send-emails pre-formatted for relay to GSM wireless devices via the provider's SMSC (Short Message Service Center). Most GSM providers offer email-to-SMS forwarding services

Press **APPLY** to save these settings

Email Test

To test email message delivery, select a destination email recipient and press **PERFORM TEST.**

When the test is completed the pass/fail result and failure diagnostics will be displayed in the TEST pane.

Samples of e-mail message types

Long Message Type

```
From :ManageUPS27@Yournet.com
Sent: 5 April 2004
To:TestR1@yournet.com
Subject: Utility Power Fail
-------------------------------------------
The CHLORIDE ACTIVE 3000 UPS @ YourLocation has the
following condition:

Module Utility Power Fail

----ManageUPSnet Information-----------------------------
Model:            ACTIVE
Serial Number:    0412-cf00
Host Name:        (none)
Contact           Your ContactName
Location:         YourLocation
Attached Devices: ""
URL:              http://192.168.1.2
------------------------------------------------------------
```

Short Message Type

```
From :ManageUPS27@Yournet.com
Sent: 5 April 2004
To:TestR1@yournet.com
Subject: Utility Power Fail
------------------------------------------------------------

Module Utility Power Fail
```

Short Message Type No Subject

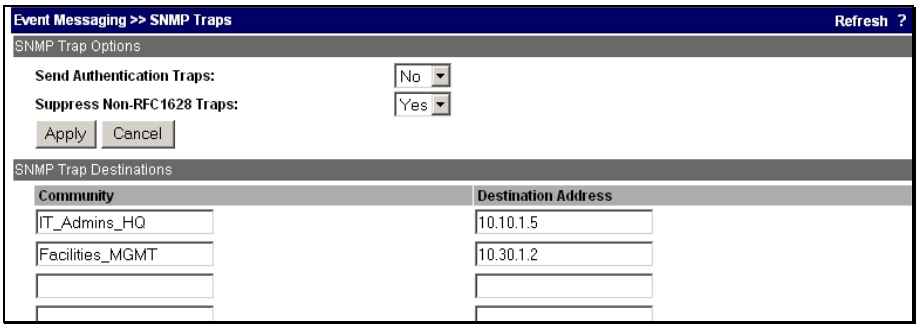
```
From :ManageUPS27@Yournet.com
Sent: 5 April 2004
To:TestR1@yournet.com
Subject:
------------------------------------------------------------

Module Utility Power Fail
```

SNMP Traps

The SNMP agent in ManageUPS conforms to the SNMP UPS MIB (RFC1628). The UPS MIB was originally circulated in SNMPv2 syntax.

An SNMP v1 translation of RFC1628 MIB file is included on the ManageUPS CD and available from

http://connectivity.chloridepower.com/products/manageups/



SNMP Trap Destinations

Send Authentication Traps: Enables or disables the agent to send SNMP authentication traps.

Suppress Non-RFC1628 Traps: Suppresses or enables the sending of alarms that are not included in the list of well-known-alarms defined in RFC1628. (See the subject; *About SNMP UPS Alarm Table Entries* on the next page for more information)

Destination Address: The IP address of the trap receiver.

Community: The name (authentication string) of the SNMP trap receiver community

About SNMP UPS Traps

There are four traps defined in the standard UPS MIB (RFC1628):

Trap1: upsTrapOnBattery

DESCRIPTION: "The UPS is operating on battery power. This trap is persistent and is resent at one minute intervals until the UPS either turns off or is no longer running on battery."

Trap2: upsTrapTestCompleted NOTIFICATION-TYPE

DESCRIPTION: "This trap is sent upon completion of a UPS diagnostic test."

Trap3: upsTrapAlarmEntryAdded NOTIFICATION-TYPE

DESCRIPTION: "This trap is sent each time an alarm is inserted into to the alarm table. It is sent on the insertion of all alarms except for upsAlarmOnBattery and upsAlarmTestInProgress." , covered in Traps 1 and 2.

Trap4: upsTrapAlarmEntryRemoved NOTIFICATION-TYPE

DESCRIPTION: "This trap is sent each time an alarm is removed from the alarm table. It is sent on the removal of all alarms except for upsAlarmTestInProgress."

About SNMP UPS Alarm Table Entries

WELL KNOWN ALARMS: (1-24)
Content sent in Traps 3 and 4 include a numeric identity (upsAlarmId) of the specific alarm that has been added or removed from the table. The MIB defines 24 specific upsWellKnownAlarms.

Value=1.3.6.1.2.1.33.1.6.3.x
Where; x is the alarm identification number of the specific alarm entry.

ADDITIONAL ALARMS: (25-31)
In addition to the 24 wellKnownAlarms defined in RFC1628, the adapter will also send additional alarms not defined in the MIB.

Additional alarms are suppressed by default. To enable these additional alarm entries, change the setting in the SNMP trap control dialog: **Suppress Non-RFC1628 Alarms.**

NOTE: For a complete list of UPS alarms reported by ManageUPS, including SNMP MIB OID, email severity code and probable cause, see *Appendix B, Alarm Detail.*

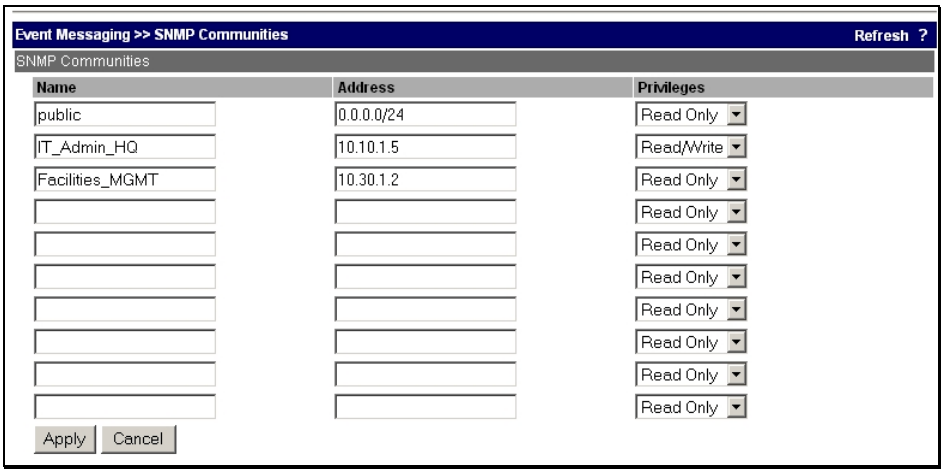
SNMP Communities

SNMP Communities is an authentication scheme that enables an intelligent network device to validate SNMP requests.

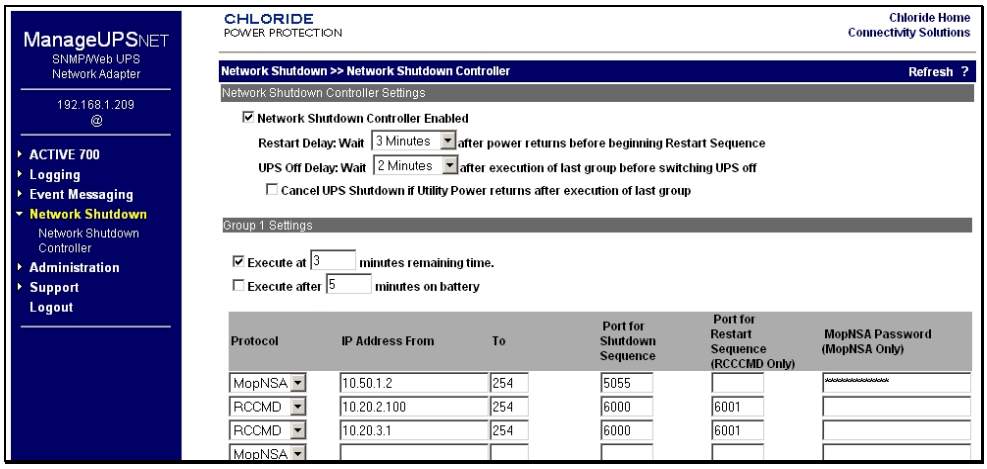
Name: The name of an SNMP access community (i.e. "public" or "private").
NOTE: Blank spaces are not accepted within the name string.

Address: The IP address of allowed stations (0.0.0.0 = any address)
A subnet range can be specified using the IP/MASK or IP/BITS syntax as shown below. If you are not familiar with this notation, open the **? HELP** dialog for examples of how this notation works.

Privileges: Enable **Read Only** or **Read/Write** access for individual communities.



Network Shutdown Control Services



Network Shutdown Controller Settings

Remote Shutdown Enabled: Check to enable the Remote Shutdown Function.

Restart Delay
(applies to RCCMD only): The amount of time to wait after power has been restored to send the restart message to all IP addresses with a restart port greater than 0. This message will only be sent to those IP addresses that have received the Shutdown message.

UPS Off Delay
(Available Only on UPS's with Shutdown Capabilities): The amount of time to wait after the last group is executed before shutting the UPS off.

Cancel UPS Shutdown if Utility Power Returns After Execution of Last Group

(Available Only on UPS's with Shutdown Capabilities): If this option is checked, the UPS shutdown will be cancelled if power returns after the last group is executed but before the UPS is turned off. (A restart message will then be sent to all IP addresses configured with an *RCCMD restart* port greater than 0 after the **Restart Delay** time.)

If this option is NOT checked, the UPS will be shutdown regardless of the state of the input power. If power was restored prior to UPS shutdown, then the UPS will shut off and restart after a short delay. (RCCMD Restart messages will not be sent to any IP addresses in this scenario.

Group Settings	**Execute at [N] minutes remaining time:**	Send Shutdown Messages to all IP Addresses in the Group if the UPS is running on battery power and the amount of remaining time is estimated to be [N] minutes.
	Execute after [N]:	Where N is the number of minutes on battery to wait
	Protocol:	Select the protocol of the shutdown targets. If the shutdown target is running RCCMD listener module, select RCCMD. If the target is running MopUPS network shutdown agent (NSA), select **MopNSA**.
	IP Address From:	The IP address of the first computer in a range to receive *Remote Shutdown* signals. Formatted as `xxx.xxx.xxx.xxx`.
	IP Address To:	The fourth octet of the last computer in the range to receive Remote Shutdown messages. Must be a number greater than the fourth octet of the corresponding **IP Address From**, and must be less than 255.
	Port for Shutdown Sequence:	The TCP/IP port each of the computers in this range is listening on for Remote Shutdown messages.
	Port for Restart Sequence (RCCMD Only)**:**	The TCP/IP port each of the computers in this range are listening on for RCCMD restart messages
	Password (MopNSA only):	The password entered on the target computer for access to the MopUPS service. ManageUPS must present the correct password to the shutdown target in order to be authenticated with rights to trigger shutdown of the target host operating system.