

# Log Management

Document revision 2.4 (February 6, 2008, 1:40 GMT)

This document applies to V3.0

## Table of Contents

### [Table of Contents](#)

[Summary](#)

[Specifications](#)

[Description](#)

### [General Settings](#)

[Property Description](#)

[Example](#)

### [Actions](#)

[Property Description](#)

[Notes](#)

[Example](#)

### [Log Messages](#)

[Description](#)

[Property Description](#)

[Example](#)

## General Information

### Summary

Various system events and status information can be logged. Logs can be saved in local routers file, displayed in console, sent to an email or to a remote server running a syslog daemon. MikroTik provides a shareware Windows Syslog daemon, which can be downloaded from [www.mikrotik.com](http://www.mikrotik.com)

### Specifications

Packages required: *system*

License required: *level1*

Home menu level: */system logging, /log*

Standards and Technologies: [Syslog](#)

Hardware usage: *Not significant*

### Description

Logs have different groups or topics. Logs from each topic can be configured to be discarded, logged locally or remotely. Locally log files can be stored in memory (default; logs are lost on reboot or power outage) or on hard drive (not enabled by default as is harmful for flash disks).

### General Settings

Home menu level: */system logging*

## Property Description

**action** (*name*; default: **memory**) - specifies one of the system default actions or user specified action listed in /system logging action

**prefix** (*text*) - local log prefix

**topics** (*info | critical | firewall | keepalive | packet | read | timer | write | ddns | hotspot | l2tp | ppp | route | update | account | debug | ike | manager | pppoe | script | warning | async | dhcp | notification | pptp | state | watchdog | bgp | error | ipsec | radius | system | web-proxy | calc | event | isdn | ospf | raw | telephony | wireless | e-mail | gsm | mme | ntp | open | ovpn | pim | radvd | rip | sertcp | ups*; default: **info**) - specifies log group or log message type

## Example

To log messages that are generated by firewall by saving them in local buffer

```
[admin@MikroTik] system logging> add topics=firewall action=memory
[admin@MikroTik] system logging> print
Flags: X - disabled, I - invalid
#   TOPICS                                     ACTION PREFIX
0   info                                       memory
1   error                                       memory
2   warning                                    memory
3   critical                                    echo
4   firewall                                    memory
[admin@MikroTik] system logging>
```

## Actions

Home menu level: */system logging action*

## Property Description

**disk-lines** (*integer*; default: **100**) - number of records in log file saved on the disk (only if action target is set to disk)

**disk-stop-on-full** (yes | no; default: **no**) - whether to stop to save log messages on disk after the specified disk-lines number is reached

**email-to** (*name*) - email address logs are sent to (only if action target is set to email)

**memory-lines** (*integer*; default: **100**) - number of records in local memory buffer (only if action target is set to memory)

**memory-stop-on-full** (yes | no; default: **no**) - whether to stop to save log messages in local buffer after the specified memory-lines number is reached

**name** (*name*) - name of an action

**remember** (yes | no; default: **yes**) - whether to keep log messages, which have not yet been displayed in console (only if action target is set to echo)

**remote** (*IP address:port*; default: **0.0.0.0:514**) - remote logging server's IP address and UDP port (only if action target is set to remote)

**target** (*disk | echo | email | memory | remote*; default: **memory**) - log storage facility or target

- **disk** - logs are saved to the hard drive
- **echo** - logs are displayed on the console screen

- **email** - logs are sent by email
- **memory** - logs are saved to the local memory buffer
- **remote** - logs are sent to a remote host

## Notes

You cannot delete or rename default actions.

## Example

To add a new action with name short, that will save logs in local buffer, if number of records in buffer are less than 50:

```
[admin@MikroTik] system logging action> add name=short \
\... target=memory memory-lines=50 memory-stop-on-full=yes
[admin@MikroTik] system logging action> print
Flags: * - default
#   NAME                TARGET REMOTE
0 * memory              memory
1 * disk                disk
2 * echo                echo
3 * remote              remote 0.0.0.0:514
4   short                memory
[admin@MikroTik] system logging action>
```

## Log Messages

Home menu level: */log*

### Description

Displays locally stored log messages

### Property Description

**message** (*read-only: text*) - message text

**time** (*read-only: text*) - date and time of the event

**topics** (*read-only: text*) - topic list the message belongs to

### Example

To view the local logs:

```
[admin@MikroTik] > log print
TIME                MESSAGE
dec/24/2003 08:20:36 log configuration changed by admin
dec/24/2003 08:20:36 log configuration changed by admin
dec/24/2003 08:20:36 log configuration changed by admin
dec/24/2003 08:20:36 log configuration changed by admin
dec/24/2003 08:20:36 log configuration changed by admin
dec/24/2003 08:20:36 log configuration changed by admin
-- [Q quit|D dump]
```

To monitor the system log:

```
[admin@MikroTik] > log print follow
TIME          MESSAGE
dec/24/2003 08:20:36 log configuration changed by admin
dec/24/2003 08:24:34 log configuration changed by admin
dec/24/2003 08:24:51 log configuration changed by admin
dec/24/2003 08:25:59 log configuration changed by admin
dec/24/2003 08:25:59 log configuration changed by admin
dec/24/2003 08:30:05 log configuration changed by admin
dec/24/2003 08:30:05 log configuration changed by admin
dec/24/2003 08:35:56 system started
dec/24/2003 08:35:57 isdn-out1: initializing...
dec/24/2003 08:35:57 isdn-out1: dialing...
dec/24/2003 08:35:58 Prism firmware loading: OK
dec/24/2003 08:37:48 user admin logged in from 10.1.0.60 via telnet
-- Ctrl-C to quit. New entries will appear at bottom.
```