

Manual:Configuration Management

Applies to RouterOS: ALL



Summary

This manual introduces you with commands which are used to perform the following functions:

- system backup;
- system restore from a backup;
- configuration export;
- configuration import;
- system configuration reset.

Description

The configuration backup can be used for backing up MikroTik RouterOS configuration to a binary file, which can be stored on the router or downloaded from it using FTP for future use. The configuration restore can be used for restoring the router's configuration, exactly as it was at the backup creation moment, from a backup file. The restoration procedure assumes the configuration is restored on the same router, where the backup file was originally created, so it will create partially broken configuration if the hardware has been changed.

The configuration export can be used for dumping out complete or partial MikroTik RouterOS configuration to the console screen or to a text (script) file, which can be downloaded from the router using FTP protocol. The configuration dumped is actually a batch of commands that add (without removing the existing configuration) the selected configuration to a router. The configuration import facility executes a batch of console commands from a script file.

System reset command is used to erase all configuration on the router. Before doing that, it might be useful to backup the router's configuration.

System Backup

Submenu level: `/system backup`

Description

The **backup save** command is used to store the entire router configuration in a backup file. The file is shown in the `/file` submenu. It can be downloaded via ftp to keep it as a backup for your configuration.

Important! The backup file contains sensitive information, do not store your backup files inside the router's Files directory, instead, download them, and keep them in a secure location.

To restore the system configuration, for example, after a `/system reset-configuration`, it is possible to upload that file via ftp and load that backup file using load command in `/system backup` submenu. Command Description

- **load name=[filename]** - Load configuration backup from a file
- **save name=[filename]** - Save configuration backup to a file



Warning: If TheDude and user-manager is installed on the router then backup will not take care of configuration used by these tools. Therefore additional care should be taken to save configuration from these. Use provided tool mechanisms to save/export configuration if you want to save it.

Example

To save the router configuration to file test:

```
[admin@MikroTik] system backup> save name=test
Configuration backup saved
[admin@MikroTik] system backup>
```

To see the files stored on the router:

```
[admin@MikroTik] > file print
# NAME                                TYPE          SIZE          CREATION-TIME
0 test.backup                         backup        12567         sep/08/2004 21:07:50
[admin@MikroTik] >
```

To load the saved backup file test:

```
[admin@MikroTik] > system backup load name=test
Restore and reboot? [y/N]:
y
Restoring system configuration
System configuration restored, rebooting now
```

Exporting Configuration

Command name: */export*

The **export** command prints a script that can be used to restore configuration. The command can be invoked at any menu level, and it acts for that menu level and all menu levels below it. The output can be saved into a file, available for download using FTP.

Command Description

- **file=[filename]** - saves the export to a file

Example

```
[admin@MikroTik] > ip address print
Flags: X - disabled, I - invalid, D - dynamic
# ADDRESS                NETWORK          BROADCAST      INTERFACE
0 10.1.0.172/24           10.1.0.0        10.1.0.255    bridge1
1 10.5.1.1/24            10.5.1.0        10.5.1.255    ether1
[admin@MikroTik] >
```

To make an export file:

```
[admin@MikroTik] ip address> export file=address
[admin@MikroTik] ip address>
```

To see the files stored on the router:

```
[admin@MikroTik] > file print
# NAME                                TYPE          SIZE          CREATION-TIME
0 address.rsc                        script        315           dec/23/2003 13:21:48
[admin@MikroTik] >
```

Compact Export

Starting from v5.12 compact export was added. It allows to export only part of configuration that is not default RouterOS config.



Note: Starting from v6rc1 "export compact" is default behavior. To do old style export use *export verbose*

For example compact OSPF export:

```
[admin@SXT-ST] /routing ospf> export compact
# jan/02/1970 20:16:32 by RouterOS 5.12
# software id = JRB7-9UGC
#
/routing ospf instance
set [ find default=yes ] redistribute-connected=as-type-1
/routing ospf interface
add disabled=yes interface=wlan1 network-type=point-to-point
/routing ospf network
add area=backbone network=10.255.255.36/32
add area=backbone disabled=yes network=10.5.101.0/24
add area=backbone network=10.10.10.0/24
[admin@SXT-ST] /routing ospf>
```

Compact export introduces another feature that indicates which part of config is default on RouterOS and cannot be deleted. As in example below '*' indicates that this OSPF instance is part of default configuration.

```
[admin@SXT-ST] /routing ospf instance> print
Flags: X - disabled, * - default
 0 * name="default" router-id=0.0.0.0 distribute-default=never
    redistribute-connected=as-type-1 redistribute-static=no
    redistribute-rip=no redistribute-bgp=no redistribute-other-ospf=no
    metric-default=1 metric-connected=20 metric-static=20 metric-rip=20
    metric-bgp=auto metric-other-ospf=auto in-filter=ospf-in
    out-filter=ospf-out
```

List of default config by menus that cannot be removed:

Menu	Entries
/interface wireless security-profiles	default
/ppp profile	"default", "default-encryption"
/ip hotspot profile	"default"
/ip hotspot user profile	"default"
/ip ipsec proposal	"default"
/ip smb shares	"pub"
/ip smb users	"guest"
/ipv6 nd	"all"

/mpls interface	"all"
/routing bfd interface	"all"
/routing bgp instance	"default"
/routing ospf instance	"default"
/routing ospf area	"backbone"
/routing ospf-v3 instance	"default"
/routing ospf-v3 area	"backbone"
/snmp community	"public"
/tool mac-server mac-winbox	"all"
/tool mac-server	"all"
/system logging	"info", "error", "warning", "critical"
/system logging action	"memory", "disk", "echo", "remote"
/queue type	"default", "ethernet-default", "wireless-default", "synchronous-default", "hotspot-default", "only-hardware-queue", "multi-queue-ethernet-default", "default-small"

Importing Configuration

Command name: */import*

The root level command **/import [file_name]** executes a script, stored in the specified file adds the configuration from the specified file to the existing setup. This file may contain any console commands, including scripts. is used to restore configuration or part of it after a /system reset event or anything that causes configuration data loss.

Command Description

- **file=[filename]** - loads the exported configuration from a file to router

Automatic Import

Since RouterOS v3rc it is possible to automatically execute scripts - your script file has to be called anything.**auto.rsc** - once this file is uploaded with FTP to the router, it will automatically be executed, just like with the Import command.

Example

To load the saved export file use the following command:

```
[admin@MikroTik] > import address.rsc
Opening script file address.rsc

Script file loaded and executed successfully
[admin@MikroTik] >
```

Configuration Reset

Command name: `/system reset-configuration`

Description

The command clears all configuration of the router and sets it to the default including the login name and password ('admin' and no password), IP addresses and other configuration is erased, interfaces will become disabled. After the reset command router will reboot.

Command Description

- **keep-users:** *keeps router users and passwords*
- **no-defaults:** *doesn't load any default configurations, just clears everything*
- **skip-backup:** *automatic backup is not created before reset, when yes is specified*
- **run-after-reset:** *specify export file name to run after reset*



Warning: If the router has been installed using netinstall and had a script specified as the initial configuration, the reset command executes this script after purging the configuration. To stop it doing so, you will have to reinstall the router.

Example

```
[admin@MikroTik] > system reset-configuration
Dangerous! Reset anyway? [y/N]: n
action cancelled
[admin@MikroTik] >
```

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