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TECHNICAL WHITE PAPER

CONFIGURATION RESTORE WITHOUT REBOOT

ARUBAOS-SWITCH VERSION 16.05

PURPOSE

Starting with the 16.05 software release, a switch configuration can be backed up and restored without requiring a reboot of the switch. Dedicated commands have been added to back up either the running or startup configuration to the built-in flash, or to restore a configuration file, replacing the current running configuration on an operating switch. This allows the administrator to restore a switch to a known-stable configuration in the event of a configuration change causing network disruption, while minimizing the downtime associated with a switch reboot.

CONFIGURATION

Configuration backup

The `cfg-backup` command backs up the running or startup configuration to a configuration file in the built-in flash; there can be up to five configuration files on the flash at any given time (including the startup configuration).

```
switch(config)# cfg-backup running-config config stable
switch(config)# show config files

Configuration files:

 id | act pri sec | name
 ---+-------------+-------------------------------------------------
  1 |  *   *   *  | config
  2 |             | stable
  3 |             |
  4 |             |
  5 |             |
```

Configuration restoration

The corresponding `cfg-restore` command sources a configuration file from either flash or an external file server (via TFTP or SFTP), checks the differences between that file and the running configuration, then replaces the running configuration with the contents of the file. While the restoration process is running, configuration changes from other sources (including other CLI sessions, the Web UI, SNMP, and REST) are blocked, as are `show` commands that display either the running or startup configuration.

```
switch(config)# cfg-restore flash stable
Current running-configuration will be replaced with 'stable'.
Continue (y/n)? y
Configuration restore is in progress, configuration changes are temporarily disabled.

Successfully applied configuration 'stable' to running configuration.
```

The command can also be used to examine differences between the current running configuration and the backed-up configuration without actually replacing the running configuration.

```
switch(config)# cfg-restore flash stable diff

Differences between running config and stable
```

```
Configuration delete list:

vlan 1
   untagged 2-5,10
   exit

Configuration add list:

vlan 1
   no untagged 2-5,10
   exit
vlan 2001
   name "PCData"
   untagged 2-5,10
   ip address 10.6.21.1 255.255.255.0
   exit
vlan 2002
   name "IPPhones"
   tagged 2-5,10
   ip address 10.6.22.1 255.255.255.0
   voice
   exit
```

Automatic rollback

The cfg-restore command can be used in conjunction with the `alias` command and job scheduler function to provide a means for automatically reverting to a stable configuration if, when an administrator is modifying the running configuration, they lose connectivity to the switch and are unable to revert their changes.

```
switch(config)# alias "cfg-rollback" "cfg-restore flash stable"
switch(config)# job "auto-rollback" delay 00:00:15 "cfg_rollback" count 1
```

After the administrator is finished making configuration changes, and the resulting configuration is stable, the job can be removed.

```
switch(config)# no job "auto-rollback"
```

Limitations

Certain commands within a backed-up configuration may preclude the use of the cfg-restore command to replace the running configuration without a reboot. Many of these commands require the system to be rebooted even when executed manually, such as the following:

- secure-mode (enhanced | standard)
- max-vlans <257-4094>
- no allow-v2-modules
- qinq (mixedvlan | svlan)
- vsf member [0-9]
- vsf remove

Additionally, commands that provision or remove modules or remove physically present stack members will prevent restoring a backed-up configuration without rebooting. The force flag can be added to the cfg-restore command to override this behavior; the switch will be rebooted once the configuration is restored.

For a comprehensive list of limitations, refer to the chapter titled ***Configuration backup and restore without reboot*** in the ***Management and Configuration Guide*** for each switch platform.

SUPPORTED PLATFORMS

Configuration restore without reboot feature is supported on the following ArubaOS-Switch software version 16.05.

- Aruba 2530 Series Switch
- Aruba 2540 Series Switch
- Aruba 2920 Series Switch
- Aruba 2930M/F Series Switch
- Aruba 3810M Series Switch
- Aruba 5400R Series Switch