

CSS610 series Manual

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Summary

SwOS Lite is an operating system designed specifically for the administration of MikroTik CSS610 series switch products. CSS610 series switches support only SwOS Lite operating system.

The main differences compared to CSS3xx series switches are:

- unsupported Independent VLAN Learning;
- unsupported VLAN mode "enabled";
- unsupported ACL Rate limiting;
- supported Port Egress Rate limiting

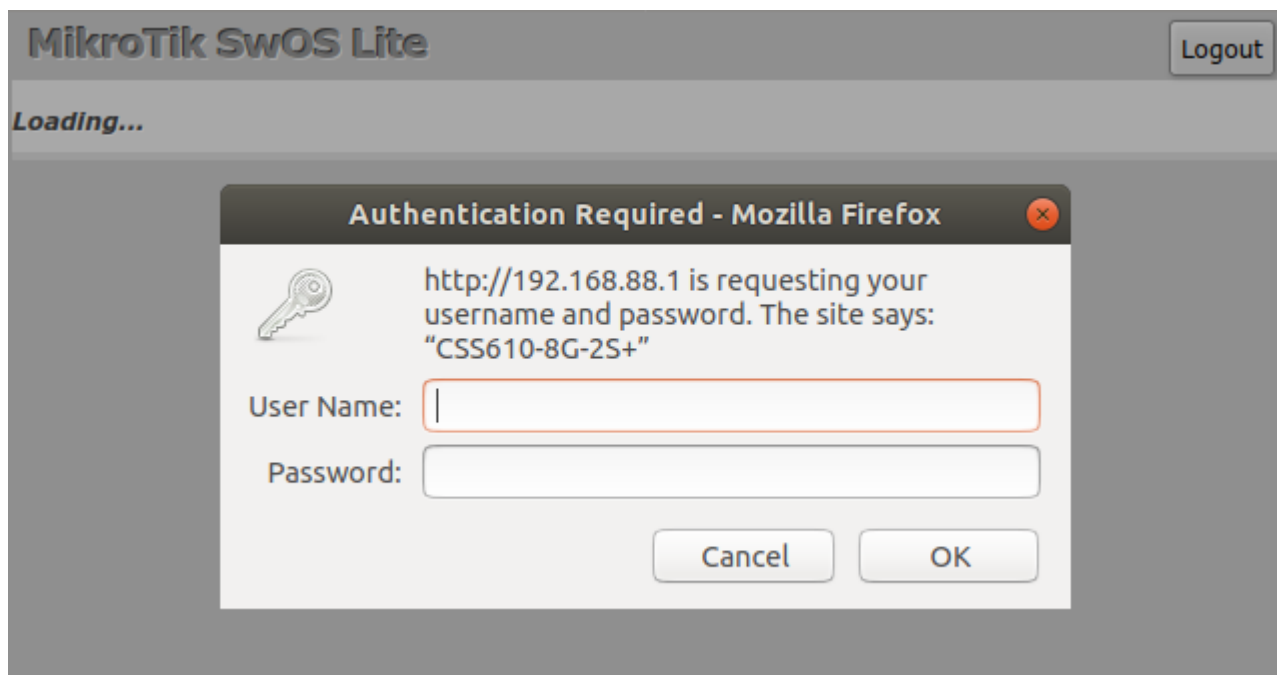
CSS610 series features

Features	Description
Forwarding	<ul style="list-style-type: none">• Full non-blocking wirespeed switching• Up to 16k MAC entries in the Host table• Forwarding Database works based only on SVL• Port Isolation• Jumbo frame support - 10218 bytes
Spanning Tree Protocol	<ul style="list-style-type: none">• RSTP support

Link Aggregation	<ul style="list-style-type: none"> • Supports 802.3ad LACP groups • Supports static link aggregation groups • Up to 16 link aggregation groups • Up to 8 member ports per a group • Hardware automatic failover and load balancing
Multicast Forwarding	<ul style="list-style-type: none"> • IGMP Snooping support • Unknown Multicast Filtering
Mirroring	<ul style="list-style-type: none"> • Port-based mirroring
VLAN	<ul style="list-style-type: none"> • Fully compatible with IEEE802.1Q • Port-based VLAN • Up to 250 VLAN entries (limited by SwOS) • VLAN filtering
Security	<ul style="list-style-type: none"> • Port Lock • Broadcast Storm Control • DHCP & PPPoE Snooping
Quality of Service (QoS)	<ul style="list-style-type: none"> • Ingress traffic limiting • Egress traffic limiting
Access Control List	<ul style="list-style-type: none"> • Ingress ACL tables • Up to 32 ACL rules (limited by SwOS) • Classification based on ports, L2, L3, L4 protocol header fields • ACL actions include filtering, forwarding, and modifying the protocol header fields

Connecting to the Switch

Open your web browser and enter the IP address of your switch (192.168.88.1 by default) and a login screen will appear. The switch can also run a DHCP client, see if a different IP address has been assigned by the DHCP server.



SwOS default IP address: **192.168.88.1**, user name: **admin** and there is no password.



[MikroTik Neighbor Discovery](#) can be used to discover the IP address of the MikroTik switch. LLDP is not supported.

Interface Overview

SwOS interface menu consists of multiple tabs depending on the device model. These are all possible SwOS menus: Link, PoE, SFP, Port Isolation, LAG, Forwarding, RSTP, Stats, Errors, Hist, VLAN, VLANs, Hosts, IGMP, SNMP, ACL, System, Health and Upgrade.

Description of buttons in SwOS configuration tool:

- **Append** - add a new item to the end of the list
- **Apply All** - applies current configuration changes
- **Cut** - removes an item from the list
- **Clear** - reset properties of the item
- **Discard Changes** - removes unsaved configuration
- **Insert** - add a new item to the list (places it before current item)
- **Sort** - sort VLAN table by VLAN-IDs; sort host table by MAC addresses
- **Change Password** - changes the password of the switch
- **Logout** - logout from the current switch
- **Reboot** - reboot the switch
- **Reset Configuration** - reset configuration back to factory defaults
- **Choose File** - browse for upgrade or backup file
- **Upgrade** - upgrade the firmware of the switch using the selected file
- **Download & Upgrade** - automatically try to download and upgrade the firmware, the PC which is running a web browser should be able to access the Internet
- **Restore Backup** - restore switch using a selected backup file
- **Save Backup** - generate and download the backup file from the switch



Each RouterBoard switch series device has its own firmware which cannot be installed on other series models!

- CSS610-1Gi-7R-2S+ supports SwOS Lite v2.12 and newer.
- CSS610-8G-2S+ supports SwOS Lite v2.12 and newer.
- CSS610-8P-2S+IN supports SwOS Lite v2.15 and newer.

System

System Tab performs the following functions:

- General information about switch
- Switch management
- Configuration reset
- Backup and restore configuration



SwOS uses a simple algorithm to ensure TCP/IP communication - it just replies to the same IP and MAC address packet came from. This way there is no need for Default Gateway on the device itself.

MikroTik SwOS Lite

Link

SFP

Port Isolation

LAG

Forwarding

RSTP

Stats

Errors

Hist

VLAN

VLANs

Hosts

IGMP

SNMP

ACL

ACL Stats

System

Upgrade

General

Address Acquisition

DHCP with fallback ▾

Static IP Address

192.168.88.1

Identity

MikroTik

Allow From

Allow From Ports

☒☒☒☒☒☒☒☒☒☒

Allow From VLAN

Watchdog

☒

IGMP Snooping

☐

Mikrotik Discovery Protocol

☒☒☒☒☒☒☒☒☒☒

Serial Number

D19C0BA4CA1D

MAC Address

c4:ad:34:f3:98:90

Board Name

CSS610-8G-2S+

Uptime

00:15:30

Property	Description
Address Acquisition	<p>Specify which address acquisition method to use:</p> <ul style="list-style-type: none">• DHCP with fallback - switch is trying to request an IP address from a DHCP server. If the requests are unsuccessful, then the switch can be accessed using a Static IP Address value• static - address is set as a Static IP Address value• DHCP only - switch uses DHCP client to acquire address
Static IP Address	IP address of the switch in case of Address Acquisition is set as DHCP with fallback or static
Identity	Name of the switch (for Mikrotik Neighbor Discovery protocol)

Allow From	IP address from which the switch is accessible. Default value is '0.0.0.0/0' - any address
Allow From Ports	List of switch ports from which it is accessible
Allow From VLAN	VLAN ID from which the service is accessible. Make sure to first configure VLANs and VLAN pages
Watchdog	Enable or disable system Watchdog. It will reset CPU of the switch in case of fault condition
IGMP Snooping	Enable or disable IGMP Snooping
IGMP Querier	Enables or disabled IGMP querier on the switch. Only applies when IGMP Snooping is enabled
IGMP Fast Leave	Enables or disables IGMP fast leave feature per switch port.
IGMP Version	Changes IGMP version for switch querier. Only applies when IGMP Querier is enabled.
Mikrotik Discovery Protocol	Enable or disable Mikrotik Neighbor Discovery protocol
MAC Address	MAC address of the switch (read-only)
Serial Number	Serial number of the switch (read-only)
Board Name	MikroTik model name of the switch (read-only)
Uptime	Current switch uptime (read-only)
PoE Out Mode	<p>Specifies PoE-Out state (CSS610-1Gi-7R-2S+ model only)</p> <ul style="list-style-type: none"> • auto-on - the board will attempt to detect if power can be applied to the port. For power-on to happen there should be resistance on spare pairs in the range from 3kΩ to 26.5kΩ • forced-on - detection range is removed. As a result power over Ethernet will be always on • off - all detection and power is turned off for this port
PoE Out Status	Shows current PoE-Out status on port (read-only, CSS610-1Gi-7R-2S+ model only)

Health

Health	
Temperature	44C
PSU1	150mA @ 27.9V
PSU2	0mA @ 54.13V
Power Consumption	3.8W

Property	Description
Temperature	Shows CPU temperature in celsius temperature scale (read-only)
PSU	Shows PSU voltage and consumed miliamperes by PoE-out connected devices (read-only, CSS610-8P-2S+IN model only)
Power Consumption	Shows PSU power consumption by PoE-out connected devices (read-only, CSS610-8P-2S+IN model only)

DHCP & PPPoE Snooping

DHCP & PPPoE Snooping

Trusted Ports ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒

Add Information Option ☒

Property	Description
Trusted Ports	Group of ports, which allows DHCP or PPPoE servers to provide a requested information. When enabled, it allows forwarding DHCP client packets towards the DHCP server through this port. Mainly used to limit unauthorized servers to provide malicious information for users, access ports usually do not configure as trusted. Ports that receive DHCP client packets with already added Option-82 must also be trusted, otherwise these packets are dropped. The setting does not apply to DHCPv6 packets.
Add Information Option	<p>Enables or disables DHCP Option-82 information. When enabled, the Option-82 information (Agent Remote ID and Circuit ID) is added for DHCP packets received from untrusted ports. Can be used together with Option-82 capable DHCP server to assign IP addresses and implement policies. The setting does not apply to DHCPv6 packets.</p> <p>For Agent Remote ID, SwOS uses interface name where DHCP client resides. For Agent Circuit ID, SwOS uses identity of the SwOS device, internally used port ID and VLAN ID. For example:</p> <p>Agent Remote ID - Port1</p> <p>Agent Circuit ID - MikroTik eth 0/1:100</p>

Password and Backup

Password Change

Old Password

New Password

Confirm Password

Change Password

Backup

Backup to Restore

Browse...

No file selected.

Restore Backup

Save Backup

Reset Configuration

Link

Link Tab allows you to configure each interface settings and monitor the link status.

MikroTik SwOS Lite

Logout

LinkSFPPort IsolationLAGForwardingRSTPStatsErrorsHistVLANVLANsHostsIGMPSNMPAACLACL StatsSystemUpgrade

	Enabled	Name	Link Status	Auto Negotiation	Speed	Full Duplex	Flow Control Tx/Rx	Hops	Last Hop	Length	Fault At	Cable Pairs
Port1	<input checked="" type="checkbox"/>	<input type="text" value="Port1"/>	no link	<input checked="" type="checkbox"/>		no	<input type="checkbox"/> <input type="checkbox"/> off					
Port2	<input checked="" type="checkbox"/>	<input type="text" value="Port2"/>	no link	<input checked="" type="checkbox"/>		no	<input type="checkbox"/> <input type="checkbox"/> off			83m		0000
Port3	<input checked="" type="checkbox"/>	<input type="text" value="Port3-PC#1"/>	link on	<input checked="" type="checkbox"/>	100M	yes	<input type="checkbox"/> <input type="checkbox"/> off					
Port4	<input checked="" type="checkbox"/>	<input type="text" value="Port4"/>	no link	<input checked="" type="checkbox"/>		no	<input type="checkbox"/> <input type="checkbox"/> off					
Port5	<input checked="" type="checkbox"/>	<input type="text" value="Port5"/>	link on	<input type="checkbox"/>	100M	<input checked="" type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> off					
Port6	<input checked="" type="checkbox"/>	<input type="text" value="Port6"/>	no link	<input checked="" type="checkbox"/>		no	<input type="checkbox"/> <input type="checkbox"/> off					
Port7	<input checked="" type="checkbox"/>	<input type="text" value="Port7-NAS"/>	link on	<input checked="" type="checkbox"/>	1G	yes	<input type="checkbox"/> <input type="checkbox"/> off					
Port8	<input checked="" type="checkbox"/>	<input type="text" value="Port8"/>	link on	<input checked="" type="checkbox"/>	1G	yes	<input type="checkbox"/> <input type="checkbox"/> off					
SFP1	<input checked="" type="checkbox"/>	<input type="text" value="SFP1"/>	no link	<input checked="" type="checkbox"/>		no	<input type="checkbox"/> <input type="checkbox"/> off					
SFP2	<input checked="" type="checkbox"/>	<input type="text" value="SFP2"/>	no link	<input checked="" type="checkbox"/>		no	<input type="checkbox"/> <input type="checkbox"/> off					

Property	Description
Enabled	Enable or disable port
Name	Editable port name
Link Status	Current link status (read-only)
Auto Negotiation	Enable or disable auto-negotiation
Speed	Specify speed setting of the port (requires auto-negotiation to be disabled)
Full Duplex	Specify the duplex mode of the port (requires auto-negotiation to be disabled)
Flow control Tx/Rx	Enable or disable 802.3x Flow control
Hops	Shows the number of GPER repeaters in the link
Last Hop	Shows the number of the last GPER repeater if the link is terminated
Length	Shows the length of the cable in meters if the link is terminated
Fault At	Shows the distance in meters to the failure point if the cable is damaged but the link is active
Cable Pairs	Shows four positions of the cable pairs with their status: O - open; S - short; P - reverse polarity



The switch supports Jumbo frames up to 10218 bytes. Manually decreasing the MTU settings is not supported for SwOS Lite devices.

PoE

Devices with PoE-out support have some configuration options and certain monitoring features, like PoE-out current, voltage, etc. For a more detailed description, see [PoE-Out manual](#).

MikroTik SwOS

Logout

Link

PoE

SFP

Port Isolation

LAG

Forwarding

RSTP

Stats

Errors

Hist

VLAN

VLANs

Hosts

IGMP

SNMP

ACL

System

Health

Upgrade

	PoE Out	PoE Priority	Voltage Level	PoE Status	PoE Current	PoE Voltage	PoE Power
Port1	auto	1	auto	waiting for load			
Port2	auto	2	auto	short circuit			
Port3	auto	3	auto	powered on	123mA	52.5V	6.4W
Port4	auto	4	auto	powered on	353mA	52.1V	18.3W
Port5	auto	5	auto	waiting for load			

SFP

SFP tab allows you to monitor the status of SFP/SFP+ modules.

MikroTik SwOS

Logout

Link

SFP

Port Isolation

LAG

Forwarding

RSTP

Stats

Errors

Hist

VLAN

VLANs

Hosts

IGMP

SNMP

ACL

System

Upgrade

SFP

	Vendor	Part Number	Revision	Serial	Date	Type	Temperature	Voltage	Tx Bias	Tx Power	Rx Power
SFP1	Mikrotik	S+85DLC03D		MT41124H09501	14-11-26	850nm multi-mode fiber	50C	3.274V	8.812mA	-2.187dBm	-4.57dBm
SFP2	OEM	SFP-10G-CU1M	A0	E1309050111	13-10-10	1m copper					

Port Isolation

The Port Isolation table allows or restricts traffic forwarding between specific ports. By default, all available switch chip ports can communicate with any other port, there is no isolation used. When the checkbox is enabled/ticked you allow to forward traffic from this port towards the ticked port. Below are some port isolation examples.

Port Isolation	LAG	Forwarding	RSTP	Stats														
From Port1	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
From Port2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
From Port3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
From Port4	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
From Port5	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
From Port6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
From Port7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
From Port8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
From Port9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
From Port10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Port Isolation	LAG	Forwarding	RSTP	Stats														
From Port1	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
From Port2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
From Port3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
From Port4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
From Port5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
From Port6	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
From Port7	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
From Port8	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
From Port9	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
From Port10	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Port Isolation	LAG	Forwarding	RSTP	Stats														
From Port1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
From Port2	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
From Port3	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
From Port4	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
From Port5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
From Port6	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
From Port7	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
From Port8	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
From Port9	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
From Port10	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

In some scenarios, you might need to isolate a group of devices from other groups. In this example devices on **Port1-Port5** are not able to communicate with **Port6-Port10** devices, and vice versa.

In some scenarios, you might need to forward all traffic to an uplink port while all other ports are isolated from each other. This kind of setup is called a **Private VLAN** configuration. The switch will forward all Ethernet frames only to the uplink **Port1**, while uplink can reach all other ports

Individual isolated **Port1** (e.g. for management purpose), it cannot send or receive traffic from any other port



It is possible to check/uncheck multiple checkboxes by checking one of them and then dragging horizontally (Click & Drag).



(R)STP will only work properly in Private VLAN setups. In setups with multiple isolated switch groups (R)STP might not properly receive BPDUs and therefore fail to detect network loops.

LAG

IEEE 802.3ad (LACP) compatible link aggregation is supported, as well as static link aggregation to ensure failover and load balancing based only on Layer2 hashing. Up to 16 link aggregation groups with up to 8 ports per group are supported. Each individual port can be configured as Passive LACP, Active LACP, or a Static LAG port.

MikroTik SwOSLogout

LinkSFP SFP StatusPort IsolationLAGForwardingRSTPStatsErrorsHist.VLANVLANsStatic HostsHostsSNMPACLSystemUpgrade

	Mode	Group	Trunk	Partner
Port1	passive ▾			
Port2	passive ▾			
Port3	passive ▾			
Port4	passive ▾			
Port5	passive ▾		1	4c:5e:0c:4b:89:5c
Port6	passive ▾		1	4c:5e:0c:4b:89:5c
Port7	passive ▾			
Port8	passive ▾			
Port9	static ▾	<input type="text" value="2"/>	2	
Port10	static ▾	<input type="text" value="2"/>	2	

Property	Description
Mode <i>(default: passive)</i>	Specify LACP packet exchange mode or Static LAG mode on ports: <ul style="list-style-type: none">Passive: Place port in listening state, use LACP only when its contrary port uses active LACP modeActive: Prefer to start LACP regardless of contrary port modeStatic: Set port in a Static LAG mode, it requires to set the same Group setting for all ports that need to be included in the same static LAG
Group	Specify a Static LAG group.
Trunk <i>(read-only)</i>	Represents group number port belongs to.
Partner <i>(read-only)</i>	Represents partner mac-address, only available when ports are included in LACP.

Forwarding

Forwarding Tab provides advanced forwarding options among switch ports, port locking, port mirroring, bandwidth limit, and broadcast storm control features.

MikroTik SwOS Lite Logout

[Link](#)
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	Port Lock	Lock On First	Mirror Ingress	Mirror Egress	Mirror To	Storm Rate	Limit Unknown Unicast	Flood Unknown Multicast	Ingress Rate	Egress Rate
Port1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="radio"/>	<input type="text"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="text"/>	<input type="text"/>
Port2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>	<input type="text"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="text"/>	<input type="text"/>
Port3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>	<input type="text"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="text"/>	<input type="text"/>
Port4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>	<input type="text"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="text"/>	<input type="text"/>
Port5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>	<input type="text"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="text"/>	<input type="text"/>
Port6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>	<input type="text"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="text"/>	<input type="text"/>
Port7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>	<input type="text"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="text"/>	<input type="text"/>
Port8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>	<input type="text"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="text"/>	<input type="text"/>
SFP1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>	<input type="text"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="text"/>	<input type="text"/>
SFP2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>	<input type="text"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="text"/>	<input type="text"/>

Property	Description
Port Lock	<ul style="list-style-type: none"> Port Lock - Enables or disables MAC address learning on this port. When the option is enabled, it will restrict MAC address learning and static MAC addresses should be configured. Any received frames with unknown source MAC address will be dropped Lock On First - Allows to learn source MAC address from the first received frame, this property should be used together with Port Lock. Learning of the first MAC address will reset every time an interface status changes
Port Mirroring	<ul style="list-style-type: none"> Mirror Ingress - Whether traffic entering this port must be copied and forwarded to the mirroring target port Mirror Egress - Whether traffic leaving this port must be copied and forwarded to the mirroring target port Mirror To - Mirroring target port
Broadcast Storm Control	<ul style="list-style-type: none"> Storm Rate - Limit the number of broadcast packets transmitted by an interface. The rate is measured in bits per second (bps). Include Unknown Unicast - Include unicast packets without an entry in the host table in Storm Rate limitation
Multicast Flood Control	<ul style="list-style-type: none"> Flood Unknown Multicast - Changes the multicast flood option on a switch port, only controls the egress traffic. When enabled, the bridge allows flooding multicast packets to the specified switch port, but when disabled, it restricts multicast traffic from being flooded. The setting affects all multicast traffic, this includes non-IP, IPv4, IPv6 and the link-local multicast ranges (e.g. 224.0.0.0/24 and ff02::1).
Bandwidth Limit	<ul style="list-style-type: none"> Ingress Rate - Limit traffic entering this port (bps) Egress Rate - Limit traffic leaving this port (bps)



It is possible to limit ingress/egress traffic per port basis. The policer is used for ingress traffic, the shaper is used for egress traffic. The ingress policer controls the received traffic with packet drops. Everything that exceeds the defined limit will get dropped. This can affect the TCP congestion control mechanism on end hosts and achieved bandwidth can be actually less than defined. The egress shaper tries to queue packets that exceed the limit instead of dropping them. Eventually, it will also drop packets when the output queue gets full, however, it should allow utilizing the defined throughput better.

RSTP

Per-port and global RSTP configuration and monitoring are available in the RSTP menu.

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SNMP

ACL

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Upgrade

General

Bridge Priority (hex)

9000

Port Cost Mode

short

Root Bridge

8000.6c:3b:6b:7b:f9:07

Discard Changes

Apply All

Per Port

	RSTP	Mode	Role	Root Path Cost	Type	State
Port1	<input checked="" type="checkbox"/>	RSTP	alternate	19	point-to-point	discarding
Port2	<input type="checkbox"/>	RSTP	disabled		edge	forwarding
Port3	<input checked="" type="checkbox"/>	RSTP	designated		edge	forwarding
Port4	<input checked="" type="checkbox"/>	RSTP	designated		edge	forwarding
Port5	<input checked="" type="checkbox"/>	RSTP	designated		edge	forwarding
Port6	<input checked="" type="checkbox"/>	RSTP	root	4	point-to-point	forwarding
Port7	<input checked="" type="checkbox"/>	RSTP	designated		point-to-point	forwarding
Port8	<input checked="" type="checkbox"/>	RSTP	designated		point-to-point	forwarding

Property	Description
Bridge Priority (hex)	RSTP bridge priority for Root Bridge selection
Port Cost Mode	There are two methods for automatically detecting RSTP port cost depending on link speed. <ul style="list-style-type: none">short: 40G - 1; 10G - 2; 1G - 4; 100M - 10; 10M - 100long: 40G - 500; 10G - 2000; 1G - 20000; 100M - 200000; 10M - 2000000
Root Bridge	The priority and MAC address of the selected Root Bridge in the network (read-only)
RSTP	Enable or disable STP/RSTP functionality on this port
Mode	Shows STP/RSTP functionality mode on a specific port (read-only): <ul style="list-style-type: none">RSTPSTP
Role	Shows specific port role (read-only): <ul style="list-style-type: none">root - port that is facing towards the root bridge and will be used to forward traffic from/to the root bridgealternate - port that is facing towards root bridge, but is not going to forward traffic (a backup for root port)backup - port that is facing away from the root bridge, but is not going to forward traffic (a backup for non-root port)designated - port that is facing away from the root bridge and is going to forward trafficdisabled - port that is not strictly part of STP (RSTP functionality is disabled)
Root Path Cost	Shows root path cost for ports that are facing root bridge (read-only)

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Link

SFP

SFP Status

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	64	65-127	128-255	256-511	512-1023	1024-max
Port1	0	0	0	0	0	0
Port2	2263	2638	1203	5	3	0
Port3	2267	2915	1211	26	39	530
Port4	0	0	0	0	0	0
Port5	2236	1403	1237	9	7	288
Port6	138	1756	616	3	2	0
Port7	3	3	1	0	0	0
Port8	0	0	0	0	0	0
Port9	2177	715	983	2	1	0
Port10	20	1788	475	19	33	242



Statistics for SFP+ interface are cleared whenever an active SFP+ link is established.

VLAN and VLANs

VLAN configuration for switch ports.

MikroTik SwOS Lite

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Logout

	VLAN Mode	VLAN Receive	Default VLAN ID	Force VLAN ID
Port1	<div>optional</div>	<div>any</div>	<div>1</div>	<div></div>
Port2	<div>optional</div>	<div>any</div>	<div>1</div>	<div></div>
Port3	<div>optional</div>	<div>any</div>	<div>1</div>	<div></div>
Port4	<div>strict</div>	<div>only tagged</div>	<div>1</div>	<div></div>
Port5	<div>strict</div>	<div>only untagged</div>	<div>200</div>	<div></div>
Port6	<div>strict</div>	<div>any</div>	<div>300</div>	<div></div>
Port7	<div>strict</div>	<div>only untagged</div>	<div>400</div>	<div></div>
Port8	<div>disabled</div>	<div>any</div>	<div>1</div>	<div></div>
SFP1	<div>disabled</div>	<div>any</div>	<div>1</div>	<div></div>
SFP2	<div>disabled</div>	<div>any</div>	<div>1</div>	<div></div>

Property	Description
----------	-------------

VLAN Mode (<i>disabled / optional / strict</i> ; Default: optional)	<p>VLAN filtering mode, these options are relevant to egress ports (except for strict mode).</p> <ul style="list-style-type: none"> disabled - VLAN table is not used. The switch discards packets with a VLAN tag on egress ports. If the packet has a VLAN tag and the VLAN ID matches <code>Default VLAN ID</code> on egress ports, then with <code>VLAN Receive=any</code> the switch will remove the VLAN tag and forward the packet. optional - Disabled VLAN filtering. Handle packets with VLAN tag ID that is not present in the VLAN table just like packets without VLAN tag. strict - Enabled VLAN filtering with additional ingress filtering, which checks if the ingress port is a member of the received VLAN ID in the VLAN table. Received packets on the ingress port with a VLAN ID that does not match with the VLAN table will be dropped. Default VLAN ID must be specified for access ports since it will be used to tag ingress traffic and untag egress traffic for a certain port.
VLAN Receive (<i>any / only tagged / only untagged</i> ; Default: optional)	<p>Received traffic filtering based on VLAN tag presence.</p> <ul style="list-style-type: none"> any - allows tagged and untagged packets on a certain port only tagged - allows only packets with a VLAN tag. The "Default VLAN ID" will not work, because it only applies for untagged traffic only untagged - Allows only packets without a VLAN tag
Default VLAN ID (<i>integer: 1..4095</i> ; Default: 1)	The switch will place received untagged packets in the "Default VLAN ID" VLAN. Only has an effect on untagged traffic, and when VLAN Receive is set to "any" or "only untagged". It does not apply for tagged traffic. This parameter is usually used to allocate access ports with specific VLAN. It is also used to untag egress traffic if the packet's VLAN ID matches Default VLAN ID.
Force VLAN ID (<i>integer: yes / no</i> ; Default: no)	Assigns the <code>Default VLAN ID</code> value to all ingress traffic (tagged and untagged). Has effect in all VLAN Modes. If the port receives tagged traffic and <code>Default VLAN ID</code> is set to 1, then with this parameter the egress traffic will be untagged.

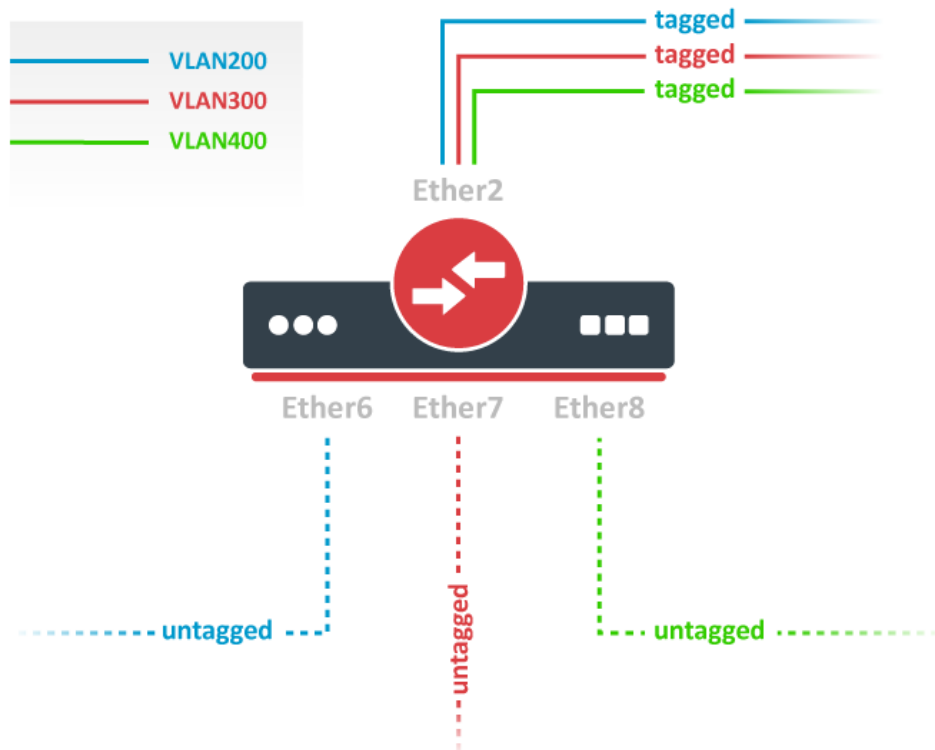
VLAN membership configuration for switch ports.

MikroTik SwOS Lite Logout										
Link	SFP	Port Isolation	LAG	Forwarding	RSTP	Stats	Errors	Hist	VLAN	VLANs
Hosts	IGMP	SNMP	ACL	ACL Stats	System	Upgrade				
VLAN ID	IGMP Snooping	Members								
99	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Cut Insert
200	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Cut Insert
300	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Cut Insert
400	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Cut Insert

Property	Description
VLAN ID (<i>integer: 1..4095</i> ; Default: 0)	VLAN ID to which assign ports.
IGMP Snooping (<i>yes / no</i> ; Default: no)	Enables or disables IGMP Snooping on the defined VLAN. When enabled, the switch will listen to IGMP Join and Leave requests from the defined VLAN and only forward traffic to ports, which have sent IGMP membership requests from the defined VLAN. When disabled, the switch will flood all VLAN member ports with Multicast traffic.
Members (<i>ports</i> ; Default: none)	Group of ports, which are allowed to forward traffic on the defined VLAN.

VLAN Configuration Example

Trunk and Access Ports



1. In the VLANs menu add VLAN entries and specify port membership.

MikroTik SwOS Lite Logout

Link SFP Port Isolation LAG Forwarding RSTP Stats Errors Hist VLAN **VLANs** Hosts IGMP SNMP ACL ACL Stats System Upgrade

VLAN ID	IGMP Snooping	Members	
200	<input type="checkbox"/>	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Cut Insert
300	<input type="checkbox"/>	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Cut Insert
400	<input type="checkbox"/>	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Cut Insert

Append Sort Discard Changes Apply All

2. In the VLAN menu configure Default VLAN ID on planned access ports (untagged), select the correct VLAN Receive setting (Port2 only tagged, Port6-8 only untagged) and enable strict VLAN filtering to ensure only allowed VLANs can pass through the ports.

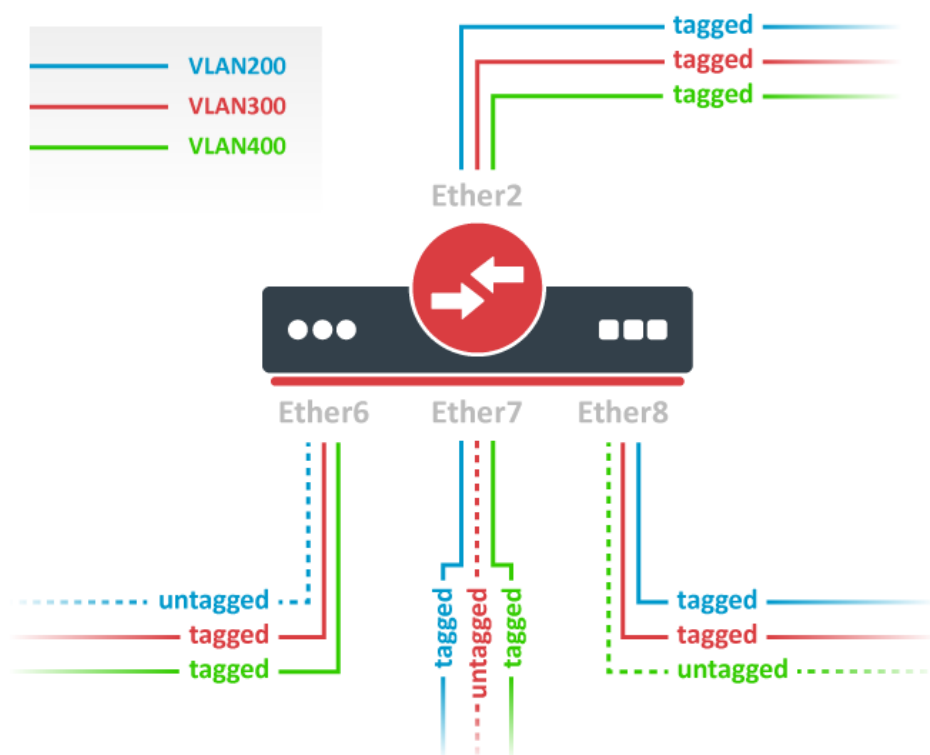
MikroTik SwOS Lite Logout

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[Stats](#)
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[Upgrade](#)

	VLAN Mode	VLAN Receive	Default VLAN ID	Force VLAN ID
Port1	optional	any	1	<input type="checkbox"/>
Port2	strict	only tagged	1	<input type="checkbox"/>
Port3	optional	any	1	<input type="checkbox"/>
Port4	optional	any	1	<input type="checkbox"/>
Port5	optional	any	1	<input type="checkbox"/>
Port6	strict	only untagged	200	<input type="checkbox"/>
Port7	strict	only untagged	300	<input type="checkbox"/>
Port8	strict	only untagged	400	<input type="checkbox"/>
SFP1	optional	any	1	<input type="checkbox"/>
SFP2	optional	any	1	<input type="checkbox"/>

[Discard Changes](#)
[Apply All](#)

Trunk and Hybrid Ports



1. In the VLANs menu add VLAN entries and specify port membership.

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Link SFP Port Isolation LAG Forwarding RSTP Stats Errors Hist VLAN **VLANs** Hosts IGMP SNMP ACL ACL Stats System Upgrade

VLAN ID	IGMP Snooping	Members	
200	<input type="checkbox"/>	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Cut Insert
300	<input type="checkbox"/>	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Cut Insert
400	<input type="checkbox"/>	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Cut Insert

Append Sort Discard Changes Apply All

2. In the VLAN menu configure Default VLAN ID on planned hybrid ports (for untagged VLAN), select the correct VLAN Receive setting (Port2 only tagged, Port6-8 any) and enable strict VLAN filtering to ensure only allowed VLANs can pass through the ports.

MikroTik SwOS Lite Logout

Link SFP Port Isolation LAG Forwarding RSTP Stats Errors Hist **VLAN** VLANs Hosts IGMP SNMP ACL ACL Stats System Upgrade

	VLAN Mode	VLAN Receive	Default VLAN ID	Force VLAN ID
Port1	optional	any	1	<input type="checkbox"/>
Port2	strict	only tagged	1	<input type="checkbox"/>
Port3	optional	any	1	<input type="checkbox"/>
Port4	optional	any	1	<input type="checkbox"/>
Port5	optional	any	1	<input type="checkbox"/>
Port6	strict	any	200	<input type="checkbox"/>
Port7	strict	any	300	<input type="checkbox"/>
Port8	strict	any	400	<input type="checkbox"/>
SFP1	optional	any	1	<input type="checkbox"/>
SFP2	optional	any	1	<input type="checkbox"/>

Discard Changes Apply All

Management access

In this example, switch management access on VLAN 200 will be created. The configuration scheme is the same as "Trunk and Access Ports" and 1., 2. configuration steps are identical. The additional 3rd step requires to specify the management VLAN ID in the System menu. After applying the configuration, switch will only respond to tagged VLAN 200 packets on Port2 and untagged packets on Port6. The DHCP client will also work in the specified VLAN ID.

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LAG
Forwarding
RSTP
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VLAN
VLANs
Hosts
IGMP
SNMP
ACL
ACL Stats
System
Upgrade

General

Address Acquisition

DHCP with fallback

Static IP Address

192.168.88.1

Identity

MikroTik

Allow From

Allow From Ports

☒
☒
☒
☒
☒
☒
☒
☒
☒
☒

Allow From VLAN

200

Watchdog

☒

IGMP Snooping

☐

Mikrotik Discovery Protocol

☒
☒
☒
☒
☒
☒
☒
☒
☒
☒

Serial Number

D19C0C045A8B

MAC Address

48:8f:5a:a5:1a:ea

Board Name

CSS610-8G-2S+

Uptime

00:15:02

Temperature

49C



Changing management VLAN can completely disable access to the switch management if VLAN settings are not correctly configured. Save a configuration backup before changing this setting and use [Reset](#) in case management access is lost.

Hosts

This table represents dynamically learned MAC address to port mapping entries. It can contain two kinds of entries: dynamic and static. Dynamic entries get added automatically, this is also called a learning process: when a switch receives a packet from a certain port, it adds the packet's source MAC address and port it received the packet from to the host table, so when a packet comes in with a certain destination MAC address it knows to which port it should forward the packet. If the destination MAC address is not present in the host table then it forwards the packet to all ports in the group. Dynamic entries take about 5 minutes to time out.

Static entries will take over dynamic if dynamic entry with same mac-address already exists. Also by adding a static entry you get access to more functionality.

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Static Hosts

Port

MAC

Port2

00:01:29:ff:1d:cc

Cut

Insert

Port6

00:0c:42:70:ff:96

Cut

Insert

Port6

ff:ff:ff:ff:ff:ff

Cut

Insert

Append

Sort

Discard Changes

Apply All

Port	MAC
Port1	b8:69:f4:2b:07:85
Port1	b8:69:f4:c4:38:3a
Port1	c4:ad:34:55:db:7a
Port1	c4:ad:34:93:d8:44
Port1	cc:2d:e0:8c:7e:6f
Port1	e4:8d:8c:1b:05:fb

Property	Description
Ports	Ports the packet should be forwarded to
MAC	MAC address
Port (<i>read-only</i>)	Ports the packet should be forwarded to
MAC (<i>read-only</i>)	Learned MAC address

IGMP Snooping

IGMP Snooping which controls multicast streams and prevents multicast flooding. The feature allows a switch to listen in the IGMP conversation between hosts and routers.

Enable this option under the System tab.

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General

Address Acquisition DHCP with fallback ▾

Static IP Address

Identity

Allow From

Allow From Ports ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒

Allow From VLAN

Watchdog ☒

IGMP Snooping ☒

Mikrotik Discovery Protocol ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒

Serial Number D19C0BA4CA1D

MAC Address c4:ad:34:f3:98:90

Board Name CSS610-8G-2S+

Uptime 00:15:45

Available IGMP snooping data can be found under the IGMP tab.

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Group Address	VLAN	Member Ports
229.1.1.2	4	Port7
239.255.255.250		Port24

It is possible to enable IGMP Snooping for a specific VLAN ID under the VLANs menu.

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LinkSFPPort IsolationLAGForwardingRSTPStatsErrorsHistVLANVLANsHostsIGMPSNMPACLACL StatsSystemUpgrade

VLAN ID	IGMP Snooping	Members	
<input type="text" value="4"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="button" value="Cut"/> <input type="button" value="Insert"/>
<input type="text" value="5"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="button" value="Cut"/> <input type="button" value="Insert"/>

SNMP

SwOS supports SNMP v1 and v2c (the Response for GetRequest, GetNextRequest and GetBulkRequest) and uses IF-MIB, SNMPv2-MIB, BRIDGE-MIB and MIKROTIK-MIB (only for health, PoE-out and SFP diagnostics). SNMP traps and writing SwOS configuration are not supported.

Available SNMP data:

- System information
- System uptime
- Port status
- Interface statistics
- Host table information

Enabled☒

Community

Contact Info

Location

Property	Description
Enabled	Enable or disable SNMP service
Community	SNMP community name
Contact Info	Contact information for the NMS
Location	Location information for the NMS

ACL and ACL Stats Tabs

An access control list (ACL) rule table is a very powerful tool allowing wire-speed packet filtering, forwarding, and VLAN tagging based on L2,L3, and L4 protocol header field conditions. Each rule contains a conditions part and an action part.

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From:
☐ ☐ ☐ ☐ ☒ ☐ ☐ ☐
Account as:
none
Clear
Cut
Insert

MAC Src:
6c:3b:6b:12:83:61
MAC Dst:
6c:3b:6b:12:81:7c
Ethertype:
hex

VLAN:
any
VLAN ID:
20
Priority:

IP Src:
192.168.88.2
IP Dst:
192.168.88.1
Protocol:
DSCP:

Redirect To:
none
Mirror To:
none
Drop
Set VLAN ID:
Priority:
DSCP:

Append
Discard Changes
Apply All

Conditions part parameters

Property	Description
From	A port that packet came in from
MAC Src	Source MAC address and mask
MAC Dst	Destination MAC address and mask
Ethertype	Protocol encapsulated in the payload of an Ethernet Frame
VLAN	VLAN header presence: <ul style="list-style-type: none"> any present not present
VLAN ID	VLAN tag ID
Priority	Priority in VLAN tag
IP Src (IP/netmask:port)	Source IPv4 address, netmask, and L4 port number
IP Dst (IP/netmask:port)	Destination IPv4 address, netmask, and L4 port number
Protocol (<i>integer</i>)	IP protocol
DSCP	IP DSCP field

Action part parameters

Property	Description
Account as	Select the number where matched packets will be counted
Redirect To	Force new packets destination port
Mirror	Clones packet and sends it to mirror-target port
Drop	Drop packet
Set VLAN ID	Changes the VLAN tag ID, if VLAN tag is present
Priority	Changes the VLAN tag priority bits, if VLAN tag is present
DSCP	Changes the IP DSCP field

Each ACL rule can be selected to a specific counter where matched packets will be counted.

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	Counter #1	Counter #2	Counter #3	Counter #4
Port1	0	0	0	0
Port2	0	0	0	0
Port3	0	0	0	0
Port4	0	0	0	0
Port5	0	0	0	0
Port6	0	0	0	0
Port7	0	0	0	0
Port8	0	0	0	0
SFP1	0	0	0	0
SFP2	0	0	0	0

Reset Counters

Reset and Reinstall

The CSS610 have built-in backup SwOS firmware which can be loaded in case standard firmware breaks or upgrade fails:

- Holding Reset button for few seconds while the device is booting will reset configuration and load backup firmware.
- After loading backup firmware, it is possible to connect to 192.168.88.1 (or leased address from a DHCP server) using a web browser and install new SwOS firmware.