

Release Notes: ISW Series 8-Port Industrial Switches

Firmware Version 1.01.03.0014 (for all models)

Models:

ISW 4-10/100P, 2-10/100T, 2-SFP, PoE Switch
ISW 4GbP, 2GbT, 2-SFP, PoE Switch

Documentation Date: 2021/10/29

Note:

Image ISW-TLN-8PORT_V01.01.03.0014 is not compatible with 12-port ISW-Series platforms.

[New Release: v01.01.03.0014]

The release note includes all feature changes and fixed bugs since previous release v01.01.03.0013.

<Software Date>

Software Build Date: 2021/10/24

<Software Base>

MSCC VSC7429, VSC7425
Compatible OS: eCos Operating System
Version 3.65 CE Service

<New Features>

1. DHCP client support fallback IP address. Default fallback IP is 192.0.2.1.

<Feature update>

1. SSH default setting is changed. Add CLI and WEB commands to enable/disable CBCciphers and HMACs item by item.

SSH / TELNET Configuration

SSH Mode	Enabled ▾
Key Exchange Algorithms	<input checked="" type="checkbox"/> curve25519-sha256 <input checked="" type="checkbox"/> ecdh-sha2-nistp521 <input checked="" type="checkbox"/> ecdh-sha2-nistp384 <input checked="" type="checkbox"/> ecdh-sha2-nistp256 <input checked="" type="checkbox"/> diffie-hellman-group14-sha1 <input checked="" type="checkbox"/> diffie-hellman-group1-sha1 <input checked="" type="checkbox"/> kexguess2
HMAC	<input type="checkbox"/> hmac-sha1-96 <input checked="" type="checkbox"/> hmac-sha1 <input checked="" type="checkbox"/> hmac-sha2-256 <input checked="" type="checkbox"/> hmac-sha2-512 <input type="checkbox"/> hmac-md5
Cipher	<input checked="" type="checkbox"/> aes128-ctr <input checked="" type="checkbox"/> aes256-ctr <input checked="" type="checkbox"/> 3des-ctr <input type="checkbox"/> aes128-cbc <input type="checkbox"/> aes256-cbc <input type="checkbox"/> twofish256-cbc <input type="checkbox"/> twofish-cbc <input type="checkbox"/> twofish128-cbc <input type="checkbox"/> 3des-cbc <input type="checkbox"/> blowfish-cbc
Hostkey Status	Normal
TELNET Mode	Enabled ▾

Default setting of Ciphers and HMAC/Hashing Message Authentication Code are listed in following table.

Weak CBC Ciphers are disabled by default. Weak HMAC are disabled by default.

No	Type	Default Setting
1	hmac-sha1-96	<i>Disabled</i>
2	hmac-sha1	Enabled
3	hmac-sha2-256	Enabled
4	hmac-sha2-512	Enabled
5	hmac-md5	<i>Disabled</i>
6	aes128-ctr	Enabled
7	aes256-ctr	Enabled
8	3des-ctr	Enabled

9	aes128-cbc	<i>Disabled</i>
10	aes256-cbc	<i>Disabled</i>
11	twofish256-cbc	<i>Disabled</i>
12	twofish-cbc	<i>Disabled</i>
13	twofish128-cbc	<i>Disabled</i>
14	3des-cbc	<i>Disabled</i>
15	blowfish-cbc	<i>Disabled</i>

<Fixed Bugs>

1. TSS 5432: Process crash when running 'show ip ssh public-key'
2. TSS 5403: Flow stops working after sFlow configuration timeout

Support sflow commands in show running-config and configuration saving. Change the behavior of “timeout” parameter:

- If timeout is not 0, the sflow will be enabled.

Timeout will not count down to 0 to keep sflow working.

- If timeout is 0, the sflow will be disabled/released.

Only manually setting can change timeout to 0.

- Timeout value still can access through SNMP and Timeout will not be decreased.

Release History

[v01.01.03.0013]

<Software Date>

Software Build Date: 2021/04/30

<Software Base>

MSCC VSC7429, VSC7425

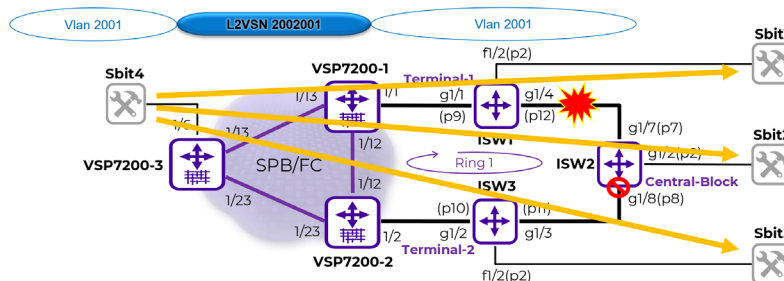
CompatibleOS: eCos Operating

System

Version 3.65 CE Service

<New Features>

1. TCN (topology change notification) of MSTP.
ISW Ringv2(Chain/Balancing Chain) support MSTP/RSTP TCN BPDU for fast (less than 100ms) network redundancy recovery time.



- Ring Cut (64 millisecs interruption)

Signature Frames Sent	0	0	0	0	0	0	238,194	0	Sbit1	Sbit2	Sbit3
Signature Frames Received	79,398	0	79,334	0	79,398	0	0	0	0	64	0

- Ring Restore (65 millisecs interruption)

Signature Frames Sent	0	0	0	0	0	0	124,711	0	Sbit1	Sbit2	Sbit3
Signature Frames Received	41,571	0	41,505	0	41,570	0	0	0	-1	65	0

Verified: ISW of TCN BDUs for fast aging of MACs on Fabric Core whenever ISW ring is cut or restored. (Less than 100ms)

2. Support "show tech-support" CLI command.
3. Support SSH Key Exchange Algorithms configuration in CLI/WEB/SNMP.

<Feature Updated>

1. Providing TELNET enable/disable configuration in CLI and Web. (Default is enable)
2. LLDP management IP address
TSS 5386: Query relating to LLDP displaying IP address for untagged VLANs as opposed to or not for tagged VLANs
3. Remove CPU drop packet counter from "Rx packet drops"
TSS 5355: Rx packet drops seen on port

<Fixed Bugs>

1. Mantis 6298: System Hang (no reboot) when fail to login switch with SSH.command is applied.
Whenever "unsupported" SSH KEX (encryption algorithm) is used to login switch, and failed for 3 times, first IP interface malfunction, then system hang. (Console, TELNET, SSH, Web all malfunction)
2. Mantis 6305: SSH disable cause system's CPU to 100%.
3. Mantis 6311: The format of SSH WEBGUI display inconsistent (alignment).

SSH / TELNET Configuration

SSH Mode	Enabled ▾
Key Exchange Algorithms	<input checked="" type="checkbox"/> curve25519-sha256 <input checked="" type="checkbox"/> ecdh-sha2-nistp521 <input checked="" type="checkbox"/> ecdh-sha2-nistp384 <input checked="" type="checkbox"/> ecdh-sha2-nistp256 <input checked="" type="checkbox"/> diffie-hellman-group14-sha1 <input checked="" type="checkbox"/> diffie-hellman-group1-sha1 <input checked="" type="checkbox"/> kexguess2
TELNET Mode	Enabled ▾
Hostkey Status	Normal

Alignment incorrect in previous version

SSH / TELNET Configuration

SSH Mode	Enabled ▼
Key Exchange Algorithms	<input checked="" type="checkbox"/> curve25519-sha256
	<input checked="" type="checkbox"/> ecdh-sha2-nistp521
	<input checked="" type="checkbox"/> ecdh-sha2-nistp384
	<input checked="" type="checkbox"/> ecdh-sha2-nistp256
	<input type="checkbox"/> diffie-hellman-group14-sha1
	<input checked="" type="checkbox"/> diffie-hellman-group1-sha1
	<input checked="" type="checkbox"/> kexguess2
TELNET Mode	Enabled ▼
Hostkey Status	Normal

Improved in v01.01.03.0013

4. TSS5386: Query relating to LLDP displaying IP address for untagged VLANs as opposed to or not for tagged VLANs.
5. TSS5398: ISW 10/100 ISW 4-10/100P || Version:
ISW-TLN-8PORT_V01.01.03.0012.dat || Fast Ethernet interfaces changed to Gigabit

Special notes: When upgrading to software version 01.01.03.0012 or later, the FE models (ISW 4-10/100P, 2-10/100T, 2-SFP) will change to GE models.

Root cause: The firmware size is bigger in the newer version and causes the FE/GE model customization database to overlap with the firmware partition. The issue is triggered by a firmware upgrade to 01.01.03.0012 or later version.

Workaround solution for solving this issue:

- Login to ISW
- Type the following commands to re-format the GE/FE model customization database. In v01.01.03.0013, the new customization information moves to a safe location.

```
platform debug allow
configure terminal
debug default interface fe
```

- Reboot ISW

6. Mantis 6314: Use CLI to show PoE firmware version is 0.

<Known Issues>

None

[v01.01.03.0012]*Model:*

ISW 8GbP, 4-SFP, PoE Switch (GE)

ISW 4GbP, 2GbT, 2-SFP, PoE Switch (GE)

ISW 8-10/100P, 4-SFP, PoE Switch (FE)

ISW 4-10/100P, 2-10/100T, 2-SFP, PoE Switch (FE)

FW Release Version: v01.01.03.0012 (for all models)

Documentation Date: 2020/10/12

This is ISW release to add Fabric Attach Client Features. The release note includes all feature changes and fixed bugs since previous release v01.01.02.0011.

<Software Base>

MSCC VSC7429, VSC7425 Compatible

OS: eCos Operating System

Version 3.65 CE Service

<New Features>

None

<Feature update>

When a FA upstream switch is selected, ISW will set 'QoS trust tag' of uplink ports automatically:

- In the case of no link aggregation, ISW will set 'QoS trust tag' of the uplink port.
- In the case of static LAG or LACP, ISW will set 'QoS trust tag' of all ports of the aggregation group.

<Fixed Bugs>

None

[v01.01.03.0011]*Model:*

ISW 8GbP, 4-SFP, PoE Switch (GE)

ISW 4GbP, 2GbT, 2-SFP, PoE Switch (GE)

ISW 8-10/100P, 4-SFP, PoE Switch (FE)

ISW 4-10/100P, 2-10/100T, 2-SFP, PoE Switch (FE)

FW Release Version: v01.01.03.0011 (for all models)

Documentation Date: 2020/9/28

This is ISW release to add Fabric Attach Client Features. The release note includes all feature changes and fixed bugs since previous release v01.01.02.0010.

<Software Base>

MSCC VSC7429, VSC7425 Compatible

OS: eCos Operating System

Version 3.65 CE Service

<New Features>

Fabric Attach Client features are added in this release (V01.01.03.0011).

<Feature update>

None

<Fixed Bugs>

Default config is wrong on FE models (bug found during test of Fabric Attach Client feature)

[v01.01.02.0010]*Model:*

ISW 8GbP, 4-SFP, PoE Switch (GE)

ISW 4GbP, 2GbT, 2-SFP, PoE Switch (GE)

ISW 8-10/100P, 4-SFP, PoE Switch (FE)

ISW 4-10/100P, 2-10/100T, 2-SFP, PoE Switch (FE)

FW Release Version: v01.01.02.0010 (for all models)

Documentation Date: 2020/7/23

This is formal release for production. The release note includes all feature changes and fixed bugs since previous production release v01.01.02.0005.

<Software Base>

MSCC VSC7429, VSC7425 Compatible

OS: eCos Operating System

Version 3.65 CE Service

<New Features>

Support sFTP client, for firmware upgrade and configuration import/export in v01.01.02.0008 or later version.

Example command:

"firmware upgrade

sftp://grace:grace@192.168.7.82/image/ISW-TLN-8PORT_V01.01.02.0008.dat"

"copy running-config sftp://test:123@172.16.9.136/abc.txt"

Note:

sFTP usually is spending time for file transferring due to encoding/decoding of data.

While SFTP file transferring is proceeding, another new SSH session will interrupt the SFTP file transfer.

<Features Updated>

1. SSH (dropbear) is upgraded to 2017.75 in v01.01.02.0007 or later versions.

2. PSE (PoE Chipset) firmware upgrade function is available in normal mode in v01.01.02.0008 or later version.

Detail: PoE firmware v211 is bundled in side. New CLI command for PoE firmware update ***"poe firmware upgrade"*** CLI command is available for upgrade poe firmware manually. ***"show poe firmware"*** CLI command is available for show poe firmware version.

<Fixed bugs>

TSS 4720: PoE configuration shows "PoE not available - No PoE chip found"

TSS 4926: Customer is having an issue power a license plate camera created by Vigilant Solutions

Details: PoE AF/AT/POH 3 mode are available in this release. To support Vigilant Solutions IPCAM, PoE should operate in POH mode.

TSS 4966: Dropbear SSH Server < 2016.72 Multiple Vulnerabilities

TSS 4986: No PoE Chip found in three switches

TSS 4987: High CPU in most of the network switches

TSS 5035: Unable to provide PoE to an MR62e Controller

Details: PoE firmware v211 bundled in this release to solve MR62e Controller issue. Please use CLI command "poe firmware upgrade" to upgrade PoE firmware after upgrade ISW to V01.01.02.0008 or later version

Notes: ISW PoE firmware should be upgraded to v211 to solve this issue. ISW with the production release will included PoE firmware v211 and not required PoE firmware upgrade.

TSS 5067: SNMPv3 does not work when NTP is configured

TSS 5093: The ISW switch or NTP server calculated the wrong time causing SNMPv3 to stop working

TSS 5138: Do ISW switches support writeable SNMP values for these MIB entries - ifXEntry.ifAlias & ifEntry.ifDescr?

Details:

ifXEntry.ifAlias is writable now, but ifEntry.ifDescr is still read-only because it is standard MIB. "Port Description" has been added to switch, switch returns value to ifXEntry.ifAlias as per this new field of each port.

Configurable in CLI/Web. Web page "Configuration/Port", support length 255 char, however, ifAlias length is defined as 64 octets(char). Manager have to make "reload default" or "reload default keep-ip" to load default "Port Description" of each port.

CLI example as below:

=====

```
(config)# interface g 1/1
(config-if)# description ?
<line255> Port description
(config-if)# description Port-1
SNMPWalk result by default:
***** SNMP QUERY STARTED *****
```

```
1: ifAlias.1000001 (octet string) Port-1 [50.6F.72.74.2D.31 (hex)]
2: ifAlias.1000002 (octet string) Port-2 [50.6F.72.74.2D.32 (hex)]
3: ifAlias.1000003 (octet string) Port-3 [50.6F.72.74.2D.33 (hex)]
4: ifAlias.1000004 (octet string) Port-4 [50.6F.72.74.2D.34 (hex)]
5: ifAlias.1000005 (octet string) Port-5 [50.6F.72.74.2D.35 (hex)]
6: ifAlias.1000006 (octet string) Port-6 [50.6F.72.74.2D.36 (hex)]
7: ifAlias.1000007 (octet string) Port-7 [50.6F.72.74.2D.37 (hex)]
8: ifAlias.1000008 (octet string) Port-8 [50.6F.72.74.2D.38 (hex)]
```

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TSS 5188: SSH authentication method follows telnet configuration, rather than SSH

Mantis 5436: Gigabit Ethernet port in auto-negotiation mode can't link up while using 100Mb cable

Mantis 5591: If oid inside LLDP TLV which is too long and received by ISW, ISW would have chance to reboot when user enter “show lldp neighbors” command.

Mantis 5693: ALM LED abnormal, Alarm Current/History table doesn't show correct alarm status.

End of document