

LANCOM Release Notes for GS-3xxx series switches

LCOS SX

4.00 RU6

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LANCOM Systems GmbH
Adenauerstrasse 20 / B2
52146 Wuerselen
Germany

Internet: <http://www.lancom-systems.com>

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1. Preface

The LANCOM family of operating systems—LCOS, LCOS SX, LCOS LX, and LCOS FX—forms the trusted basis for the entire LANCOM range of products. Within the scope of the hardware specified by the products, the latest firmware version is available for all LANCOM products and is offered by LANCOM Systems for download free of charge.

LCOS SX 4.x is the operating system for all LANCOM switches of the GS-3xxx series.

For all LANCOM switches of the XS series the LCOS SX 5.x operating system is available.

For all LANCOM switches of the GS-13xx and GS-23xx series the LCOS SX 3.x operating system is available.

You can find the release notes for these series as usual on the LANCOM website in the download area of the respective switch.

This document describes the innovations within LCOS SX software release 4.00 RU6, as well as the improvements since the previous version.

Devices delivered with LCOS SX 4.00 or higher automatically connect to the LANCOM Management Cloud (LMC). This functionality provides zero-touch installation for new devices. In case you do not want to use the LMC, this feature can be disabled at any time on the device's WEBconfig under "Configuration > LMC". You can manually re-enable the usage of the LMC whenever you want.

2. New features, improvements, and history

LANCOM GS-3xxx series - LCOS SX 4.00.0333 RU6

New features

- › Support for the LANCOM GS-3152P

Bug fixes

- › Due to a failure during the rollout of a configuration from the LMC to the switch, it could happen that individual switch ports were not configurable in the LMC. Since the rollback of the original configuration did not work, the error state (ports not configurable) remained.
- › If in the configuration of a switch of the GS-3xxx series the SNMP read community was disabled, no configuration tables could be transmitted to the LMC when claiming the device.
- › When using the „startlmc“ CLI command on a switch that was in preclaimed state with the LMC (device was known to the LMC), a pairing token was requested to connect to the LMC even though it was not necessary.
- › Removing an entry for an LMC rollout project via CLI command „no lmc rollout-project“ was aborted with an error message because the parameter ,no‘ could not be interpreted.
- › Devices connected to a LANCOM GS-3510XP managed via the LMC could lose their connection to the LMC due to runtime problems.
- › In individual cases, interference could occur on the data bus of a LANCOM GS-3152XSP, which is responsible for controlling the PoE chip and the temperature sensor.
- › Switches of the LANCOM GS-3510 series could experience increased downshift problems with port speeds in firmware version LCOS SX 4.00 RU5. The negotiated port speeds of connected network components (e.g. access points) were suddenly downshifted (e.g. to 100 Mbps or 1 Gbps), although the devices support faster speeds (e.g. 2.5 Gbps).

LANCOM GS-3xxx series - LCOS SX 4.00.0305 RUS

New features

- › Support for AES-192/256 and SHA-2 algorithms enables even more secure SNMPv3 connections with LANmonitor.
- › The Radius service type in IEEE 802.1X authentication is now configurable and distinguishes between ‚Framed‘ and ‚Call-Check‘ packets.
- › The LAG detail configuration is now available in the LMC.
- › The ‚dir‘ and ‚more‘ commands now allow viewing and managing configuration scripts and backups on the CLI.
- › In the menu ‚VLAN Management / VLAN Membership‘ several consecutive and identically configured VLANs are now combined in the membership table for a better overview. If there are differences in the configured VLANs, their membership information is displayed in a new row.
- › The boot log of the switches has been extended with a backtrace (memory trace).

Bug fixes

- › When a switch was paired with another LMC instance, the device used the new instance’s LMC domain temporarily, but it was not included in the switch’s active configuration.
- › The default HTTPS certificate is now replaced by an individually generated certificate.
- › The OID value ‚Serial‘ was output with the incorrect value ‚System MAC: <MAC address>‘ in monitoring tools.
- › In the routing table of a LANCOM GS-3152X an additional row for a default route could not be rolled out from the LMC to the switch. In addition, the value for the distance was not taken over in the switch. The valid distance ‚1‘ became the invalid value ‚0‘ in the switch.
- › A start of the LMC module trace on the console led to an immediate reboot of the device.
- › When using the ‚Force Authorized as Admin State‘ option in the 802.1X port configuration (default setting), the status ‚Unauthorized‘ was displayed instead of ‚Authorized‘.
- › If a topology change was detected by the switch in a Spanning Tree network (e.g. due to a cable change), the switch sent a large number of ‚topology change notifications‘ (BPDU storm). This led to a failure of the Spanning Tree function.
- › MAC addresses were not automatically deleted from the ARP cache. When the MAC address was changed (e.g. in environments with virtual machines), this resulted in the affected network subscriber no longer being reachable from the switch.
Furthermore, when trying to clear the ARP cache manually using the console command ‚clear ip arp‘, it could happen that this failed and the error message ‚Failed to clear IP ARP: MESA_RC_ERROR‘ was issued.
- › If errors occurred when rolling out a configuration via the LMC, it could happen that these were transmitted to the LMC incompletely or not at all.
- › If the switch was configured as a DHCP client and could not establish a connection to the LMC, no DHCP renew was performed. In this case, the error message ‚No DHCP server detected‘ was issued in the LMC control state trace.
- › SNMP is disabled by default, but the SNMPv1 / SNMPv2 communities are enabled by default. This means that when SNMP is enabled, the SNMPv1 / SNMPv2 communities are also active without any further adjustments. However, the use of SNMPv1 / SNMPv2 is not recommended for security reasons.
The SNMPv1 / SNMPv2 communities are now disabled by default (reinstallations only).

- If the switch was accessed via WEBconfig tunnel in the LMC and an HTTP redirect to HTTPS was set up, local authentication was always performed, even if a different method was stored for HTTPS.
If HTTP was disabled for access, access via the WEBconfig tunnel in the LMC was not possible, although access via HTTPS was allowed.
- A username in the Layer 7 application detection table was displayed illegibly. As a result, this username was also output illegibly in management tools, such as the LMC (Dashboard tile 'LMC Top-User Table').
- In the configuration dialog of a RADIUS server, only an IP address could be entered in the 'Hostname' field. It was not possible to specify a DNS name.

LANCOM GS-3xxx series - LCOS SX 4.00.0261 RU4

New features

- If the VLAN membership is changed via the Q-Bridge MIB, the port mode is no longer necessarily set to Hybrid.
- As with the aggregation switches, it is now also possible with these switches to establish a direct WebGUI tunnel from the LMC.

Bug fixes

- When using the DHCP option 61 (DHCP client identifier), the hardware type '0' including host name was sent in the 'DHCP discover' instead of the MAC address.
- If the 'LLDP Neighbors' were called in the configuration, the switch could sporadically restart.
- It could happen that the switch went offline for a short time during the rollout of a configuration via the LANCOM Management Cloud (LMC) and thus the configuration could not be rolled out.
- After a cold start, the default route was deleted, so that routing to other networks via the switch was no longer possible.
- With the LANCOM switches of the GS-3xxx series it could happen that a configuration rollout via the LMC ended in an endless loop and was not completed.

LANCOM GS-3xxx series - LCOS SX 4.00.0219 SU3

Bug fixes

- Special user input via the web interface was not validated correctly. This could provoke a sudden restart of the device.

LANCOM GS-3xxx series - LCOS SX 4.00.0212 RU2

New features

- The clock role for the 2.5 Gbps ports of the GS-3528X and GS-3528XP is now switchable via CLI:
 - slave preferred
 - master preferred
 - force slave
 - force master.The default setting is ,slave preferred'.
- RADIUS-assigned VLAN with Mac-based authentication can now be used.
- MAC-based authentication now also works without EAP components The MAC address is now transferred as the user name.
- The status information of the built-in fans can now be read out via SNMP. They can also be read out as syslog message and sent as e-mail event in case of alarm.

Bug fixes

- With MAC-based IEEE 802.1x authentication against a RADIUS server, a client was authenticated although a 'RADIUS Reject' returned with an 'EAP Success' in RADIUS authentication. However, the EAP packet of type 'Success' only refers to successful EAP communication.
The switch interpreted only the EAP part and not the contents of the RADIUS packet (the 'RADIUS Reject'). Therefore, a client that was not known on the RADIUS server was also successfully authenticated.
- By default, the GS-31x and GS-35x series switches had the HTTPS protocol disabled for communication with the switch and the unencrypted TFTP and SNMPv1 protocols enabled. In the current factory settings, the insecure protocols are disabled and HTTP, HTTPS, and SSH are enabled.
- If a GS-3528 series switch was connected to a network device with a 1 Gbps port speed on a 2.5 Gbps port, it was possible that the connection was negotiated at 100 Mbps only. In this case, if the port speed on both the switch and the network device was fixed to 1 Gbps, the connection failed.
- The VLAN configuration could not be set correctly via SNMP (Q-Bridge).
When setting the PVID for a port in Access or Trunk mode, all VLANs were stored in the 'Allowed VLAN' field instead of just the 'Port VLAN ID'. The 'Allowed VLAN' field could not be set and remained at its original value.

LANCOM GS-3xxx series - LCOS SX 4.00.0139 RU1

New features

- › Support for the PowerEthernet MIB
- › SNMPv1/2: The read community can now be disabled
- › LMC client: DHCP option 43 is now configurable
- › LMC client: DHCP renew after 'Connection error'

Bug fixes

- › The creation of IP routes on a LANCOM GS-3152XP via CLI resulted in deleting an existing default route.
- › If more than one default route was configured on the LANCOM GS-3152XP, the switch always initialized the latest created default route after a restart. All other default routes were not loaded and thus were missing in the configuration.
- › After a restart, the switch sent some STP packets into the network using all ports, although the STP function (Spanning Tree Protocol) was disabled in the configuration.
- › When someone tried to access a LANCOM switch via a LANCOM router using the function 'create TCP/HTTP tunnel', or via a routed connection per HTTP(s), the switch cancelled the request with an 'Internal Server Error'.
- › If a backup configuration was loaded into a LANCOM switch, the switch did not store this as a start configuration (boot persistent). As a result, the switch always used its default configuration after a restart.
- › The LANCOM switches of the GS-31xx series and the GS-3528XSP could not be restarted via the LANCOM Management Cloud (LMC).
- › After having successfully uploaded a firmware via web interface the message 'service unavailable' was displayed right before the mandatory device restart. This message has been replaced by an informative dialog concerning the firmware update process.
- › The error message which was displayed when trying to upload a non-suitable device firmware was not precise. Now an error message with a precise text is displayed.
- › The LMC diagnose trace output was only shown on the console using the command 'trace on' when using a serial connection to the LANCOM switch.
- › An LACP link consisting of more than four interfaces could not be operated stable. Furthermore, network malfunctions on the devices connected to the switch could occur when operating an LACP link.
- › Configuration elements could not be written per SNMP if the default value 'private' did not exist in 'Write community'.
- › An SNMP request for the available switch ports on a GS-3152X returned the value 54 instead of 52.
- › With disabled SNMPv1/2 protocol (default setting) access per SNMPv3 protocol was not possible, too.
- › In the table 'Static ARP Inspection' no additional line could be added, neither per web interface, nor per SNMP.
- › If the PoE budget was exceeded, no appropriate message was displayed in the switch's webinterface or syslog.
- › No name designations for VLANs could be added on the web interface.
- › In a console session which was established via the switch's serial interface no backspace function could be used (backspace key).
- › When using a RADIUS authenticated login for the web interface or console the switch did not send RADIUS authentication packets. The switch login was successful, but accounting did not work.

LANCOM GS-3xxx series - LCOS SX 4.00.0070 Rel

Features

- > Initial release version for all new switches of the series GS-3xxx
- > New function: DHCP server
- > New function: static routing
- > Unified MIB: Starting from version LCOS SX 4.00 Rel there is a unified SNMP MIB file.
- > New operating status for the sFlow function: Always ON

3. Common advice

Disclaimer

LANCOM Systems GmbH does not take any guarantee and liability for software not developed, manufactured or distributed by LANCOM Systems GmbH, especially not for shareware and other extraneous software.

Support notes & known issues

Latest support notes and known issues regarding the current LCOS SX version can be found in the download area of our website: [Common support hints](#)