RELEASE NOTES

LCOS SX
4.30 SU11

Table of contents

02 **1. Preface**

03 **2. The release tag in the software name**

04 **3. New features, improvements, and history**
04 LCOS SX 4.30.0503 SU11
05 LCOS SX 4.30.0502 RU10
06 LCOS SX 4.30.0439 RU9
07 LCOS SX 4.30.0438 RU8
08 LCOS SX 4.30.0434 RU7
10 LCOS SX 4.30.0302 RU6
11 LCOS SX 4.30.0224 RU5
13 LCOS SX 4.30.0147 RU4
14 LCOS SX 4.30.0075 RU3
15 LCOS SX 4.30.0073 RU2
15 LCOS SX 4.30.0071 RU1
16 LCOS SX 4.30.0071 Rel

17 **4. Common advice**
17 Disclaimer
17 Support notes & known issues

1. Preface

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

LCOS SX 4.30 is the operating system for all R&S®LANCOM switches of the series XS- / GS- / IGS-3000, and GS-2400.

The following LCOS SX operating systems are also available for other R&S®LANCOM switches:

LCOS SX 5.3x is the operating system for the R&S®LANCOM switches CS-8132F and YS-7154CF.

LCOS SX 5.2x is the operating system for all R&S®LANCOM switches of the XS-5100, XS-4500, and GS-4500 series, as well as for the R&S®LANCOM XS-6128QF.

LCOS SX 3.34 is the operating system for all R&S®LANCOM switches of the GS-2300 and GS-1300 series.

The release notes for these device series can be found as usual on the Rohde & Schwarz Networks and Cybersecurity website in the download area of the respective switch.

This document describes the new features of the LCOS SX software release 4.30 SU11 as well as the changes and improvements to the previous version.

Before upgrading your device to a new firmware it is essential to **backup your device's configuration**.
Due to extensive features it is **not possible to downgrade** to a previous firmware without using the backup configuration.
Please note that different firmware files might be available for your device.

2. The release tag in the software name

Release Candidate (RC)

A Release Candidate has been extensively tested by Rohde & Schwarz Networks and Cybersecurity and includes new operating system featurses. It is suitable for testing and is not recommended for use in productive environments.

Release Version (REL)

The release version has been extensively and successfully tested in practice. It contains new features and improvements over previous operating system versions and is therefore recommended for use in productive environments.

Release Update (RU)

A release update is a further development of an initial release version in productive environments and contains minor improvements, security fixes, bug fixes and smaller features.

Security Update (SU)

Contains important security fixes for the respective operating system version and ensures that your security level remains very high on an ongoing basis in your productive environment.

3. New features, improvements, and history

LCOS SX 4.30.0503 SU11

For all R&S®LANCOM switches of the series XS- / GS- / IGS-3000, and GS-2400

Bug fixes

- A security vulnerability in the Linux TCP/IP stack, described in CVE-2026-98432, has been fixed.

LCOS SX 4.30.0502 RU10

For all R&S®LANCOM switches of the series XS- / GS- / IGS-3000, and GS-2400

New features

- Increased the number of allowed ‚Access Control List management entries' from 16 to 128

Bug fixes

- If a 'RADIUS Accounting Stop' message did not contain the IP address of the RADIUS authenticator (NAS IP address), the switch would delete the field during further transmission instead of using the default address 0.0.0.0.
- The ‚Access Management' table supported 16 entries. However, the calculation of the existing entries was based on 17 possible entries (x + 1). If 16 access entries were created in the 'Access Management' table for a switch managed by the LMC (in the detailed configuration under the 'Security → Management → Access Controls' menu) and the configuration was deployed to the switch, this resulted in an unexpected reboot followed by an endless boot loop. Accessing the 'Access Management' table via SNMP also caused an unexpected reboot when there were 16 existing entries.
  The calculation of the number of entries is now performed correctly. In addition, the 'Access Management' table now holds 128 entries.

LCOS SX 4.30.0439 RU9

For all R&S®LANCOM switches of the series XS- / GS- / IGS-3000, and GS-2400

New features

- Optimization of the operating noise level of the R&S®LANCOM GS-2426P using PoE load-dependent fan control
- CLI extension by adding a much more convenient ‚show int status' command

Bug fixes

- If data was transferred over a 1G port on a R&S®LANCOM GS-3252P or XS-3550YUP and at least one 1G port on the same port bank was disabled (status 'Shutdown'), minor packet loss occurred during data transmission.
- It was not possible to roll out additional users to the switch using the detail configuration in the R&S®LMC under the 'System / Users' menu.
- The libssh2 software library has been updated, and the following security vulnerabilities have been fixed:
  - CVE-2025-15661
  - CVE-2026-7598
  - CVE-2026-55199
  - CVE-2026-55200
- If at least one of the SFP ports on an R&S®LANCOM GS-3152P running LCOS SX 4.00 was in the 'Shutdown' state, after updating to LCOS SX 4.30, port 48 remained permanently in the 'Shutdown' state, preventing any data from being transmitted through it. Instead, the SFP ports were active.
  Furthermore, the update renamed the SFP ports to '10 Gigabit Ethernet 1/1' through '10 Gigabit Ethernet 1/4', even though the SFP ports only support 1 Gbps.

LCOS SX 4.30.0438 RU8

For all R&S®LANCOM switches of the series XS- / GS- / IGS-3000, and GS-2400

Bug fixes

- With DHCPv6 snooping enabled and no available DHCPv6 server, the switch created a separate entry for each received DHCPv6 IAID (Identity Association Identifier) but did not delete it once it was no longer needed. Depending on the amount of DHCPv6 IAID requests, this could result in the switch running out of memory after several weeks. This caused the switch to reboot unexpectedly.

LCOS SX 4.30.0434 RU7

For all R&S®LANCOM switches of the series XS- / GS- / IGS-3000, and GS-2400

New features

- Integration of the R&S®LANCOM GS-3152P (EOS since 2023)

  Note: Please note that after updating to LCOS SX 4.30 RU7, it is no longer possible to downgrade to LCOS SX 4.00 if LCOS SX 4.00 has been deleted from the switch's firmware backup slot.
- After entering the CLI command 'show ip name-server', information about all 4 possible DNS servers is displayed.
- It is now possible to create and maintain switch user accounts in the R&S®LMC.
- Configuration option for 'Storm Control' settings via the R&S®LMC
- Addition of zero-touch capability (R&S®LMC domain notification) in pure IPv6 networks via DHCPv6 option 17
- Add configuration of voice attributes (device-traffic-class=voice) via RADIUS so that authenticated clients are transferred to the configured voice VLAN.
- Logging of accounting data for 802.1X authentication events, which can be enabled via the CLI in the 'configure' menu using the command "aaa accounting dot1x start-stop interface <interface>".
- Added a query option for the TACACS+ server status via CLI using "show tacacs server statistics."

Bug fixes

- The R&S®LMC client did not register an IPv6 address with the R&S®LMC. In a pure IPv6 environment, this resulted in the IP address 0.0.0.0 being displayed in the R&S®LMC device list.
- VLANs assigned via RADIUS server were incorrectly displayed in the VLAN table with an empty entry when the port state 'Multi Auth' was used.
- The CLI command 'show ip name-server' did not display any IPv6 name servers obtained via DHCPv6, but simply returned the output "No address is used for DNS lookup...".
- A switch that obtained its DNS servers via DHCPv6 server forgot all learned DNS servers when a configuration rollout was performed via R&S®LMC in which the DHCPv4 functionality was disabled.
- The default DNS settings of a switch only allowed the use of DHCPv4. This could lead to problems with zero-touch configurations that used DHCPv6.
- The R&S®LMC client was deactivated if only an IPv6 interface was configured, but no IPv4 interface. If only an IPv6 address was assigned to the switch, this meant that it could not be managed by the R&S®LMC.
- If the authentication password of an SNMP user contained an apostrophe character ('), the user could not be created via the web interface. Instead, the entry was deleted.

  Rolling out an SNMP user with a corresponding authentication password via R&S®LMC was also not possible and was rejected with the message "VALUE_INVALID."
- On the R&S®LANCOM GS-3528XUP, GS-3152X, and GS-3126XP switches, the port LEDs did not light up when the reset button was pressed for longer than 10 seconds.
- No validation of IP addresses was performed in the 'Server Address → System Log Configuration' field. This could result in invalid IP addresses being stored and no messages being sent to the syslog server.
- Once DHCP snooping was enabled on switches running LCOS SX 4.30RU6, it could happen that the VLAN tag was removed from outgoing response packets.
- For switches managed by R&S®LMC, the R&S®LMC client did not automatically renew DHCP IPv6 leases when

the connection to the R&S®LMC was interrupted.

- DHCPv6 snooping did not forward ‘DHCPv6 solicit messages’ from the switch to the DHCPv6 server. This meant that the switch could not obtain an IPv6 address when DHCPv6 snooping was enabled.

LCOS SX 4.30.0302 RU6

For all R&S®LANCOM switches of the series XS-3500, GS-3600, GS-3500, GS-3200, and GS-2400, as well as for R&S®LANCOM GS-3152(X/XP/XSP), GS-3126(X/XP), and IGS-3510XUP

New features

- Configurability of DHCP option 43 (Discover/Request Messages) for the parameter list of DHCP option 55
- Note: Default = Active; If the function is deactivated, the DHCP option 43 on the interface is no longer accepted by the R&S®LMC client, even if it was sent.

Bug fixes

- If a network component that used a transfer rate of 100 Mbps was plugged into one of the combo ports 25 or 26 of a R&S®LANCOM GS-2426(P), flapping occurred on the respective port with the default setting 'Dual' (link constantly up/down).
- A connection via a 1G SFP module between a R&S®LANCOM GS-24xx / GS-3xxx / XS-3xxx and a R&S®LANCOM XS-51xx / XS-6128QF with active auto-negotiation on the SFP port was not possible because auto-negotiation was not supported on the SFP ports of the R&S®LANCOM XS-51xx / XS-6128QF.
  A connection with Static Mode could not be established either, as Static Mode was not working correctly.
- If the switch sent a ping via the console and the ICMP requests were answered by the target, the SSH session was terminated after four successful pings.
- If port 13 was deactivated on R&S®LANCOM GS-2400 series switches, this meant that the subsequent port 14 no longer learned any MAC addresses and therefore no communication was possible on this port.
- For switches with 1G ports (e.g. R&S®LANCOM XS-3510YUP), the speed '1 Gbps FDX' was not offered as an individual selection in the R&S®LMC detailed configuration. If this speed was set on the WEBconfig of the switch, the value "6" was displayed in the R&S®LMC detail configuration.
- DHCP requests were sent without DHCP option 43. If the DHCP server in a private R&S®LMC scenario sent the private R&S®LMC domain via DHCP option 43, this meant that the switch could not establish a connection to the private R&S®LMC.
  DHCP option 43 is now always queried as part of DHCP option 55.

LCOS SX 4.30.0224 RU5

For all R&S®LANCOM switches of the series XS-3500, GS-3600, GS-3500, GS-3200, and GS-2400, as well as for R&S®LANCOM GS-3152(X/XP/XSP), GS-3126(X/XP), and IGS-3510XUP

New features

- Extension of DHCP option 82 to allow the use of multiple relay addresses (ip dhcp snooping option82 (keep/replace/drop))
- Integration of the R&S®LANCOM GS-2400 series

Bug fixes

- On the R&S®LANCOM GS-2400 series switches, the system LED flashed green after the device was started, although there was no reason for this.
- The device type designation (e.g. gs-3652xp) was used as the standard DHCP device name and not, as intended, the name 'LANCOM-' followed by the last 3 bytes of the MAC address (e.g. 'LANCOM-1d1000').
- If a configuration table in the local configuration of a switch managed by the R&S®LMC was completely emptied and the switch configuration was then saved as 'Start configuration', the deleted entries were still present in the R&S®LMC configuration.
- With the R&S®LANCOM XS-3510YUP, a Link Aggregation Group (LAG) was not established if it was configured on the 10G ports.
- The auto-logout on the web interface always occurred after 10 minutes, regardless of which value was configured.
- If the switch received a 'DHCP Offer' with an additional DHCP option from the DHCP server when using the DHCP relay with the 'Relay Information Policy - Replace' setting, the switch appended the information of this option a second time. This resulted in a 'Malformed Packet', which the switch sent to the client. The DHCP server acknowledged this accordingly by sending DHCP option 52 (option overload).
- A user without any authorizations (Privilege Level 0) was able to log in to the web interface.
- If an attempt was made via the R&S®LMC or console to create an SNMP user with the wrong length for the authentication password or privacy password (between 8 and 128 characters are permitted in each case), the process could be carried out but the user was not created.
- A batch of R&S®LANCOM GS-3126XP was equipped with an incorrect system configuration for Spanning Tree, which always contained the same MAC address as a placeholder. When using several affected devices, this led to the bridge ID in the spanning tree being the same and spanning tree therefore not working correctly.
- In WEBconfig, the option 'Non-Stop PoE' was offered in the menus for restarting and updating the firmware, even if the switch used did not have a PoE function.
- In the 'VLAN NAME Configuration' menu, the 'Start from VLAN' search field had no function after entering a position number.
- When using MSTP, the DHCP helper (always active when using DHCP functions on the switch, e.g. DHCP snooping) checked whether a port on which the switch received a DHCP packet was blocked in any MSTI. In this case, the DHCP helper discarded the DHCP packet. This meant that clients could not obtain an IP address in their VLAN even though their MSTI was not blocked.
  The DHCP Helper now only takes into account the MSTI associated with the VLAN and only drops the DHCP

packets if this MSTI is also blocked.

- If the switch received a DHCPv6 packet that it could not process when DHCPv6 snooping was active, the switch sent this packet again as a multicast to all ports instead of discarding the packet. This could lead to a greatly increased load on the network and therefore also on the CPU.
- After an update to LCOS SX 4.30 RU4, the R&S®LANCOM GS-3152XP displayed '24-P GbE RJ45 + 4-P GbE SFP L2 Plus Managed PoE Switch' in its system description instead of the correct description 'Managed L2+ PoE+ Switch, 48x 10/100/1000Base-T ports + 4x 1G/10G SFP+ slots'.
- A VLAN that was removed via the graphical switch widget was still present after the changed configuration was rolled out.
- On the R&S®LANCOM XS-3526YUP, the link LEDs for the 10G ports lit up orange instead of green when a 10G connection was active.
- When restoring the factory defaults in WEBconfig, the option 'Keep IP setup' was missing, with which the IP settings of the device could be retained.
- It could happen that during a connection with the LANCOM DAC10-3M / DAC10-1M between a LANCOM R&S Unified Firewall UF-360 and a R&S®LANCOM GS-3252P, GS-3652X or the GS-3652XUP the speed in one direction was very slow (approx. 1-20 Mbps).
- If there was a CLI tunnel to the switch during a configuration rollout via the R&S®LMC, the tunnel hung up and blocked the rollout. As a result, the switch could no longer be accessed either via the R&S®LMC or directly via the web interface. Communication between devices connected to the switch was still possible.
- The HTTP server of the web interface delivers - if available - the compressed data from the cache. However, the file identifier for the uncompressed data was also called up and not closed again. This led to the limit of open requests from the HTTP server being reached after a large number of pages were called up in the web interface. In this case, the message "Service Unavailable 503" was displayed in the web browser.
- Packets that were sent directly from the CPU or from the application (e.g. LLDP and IGMP) were not included in the capture when a Wireshark capture was taken via port mirror.
- Optimizations have been made for the search in the MAC address table so that the CPU is no longer so heavily utilized when using DHCP snooping.

LCOS SX 4.30.0147 RU4

For all R&S®LANCOM switches of the series XS-3500, GS-3600, GS-3500, and GS-3200, as well as for R&S®LANCOM GS-3152(X/XP/XSP), GS-3126(X/XP), and IGS-3510XUP

New features

- Integration of the new R&S®LANCOM XS-3500 series
- The R&S®LMC autoupdater is now supported.
- The limit of 4 active SSH sessions has been increased to 8.
- SNMPv3 configuration is now also possible via R&S®LMC.

Bug fixes

- The R&S®LANCOM GS-3652XP/XUP switches displayed the wrong color for 10 Gbps connections on the ports (green instead of blue).
- It could happen that an SSH session was aborted and closed abruptly after long command line outputs (e.g. after the command 'show tech-support').
- If large amounts of data were transferred via an R&S®LMC WEBconfig tunnel (e.g. download of 'Tech Support' log data), an endless loop could occur in the R&S®LMC client of the switch, causing the R&S®LMC WEBconfig tunnel to abort.
- It could happen that a connection with a DAC cable (10 Gbps) between a LANCOM Unified Firewall UF-360 and a R&S®LANCOM GS-3652XP was very slow in one direction (approx. 1-10 Mbps). The behavior only occurred with the DAC-10-3M or DAC-10-1M cable on SPF+ ports.
- After updating a R&S®LANCOM GS-3126XP or GS-3528XP from LCOS SX 4.00 to LCOS SX 4.30, PoE was not initialized correctly. As a result, the message "budget exceeded" was displayed in the web interface when a PoE device was connected, and the power supply via PoE did not work.
- On R&S®LANCOM switches with PoE according to 802.3bt (e.g. GS-3628XUP) the detection of devices via LLDP-MED did not work.
- In a certain batch of R&S®LANCOM GS-3628X switches, the compatibility with network cards with Intel i219 chipset was limited due to a firmware error in the installed chipset of the 2.5 Gbps ports. This could result in the negotiation of corresponding end devices on the 2.5 Gbps ports taking a very long time or only being achieved at 100 Mbps. Furthermore, it could happen that the negotiation did not take place at all and therefore no connection was possible.
- When trying to activate TACACS+ authorization and / or accounting via the web interface in the 'Security / Management / Auth Method' menu, only the error message "Authorization Error - Invalid agent method" was displayed and the function(s) were not activated.
- When updating the firmware of a R&S®LANCOM GS-3126X from LCOS SX 4.00 to LCOS SX 4.30, the logic of the fan controller was not adopted. As a result, the fan was permanently running at a speed of over 6000 rpm after the update.

LCOS SX 4.30.0075 RU3

For R&S®LANCOM GS-3200 / GS-3600 series, GS-3126X, GS-3126XP, GS-3510XP, GS-3528X, GS-3528XP, IGS-3510XUP

Bug fixes

- If loop protection was deactivated on a switch port (setting 'no loop protect') and the status value for the loop protection on this port was queried via SNMP, this led to an immediate restart of the device.
- With LLDP activated and an existing LLDP neighbor, entering the command "show lldp neighbors" resulted in an incomprehensible output. If a static route was configured on the switch, entering the command "show lldp neighbors" led to an immediate restart of the device.
- If the R&S®LMC was temporarily unavailable (e.g. due to maintenance), switches managed by the R&S®LMC could be restarted immediately.

LCOS SX 4.30.0073 RU2

For R&S®LANCOM IGS-3510XUP

Bug fixes

- If an SFP module was plugged into an SFP port of an ISG-3510XUP during the boot process, ports 7 (with SFP module in port 9) or 8 (with SFP module in port 10) could not be initialized properly and were therefore without function.

LCOS SX 4.30.0071 RU1

For R&S®LANCOM GS-3200 / GS-3600 series, GS-3126X, GS-3126XP, GS-3510XP, GS-3528X, GS-3528XP, IGS-3510XUP

Bug fixes

- If a network device on a switch with several VLANs and active routing was assigned an IP address that did not belong to the VLAN in which the device was located, this device was able to communicate with devices in other VLANs.
- If a 10 GBit SFP+ module was operated in a R&S®LANCOM GS-3510XP in port 9, a link was no longer established after an upgrade to LCOS SX 4.30 RelI.
- After updating to LCOS SX 4.30 RelI, PoE no longer worked. In the web interface, the message “budget exceeded” was displayed for the ports in the ‘PoE management / PoE status’ menu.

LCOS SX 4.30.0071 Rel

For R&S®LANCOM GS-3200 / GS-3600 series, GS-3126X, GS-3126XP, GS-3510XP, GS-3528X, GS-3528XP

Please note the following information if a later firmware downgrade from LCOS SX 4.30 REL to LCOS SX 4.00 is performed (only applies to R&S®LANCOM switches GS-3200 / GS-3600 series, GS-3126X, GS-3126XP, GS-3510XP, GS-3528X, GS-3528XP):

- A downgrade only works if LCOS SX 4.00 is still in the backup slot of the device. A later downgrade by uploading an LCOS SX 4.00 is no longer possible.
- All users created on LCOS SX 4.30 will be deleted and the admin password, if changed, will be reset to the default value.
- SNMPv1/v2c traps that use the 'Security name' are lost.
- If the configuration is persisted in LCOS SX 4.30, the 'System description' is lost after a downgrade.

New features

- OS harmonization of R&S®LANCOM GS-3126X, GS-3126XP, GS-3528X, GS-3528XP and GS-3510XP
- Support for the new R&S®LANCOM IGS-3510XUP
- The 802.1X reauth period has been increased from 3600 seconds (1h) to 28800 seconds (8h).
- Syslog messages can now be sent either via TCP or UDP.

Bug fixes

- If a switch lost the connection to the R&S®LMC (message "The device ... has lost its connection to the cloud.") and then reconnected to the R&S®LMC (message "The device ... is connected to the cloud."), the message "The device ... has reported a boot process." was always displayed in the R&S®LMC, even if the device was not restarted.
- If a network device with a port speed of 1 Gbps was connected to a 2.5 Gbps switch port, recurring link loss (flapping) could occur.
- If authentication was performed on a switch port using 802.1X with EAP-TLS and 'Multi 802.1X' mode for two daisy-chained devices (such as a telephone and a computer connected to it) and the second device was disconnected from the network, the MAC address of the second device remained in the switch. This resulted in the switch performing a fallback authentication via MAC address for the device disconnected from the network (Dot1X MAB).
- When blocking all data traffic in a network via ACL, DHCP packets were not blocked.
- If the 2.5 Gbps ports of R&S®LMC-managed switch models R&S®LANCOM GS-3652X, GS-3652XP and GS-3652XUP were set from 'Auto' to a different value, this led to a rollout error.
- A security vulnerability in the SSH protocol has been fixed (Terrapin security vulnerability/CVE-2023-48795).

4. Common advice

Disclaimer

Rohde & Schwarz Networks and Cybersecurity does not take any guarantee and liability for software not developed, manufactured or distributed by Rohde & Schwarz Networks and Cybersecurity, 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 tips

Rohde & Schwarz Networks and Cybersecurity GmbH
Adenauerstr. 20/B2
52146 Wuerselen | Germany
info.rs-nc@rohde-schwarz.com | www.rohde-schwarz.com/networks-and-cybersecurity

R&S and Rohde & Schwarz are trademarks of Rohde & Schwarz GmbH & Co. KG, registered or used, among others, in Germany, the EU, the USA, China, and other countries. Other names or designations used may be registered trademarks of different companies or owners. This document contains forward-looking statements regarding products and product features. The publisher reserves the right to change these at any time without stating reasons. No liability is accepted for technical inaccuracies or omissions.

ROHDE&SCHWARZ
Make ideas real