



SYNESIS Release notes

Dec 07, 2023

Version 6.0.17

Released Packages

Same as previous version.

Changed Features and Fixed Issues

- Fixed an issue in the VoIP filter that DNS traceback processing may result in the multiple extraction of DNS packets. [#26278]
- Fixed an issue in REST API 2.0 in which the second and subsequent filter creations rarely failed when software or hardware filters were created consecutively. [#26241]
- In FeedServiceErrorChecker, the number of FeedService log files for checking is variable in the configuration file. [#26612]
- Changed the rotate size of FeedService.log to 10MB x 20 generations.
- Fixed an issue that caused the analysis module to hang up in the SIP Register analysis process when a To field containing none of the characters "@", ":", or ";" existed in the SIP Register Response packet to be analyzed. [#27006]

Dec 15, 2022

Version 6.0.16

Released Packages

Same as previous version.

Changed Features and Fixed Issues

- Fixed an issue in the VoIP filter that could not extract SIP packets containing the corresponding service URN even if an emergency call number was specified. [#23051]
- Fixed an issue in which tomcat stopped outputting logs when the size of the log file "polyvirtual_portal.log" reached 10 MB. [#23286]
- Fixed an issue that caused the NetKeeper service to restart when multiple trace file saves were requested sequentially, and a new trace save was requested immediately after the currently running trace save was canceled. [#23447]
- Changed the FeedServiceErrorChecker's sending trap condition as follows. [#23636]
 - Detected 2 or more errors from previous execution.
 - Or, the case that detected 1 error and not logged the "prepare" text in the log that represents sending from FeedService to client correctly.
- Changed the rotate size of FeedService.log to 10MB x 5 generations.

- Fixed an issue in which the workspace would not display anything when clicking [Agent] on the main menu or the configuration button on the toolbar menu if the pattern string of a pattern filter created with the RESTful API 2.0 contained double quotation, backslash or vertical bar marks. [#23704]
- Fixed an issue in which the workspace would not display anything when clicking [Agent] on the main menu or the configuration button on the toolbar menu if the pattern string of a pattern filter created with the SYNESIS GUI contained vertical bar marks. [#23704]
- RESTful API 2.0 changed as follows:
 - The following method, which returns an array of results, was changed from returning 404 Not found to returning an empty array with 200 OK if none of the elements are present.
 - ✧ GET /adapters
 - ✧ GET /agents
 - ✧ GET /applications
 - ✧ GET /captureSessions
 - ✧ GET /filters
 - ✧ GET /hardwareFilters
 - ✧ GET /replayProfiles
 - ✧ GET /traces
 - ✧ GET /traces/all
 - Added “status” as a query parameter to the “GET /traces/all” method. This allows the list of trace file information to be filtered by status.
 - Allowed the query parameter “limitCount” of the “GET /traces/all” method to be set to 0 - unlimited.
 - The timeout period for creating trace files requested by the “POST /traces” method was extended from 10 minutes to 24 hours. Previously, if a request was not completed within 10 minutes, the state would transition from Running to Failed. However, starting with this version, the Running state lasts up to 24 hours.

Apr 21, 2022

Version 6.0.15

Released Packages

Same as previous version.

Changed Features and Fixed Issues

- The issue had been fixed: 0x00 was appended to the end of SNMP trap notification messages. This caused some SNMP managers or wireshark to incorrectly convert the message to an ASCII string. [#21339]
 - SNMP traps configured in the GUI are the target of this bug. Capture or FeedService checkers are not.
- The issue had been fixed: when the FeedService disconnect the socket, it sometimes disconnect twice and it causes the termination of the FeedService. [#21267]

- Even if this issue occurs, FeedService will be restarted immediately by monit.
- For the FeedServiceRestartChecker, we changed not to send the normal level trap.
- For the FeedServiceErrorChecker, we added a feature to restart FeedService if it outputs the log that shows it is waiting continuously. [#21932]

Dec 24, 2021

Version 6.0.14

Released Packages

Same as previous version.

Changed Features and Fixed Issues

- When restarting the VPEyes or NetKeeper process, there was a low probability that NetKeeper would start twice. This could lead to the phenomenon that the captured packets could not be saved correctly, or the captured statistics could not be correctly recorded in the database. This bug has been fixed by reviewing the order to start the monit process and SYNESIS processes.
- There was a problem that the transition to the agent screen of the GUI was delayed when there were approximately 20 or more capture records. It also caused a temporary increase in CPU utilization, which could lead to packet drops. This bug has been fixed.
- The installation script has been modified so that the Trap destination and community name set in the following 5 Checkers will not be overwritten when applying the patch.
 - HangUpChecker, PacketCapturingChecker, DropPacketChecker
 - FeedServiceRestartChecker, FeedServiceErrorChecker

Changed Features and Fixed Issues (for FeedService users)

- In the previous version, there was a potential bug that FeedService skipped packets when there were multiple packet stores. This issue had been fixed.
- In FeedServiceRestartChecker, the judgment of process alive monitoring has been changed to the method by pgrep.
- In FeedServiceRestartChecker, changed to restart FeedService when PID cannot be acquired 5 times in a row.
- For some SNMP Traps issued by FeedServiceRestartChecker, those that correspond to the normal range have added the character string "INFO" to the message.
- Log rotation has been set for FeedServiceRestartChecker and FeedServiceErrorChecker.
- In the process monitoring of FeedService by monit, the process status acquisition has been changed from PID file to process name matching.
- Added the script syntax_tools / MonitRestartRegularly to restart monit periodically. Here, the factory default is invalid.

Released Packages

● New Production

Control Unit	SYxB-2GP3, SYxB-4GP2, SYxB-10GP3, SYxB-20GP2, SYxB-40GP2, SYxB-100GP2, SYxB-200GP1, SYxB-200GP1-LongRep, SYxB-200GP2, SYxB-2GR1-C, SYxB-10GR2, SYxB-8GR1-C, SYxB-20GR2
Storage Unit	SYxE-8GR1-C, SYxE-20GR2
Capture Module	SYxC-1G4N1-HP/LE, SYxC-10G2N1-HP/LE, SYxC-10G4N1-HP, SYxC-40G2N1-HP, SYxC-100G2N1-HP, SYxC-100G2N2-HP
Capture Module for PacketReplayer	SYxC-1G4N1-HP, SYxC-10G2N1-HP, SYxC-10G4N1-HP, SYxC-100G2N2-HP

● Version up from V5.0

Control Unit	SYxB-2GP1/2, SYxB-10GP1/2, SYxB-20GP1/2, SYxB-40GP1, SYxB-80GP1, SYxB-100GP1/2, SYxB-200GP1, SYxB-2GR1-C, SYxB-10GR1, SYxB-8GR1-C, SYxB-20GR1
Storage Unit	SYxE-8GR1-C, SYxE-20GR1/2
Capture Module	SYxC-1G4N1-HP/LE, SYxC-10G2N1-HP/LE, SYxC-10G4N1-HP, SYxC-40G2N1-HP, SYxC-100G2N1-HP, SYxC-100G2N2-HP
EoS Models	SYS-100G-HPP2/2B

New/Changed Features and Fixed Issues

- In order to make FeedService run more stably, internal parameters have been added to the configuration file so that it can be adjusted only by restarting the service.
- In the SYNESIS FS, the parameter that enables/disables the reading from a file that is under writing have been added to the configuration file. The default value is disable.

New/Changed Features and Fixed Issues

- In the VoIP Filter, if a SIP packet contains multiple From headers or multiple To headers, the phone numbers in the multiple headers will compared in OR condition with the filter conditions.
- The following SNMP Trap notifications have been added.
 - Restarting FeedService: Check the process pid every minute and send a Trap if it is different from the previous one.
 - FeedService data error: FeedService data error: Seek FeedService.log and send a Trap if “detectPacket (false) skip block” has been hit.
 - FeedService communication error: Seek FeedService.log and send a Trap if “fail to send buffer to socket” has been hit.

- (Remarks) Data errors and communication errors will be sought every 15 minutes. Even if multiple errors are found, only one Trap will be sent. It contains the first occurrence time and number of occurrences.
- Restarts the FeedService regularly on 3:00 every Monday to prevent its memory leakage.
- The following issue have been fixed: When reading the data being captured by FeedService, if the capture had been stopped, the reading would stop immediately, and the part of the captured data would not be read. [# 19089]

Jul 07, 2021 **Version 6.0.11**

New/Changed Features and Fixed Issues

- Fixed the issue: In some case, if you applied version up package to SYNESIS 5.0 having 20 or more trace files, you cannot save any trace files more.
- FeedService has been added to the monit so that it will be restarted automatically when the process terminated.
- In the RESTful API, the functions to starting, stopping, and restarting each SYNESIS process has been added.
- Fixed the issue: the settings of FeedService logging had not been appended to the setting file when upgrading from version 5.0.
- Add ifenslave package if it doesn't exist when upgrading from version 5.0. This is because the SYNESIS that built before version 5.0 doesn't have it.
- In the RESTful API, the upper limit count of timestamps in TraceChannelTimestamps has been changed to 30,000.

Jun 07, 2021 **Version 6.0.9**

New/Changed Features and Fixed Issues

- The following change of the Version 6.0.6 was incomplete in some case. We fixed it.
 - In the RESTful API, you can specify the optional parameter channelTimestamps in the TraceCreateFrom function.

Jun 02, 2021 **Version 6.0.8**

New/Changed Features and Fixed Issues

- The issue had been fixed: In the SYNESIS FS via socket communications, the socket sometimes cannot be reconnected when the capturing of the server stops while the client is requesting the data reading. [#18038]
 - It might occur when the server is searching for a block to read, and it has not been sent to the client.
- The following change of the Version 6.0.7 was incomplete. We fixed it again.

- Fixed the issue: In the POST/traces function in the RESTful API, you could not save the trace file from the capture session in progress.

May 21, 2021

Version 6.0.7

New/Changed Features and Fixed Issues

- In the VoIP Filter, it was impossible to filter a DNS packet of A/AAAA Query and A/AAAA answer in some case. We changed its specification to filter them by matching with decoding the SRV record. [#18057]
- Add the timeout option to the SYNESIS FS via socket communications. [#18257]
- Fixed the behavior: In the SYNESIS FS via socket communications, the Feed cannot be stopped if no packets were captured from the beginning. [#18033]
- Fixed the issue: In the POST/traces function in the RESTful API, the condition for the maxSizeReached was incorrect. From this version, the condition is that the file of maxFileCount reached to the maximum size. [#18424]
- Fixed the issue: In the POST/traces function in the RESTful API, you could not save the trace file from the capture session in progress. [#18427]

May 14, 2021

Version 6.0.6

New/Changed Features and Fixed Issues

- The Version up Package is now available for some models.
- From this version, in the following models, the Disk Fault Detection feature had been enabled by the factory default.
 - Target Control Unit: SYxB-2GP1/2/3, SYxB-4GP1/2, SYxB-10GP1/2/3, SYxB-20GP1/2, SYxB-40GP1/2, SYxB-100GP2, SYxB-100GP2-LongRep
 - This feature will notice to the user at sign-in if the disk had been fault. But during the capturing near the full rate, it will have some impact to the performance. If you want to have priority to the performance, please disable this feature. For more information, please refer to the chapter 7.1.4, Disable the Fault Detection in the Administrators' Manual.
- Improved the DropPacketChecker to reduce the overhead to the database.
- In the RESTful API, you can specify the optional parameter channelTimestamps in the TraceCreateFrom function.
- From this version, the condition to filter the ENUM packet in the VoIP filter has been changed. That is, it contains the letters, ".e164enum.net" at the end of QNAME.
- The issue had been fixed: When applying the VoIP filter, if the packet whose port number is 53 and its query name referred from the header field exceeds the packet length was found, the capture process would be terminated. [#17435]
- The issue had been fixed: After User-role operate performed exporting statistics, you cannot operate the GUI. [#18015]
 - This issue would be happened from Version 6.0.1 to Version 6.0.5

- The issue had been fixed: In the PacketReplayer and Non-Performance Mode, if you specify FCS Auto and repeat replay, the performance would be worse because the detection of FCS bytes would happen at every repeat.
 - This issue would be happened from Version 6.0.4 to Version 6.0.5
- In the document “RESTful API 2.0 Reference” in SYNESIS Manual Lists, corrected the link to each definition.

Known Issues and Restrictions added in this Version.

- In the PacketReplayer, if you had changed to the “Performance Replay” profile by using CLI adapterProfile, the GUI won’t allow you to specify the Performance Mode replaying.
 - Similar to above, if you had changed to the “Capture & Non-Performance Replay Replay” profile by using CLI adapterProfile, the GUI state won’t be changed correctly.
 - If you want to do Performance Mode replaying in the GUI, please use the GUI version of adapterProfile.
 - If you want to do Performance Mode replaying in the CLI, you can use the CLI version of adapterProfile.
 - We don’t have a plan to fix this issue in the version 6.0.x.
- In the PacketReplayer with specifying Performance Mode, Wire Rate stream, and multiple times Repeating condition, the replay performance won’t reach to 100% if you use the small trace file. If you use about 500MByte or larger file, it will be stable.
 - This restriction is common for both GUI and CLI.
 - This restriction will affect also in GUI of v6.0.3 or later, and also in CLI of v5.0 or later.

Apr 09, 2021 Version 6.0.5

Fixed issues

- The issue had been fixed: After you saved a trace file with containing no packets into the Custom Folder, you cannot operate neither trace files nor start/stop capturing. [#18018]
 - This issue would be happened from Version 6.0.1 to Version 6.0.4
 - Even if this issue had been occurred, you can recover the SYNESIS to the normal state by applying the Patch of this version.

Mar 05, 2021 Version 6.0.4

New/Changed features

- PacketReplayer [#13622]
 - Now we have CLI & GUI PacketReplayer for 100G/40G/25G interface.
 - You can apply PacketReplayer option into the SYNESIS that has 2 NICs of 1G/10G.
- PacketReplayer Sync (optional) [#12917]

- You can replay for about 1 minutes with 100Gbps. To use this feature, you have to by the option to enhance the memory.
- SYNESIS FS (For developers)
 - Supports reading out by the socket communications. This feature is only for the developers, so it won't be written in the manual for now.

Fixed issues

- The issue had been fixed: In the condition of Performance Mode, repeat replay, and multiple trace files, the replay rate of 2nd cycle or after will be faster than the one of original trace file. [#15633]
 - (How to fix) It is necessary to specify the total time range of the file(s) in the parameter, but when multiple files were specified, only the time range of the last file was set. This issue had been fixed by setting the correct value for the parameter.
 - This is same bug fix as one in the PacketRepaler 5.0.4.
- The issue had been fixed: In the TCPRedirect, when rewriting the source IP address, the IP checksum would be incorrect in some packets. [#15681]
 - (How to fix) A step of adding the value of most significant 2 bytes to the least significant 2 bytes had been missed. Fixed by added the step.
 - This is same bug fix as one in the PacketRepaler 5.0.4.

Known issues and limitations added in this version.

The following limitations are planned to be fixed in later version.

- When the adapter profile is Performance Replay profile, you cannot create or operate the Capture Session replay profile.
- If you use a Packet Filter other than the pattern filter, some packets won't be sent out though they are matched with the filter condition. That is, the IP fragment packets that don't have the first packet in the replay source (trace files or capture session).
- If you use a Replace Filter other than the pattern filter, some packets won't be sent out though they are matched with the filter condition. That is, the IP fragment packets that don't have the first packet in the replay source (trace files or capture session).
- If you perform the following operations after stopping / pausing the replay, a non-zero number will be entered in the overview screen usage rate, bit rate, packet rate, and total bytes.
 - When you had selected another profile, and then you had selected the profile again.
 - When you had edited and saved the profile.

The following limitations won't be fixed.

- Please wait at least 10 seconds when you start replaying just after it stopped.
- Please reboot the SYNESIS If you see any of the following symptoms:
 - When the packets are not sent correctly.
 - When the link status on the top bar is not displayed with a green icon.
 - When an unexpected error dialog is displayed.

- When you stopped/paused the replaying, the number of transmitted packets/bytes displayed on the overview screen will be less than the actual. This is because the transmitting will be continued for a very short time after stopped/paused.
- When replaying at “Keep Original Speed”, the time gap between packets may shift by plus or minus 0.004%.
- When replaying in Non-Performance Mode using a trace file, you have a possibility that the transmission performance may deteriorate if you use too large trace file. Please use a trace file divided into small sizes to maintain transmission performance.

Feb 22, 2021 Version 6.0.3

Fixed issues

- The issue had been fixed: In the saving trace with applying a VoIP filter, if the SIP packets that have only beginning part of double quotation in the Display Name had been contained, then the process would be terminated. [#16938]
- The issue had been fixed: Cannot terminate the saving trace processes that are processing in parallel. [#16923]
 - This issue would be happened only in the Version 6.0.1 and 6.0.2
- The issue had been fixed: In the saving trace with applying a software filter, if the internal filter info were more than 90 characters, it would cause the SQL error and it could not be saved. [#16942]
 - This issue would be happened only in the Version 6.0.1 and 6.0.2

Feb 10, 2021 Version 6.0.2

New/Changed features

1. SYNESIS FS [#12144]
 - Can read out the packets directly with maximum 2.4Gbps rate.
 - Can read out the packets from external system by using Samba mount.
2. VoIP Filter
 - Can filter the fragment SIP and ENUM/DNS packets. [#11750]
 - Can filter the Diameter packets [#14952]
3. RESTful API 2.0 [#10716]
 - Provide the new APIs that have a sense of unity.
 - Unify the parameter name in lower Camel Case, and also unify the parameter format of date/time.
4. PacketReplayer [#13622]
 - Add automatic detection for FCS add or FCS recalculation.
5. Divide the capture session [#14490]
 - You can divide a part of a capture session and can analyze the divided capture session.
6. Specifying channels to capture [#14941]

- The channel to be captured can be specified before capture. This allows you to capture only on the desired channel without changing the physical routing.
- 7. Disk utilities on SYNESIS Portable
 - The notification has been added for the disk failure on some SYNESIS portable models. [#14534]
 - You can view SMART of the portable device from Management Console. This allows you to check the status of SYNESIS portable SSDs. [#14966]
- 8. Management Console
 - You can change SYNESIS IP addresses on Management Console. This eliminates the need to manually edit the configuration file for IP address changes. [#12726]
 - You can change the link speed and Capture/Replayer profile of SYxC-100G2N2(1)-HP NIC on the Management Console. [#15050]
- 9. Other changes
 - Syslog, trap, e-mail externally notifies that a Microburst alert has occurred in the auto analysis during capture. [#11437]
 - In the save trace dialog, the units of “minute” and “hour” had been added for Position/Range. [#13780]
 - In the save trace dialog, the auto-fill button had been added for Start Time and Stop Time. Its choices are Recent 30 minutes, 1 hour, 12 hours, 24 hours, 48 hours, 72 hours, and the whole yesterday. [#13781]
 - In trace file Save dialog box, a function has been added that stores the file format, split file size, maximum number of files, save filters, slices, and destination folder information in the browser's Cookie and inherits the settings. [#13782]
 - In Advanced of the save filter, the label of the button to which the AND condition and OR condition are added was changed. [#14592]
 - Added the ability to cancel exporting statistics halfway. [#12484]
 - There was a discrepancy between numeric values with hyperlinks (01, 02, 03...) and indexes with actual filenames (00000..pcapng, 00001.. pcapng,...) on the split trace file download screen. Change the hyperlink on the screen to 00, 01, 02... to match the actual file name. [#12587]
 - The status of capture session on which the packet was overwritten has been changed from "No packet" to "overwritten". [#12590]
 - TLSv1 1 is not supported for communication between the client and SYNESIS, and TLSv1 3 is newly supported. Therefore, in SYNESIS 6 0 and later, the corresponding TLS is v1.2 and v1.3. [#13840]
 - The version of Apache/Tomcat had been changed from 7.0.68 to 9.1.0.
 - G.8275. 1 PTP telecom profile is now supported.

Fixed issues

- The issue had been fixed: After you saved a trace file with containing no packets, you cannot operate neither trace files nor start/stop capturing. [#17303]
 - This issue would be happened only in the Version 6.0.1
- The issue had been fixed: In the control unit SYxB-100GP2, the available area of packet store disk would be less, then the system cannot correctly.

- This is same bug fix as one in the Version 5.0.8.
- The issues related with VoIP Filter had been fixed: (1) In the filter algorithm, CRLF in the SIP header was regarded as the end of the field, and the rest of the bytes were regarded as another field. (2) As a result, the header length exceeded the buffer size, and it caused the termination of the capture process. [#15517]
 - Modified specifications: (1) In the SIP header, a pattern of (CRLF + 1*space) is regarded as line wrapping, and that part is replaced with a space. (2) The header name and header value are acquired up to the upper limit of the buffer size, and the part exceeding that is not acquired.
 - This is same bug fix as one in the Version 5.0.10.
- The issue has been fixed: When the user performed the capture with the auto analysis, and stopped it, the 1MB or less packets that received just before the stopping sometimes would not be save into the disk. [#14370]
 - This is same bug fix as one in the Version 5.0.7.
- The issue had been fixed: Cannot set the name of trace file when the user creates it in Decode page. [#4017]
- The issue had been fixed: For “Select All”, only the items loaded on the screen were selected. [#6826]
- The issue had been fixed: The manual line speed in the capture option sometimes would not be reflected correctly. [#15847]

Known issues and limitations added in this version.

- We’ve created new guideline for keep the auto save performance.
 - So far: Auto backup function can be used when the system captures 1Gbps or less as average traffic.
 - From v6.0: Auto backup function can save trace files with 1Gbps performance only when both of the following conditions are satisfied.
 - 1) 3Gbps or higher transfer/write performance to the destination disc.
 - 2) The destination is not a disc inside SYNESIS.