

## TSSC/IMC v9.4.x Fix List

TSSC/IMC code level 9.4.10 replaces previous code levels 9.3.8, 9.3.10 and 9.3.11.

Since TSSC/IMC may get updated from 7.x, 8.x or 9.x level of code, please review not only the 9.4.10 specific changes and improvements, yet also those already provided in prior code level as needed.

### Changes introduced with TSSC/IMC v9.4.10 (May 2023)

Note: code level v9.4.10 has been approved for TS4500 and Diamondback tape libraries only and must not be installed on TSSC/IMC shared with other systems such as TS7760/TS7770

Note: To update TSSC/IMC from current code level to v9.4.10 these systems must install TSSC/IMC patch 'Prep9\_4Install' first to allow successful installation of v9.4.10

- Added support for Diamondback tape library
- Updated WebServer to WAS Liberty
- Updated Java JRE to 11.0.17.0
- Updated ECC client to version 3.1.7
- Updated AOS client
- Security related changes:
  - Modified Firefox configuration to not contact Mozilla telemetry server
  - Fixed issue where AOS proxy password could be logged
  - Improved security by disabling SSH SHA1 cipher  
Note: This fix was previously provided via TSSC patch
  - Fixed issue where client defined access control for Rsyslog settings was not properly enforced
  - Fixed issue where client defined access control for call home settings was not properly enforced
  - LDAP:
    - Improved LDAP implementation to better handle client group name filter  
Note: This fix was previously provided via TSSC patch
    - Improved LDAP implementation where certain special character were not allowed to be used in passwords
    - Improved LDAP implementation to support simple authentication for RACF  
Note: This fix was previously provided via TSSC patch
- Service specific changes:
  - RasMenu:

- Fixed issue where rsRasMenu option to boot from BANK0/BANK1 didn't work properly
- Fixed issue where rsRasMenu option to view firewall settings didn't work properly
- Fixed issue where rsRasMenu option to configure call home didn't work properly
- Fixed issue where rsRasMenu was still referencing RETAIN and modem
- Fixed issue where rsRasMenu option to collect 3584 logs didn't work properly
- Fixed issue where rsRasMenu reported different AOS server than web UI
- Fixed issue where rsRasMenu didn't offer option to perform CSP connection test
- Fixed issue where vtd\_exec upload from CD failed due to lower case filename or version extension
- Fixed issue where TS7700 mksysb broadcasting failed due to added code signature
- Fixed issue where right mouse click menu didn't correctly open the call home history log
- Fixed issue where selecting all entries from call home queue for deletion didn't work properly
- Fixed issue where /tmp filesystem was too small resulting in filesystem full during call home of large files  
Note: This fix was previously provided via TSSC patch
- Fixed issue where default gateway IP address had to be entered twice during FTI
- Fixed issue where TSSC/IMC patch download could fail
- Fixed issue where reset configuration to manufacturing default may not remove all data and result in subsequent errors
- Fixed issue where NTP functionality was no longer working
- Fixed issue where outdated bash history was present on newly updated systems
- Fixed issue where Backup Configuration didn't work for M/T 3948
- Fixed issue where Backup Configuration to TS7700 didn't work properly (missing IP address)
- Fixed issue where Backup Configuration restore from TS7700 didn't work properly (non-default hostname)
- Fixed issue where setting TSSC/IMC time during FTI didn't work properly
- Fixed issue where 'Download Log Files' didn't identify the download target
- Fixed issue where superfluous 'Close Window' button was still present in Call Home Event Log page
- Call Home and Remote Access related changes:
  - Fixed issue where "Delay Call Home" button did not work properly  
Note: This fix was previously provided via TSSC patch
  - Fixed issue where call home could fail due to improper cluster number reference
  - Fixed issue where AOS configuration properties file could cause the web UI to respond slowly  
Note: This fix was previously provided via TSSC patch
  - Fixed issue where TSSC/IMC MTM reporting in AOS controller was inconsistent with TSSC/IMC Web UI

Additional changes previously introduced with TSSC/IMC v9.3.10 (August 2022) and v9.3.11 (November 2022)

- Add support for new TS7770 machine type/model 3948-VED and 3948-CSB

- Service specific changes:
  - Fixed issue where restore of TSSC configuration backup from attached host fails due to serial number check
  - Improved call home data offload where data packages sent using 'offloadpkg' can have a filename including parenthesis
  - Fixed issue where blanks in client name were not properly maintained across code loads  
Note: This fix was previously provided via TSSC patch
  - Fixed issue where tape drive code broadcast to attached TS7700 didn't work due to improperly grayed out broadcast button  
Note: This fix was previously provided via TSSC patch
  - Improved verbiage in various interfaces replacing 'Knowledge Center' with 'IBM Documents'
  - Improved verbiage in various interfaces replacing 'RETAIN' with 'CSP'
  - Fixed issue where improper TSSC IP address was reported in main web page section 'System Console Product Information'
  - Fixed issue where TSSC Web UI got into a hang condition when trying to import IBM service documentation
  - Added support for importing PDF documentation via 'Copy CD to Console' function
  - Fixed issue where Fix Acquisition could fail when ECC is configured to use client proxy with authentication
  - Improved usability for grayed out 'Start RSC' by showing flyover help
  - Fixed issue where filesystem 'updatepkg' being full could prevent TSSC login
  - Added ability to select BANK0/BANK1 boot selection in 'rsRasMenu'

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=====
TSSC Menu
|->Shutdown Options ...
=====
1. Restart TSSC
2. Shut Down TSSC
3. Show current boot BANK [ BANK0 | BANK1]
4. Show installed TSSC version for each BANK
5. Set boot BANK to BANK0
6. Set boot BANK to BANK1
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- Updated First Time Install wizard to match TS7700 roadmap documentation
- Embedded latest TSSC/IMC service documentation
- Security related changes:
  - Add support for SNMP V3 to send encrypted traps
  - Improved log handling and messaging for RSYSLOG
  - Fixed issue where LDAP could fail when password contains special character
  - Fixed issue where LDAP password was truncated to max length of 16 character
- TS4500/IMC specific changes:

- Added ability to perform manual and scheduled TS4500 configuration backup



- Remote Access related changes:

- Added support for third AOS broker

Hostname	IP Address	Port	Description
aosrelay1.us.ihost.com	72.15.223.60	443	US AOS Broker <sup>1)</sup>
aosback.us.ihost.com	72.15.223.61	443	US AOS Broker <sup>1)</sup>
aoshats.us.ihost.com	72.15.223.62	443	US AOS Broker <sup>1)</sup>

Table 4 – AOS 4.0 Port Information

- Updated 'remote support center' configuration with new front server default values

Hostname	IP Address	Port	Description
xrsc-front-srv-1.southdata.ibm.com <sup>3)</sup>	170.225.126.11	22, 443 <sup>1)</sup>	remote support center front server
xrsc-front-srv-2.southdata.ibm.com <sup>3)</sup>	170.225.126.12	22, 443 <sup>1)</sup>	remote support center front server
xrsc-front-srv-3.eastdata.ibm.com <sup>3)</sup>	170.225.127.11	22, 443 <sup>1)</sup>	remote support center front server
xrsc-front-srv-4.eastdata.ibm.com <sup>3)</sup>	170.225.127.12	22, 443 <sup>1)</sup>	remote support center front server

- Modified 'remote support center' configuration to restart running service after TSSC/IMC reboot

- Call Home related changes:

- Fixed shortcomings in streaming Call Home implementation  
Note: streaming Call Home should only be enabled starting with this level of code
- Improved log details for Call Home failures when backend server is unavailable
- Added support for problem cases to be opened in Call Home Connect Cloud vs CSP  
Note: This change applies only to MENA and LA countries

Note: ~90 Github Issues have been addressed in 9.4.10

## Changes introduced with TSSC/IMC v9.4.14 (July 2023)

Note: code level v9.4.14 has been approved for TS7700 in addition to previously supported TS4500 and Diamondback tape libraries and can therefore be used for all supported TSSC/IMC HW models

Note: To update TSSC/IMC from code level v9.3.x and below to v9.4.14 these systems must install TSSC/IMC patch 'Prep9\_4Install' first to allow successful installation of v9.4.14. The patch is not needed when updating a TSSC/IMC from v9.4.10

- Added support for new POWER9 based TSSC Hardware
- Changed TS3000 to TSSC for streamlined naming convention
- Changed service documentation from web based Knowledge Center to PDF format
- Security related changes:
  - Fixed issue where Web UI failed to load properly after code update, when password hash of client certificate wasn't handled properly
  - Improved usability and security by removing port 80 for Fix Acquisition options, port 443 is always enforced
  - Removed TLS 1.2 cipher that are considered weak
  - Improved usability of 'SSL certificate' option to upload certificate file by disabling the upload button until a file was selected
  - LDAP:
    - Improved error message when LDAP server URL is improperly configured for LDAP (port 389) but LDAP port matches LDAPS (636)
    - Fixed issue where LDAP test attempts to use alternate LDAP server without one being configured
    - Fixed issue where saving empty password for anonymous bind wasn't handled properly
    - Fixed issue where alternate LDAP/RACF server wasn't tested when primary reported an error
- TS4500/Diamondback specific changes:
  - Updated TS4500 CLI tool to latest version
  - Fixed issue where Fix Acquisition didn't handle Diamondback
  - Improved usability by clarifying 'Backup Library Configuration' option applies to TS4500/Diamondback only
- Call Home and Remote Access related changes:
  - Fixed issue where AOS configuration page may not load properly due to improper /etc/hosts entries
  - Fixed issue where Call Home logs reported unexpected 'illegal reflective access operation' warning message
  - Improved usability by simplifying ability to broadcast vtd\_exec to TS7700 after using 'Download specific VTD'
  - Improved handling of config backup/restore to prevent old remote support center server to be propagated
- Service specific changes:
  - Improved usability by increasing the filename input field size for configuration backup
  - Fixed issue where creating PE package via rsRasMenu or Web UI could fail
  - Fixed issue where ECuRep connection test failed due to using incorrect network port
  - Improved usability by adding proper success message when using 'Rest customer password' in rsRasMenu
  - Improved usability of 'CD Copy to Console' function by providing better usage information

- Fixed issue where copying TSSC patch from CD did not work properly
- Added logfile for mksysb broadcast option
- Improved usability of 'USB Copy to Console' by reporting name of files that are being copied
- Fixed issue where write protected USB memory stick was reported as full
- Various improvements to rsStaticUpdate usability
- Fixed issue where FTI didn't handle signed TS7700 code images correctly
- Fixed issue where restore of configuration backup from remote host (TS7700) didn't work for 3948

Note: The behavior of bonding changed with the new release.

As a result any client using TSSC with External and AOTM adapter configured to the same subnet needs to be aware of the new behavior. Until v9.3.x two separate IP addresses are used for External and AOTM and the system chooses between them transparently. With v9.4.x there is a single IP address which will be used transparently by either physical adapter as needed.

Note: ~40 Github Issues have been addressed in 9.4.14

### **Changes introduced with TSSC/IMC v9.4.21 (January 2024)**

Note: code level v9.4.21 has been approved for TS7700 in addition to previously supported TS4500 and Diamondback tape libraries and can therefore be used for all supported TSSC/IMC HW models

Note: To update TSSC/IMC from code level v9.3.x and below to v9.4.21 these systems must install TSSC/IMC patch 'Prep9\_4Install' first to allow successful installation of v9.4.21. The patch is not needed when updating a TSSC/IMC from v9.4.10 or v9.4.14

- Security related changes:
  - Added CallHome trace to rsyslog reporting to allow CSP case number to be recorded in client syslog server
  - Improved csrf\_token cookie to be session expired
    - Note: This fix was previously provided via TSSC patch
  - LDAP:
    - Improved LDAP implementation to support anonymous authentication for RACF
      - Note: This fix was previously provided via TSSC patch
    - Fixed issue where RACF queries too long time to complete
      - Note: This fix was previously provided via TSSC patch
- Customer specific changes:
  - Added ability for client to defined Web UI timeout value
  - Fixed issue in System Launch Pad where launch of Web UI for attached system failed
- Call Home and Remote Access related changes:

- Fixed issue Call Home data packages of attached systems where not sent properly to ECuRep  
Note: This fix was previously provided via TSSC patch
- Fixed issue where AOS didn't properly report connection status when a proxy requiring login is used  
Note: This fix was previously provided via TSSC patch
- Fixed issue where AOS idle timeout did not work properly
- Fixed issue where AOS proxy configuration didn't work properly
- Service specific changes:
  - Fixed issue in rsStaticUpdate where USB memory stick was not properly supported
  - Fixed issue in rsStaticUpdate where install from DVD didn't have final confirmation check
  - Fixed issue where rsStaticUpdate output contained 'Syntax Error' messages
  - Fixed issue where Fix Acquisition didn't allow to download multiple TSSC patches
  - Fixed issue where Fix Acquisition of vtd\_exec didn't work properly for R5.2 Phase 1 PGA code level
  - Fixed issue where Fix Acquisition didn't properly detect legacy TSSC code images
  - Removed "Eject DVD" button from 'Mksysb broadcast options' for TSSC 7063-CR2
  - Fixed issue where TS7700 MkSysB code broadcast could time out  
Note: This fix was previously provided via TSSC patch
  - Fixed issue where 'Copy USB Data for TS7700 Broadcast' failed during Frame swap  
Note: This fix was previously provided via TSSC patch
  - Added new right mouse click menu 'Create Hydra First Time Install Directory' for Frame swap  
Note: This fix was previously provided via TSSC patch
  - Fixed issue where NIMOL install improperly prompts to remove DVD
  - Fixed issue where copying data from the USB for TS7700 Broadcast failed reporting 'read-only'
  - Added ability to import client documentation from USB memory stick
  - Fixed issue where 'Launch IBM documents' didn't properly report if none are installed
  - Improved output when copying service documentation fails
  - Improved TSSC Patch installer to install multiple patches in chronological order
  - Fixed issue where 'Backup Library Configuration' and 'Offload User Files' could time out
  - Fixed issue where serial port sessions were not terminated properly upon logout
  - Changed verbiage on TSSC Web UI to report memory and DDM sizes in GB
  - Fixed issue where TSSC Web UI could fail when SHA-1 is being disabled
  - Fixed issue where selecting/changing disk BANK options didn't work properly in rsRasMenu
  - Fixed issue where TSSC remote authentication process could hang in Grid configuration
  - Fixed issue where disabling LDAP via rsRasMenu didn't work properly  
Note: This fix was previously provided via TSSC patch
  - Fixed issue where 'External' network interface could disconnect intermittently

Note: The behavior of bonding changed with the new release.

As a result any client using TSSC with External and AOTM adapter configured to the same subnet needs to be aware of the new behavior. Until v9.3.x two separate IP addresses are used for External and AOTM and the system chooses between them transparently. With v9.4.10 and above there is a single IP address which will be used transparently by either physical adapter as needed.

Note: ~50 Github Issues have been addressed in 9.4.21

### **Changes introduced with TSSC/IMC v9.4.26 (May 2024)**

Note: code level v9.4.26 has been approved for TS7700 in addition to previously supported TS4500 and Diamondback tape libraries and can therefore be used for all supported TSSC/IMC HW models

Note: To update TSSC/IMC from code level v9.3.x and below to v9.4.26 these systems must install TSSC/IMC patch 'Prep9\_4Install' first to allow successful installation of v9.4.26. The patch is not needed when updating a TSSC/IMC from v9.4.10, v9.4.14, or v9.4.21.

- Security related changes:
  - Fixed vulnerability where Apache Commons FileUpload could create a denial of service.
  - Improved security on Call Home related log files.
  - LDAP:
    - Fixed issue where RACF credentials weren't working with challenge login.
    - Note: This fix was previously provided via TSSC patch
- Customer specific changes:
  - Fixed issue where TSSC couldn't import users from 9.3.11 to 9.4.21
  - Note: This fix was previously provided via TSSC patch
- Call Home and Remote Access related changes:



- Fixed issue in when trying to use the tsys script with a non-root user.
- Created a service to check and restore the serviceProviderIBM.xml.
- Fixed issue on Call Home where Proxy server with authentication didn't work properly.
- Service specific changes:
  - Fixed issue where Fix Acquisition of vtd\_exec didn't work properly for files with accompanying .iso images.
  - Fixed issue where Fix Acquisition of mksysb fails to create a symbolic link.
  - Fixed issue where Fix Acquisition couldn't download patches.
  - Added a functionality to the patch installation process that checks for server type.
  - Added functionality to clean up the /boot directory after firstboot.
  - Added rsyslog page to the setup wizard.
  - Fixed issue where Library Configuration Backups were not showing on the WebUI.
  - Fixed issue where System Console Product Information was showing the incorrect Hard Drive Size.
  - Fixed issue where RSYSLOG wasn't working properly with TLS
  - Fixed issue where RSYSLOG was showing the incorrect port.
  - Fixed issue where TSSC with 'bonding' configuration was creating a network script without netmask.
  - Fixed issue where TSSC with 'bonding' was deleting DNS configuration.
  - Fixed issue where TSSC with 'bonding' was creating a bond with 'Internal' network and 'Grid' network.
  - Fixed issue where 'Grid' had an invalid network-script
  - Fixed issue where TSSC was deleting bonding configuration.
  - Fixed issue where 'Grid' network interface was adding invalid ipv6 entries.

Note: ~30 Github Issues have been addressed in 9.4.26

## Changes introduced with TSSC/IMC v9.4.31 (Oct 2024)

Note: code level v9.4.31 has been approved for TS7700 in addition to previously supported TS4500 and Diamondback tape libraries and can therefore be used for all supported TSSC/IMC HW models

Note: To update TSSC/IMC from code level v9.3.x and below to v9.4.31 these systems must install TSSC/IMC patch 'Prep9\_4Install' first to allow successful installation of v9.4.31. The patch is not needed when updating a TSSC/IMC from v9.4.10, v9.4.14, or v9.4.21.

- Security related changes:
  - Upgraded WAS Liberty.
  - Added an ICMP firewall rule to improve security.
- Call Home and Remote Access related changes:
  - Fixed issue where serviceProviderIBMLocationDefinition file was getting deleted
  - Added a curl test for support and www-945.ibm.com when testing ECC connectivity.
  - Fixed issue where a proxy URL was deleted after a code upgrade
  - Fixed issue where the RSC client was restarting with the timeout option enabled.
  - Fixed issue where the Call Home Data Base and SmarterData was showing an incorrect Gateway.
  - Fixed issue where proxy settings were deleted after a code upgrade
  - Change the IP for the us aosback server.
  - Fixed issue where lightsoutprofile.properties was getting corrupted.
- Service specific changes:
  - Fixed issue where users couldn't offload packages due to permissions.
  - Fixed issue where Default gateway was getting deleted after a code upgrade.
  - Fixed issue where TSSC with 'bonding' was creating a bond with AOTM and Internal network.
  - Fixed issue where TSSC with 'bonding' was using an internal ip after a code upgrade.
  - Fixed issue where TSSC with 'bonding' was getting extra route entries.
  - Fixed issue where TSSC was setting a default gateway for the AOTM interface.
  - Fixed issue where Enhanced users couldn't use the command "ver".
  - Fixed issue where an incorrect message was showing after trying to attach a system
  - Fixed issue where Fix Acquisition of vtd\_exec didn't work properly for files with accompanying .iso images.

Note: ~25 Github Issues have been addressed in 9.4.31