Technical Support Appliance Update History

TSA 2.7.0.0	August, 2020

IBM Technical Support Appliance version 2.7.0.0 includes many internal component improvements which may result in multiple reboots during the update process, especially for pre-v2.5.0.0 installations. We recommend that users have a recent backup before updating. See the "Backup and Restore" option under "Administration" menu for instructions.

- Multilanguage support for Technical Support Appliance user interface and data support for the following languages:
  - German
  - French
  - Italian
  - Spanish
  - Brazilian Portuguese
  - Japanese
  - Simplified Chinese
  - Traditional Chinese
- Removed support for TSA Global SSH PKI Key
- Improved TSA Network configuration process
- Improved IBM Connectivity page processing
- VMware vCenter Server and ESXi discovery improvements:
  - Collect CIM information from ESXi via vCenter
  - Updated code to handle HTTP redirection
- IT device discovery:
  - Fixes for IBM TS7700 tape library discovery
  - Updated documentation for IBM TS4500 tape library
- Internal appliance security enhancements
- Other internal appliance updates and fixes

TSA 2.6.0.0	April, 2020

IBM Technical Support Appliance version 2.6.0.0 includes many internal component improvements which may result in multiple reboots during the update process, especially for pre-v2.5.0.0 installations. We recommend that users have a recent backup before updating. See the "Backup and Restore" option under "Administration" menu for instructions.

- New: Setup Wizard → TSA can now be started using a fast path through the Setup Wizard to complete configuration of your TSA quickly and easily with minimal customization
- New: VMware Dynamic Scope Discovery → Users can now define VMware Dynamic Scopes to collect detailed device information more easily from VMware vCenter Server, ESXi, and managed x86 Linux and Windows virtual machines. This timesaving feature can automatically detect, and query managed virtual machines without requiring users to configure new scope sets. See Chapter 5, section on VMware Dynamic Scopes of the Technical Support Appliance Setup Guide for configuration instructions
- New: Data Snapshot → Users can generate and save a local copy of the raw,

unformatted data that is collected before transmitting to IBM.

- Expanded IBM POWER Systems HMC Dynamic Scope functionality, including the option to use SSH keys

- Improved user/group Administrator functions

- Internal appliance security enhancements

- Other internal appliance updates and fixes

TSA 2.5.1.0	January, 2020

- IT device discovery:
  - o Enhanced: support for IBM FlashSystem 900 latest firmware version
  - o Enhanced: updated support for VMWare vCenter Server and ESXi recent versions

- Fixed issue of IBM POWER System LPARs not displaying correctly in some cases where TSA was configured to directly discover both HMC and its managed LPARs

- VMware vCenter Server and ESXi discovery improvements to support HTTP(s) redirects

- Internal appliance security enhancements

- Other internal appliance updates and fixes

TSA 2.5.0.0	September, 2019

TSA version 2.5.0.0 includes many internal component improvements which may result in multiple reboots during the update process, especially for pre-2.4.0.0 installations. As always, we recommend that users have a recent backup before updating. See the "Backup and Restore" option under "Administration" menu for instructions.

- IT device discovery:
  - o New: Palo Alto Networks devices
  - o More detailed IBM POWER HMC and LPAR relationships
  - o Expanded HMC Dynamic Scope functionality, including option to use ssh keys

- Simplified password reset of TSA default administrator (admin)

- Improved process for deploying custom certificates

- Credential list now displays "Authentication Type" to simplify verification

- Guidance/warning for large scope sets

- Internal appliance security enhancements

- Other internal appliance updates and fixes

TSA 2.4.0.0	February, 2019

- Associate IBMid in the TSA Registration page to download TSA Reports from the IBM Client Insights Portal (https://clientinsightsportal.ibm.com). To sign up for an IBM id, go to https://www.ibm.com/account.

- New install option: Technical Support Appliance can now be installed on Microsoft Hyper-V, in addition to the already supported VMware platform. Go to IBM Fix Central (http://ibm.biz/TSAImageFixCentral) to download TSA code packages and documentation

- Expanded hardware inventory discovery:
  - IBM TS7700 family of tape solutions
  - Check Point network devices
  - Discovery of Windows systems using Windows Remote Management (WinRM)
  - Dynamic discovery for IBM Power Systems logical partitions via the Hardware Management Console
  - Improved discovery of Juniper Networks parent/child relationships
- Internal appliance security enhancements
- Other internal appliance updates and fixes

TSA 2.3.0.1	June, 2018

- Internal appliance updates and fixes
- Fixes for IBM TS35xx tape library discovery

TSA 2.3.0.0	May, 2018

- Expanded hardware inventory discovery:
  - Discovery of F5 BIG-IP devices
  - VIOS inventory without "padmin" credentials
  - Additional inventory information for Wincor Nixdorf ATM's
  - Additional inventory information for Juniper Network devices
  - Ability to discover VMware vCenter license information
- Internal appliance security enhancements
- Other internal appliance updates and fixes

TSA 2.2.0.0	December, 2017

- Expanded hardware inventory discovery:
  - IBM TS4500 tape library
  - NetApp Data ONTAP 7-Mode
  - Fortinet FortiGate firewalls
  - Add support for IBM FlashSystem A9000 Version 12
  - Enhanced data collection for Juniper Networks Devices
  - Oracle servers via Integrated Lights Out Manager (ILOM)
- Improved discovery schedules: Create customized schedules to run at the individual Scope Set level
- Security enhancement: Supports SSH version 2 (with failover to SSHv1 if SSHv2 is not supported/configured)
- Other internal appliance updates and fixes

TSA 2.1.0.0	August, 2017

- Security enhancement:
  - Power Systems - Improved sensor logic to invoke commands remotely instead of running a script on the LPAR

    This enhancement requires the user to update the sudo configuration on the endpoint to identify minimum authorities needed. For instructions, see section **IBM Power Systems → AIX / Linux on Power**

in the latest Configuration Assistant Guide

- Resolved incomplete data collection in some cases for Power Systems devices
- VMware vCenter Server sensor improvements to support data centers grouped in folders
- Other internal updates and fixes

TSA 2.0.0.0	June, 2017

- Upgrade of the appliance discovery engine and internal components for currency, scalability, security, and expandability
- User interface enhancements for improved performance, usability, and added support for TLS 1.2 connectivity
- Integration of Advanced storage device definitions into the standard credentialing and scope set definition to simplify the user interface
- Support SSH version 2 when discovering HMC, VIOS, IVM, Linux, AIX, Solaris and IBMi devices for added security
- Support of SSH Keys for HMC, VIOS, IVM, Linux, AIX, Solaris, and SVC/V7000 family for added security and ease of use
- Enhancements to IBM connectivity for improved reliability
    - Enhanced connectivity testing
    - Enabled the option to use only port 443 / HTTPS for IBM connectivity

TSA 1.7.3.1	December 14, 2016

- Internal appliance updates and fixes

TSA 1.7.3.0	November 17, 2016

- Hardware inventory discovery:
    - New device type added: Wincor Nixdorf ATM machines.
    - Option to enable/disable use of Service Location Protocol (SLP) to improve discovery of EMC devices via SMI-S Providers
    - VMware vCenter Server sensor improvements to accelerate discovery of managed hardware and virtual machines
    - Improvements to discover IBM FlashSystem v9000 devices more accurately
    - Support for older IBM Flex System Manager versions
- Security and Stability improvements:
    - Improved transmission compression to reduce size and bandwidth usage
    - Automatic retry in the event of transmission or network errors
    - Fixed errors with IBM Power Systems LPAR discovery
    - Other security fixes and enhancements
- Usability enhancements:
    - Added IBM Support contact information for administrator password reset requests
    - Fixed error with editing a scope after a database rebuild

TSA 1.7.2.3	August 12, 2016

- Expanded hardware inventory discovery:
  - o HP BladeSystem enclosure information via HP Onboard Administrator
  - o Brocade Host Bus Adapter information via VMware ESXi hypervisor. This is in addition to Emulex and QLogic HBA discovery introduced in TSA 1.7.2.2)
  - o Other adapter types (i.e. Ethernet, USB, etc.) via VMware ESXi hypervisor. (This is in addition to adapter information for standalone x86 Windows and Linux servers introduced in TSA 1.7.2.2)
  - o Location information for Chassis Management Module (CMM) in Flex Systems and Advanced Management Module (AMM) in Lenovo / IBM Bladecenters
  - o Improved inventory parsing for Lenovo / IBM x86 servers when discovered via the integrated Management Module (IMM)

TSA 1.7.2.2	May 20, 2016

- Storage Area Network topology enhancements:
  - o Worldwide Port Name (WWPN) and World-Wide Node Name (WWNN) via VMware discovery (vCenter and ESXi)
  - o Host WWPN and WWNN via direct discovery of EMC, HP, and IBM Storage systems
  - o Host Bus Adapter (HBA) information for x86 running VMware ESXi hypervisor, and standalone Windows and Linux systems
- Expanded hardware inventory discovery:
  - o Inventory discovery for other adapter types (i.e. Ethernet, USB, etc.) for standalone Windows and Linux running on x86. Displaying this adapter information in TSA Reports will be completed in June. (Note: Discovery for other adapter types for ESXi hypervisor x86 configurations will be included in future appliance and reports releases)
  - o EMC Data Domain systems
  - o IBM FlashSystem V9000
  - o IBM / Lenovo System X firmware level information discovered via the Integrated Management Module (IMM)
  - o Brocade devices in Access Gateway Mode
  - o EMC SMI-S Provider detection in environments where multicast is disabled
  - o Bay number association for Blade servers when discovered via AMM, CMM, FSM
- Usability, Security and Stability improvements:
  - o Discovery of Update Access Keys expiration dates for Power 8 systems (via HMC discovery)
  - o Other internal updates and fixes

TSA 1.7.2.1	March 07, 2016

- o Updated glibc packages to fix potential security issue
- o Transmission performance update

TSA 1.7.2.0	February 05, 2016

- Expanded hardware inventory discovery for the following:
  - o IBM TS3100 and TS3200 tape libraries
  - o IBM 3584 tape libraries when no credentials are required / defined.
  - o Better discovery of HP, Dell, and Lenovo x86 server inventory details via VMware vCenter and ESXi
  - o Discovery of non-clustered VMware ESXi servers via VMware vCenter.
  - o Juniper: Improved inventory discovery of OS name, OS version, and memory size
  - o IBM DS3xxx and DS5xxx: Better discovery of frames and enclosures
  - o HP Integrity and HP 9000 servers: Summary-level inventory information via iLO
- Security and Stability improvements:
  - o The user can edit the following system files that are closely related to TCP/IP configuration from a new option:
    - ▪ /etc/resolv.conf: This file allows the user to edit the name resolution settings for the local network resources, which is useful resolving host short names to multiple domains
    - ▪ /etc/hosts: This file contains a map of names and IP address of known network resources, so the names can be locally resolved without the need of a Domain Name Server
  - o Allow user to define a password expiration to be less than 90 days to allow alignment to Client corporate security directives
  - o Improved stability, especially for larger environments: Users can schedule automated system maintenance to help keep the TSA running at optimal performance. Although this function is not turned on by default (to not conflict with pre-existing discovery and transmission schedules), it is highly recommended that the user configures the schedule for system maintenance under the Administration menu
  - o Automatic transmission retries (within 6 hours) if the network is down
  - o Implemented database maintenance as part of the discovery process to improve scalability
  - o Other Internal updates and fixes
- Usability enhancements:
  - o Improved scheduling flexibility: Users can now set automated discoveries, transmissions, and database cleanup by day of the month instead of just day of the week
  - o "TSA Update History" is now included in the Documentation menu.
  - o Updated compression technology that significantly reduces transmission file size and bandwidth usage
  - o Changed the default TCP/IP setting to "Static" instead of "DHCP" for initial installation of TSA
  - o Authorized users can download TSA virtual image from IBM Fix Central

TSA 1.7.1.0	September 10, 2015

- Support for installing the TSA virtual appliance on Dell x86 and HP x86 servers with VMware ESXi hypervisor

- Hardware inventory discovery for the following devices -
  - o IBM Tape Library model 3576
  - o Qlogic switches
  - o System X and BladeCenter servers via the integrated management module (IMM/IMM2)
  - o Fibre channel host bus adapter (HBA) information for x86 hosts running VMware, Windows, and Linux
- Improved discovery for expansion drawers on IBM Power systems
- User Interface: Added a view with inventory information for devices that were deleted during the Inventory Cleanup cycle
- Internal updates and fixes

TSA 1.7.0.0	July 15, 2015

- Improved security. *Connectivity changes required, see details below. *
- Improved discovery for Power Systems expansion drawers via the HMC
- Inventory discovery for IBM FlashSystems 820 and V820
- Inventory discovery for HP Storage
- Hardware inventory discovery for IBM PureFlex systems via the FlexSystem Manager (FSM)
- Firmware recommendations for IBM FlashSystems
- Bulk import of predefined scope sets and devices via csv file
- Improved detail in Inventory summary report in the TSA user interface
- New test function for SNMPv3 credential types
- Improved transmission performance
- Improved UI capabilities
- Guidance when IP scope exceeds 400 endpoints
- Internal appliance updates and fixes
- Web browser updates, plus support for Google Chrome

Technical Bulletin: Required actions for updated connectivity to IBM Support

- **TLS v1.2 Security Enhancement:**
  - o TSA v1.7.0.0 includes valuable enhancements and new features, based on your feedback over the last several months. One important enhancement is an improved transmission path to the IBM Support infrastructure. TSA v1.7.0.0 and later now leverages IBM's new server environment for electronic support, which provides stronger security and other performance improvements

- **Highlights of these enhancements include:**
  - o Improved security - Now supports TLS 1.2 protocol, no SSLv3 allowed, 2048-bit strength RSA certificate keys with SHA-256 hashing and enables SHA-2 cipher suites
  - o Simplified client network configuration - In comparison to the legacy IBM support infrastructure, the number of IP addresses required for outbound connections from TSA will decrease from the current 13 IPs to just 3 new IPs
  - o Higher availability - This environment is comprised of a server cluster

consisting of several physical machines that are load balanced through a single host name, providing improved availability and performance

TSA users must explicitly change the connectivity configuration to use the new server environment. This new IBM Support IT environment will co-exist with the legacy IT environment for a period to allow compatibility and transition for existing customers.

Required actions for TSA users

- Technical Support Appliance version 1.7.0.0 and later will use this new infrastructure when connecting to IBM. You will need to take the following actions to connect to the new IBM Support servers and take advantage of these enhancements
  - o Change your network firewall to allow outbound connections to the new servers –

Hostname:	esupport.ibm.com
IP Addresses	Ports
129.42.54.189	443 & 80
129.42.56.189	443 & 80
129.42.60.189	443 & 80

  - o Run Test Connection from the IBM Connectivity panel to ensure proper connectivity. You should get a successful connection status message. See Checking Connection Status below)

- Once TSA detects a successful connection to esupport.ibm.com, the TSA will no longer connect to IBM through the legacy servers. All types of TSA transactions will be handled through the new servers. (See the TSA Setup Guide for a list of legacy IP addresses that will no longer be used by TSA)

- Until you take the above actions the TSA will continue to connect to IBM through the legacy server connections in a failover state. You may notice the following issues:
  - o IBM Connectivity on the summary panel will show a yellow warning icon. See Checking Connection Status below.
  - o TSA operations connecting to IBM may be noticeably slower (e.g. checking for updates, inventory transmissions, etc.). TSA will first attempt to connect to the new esupport.ibm.com infrastructure. If these connections fail, the TSA will fail over to the legacy IBM Support servers. The slower performance may be more noticeable if you are connecting to IBM through a proxy

Additional Information: Checking Connection Status

- The IBM Connectivity section on the Summary panel will provide an indicator to help you determine when you have successfully connected to the new esupport.ibm.com infrastructure
  - o For successful connections to the new server environment, the status will be green on the Summary panel
  - o For partially successful connections, where network rules have not yet been configured for the new servers, IBM Connectivity status will show yellow, signifying failover connectivity to the legacy servers
  - o If you are unable to connect to either the new or legacy IBM server environment, IBM Connectivity status will show red. If this occurs, verify that your network is allowing outbound connections to the new IBM Support IP addresses and retry connectivity

TSA 1.6.2 Update 1	April 24, 2015

- Inventory discovery for the following devices –
  - o EMC CLARiiON
  - o VNX
  - o VMAX storage
- Hardware inventory discovery for IBM PureFlex System chassis and compute nodes via the Chassis Management Module (CMM)
- Improved inventory discovery of IBM Power Systems managed by the Hardware Management Console (HMC)
- Internal appliance updates and fixes

TSA 1.6.2	January 29, 2015

- Improved discovery for the following devices –
  - o Brocade
  - o IBM Integrated Virtualization Manager
  - o Windows 2008 (R2 and later)
  - o DS8000 expansion frames
  - o IBM FlashSystem 840 and V840
  - o SAN Volume Controller
  - o Power Systems HMC
  - o Solaris zones
  - o General x86 systems
- Enhanced TSA code update process
- Improved user interface for Backup and SNMP credential testing
- Embedded documentation and configuration guides
- Improved security: enabled TLS support for browser connectivity (and disabled legacy SSL support)
- Accessibility improvements to the user interface
- Internal security enhancements, updates, and fixes

TSA 1.6.1 Update 1	October 22, 2014

- Patch to fix security flaw in Bash

TSA 1.6.1	September 10, 2014

- Enhanced discovery support for the following –
  - o Brocade
  - o Power HMC
  - o IBMi
  - o V7000 devices
- Internal appliance updates and fixes

TSA 1.6.0	June 27, 2014

- Added support to improve discovery of NetApp, N series, V7000, V7000 Unified, and BNT devices
- Enhanced real time credential testing for XIV, DS6K and DS8K, ESXI, vCenter, SVC/V7000
- Automatic conversion of PPK keys to SSH keys for SVC/V7000 devices and validation checks for keys
- Improved Power Systems Hardware Management Console discovery to retrieve firmware levels for managed devices
- Success/failure history to help users debug credential issues
- Internal security enhancements
- Accessibility improvements to the user interface
- Internal appliance updates and fixes

TSA 1.5.3	April 11, 2014

- Improved performance for IBM manufactured devices to avoid inventory collection hangs
- Internal appliance updates and fixes

TSA 1.5.2	March 28, 2014

- Improved collection performance for System x servers
- Improved Solaris data collection

TSA 1.5.1 Update 1	March 14, 2014

- VIOS discovery enhancements
- Discovery refinements to increase system collections

TSA 1.5.1	February 14, 2014

- Inventory processing enhancements
- Improved device details from discoveries involving IBM Power Systems Hardware Management Consoles
- Enhancements to support and report additional storage hardware
- Internal appliance updates and fixes
- Stability improvements

TSA 1.5.0	December 6, 2013

- User interface navigation improvements
- Removal of the Windows Management Instrumentation (WMI) Gateway and Anchor support
- Allow discovered inventory to be removed from the discovery history once it has aged to a certain length and has not been re-discovered
- Reset the discovered inventory history so only the information from the next discovery is in the discovered history inventory
- Ability to move a scope from one scope set to another

- Logging and debug enhancements
- Credential verification after a credential or password creation or update
- Improved device details from discoveries
- Added support to discover VMware vCenter Server instances
- Added support to discover IBM Power Systems Hardware Management Consoles (HMCs)
- Internal appliance database updates and fixes