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December 2016 -
V19 - English

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TSM - IBM Spectrum Protect 8.1.0

Upgrade Information and version history from TSM 6.1 onwards



New: [TSM IBM Spectrum Protect 7.1.3 / 8.1.0 Update Workshop](#)

+++++ **December 2016** ++++++

Latest news for TSM / IBM Spectrum Protect 8.1.0

Available for download starting: 9th of December 2016 from FTP / Fix Central

➔ a patch/fix version with some improvements.

PLET – Announcement Letter

http://www-01.ibm.com/common/ssi/ShowDoc.wss?docURL=/common/ssi/rep_ca/7/877/ENUSZP16-0637/index.html&lang=en&request_locale=en

What's new with IBM Spectrum Protect 8.1.0:

Overview:

Some of the new Spectrum Protect V8.1.0 includes the following features:

- IBM Spectrum Protect native object storage support for Amazon S3
- Improved performance for hybrid clouds by optimizing data movement to IBM Cloud Object Storage and Amazon S3 cloud storage
- Support for directory-container pool copies on tape
- Support for predefined cloud container pools
- Simplified LDAP authentication
- Support for conversion of existing data residing on tape, VTL, or file devices to directory or cloud container pools
- Deeper vSphere Web Client integration for deployment and day-to-day monitoring and redriving failed backups
- Data Protection for VMware cooperative application support for Microsoft SQL Server 2016
- Faster Data Protection for VMware backup and restore operations for large VMware virtual machines
- Support for Microsoft Windows™ Server 2016 for the Backup-Archive Client, Data Protection for VMware, Hyper-V, Oracle, SQL, Exchange, Workstations, and Space Management for Windows
- Data Protection for Oracle automation features
- Support for SAP HANA multitenant databases and parallel-stream restores
- Tighter integration of IBM Spectrum Protect for Space Management for UNIX™/Linux™ and IBM Spectrum Scale™
- Usability and performance enhancements for Space Management for Windows

Details for the features:

- **IBM Spectrum Protect native object storage integration supports Amazon S3**
-

Amazon S3 cloud storage can be defined as a target for IBM Spectrum Protect cloud-container pools. Primary or secondary copies of data can be stored in the IBM Spectrum Protect Server using Amazon S3 object storage. Previously announced support for IBM Spectrum Protect cloud-container pools include IBM Cloud Object Storage (formerly known as Cleversafe®), IBM Softlayer, OpenStack Swift, and IBM Spectrum Scale. IBM Spectrum Protect combines its powerful software-defined, inline data deduplication and compression with Amazon S3 to create a cost-effective data protection solution.

- **Optimized performance for hybrid clouds**

IBM Spectrum Protect Server introduces a temporary cache to optimize the movement of data to IBM Cloud Object Storage (formerly known as Cleversafe) and Amazon S3 cloud storage. Backups are quickly stored to the temporary cache (directory containers) and then transferred to the cloud as larger objects, leveraging the efficiency of S3 transfer mechanisms. This feature enables more use cases for leveraging cost-effective cloud storage.

- **Copy data from directory-container pools to tape**

Administrators can create a copy of directory-container pools on tape and repair directory-container pool data from this copy. This feature lowers infrastructure costs by enabling copies of deduplicated directory-container pools on tape for repairs, compliance, and air gap, especially for environments with a single backup server where a second IBM Spectrum Protect server is not available to store a second copy of backup data.

- **Predefined cloud-container pools**

Administrators can use predefined cloud S3 bucket names when creating cloud containers. This is important for organizations that require special policy and access rules when using object storage. This feature enables consistency and tighter control when using cloud storage with IBM Spectrum Protect.

- **Simplified LDAP authentication**

Authentication management with centralized LDAP integration has been simplified by enabling users and administrators to authenticate with the same user IDs that they use to log on to an Active Directory server. IBM Security Directory Server and Microsoft Active Directory are supported. This feature lowers administration costs by simplifying user ID management.

- **Convert existing data on tape and VTL to container pools**

Easily migrate your environment from VTLs or tape to cloud-container or directory-container pools using an automated, nondisruptive conversion utility that harvests data from your VTL or tape and moves it to container pools. This enables you to reduce costs immediately by leveraging the scalability and space efficiencies of IBM Spectrum Protect container pools.

- **Deeper vSphere Web Client integration and day-to-day monitoring**

VMware administrators can simplify initial deployments, including centralized configuration of data protection policy and scheduling, directly in the vSphere Web Client. Use VMware tagging to help set policies for retention and schedules, as well as to exclude VMs from backups without leaving the vSphere Web Client interface. They can also perform daily monitoring tasks and redrive failed backups with ease.

- **Data Protection for Oracle automation features**

Automate configuration and operations in Data Protection for Oracle environments, lowering costs for Oracle DBAs.

- **Support for SAP HANA multitenant database containers and parallel-stream restores**

This feature extends data protection for SAP HANA environments to multiple-container mode configurations and increases performance for recovery operations.

- **Space Management for UNIX/Linux integration with IBM Spectrum Scale and scalability enhancements for IBM Linear Tape File System™ Enterprise Edition environments**

Tighter integration between IBM Spectrum Protect for Space Management and IBM Spectrum Scale means increased overall performance, improved recall scalability (especially for IBM Spectrum Archive™ Enterprise Edition workloads), and simplified restore for environments with large numbers of files.

- **Space Management for Windows enhancements for usability and performance**

Space Management on Windows just got easier with GUI enhancements for searching for the filespace, and increased performance during migrations.

- **New support for IBM Spectrum Protect clients:**

- Data Protection for VMware cooperative application support for Microsoft SQL Server 2016
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- Support for Microsoft Windows Server 2016 for the Backup-Archive Client, Hyper-V, Oracle, SQL, Exchange, Workstations, and Space Management for Windows
- Support for Ubuntu 16.04 and 14.04 for the Backup-Archive Client on x86 and Linux on Power® (LE)
- Support for IBM AIX® 7.2 for Data Protection for Oracle

++++++ **September 2016** ++++++

Latest news for TSM 7.1.7

Available for download starting: 16th of September 2016 from FTP / Fix Central

➔ **a patch/fix version with some improvements.**

IBM Spectrum Protect Version 7.1.7 is made up of the following components and code levels (see: swg24042235)

- Server V7.1.7
- Backup-archive client at V7.1.6
- Application programming interface (API) at V7.1.6
- Server and Operations Center at V7.1.7
- IBM Tivoli Monitoring for Spectrum Protect at V7.1.3

Part-Numbers - IBM Spectrum Protect Version 7.1.7 for Windows and AIX/Linux/UNIX servers:

UNIX: <http://www-01.ibm.com/support/docview.wss?uid=swg24042271>

Windows: <http://www-01.ibm.com/support/docview.wss?uid=swg24042276>

For patch list see:

<http://www-01.ibm.com/support/docview.wss?uid=swg21678116>

Fix Pack Readme:

<ftp://ftp.software.ibm.com/storage/tivoli-storage-management/maintenance/server/v7r1/WIN/7.1.7.000/README.htm>

What's new with IBM Spectrum Protect **7.1.7:**

Some of the new Spectrum Protect V7.1.6 includes the following features:

- **Connection to AMAZON S3 Cloud**

With Tivoli® Storage Manager Version 7.1.7, you can configure cloud-container storage pools to use Amazon Web Services (AWS)

- **Optimize data movement to the cloud (staging / cache directories)**

What was available already in 7.1.6 is now documented: After you define a cloud-container storage pool, create one or more directories that are used for local storage. You can temporarily store data in local storage during the data ingestion, before the data is moved to the cloud. In this way, you can improve system performance (in define stgpooldir command).

- **Protect directory-container storage pools by using tape volumes**

This is a “legacy” “device class” stg pool (no container pool) as it is e.g. a file volume sequential pool!

POoltype = COPYCONtainer

With V7.1.7, you can protect directory-container storage pools by copying the data to **container-copy storage pools**, where the data is **stored on tape volumes**.

A *container-copy storage pool* is a new type of storage pool that provides an alternative to using a replication server to protect data in a directory-container storage pool.

Container-copy storage pools can be used to **repair minor to moderate** directory-container storage pool damage, which includes damaged containers or directories.

Attention: However, replication is the only way to provide complete disaster recovery protection for directory-container storage pools. **With replication, you can directly restore client data from the target server if the source server is unavailable.**

Restriction: **It is not recommended to use container-copy storage pools for disaster recovery protection**, even if your storage environment is based on a small blueprint configuration.

Repairing an entire directory-container storage pool, even for a small blueprint configuration, **can take several days**. Adding more drives or using the latest generation of tape technologies does not decrease the time that is required for the repair activity.

For information about using container-copy storage pools to protect and recover a server environment in a disaster, and for using container-copy storage pools in storage environments that are based on medium or large blueprint configurations, see technote 7048653.

- **LDAP improvements**

Tivoli® Storage Manager Version 7.1.7 simplifies the process of authenticating user IDs by using an Active Directory database. In contrast to previous releases, users and administrators can authenticate **by using the same user IDs that they use to log on to an Active Directory server.**

++++++ **June 2016** ++++++

Latest news for TSM 7.1.6

Available for download starting: 17th of June 2016 from FTP / Fix Central

➔ **a patch/fix version with some improvements.**

PLET – Program Announcement Letter – please see:

<http://www-01.ibm.com/common/ssi/cgi-bin/ssialias?subtype=ca&infotype=an&appname=iSource&supplier=877&letternum=ENUSZP16-0122>

For patch list see:

<http://www-01.ibm.com/support/docview.wss?uid=swg21678116>

Fix Pack Readme:

<http://www-01.ibm.com/support/docview.wss?uid=swg27047485>

What's new with IBM Spectrum Protect 7.1.6:

Some of the new Spectrum Protect V7.1.6 includes the following features:

- **Faster Replication**

Using high speed data transfer to replicate data rapidly from one Spectrum Protect server to another faster. This capability is particularly beneficial over long distances and impaired networks, and helps to achieve disaster recovery goals for rapid off-site replication of business data.

- **Converts existing file and virtual tape library (VTL)-type deduplicated storage pools to Spectrum Protect directory-container storage pools.**

New **CONVERT stgpool** command: This automated conversion function enables organizations to take advantage of the space, management, and database improvements in the new storage pools.

- **Daily tape related management tasks**

Administrators can view and respond to daily tape related management tasks from within the Operations Center with a real-time understanding of tape related actions.

- **Native object storage support for Cleversafe**

Extends native object storage support for Cleversafe with its reliable and scalable storage platform. Administrators can now define Cleversafe as a target for on premises object storage pools in Spectrum Protect server.

- **8 TB VMDK disks**

Supports protected VMware virtual machine disk (VMDK) sizes that are increased from 2 terabytes (TB) to 8 TB.

- **Supports dynamic Microsoft™ Exchange mailbox restore.**

- **Spectrum Protect Operations Center includes new customizable reporting features.**

- **Delivers enhanced support for clustered NetAPP storage arrays running Data ONTAP.**

- **Supports IBM Spectrum Protect for Enterprise Resource Planning in SAP HANA environments on IBM Power® systems.**

+++++ **March 2016** ++++++

Latest news for TSM 7.1.5

Available for download starting: 11th of March 2016 from FTP / Fixcentral sites.

➔ **Essentially a patch/fix version with some improvements.**

For patch list see:

<http://www-01.ibm.com/support/docview.wss?uid=swg21678116>

Fix Pack Readme:

<http://www-01.ibm.com/support/docview.wss?uid=swg27047485>

What's new with IBM Spectrum Protect **7.1.5:**

○ **Server**

- **Back up data to a Cleversafe object storage system**

With Tivoli® Storage Manager Version 7.1.5, you can configure cloud-container storage pools **to use Cleversafe®**, an IBM® object storage system, to back up data.

The Cleversafe object storage system uses the Simple Storage Service (S3) protocol to communicate with a cloud server. The Cleversafe object storage system can help you simplify storage management, improve server performance, and secure data by using encryption.

- **Compress data in container storage pools**

With Tivoli® Storage Manager Version 7.1.5, you can increase the amount of available space in a storage pool by **enabling inline compression.**

When you enable inline compression, data is compressed as it is written to a storage pool. Data compression is available for directory-container and cloud-container storage pools.

- **Repair damaged data on a replication target**

With Tivoli® Storage Manager Version 7.1.5, when a storage pool protection process runs for a directory-container storage pool on a source server, damaged extents **in the target server's storage pool** are repaired automatically.

Information about what is repaired is recorded in the activity log for the target server. The automatic repair has the following limitations:

- Both the source server and the target server must be at V7.1.5 or later.
- To be repaired, extents must already be marked as damaged on the target server. The repair process does not run an audit process to identify damage.
- Only target extents that match source extents are repaired. Target extents that are damaged but have no match on the source server are not repaired.
- Extents that belong to objects that were encrypted are not repaired.
- The timing of the occurrence of damage on the target storage pool and the sequence of REPLICATE NODE and PROTECT STGPOOL commands can affect whether the repair process is successful. Some extents that were stored in the target storage pool by a REPLICATE NODE command might not be repaired.

- **View new, changed, and deleted server messages**

Beginning with Tivoli® Storage Manager Version 7.1.5, **the server installation directory contains lists of new, changed, and deleted** server messages.

Use these lists to determine what messages are new, changed, or deleted between versions and releases.

Related reference:

[ANE messages list](#)

[ANR messages list](#)

- **Operation Center**

- **Operations Center updates**

New features are available in Tivoli® Storage Manager Operations Center Version 7.1.5. By using the updated Operations Center, you can store client data in a new type of cloud storage pool and monitor data deduplication and compression in directory-container storage pools.

The following enhancements were made to the Operations Center:

- You can use the **Add Storage Pool wizard** to create a cloud-container storage pool that backs up data to **Cleversafe**, an IBM object storage system, using the Simple Storage Service (S3) protocol.
 - You can **use inline compression** with a directory-container storage pool to maximize storage pool space. You can complete the following tasks:
-

- Specify whether data that is stored to a directory-container storage pool is compressed.
- **View how much space was saved in a storage pool by deduplicating and compressing data.** The savings from both client-side and server-side compression are shown.

For more information about these enhancements, see the Operations Center help.

○ **TSM Monitoring**

- **Tivoli Monitoring for Tivoli Storage Manager updates**

You can use IBM® Tivoli® Monitoring for Tivoli Storage Manager Version 7.1.3 **to monitor Tivoli Storage Manager V7.1.5** or earlier servers and to produce historical reports about server and client activities.

For product documentation, see [Tivoli Monitoring for Tivoli Storage Manager](#) in the Tivoli Storage Manager wiki.

Related information:

[Installing and upgrading Tivoli Monitoring for Tivoli Storage Manager](#)

+++++ **December 2015** ++++++

Latest news for TSM 7.1.4

Available for download starting: 7th of December 2015 from FTP / Fixcentral sites.

➔ **Essentially a patch/fix version with some improvements.**

For patch list see:

<http://www-01.ibm.com/support/docview.wss?uid=swg21678116>

Fix Pack readme files:

What's new with IBM Spectrum Protect 7.1.4:

- Operation Center Updates
manage email reports and monitor network-attached storage (NAS) file servers.

Reports

You can complete the following tasks:

- Configure and manage a general operations report and a license compliance report. These predefined reports are available by default.
- Configure and manage custom reports, which use SQL SELECT statements to query one or more managed servers.
- Schedule reports to be sent automatically, or manually send a report.

NAS file servers

You can complete the following tasks:

- View capacity and status information for NAS file servers that are registered as Tivoli Storage Manager clients.
- View the capacity of volumes that are defined on NAS file servers.
- Track the status and performance of full and differential volume backups.

- Simplify backup operations for data in NetApp clusters

With Tivoli® Storage Manager Version 7.1.4, you can simplify the process of backing up data that is on a network-attached storage (NAS) device in a NetApp cluster. You can configure Tivoli Storage Manager to use the NetApp Cluster Aware Backup extension, which facilitates backup operations in a clustered environment.

- Improve performance for backup operations from NetApp file servers

When you configure Tivoli® Storage Manager Version 7.1.4 to back up data from a NetApp network-attached storage (NAS) device, backup operations use a 256 KB tape-block size. In earlier releases, a 64 KB tape-block size was used. The 256 KB tape-block size can improve system performance (with ONTAP 8.3 or later).

- Prevent error messages when your system fails to use TLS 1.1 or earlier protocols

With Tivoli® Storage Manager Version 7.1.4, you can prevent error messages about failures to use Transport Layer Security (TLS) 1.1 or earlier protocols for Secure Sockets Layer (SSL) ports. To prevent the error messages, specify a value of YES for the new SSLHIDELEGACYTLS server option.

When you specify a value of YES, servers and storage agents preclude the use of TLS 1.1 and earlier protocols for SSL ports. The option is useful in situations such as the following one:

- To enhance security, you restrict communications to TLS 1.2 by specifying a value of YES for the SSLDISABLELEGACYTLS option.
- To ensure that failures to use earlier protocols are not logged as errors, you specify a value of YES for the SSLHIDELEGACYTLS option.

++++ September 2015 ++++++

Latest news for TSM Server 7.1.3 (IBM Spectrum Protect 7.1.3)

Available for download starting: 11th September 2015

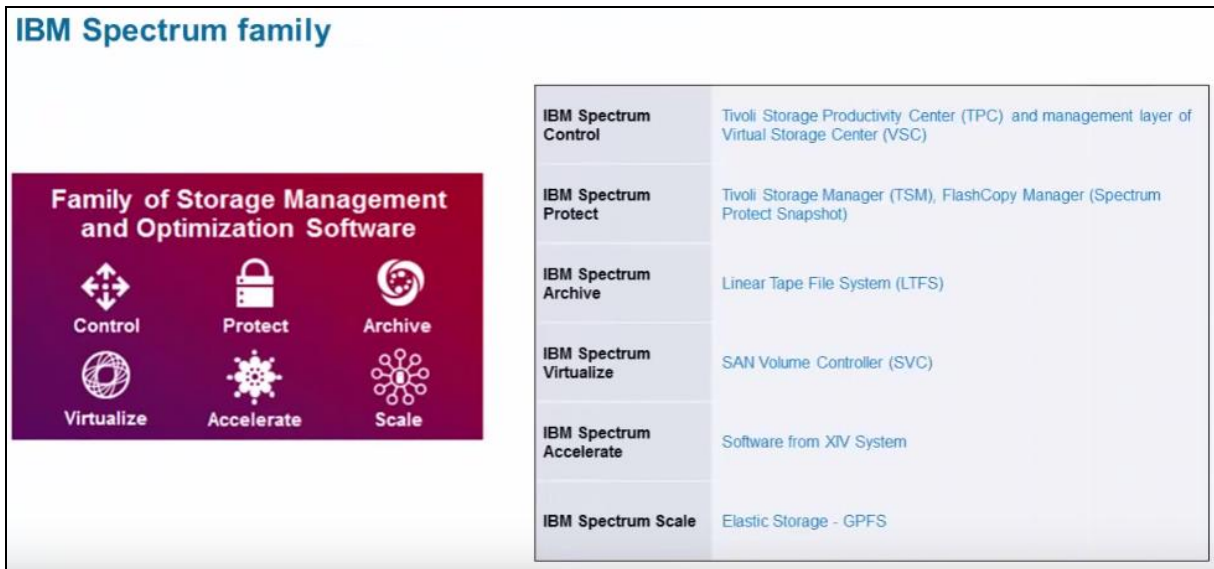
Important: TSM has been rebranded:

With previous **TSM 7.1.2** TSM got a new name as well

➔ “IBM® Tivoli® Storage Manager for Unified Recovery (SUR)”

Now **with 7.1.3** a complete re-branding took place . TSM is now called

➔ **IBMSpectrum™ Protect V7.1.3** and is part of an IBM storage management family under the roof of IBM Spectrum.



PLET: new name: IBM Spectrum Protect V7.1.3 (=TSM) and IBM Spectrum Protect Snapshot V4.1.3 provide breakthrough deduplication, native cloud storage, and a user-centric portal for file restore from virtual machines

<http://www-01.ibm.com/common/ssi/cgi-bin/ssialias?subtype=ca&infotype=an&appname=iSource&supplier=877&letternum=ENUSZP15-0411>

Catchwords.....:

What's new with IBM Spectrum Protect 7.1.3 ? (excerpt)

- IBM Spectrum Protect **Snapshot** V4.1.3 (formerly IBM Tivoli Storage FlashCopy® Manager) is **now part** of each IBM Spectrum Suite,
- **Up to ten times** improvement in **capacity per Spectrum Protect server** using built-in software defined deduplication technology, enabling a storage pool to protect petabytes of backup data.

New “Next Generation” deduplication and object container storage pools not using “volumes” any more.

→ **Three new Container based Storage Pool** with
stgtype of “**cloud**” or “**directory**”

where **cloud** can be **On-premises** or **Off-premises** and for

the stgtype of “**directory** you have to define **directory** with “**define stgpooldirectory**”. Therefore it is also called **directory stgpool**. You could also define an overflow stgpool, if the container fills up.

Remark Malitz: In addition, container stgpools simplify stgpool maintenance because a lot of processes – like migration, collocation, identify duplicates, etc. – are not necessary anymore AND we have less DB objects to track.

- Up to **four times** improvement in **backup throughput** using highly efficient in-line server-side deduplication technology.
- New, efficient, server-side, **in-line deduplication** allows the use of inexpensive backup storage pool disks.
- define a **lifecycle** for **decommission of client nodes** data, which streamlines the process of removing backup data for decommissioned systems.

➔ Node will be locked, all data will be “inactivated” and policy rules apply.

- **Maintenance Mode** for TSM / IBM Spectrum Protect DSMSEV Server start
- **Node Replication for complete Storage Pool** ➔ new command “**Protect stgpool**”

➤ IBM Spectrum Protect V7.1.3 Operations Center

A lot of new wizards.....

➤ Name changes:

Prior product name	VRM Prior PID	New product name	VRM New PID
IBM Tivoli Storage Manager	7.1.2 5608-E01	IBM Spectrum Protect	7.1.3 5725-W98
IBM Tivoli Storage Manager Extended Edition	7.1.2 5608-E02	IBM Spectrum Protect Extended Edition	7.1.3 5725-W99
IBM Tivoli Storage Manager for Virtual Environments	7.1.2 5725-A44	IBM Spectrum Protect for Virtual Environments	7.1.3 5725-X00
IBM Tivoli Storage Manager for Databases	7.1.2 5608-E04	IBM Spectrum Protect for Databases	7.1.3 5725-X01
IBM Tivoli Storage Manager for Mail	7.1.2 5608-E06	IBM Spectrum Protect for Mail	7.1.3 5725-X02
IBM Tivoli Storage Manager for Enterprise Resource Planning	6.4.2 5608-E05	IBM Spectrum Protect for Enterprise Resource Planning	7.1.3 5725-X03
IBM Tivoli Storage Manager for Storage	7.1.1 5608-E07	IBM Spectrum Protect for SAN	7.1.3 5725-X18

Prior product name	VRM Prior PID	New product name	VRM New PID
Area Networks			
IBM Tivoli Storage Manager for Space Management	7.1.2 5608-E12	IBM Spectrum Protect for Space Management	7.1.3 5725-X04
IBM Tivoli Storage Manager Suite for Unified Recovery	7.1.2 5724-Z12	IBM Spectrum Protect Suite	7.1.3 5725-X05
IBM Tivoli Storage Manager Suite for Unified Recovery Entry	7.1.2 5725-H25	IBM Spectrum Protect Suite Entry	7.1.3 5725-X06
IBM Tivoli Storage Manager Suite for Unified Recovery - Front End	7.1.2 5725-R37	IBM Spectrum Protect Suite - Front End	7.1.3 5725-X07
IBM Tivoli Storage Manager Suite for Unified Recovery Entry - Front End	7.1.2 5725-R38	IBM Spectrum Protect Suite Entry - Front End	7.1.3 5725-X08
IBM Tivoli Storage Manager Entry	7.1.2 5725-Q58	IBM Spectrum Protect Entry	7.1.3 5725-X11
IBM Tivoli Storage Manager Fastback for Workstations	7.1.1 5724-Y96	IBM Spectrum Protect for Workstations	7.1.3 5725-X12
IBM Tivoli Storage Manager Fastback for Workstations -Starter Edition	7.1.1 5724-S64	IBM Spectrum Protect for Workstations - Starter Edition	7.1.3 5725-X13
IBM Tivoli Storage Manager HSM for Windows™	7.1.2 5608-E13	IBM Spectrum Protect HSM for Windows	7.1.3 5725-X14
IBM Tivoli Storage FlashCopy Manager	4.1.2 5608-ACB (AAS)	IBM Spectrum Protect Snapshot	4.1.3 5608-AB3 (AAS)
IBM Tivoli Storage FlashCopy Manager	4.1.2 5724-X94 (PPA)	IBM Spectrum Protect Snapshot	4.1.3 5725-X22 (PPA)
IBM System Storage® Archive Manager	7.1.2 5608-E03	IBM Spectrum Protect for Data Retention	7.1.3 5725-X15

For additional information please see PLET.

++++ April 2015 ++++++

Latest news for TSM Server 7.1.2

Available for download since: 17. April 2015

PLET: new name: IBM Tivoli Storage Manager Suite for Unified Recovery (SUR) V7.1.2

<http://www-01.ibm.com/common/ssi/cgi-bin/ssialias?subtype=ca&infotype=an&appname=iSource&supplier=877&letternum=ENUSZP15-0260>

Catchwords.....:

Important: there does NOT exist a new TSM Server Version 7.1.2.

➔ The TSM version still is 7.1.1 Patch 100

What's new?

TSM Version 7.1.2 comprises the following components / Code Levels:

- Backup-Archive Client Version 7.1.2 (with Ubuntu 14.04 x86_64 Support).
- Application programming interface (API) at V7.1.2.
- **TSM Server Version 7.1.1.100.**
- Operations Center, Tivoli Monitoring for Tivoli Storage Manager, and device driver components, V7.1.1 (same as before).

Additional changes: – e.g. TSM for VE or MAIL – please see PLET.

++++ **September 2014** ++++++

Latest news for TSM Server 7.1.1

Available for download since: 12.09.2014

Catchwords.....:

- **Node Replication improvements**

Recover damaged files from a replication server. With Tivoli Storage Manager Version 7.1.1, you can use node replication processing to recover damaged files. When this feature is enabled, the system detects any damaged files on a source replication server and replaces them with undamaged files from a target replication server.

- **Manage replicated data with policies that are defined on the target replication server**

With Tivoli Storage Manager Version 7.1.1, you can use the policies that are defined on the target replication server to manage replicated client-node data independently from the source replication server. In previous releases, client node data on the target replication server was managed by policies on the source replication server.

- **Restrict SSL protocols to TLS 1.2 or later**

With Tivoli Storage Manager Version 7.1.1, you can prevent the use of Secure Sockets Layer (SSL) protocols earlier than TLS 1.2 with the new server option, SSLDISABLELEGACYTLS. The SSLDISABLELEGACYTLS option specifies whether to use protocols earlier than Transport Layer Security (TLS) 1.2 for

Secure Sockets Layer (SSL) sessions between the server and the backup-archive client or storage agent.

- **Use offline reorganization of tables and indexes**

With Tivoli Storage Manager Version 7.1.1, you can reorganize indexes and tables offline to maintain server stability and improve database performance. To enable this feature, set the `DISABLEREORGTABLE` (disable certain tables from online reorgs), `DISABLEREORGINDEX` (disable certain index tables from online reorgs), and `DISABLEREORGCLEANUPINDEX` (The `DISABLEREORGCLEANUPINDEX` option specifies whether online index reorganization is disabled for the `BF_BITFILE_EXTENTS` table, when the `DB2 CLEANUP PAGES ALL` parameter is used on the `REORG INDEXES/TABLE` command) server options.

- **Compress archive logs**

With Tivoli Storage Manager Version 7.1.1, you can enable or disable compression of the archive log files that are written to the archive log directory. By compressing the archive log files, you reduce the amount of space that is required to store them.

- **Compress database backups**

With Tivoli Storage Manager Version 7.1.1, you can choose which Tivoli Storage Manager database backups are compressed.

- **Verify tape volumes**

You can now audit any volume in a tape library by using the `AUDIT LIBVOLUME` command, which is available in Tivoli Storage Manager Version 7.1.1 for some library types and tape drives. When this command is issued, an entire physical tape volume is audited instead of just a storage pool volume.

- **Validate pages during database backup processing**

Tivoli Storage Manager Version 7.1.1 uses IBM DB2® database technology to validate database pages during database backup processing.

- **Operation Center**

The Operations Center cannot be installed on HP-UX or Oracle Solaris systems. However, you can use the Operations Center to manage Tivoli Storage Manager V6.3.4 or later servers that run on HP-UX or Oracle Solaris systems.

Now again, improvements in the area of Navigation, customization, reporting, alerts etc.

- **„Old“ Administration Center (base on TIP = Tivoli Integrated Portal) availability**

Although the Tivoli Storage Manager Administration Center is not delivered with V7.1 or later versions, you can instead use the Operations Center, which is a web-based interface for managing your storage environment. You can use the V6.3.4 Administration Center with any Tivoli Storage Manager V6.3 or later server, including to automatically update backup-archive clients.

- **Tivoli Monitoring for Tivoli Storage Manager availability**

IBM Tivoli Monitoring for Tivoli Storage Manager is delivered with V7.1.1.

The existing BIRT reports that were available in previous releases are available as Cognos reports.

- **Verschiedenes**

The file **i logattr.chk** (former dsmserv.dsk) is not used anymore. All parameter are now in TSM DB.

ACTIVE LOG Size: now up to 512GB (not documented yet)

PLET:

<http://www-01.ibm.com/common/ssi/cgi-bin/ssialias?infotype=AN&subtype=CA&appname=gpatem&supplier=897&letternum=ENUS214-340&pdf=yes>

++++ **December 2013** ++++++

Latest news for TSM Server 7.1

Available for download since: 13.12.2013

Catchwords.....:

1. **IBM Installation Manager**
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In Tivoli Storage Manager V7.1, the server and Operations Center use IBM Installation Manager to install or update software. If the required version of IBM Installation Manager is not already installed, it is automatically installed or upgraded when you install the Tivoli Storage Manager server or Operations Center. It must remain installed on the system so that the server or Operations Center can be updated or uninstalled later as needed.

ATTENTION: Software Prereqs e.g. W 2008 Server R2 and 12 GB RAM will be enforced! (but circumvention exists also of course!)

2. A single Tivoli Storage Manager server can handle up to ten times daily ingest of deduplicated and replication data over previously published rates. The total time required for Tivoli Storage Manager server to ingest, deduplicate, replicate, expire, and reclaim data is reduced significantly between Tivoli Storage Manager V6.3 and Tivoli Storage Manager V7.1.
 3. Tivoli Storage Manager is able to process large objects of sizes 10 GB, or larger, more efficiently.
 4. Node replication for data access, with automated client redirection in case of lack of a server availability.
 5. Improved installer with integrated installation of Tivoli Storage Manager server and Tivoli Storage Manager Operations Center.
 6. **DB2 will be V10.5**
 7. **Deprecated Device Ttypes:**
 - 3490
 - 3570
 - CARTRIDGE
 - OPTICAL
 - WORM
 - QIC
 - DTF
 8. **File-space level collocation groups are introduced in Tivoli Storage Manager Version 7.1.**

You can group file spaces that belong to a single node, which allows data for these file spaces to be collocated efficiently without requiring separate volumes for each file space. When you use file-space level collocation groups, you can group data for a limited set of file systems, for example, virtual machines. Fewer volumes are required for the data and placement can be coordinated in the server storage
 9. **File Space Level Migration possible now!.**
-

With the new functions that are added to migration processing, you can improve the efficiency of the server by using file space level migration. Nodes with multiple large file spaces can take advantage of faster migration processing for random-access storage pools.

10. Shared memory for database backup and restore operations

You can now use shared memory to reduce processor load and improve throughput, if the database backup performance is slow.

You can manually configure a Tivoli Storage Manager server, or use the instance configuration wizard, to use shared memory with DB2.

11. Immediate use of space that is added to the server database

When you add space to the database, new database directories are now available for immediate use and parallel I/O performance is improved. You can add directories to the database by using the EXTEND DBSPACE command. In Version 7.1, the updates for this operation include distributing data across all database directories and then reclaiming unused space and returning it to the system. Because redistribution operations take considerable system resources, plan ahead when you want to add space to the database. You must complete the process while the server is not handling a heavy load.

Attention: TSM versions 5.5 and 6.1 → „end of support“: 30. June 2014.

PLET:

<http://www-01.ibm.com/common/ssi/cgi-bin/ssialias?infotype=AN&subtype=CA&htmlfid=897/ENUS213-447&appname=USN>

++++ **December 2012** ++++++

Latest news for TSM 6.3.3 (as mentioned in TSM 6.4 PLET):

Available for download since: 16.11.2012

Catchwords....:

1. LDAP authenticated passwords
 2. Tivoli Monitoring for TSM Updates
 3. Enhancements for expire processing
 4. and more...
-

PLET:

→ <http://www-01.ibm.com/common/ssi/cgi-bin/ssialias?subtype=ca&infotype=an&appname=iSource&supplier=877&letternum=ENUSZP12-0488>

++++ May 2012 ++++++

Latest news for TSM 6.3:

Available for download since: 21.10.2011

Catchwords....:

1. DB now with 4 TB (2 TB V6.2 and 1 TB TSM 6.1)
2. Reporting with Cognos
3. Selective Node Replication to second TSM Server
4. JBB for Linux
5. Central Client upgrades for several platforms
6. ...

PLET:

→ <http://www-01.ibm.com/common/ssi/cgi-bin/ssialias?infotype=AN&subtype=CA&htmlfid=897/ENUS211-372&appname=USN>

Overview - Tivoli Storage Manager Supported Operating Systems

→ <http://www-01.ibm.com/support/docview.wss?uid=swg21243309>

Storage-agent and library-client compatibility with the IBM Tivoli Storage Manager server

➔ <http://www-01.ibm.com/support/docview.wss?uid=swg21302789>

Latest news for TSM 6.2.3:

++++ **May 2011** ++++++

ISC is called now TIP (Tivoli Integrated Portal) and is a little bit slower in terms of performance.

Attention: TXNGROUPMAX default is now 4096!!!

Fix Pack 03 is out: TSM V6.2 Fix Pack 3 (6.2.3)

<https://www-304.ibm.com/support/docview.wss?uid=swg24029217>

++++ **May 2010** ++++++

A new **6.2.1** / ISC /Admin Center Version and the Fix Pack TSM 6.2.1 is available

e.g. for Windows: **6.2.1.0-TIV-TSMAC-WindowsI32.exe**

++++ **March 2010** ++++++

ITM 6.2 is available

++++ **18. Januar 2010** ++++++

- **Upcomming fix-packs -- 6.1.3.0 REMOVED !!!!!!!!**

Removed from FTP site 1/12 due to IC65409, to be replaced by **6.1.3.1**. comes 22. January

→ Info from:

<https://www.ibm.com/developerworks/wikis/display/tivolistorage/TSM+Schedule+for+Fix-Packs>

Latest news for TSM 6.1.2.0:

Attention: although there exist also a patch 6.1.2.0 for the **TSM Reporting and Monitoring Feature**, it is **not obligatory** to install this patch, because the basic functionality is not “touched” by the two APARS which I found in the overall patch description.

These two APARS cover minor „flaws“ like “password has to comply to DB2 rules”. That’s it.

Latest news: New in 6.1.2.0: very good preview option!

- **backup sets** or tables of contents (TOCs) can be upgraded to V6 and **backup NAS** with TOCs can be used).
- **TSMDLST** (Device List) → since years, this utility is available for Windows
→ NOW it is also available for **AIX!**
- **PREVIEW** for **DSMSERV INSERTDB**

When you use the **PREVIEW=YES** parameter, the operation includes all the steps of the process, except for the actual insertion of data into the new database. When you preview the insertion operation, you can quickly verify that the source database is readable. You can also identify any data constraint violations before you run the actual upgrade process for your server.

+++ end latest news +++ from mid September ++++++

The new TSM version 6.1 is available since 27th of March 2009.

Besides a lot of new enhancements, three special - outstanding - main features are worth to be mentioned:

- 1. data de-duplication** for special storage pools / device class
- 2. a new TSM database technology (DB/2)** as **100% replacement** for the current proprietary TSM database

and

3. the new Reporting and real-time Monitoring - Feature

→ a complete new approach for TSM.

→ This feature is based on the already existing IBM Tivoli Monitoring **ITM 6.2** in combination with Tivoli Common Reporting (**TCR**). On the other hand, TCR is based on the **open source** reporting tool "**BIRT**" (Business Intelligence Reporting Tools)!

→ **Overview: click on:**

http://www.mm-it.at/de/downloads/TSM_6.1_Overview_Reporting_Monitoring_Komponenten_V2_English.pdf

New: there exists an new **TSM Reporting Workshop** for this subject:

→ **click on (version in german language):**

http://www.mm-it.at/de/downloads/TSM_6.1_Reporting_und_Real-Time_Monitoring_Workshop.pdf

and **English version:**

http://www.mm-it.at/de/downloads/TSM_6.1_Reporting_and_Real-Time_Monitoring_Workshop_English.pdf

Migration concept:

→ In contrast to previous TSM versions, some additional planning activities should be considered for upgrading TSM 6.1.

A tip / suggestion:

Use the TSM 6.1 upgrade planning as an opportunity in order to check or examine your current TSM productive environment structure, settings and design.

You will not have very often such a chance for carrying out a TSM design-review.

→ In order to give you a clue of what has to be considered for a TSM 6.1 upgrade, following you will find some of the essential elements:

TSM 6.1/6.2 Upgrade – important elements:

- **New DB/2 database**

Decision about upgrade technique (media, network, import/export !), the same or on

a different system.

1. Upgrade to new system, using external media
2. Upgrade to new system, using network
3. Upgrade in place (on same system), using external media
4. Upgrade in place (on same system) using network
5. TSM Export/Import from 5.x -> 6.1
 - TSM Export/Import supported from 5.x -> V6 (server-to-server or external media to new system only)

- **Disk space dependencies**

Example - recovery log:

→ New: the “recovery log” itself is made up of several different physical log files.

Two **mandatory** ones:

- **Active Log (max 128 GB)** - (not yet committed transactions) and
- **Archive Log** („quasi no Limit!“ see below) - (copies of finished „closed“ active log files/records),

As well as two **optional** logs

- **Log Mirror** - (copy of „active logs“) and
- **Archive Failover Log** (also called “**secondary Archive Log**“) - (stores archive log files in case the archive log is full).

The **Archive Log** could be an issue - **why?**

→ Because it can use a lot of disk space resources. The size depends on:

- 1.) **the number of saved TSM client objects between two TSM database backups**

and
- 2.) **the fact**, that the automatic cleaning procedure for archived logs requires 2 complete full backups of the TSM database. As a result, archived logs are kept at least for 3 days in case of using full backup for database every day before old records can be pruned.

Example calculation: (source - TSM 6.1 admin guide)

If you perform a full backup of the database every day, the archive log must be large enough to hold the log files for client activity that occurs over two days.

Typically 600 - 4000 bytes of log space are used when an object is stored in the server. Therefore you can estimate a starting size for the archive log using the **following calculation**:

objects stored per day x 3000 bytes per object x 2 days

For example:

5 000 000 objects/day x 3000 bytes/object x 2 days = 30 000 000 000 bytes,
→ for **5 million objects** you need **30 GB disk space** for the Archive Log

- **MMC (Microsoft Management Console) – Reporting → not officially supported any more!**
 - check current report-usage.
 - If you are using the MMC operational reporting feature, some changes need to be Done in order to cover for the changes in the 6.1 database schema and a stricter SQL 92 standard enforcement with DB2
 - Evaluation of the new TSM reporting and real-time monitoring capabilities
- **Serverscripts**
 - also here – due to a stricter SQL 92 standard enforcement with db/2, adaptations may be needed.
 - evaluation / validation of daily „maintenance“-commands/-scripts.
- **Evaluation of server- and client-options**
- **TSM library manager and library client / STA (storage agent)-checks**
- **ISC/AC upgrade planning**
- **General upgrade topics**
 - NIC (network interface cards) - Windows
 - SW compatibilities - server, STA und client
 - Archive Server - retention
 - Evaluation of new TSM commands
 - new ODBC DB/2 driver
- **Data de-duplication - evaluation**
- **And a lot more ...**

TSM 6.1/6.2 – Upgrade Consulting

→ our approach:.

Introduction into TSM 6.1/6.2 specifics – requirements analysis – „where do we stand now ? – agreement of upgrade approach - implementation of upgrade – documentation.

Tools: we will use our own-developed detailed upgrade-checklists

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