

TSMExplorer V6



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TSMExplorer functions

TSMExplorer is a solution for the administration and monitoring of IBM Spectrum Protect (SP).

TSMExplorer possesses the following features:

- Easy to use user interface for managing SP servers
- Easy installation
- Low requirements to hardware resources
- Implementation of all functions available through standard dsmadmc management console
- Implementation of graphical charts for displaying data
- Collects and displays statistical information on SP server work
- Save SP configuration, volume history, device configuration file
- Generates reports, alerts and sends them to users.
- Performs constant monitoring SP servers' key parameters

TSMExplorer Software requirements

TSMExplorer supports the following operations systems:

- Windows System;
- Unix Systems;
- Supported SP version: 6.x, 7.x, 8.x

Front-end is not required Java for work. Just run browser and go.

TSMExplorer Hardware requirements

TSMExplorer requires:

- 1024 Mb memory.

TSMExplorer Installation in Windows (portable version)

- download file **tsmexp_winx64.zip** from <https://www.tsmexplorer.com/> site;
- Install Spectrum Protect Client with administrative clients (dsmadmc.exe);
- extract zip file to any directory;
- copy license key **key.lic** to application path;
- run **install_service.cmd** as administrator for installation windows service;
- check windows service "TSMExplorer Server";
- open browser and go to <https://host:5020/start>
- default login/password is admin/admin

To uninstall TSMExplorer just stop application and remove directory by

```
> uninstall_service.cmd
> delete path /TSMExplorer
```

TSMExplorer Installation in Linux and AIX (portable version)

- download file **tsmexp_aix.zip** or **tsmexp_linx64.zip**;
- Install Spectrum Protect client with administrative clients (dsmadmc);
- extract zip file to any directory;
- copy license key **key.lic** to application path;
- set **chmod 0755** for file **tsmexp.rc**;
- change variable PATH_TSMEPLORER to absolute path in **tsmexp.rc**;
- run > **tsmexp.rc start'** for start service;
- open browser and go to <https://host:5020/start>;
- default login/password is admin/admin

To uninstall TSMExplorer just stop application and remove directory by

```
> tsmexp.rc stop
> rm -rf /TSMExplorer
```

TSMExplorer Installation for Unix Systems

- download file **tsmexp_unix.zip** from <https://www.tsmexplorer.com/> site;
- install Java 11 or later version;
- Install Spectrum Protect client with administrative clients (dsmadmc);
- extract zip file to any directory;
- copy license key **key.lic** to application path;
- set **chmod 0755** for file **tsmexp.rc**;
- change variable PATH_TSMEPLORER to absolute path in **tsmexp.rc**;
- run > **tsmexp.rc start'** for start service;
- open browser and go to <https://host:5020/start>;
- default login/password is admin/admin

To uninstall TSMExplorer just stop application and remove directory by

```
> tsmexp.rc stop
> rm -rf /TSMExplorer
```

Additional command (UNIX):

- > **tsmexp.rc stop** - stop service
- > **tsmexp.rc status** - show status service
- > **tsmexp.rc restart** - restart service
- > **tsmexp.rc license** - show license

Additional command (Windows):

- > **TSMExplorer.exe stop** - for stop service
- > **TSMExplorer.exe status** - show status service
- > **TSMExplorer.exe restart** - restart service
- > **TSMExplorer.exe license** - show license

[TSMExplorer Config](#)

Standard app.cfg file for manager application

```
port = 5020      // communication port
lockport = 27550 // inside service port for application
ibmlib = false   // enable/disable function for manage IBM libraries TS3500 and TS4500
restapi = true    // enable/disable REST-API for Spectrum Protect Servers
restport = 16020  // REST-API communication port for Spectrum Protect Servers
```

[TSMExplorer Upgrade](#)

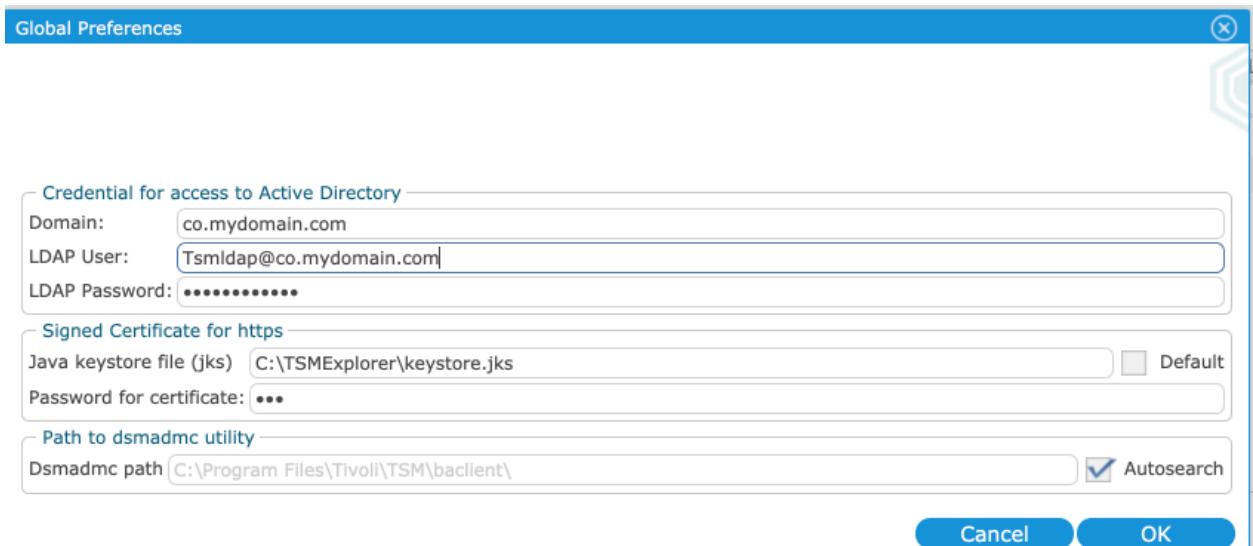
- stop application service
- update all files except app.cfg, tsmexp.rc

[License Model](#)

All license information for the “TSMExplorer” software is contained in a single file with the name "key.lic". This file is valid equally for the client and the server component of the “TSMExplorer” software. For activating the licensed version, the key.lic file must be located in the root directory where the program is installed. You can look at product license and other parameters in menu “About”

You can send request to support@tsmexplorer.com to get temporary license keys.

Preferences and SP Server Registration.



- Domain – auto-set “@yourdomain” to login form
- Dsmadmc path – manual set path to dsmadmc
- Java key store file – manual personal jks file with your personal certificate for validate SSL connection

Create personal jks (certificate) file

To create keystore:

```
>keytool -genkeypair -v -alias tsmsrv.yourdomain.com -keyalg RSA -keysize 2048 -validity 730 -keystore TSMExplorer.jks -storepass XXXX -storetype JKS
```

To generate certificate request:

```
>keytool -certreq -v -alias tsmsrv.yourdomain.com -file tsmsrv.yourdomain.com.csr -keypass XXXX -keystore TSMExplorer.jks -storepass XXXX -storetype JKS
```

To import CA root certificate:

```
>keytool -import -v -trustcacerts -alias YOUR_CA_ROOT -file root.cer -keystore TSMExplorer.jks -storepass XXXX -storetype JKS
```

To import CA intermediate certificate:

```
>keytool -import -v -trustcacerts -alias YOUR_CA_INTERMEDIATE -file intermediate.cer -keystore TSMExplorer.jks -storepass XXXX -storetype JKS
```

To import signed certificate:

```
>keytool -import -v -alias tsmsrv.yourdomain.com -file tsmsrv.yourdomain.com.cer -keypass XXXX -keystore TSMExplorer.jks -storepass XXXX -storetype JKS
```

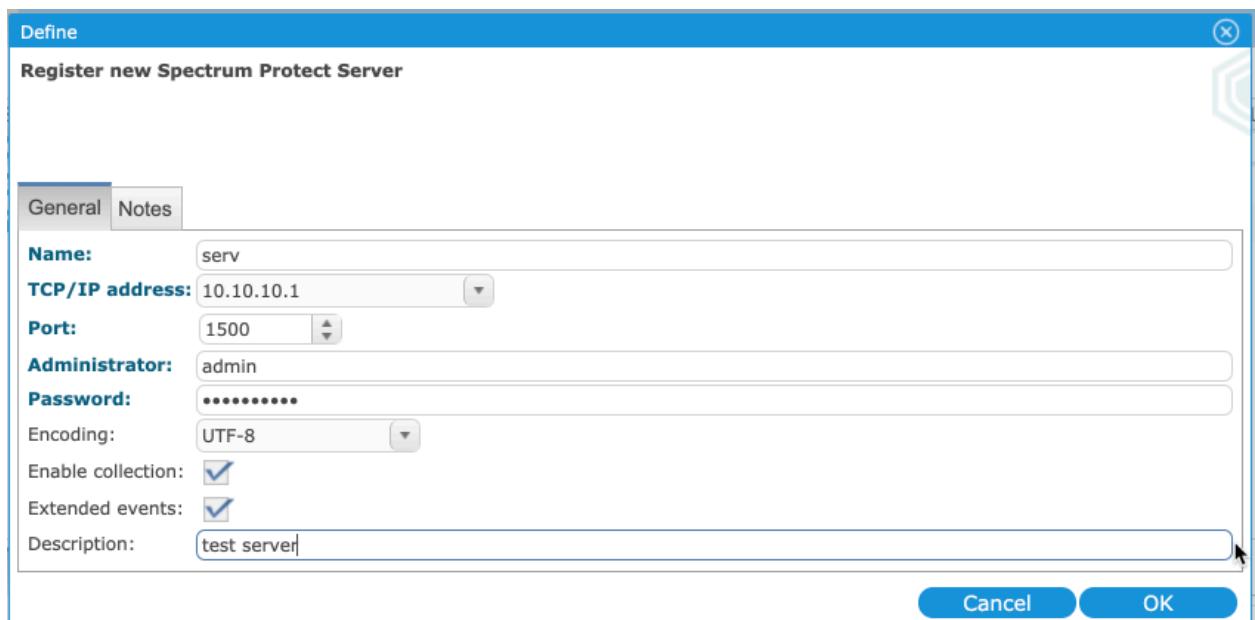
To list certificates in keystore:

```
>keytool -list -v -keystore TSMExplorer.jks -storepass XXXX -storetype JKS
```

Or use <https://keystore-explorer.org> for generate jks file

Registration of any new SP Server in TSMExplorer includes the following properties:

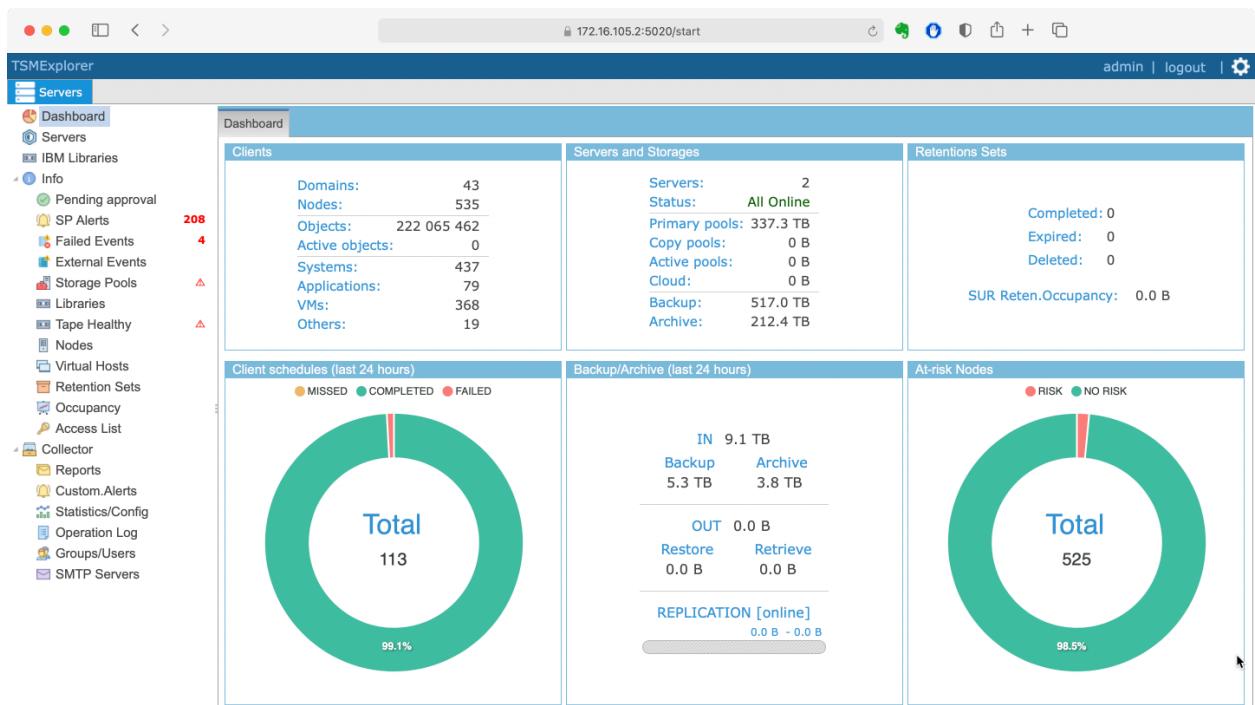
- Name of SP Server
- SP server address (TCP/IP address)
- SP server port number
- Name of SP server administrator
- Password of SP server administrator
- Encoding message from SP server (for different localization of SP)
- Enable/Disable collection data from SP server
- SP server description



After registration, the SP server will appear in the list. Available SP server gets **online** status.

All passwords are encrypted and stored in database.

Use this command «**accept date**» from menu to cause the server to accept the current date and time as valid when an invalid date and time are detected.



TSMEexplorer

admin | logout |

Servers

- Dashboard
- Servers **208**
- IBM Libraries
- Info
 - Pending approval
 - SP Alerts **4**
 - Failed Events
 - External Events
 - Storage Pools
 - Libraries
 - Tape Healthy
 - Nodes
 - Virtual Hosts
 - Retention Sets
 - Occupancy
 - Access List
- Collector
 - Reports
 - Custom.Alerts
 - Statistics/Config
 - Operation Log
 - Groups/Users
 - SMTP Servers

Servers

New ► Statistics ► Global Preferences ► License

Server	Status	Type	Address	Version	Platform	License	Uptime	Collector	Database Utilization	Archive Log Utilization	Status sessions	GUID
CO-NORTH	Online	SP	2	7.1.10.100	AIX	true	211 days 05:09	✓	76.2%	6.6%	enabled	ca.41.cc.2c.f1
CO-SOUTH	Online	SP	3	7.1.10.100	AIX	true	190 days 07:12	✓	76.1%	9.0%	enabled	07.91.9f.0e.d
MYSPP	Online	SP+	1	10.1.8-4082		true						

Details **Notes**

Name: **CO-NORTH**

License status: Server is licensed until 2021-10-28

Address:

Port: 1500

Machine Guid: ca.41.cc.2c.f1.ae.11.e5.bc.e8.56.83.be.d2.80.02

Encoding: Cp1251

Description: the shire

Enable collection:

Enable external events:

TSMExplorer Interface

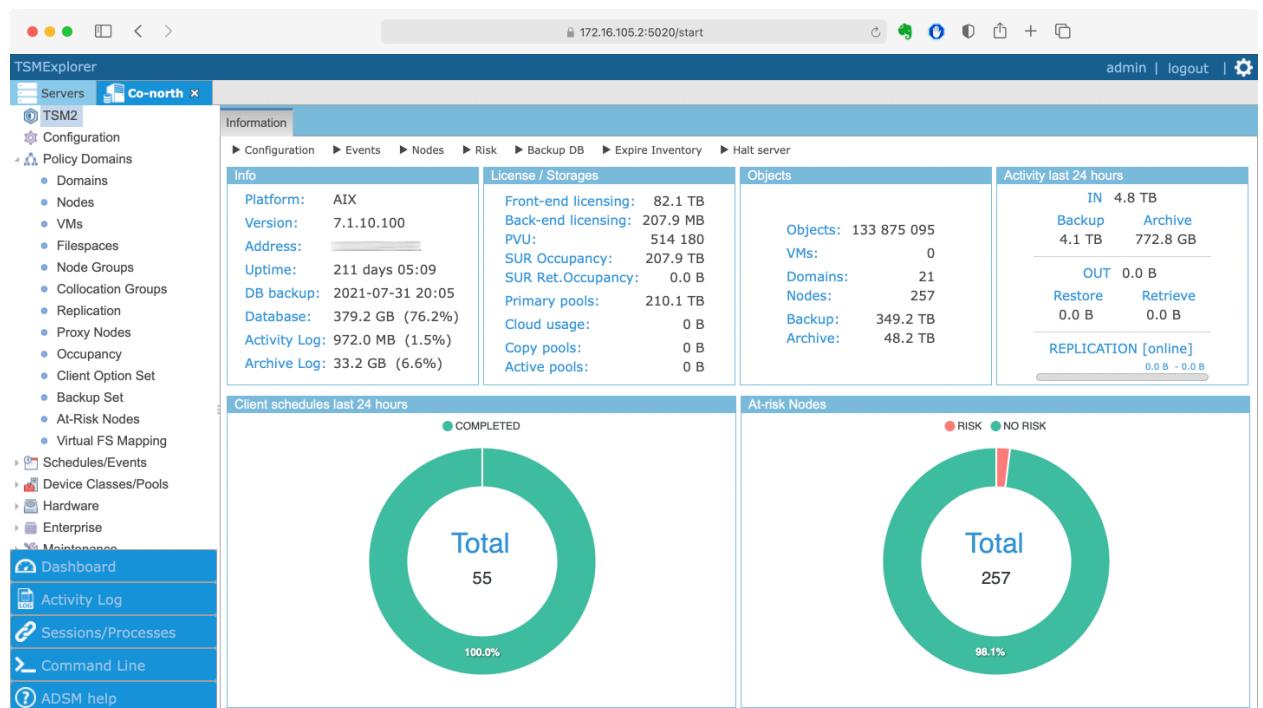
TSMExplorer layout consists of 3 main parts:

- Tivoli Storage Manager logical component tree on the left.
- When selecting a tree component its full information opens on the right.
- The buttons for opening separate windows are situated in the left bottom corner.

Any element of the logical tree can open and have a menu that is activated by the right mouse button. Any list of data has a menu that is activated by the right mouse button.

Dialog windows have the HELP button to display a window with information on the current operation.

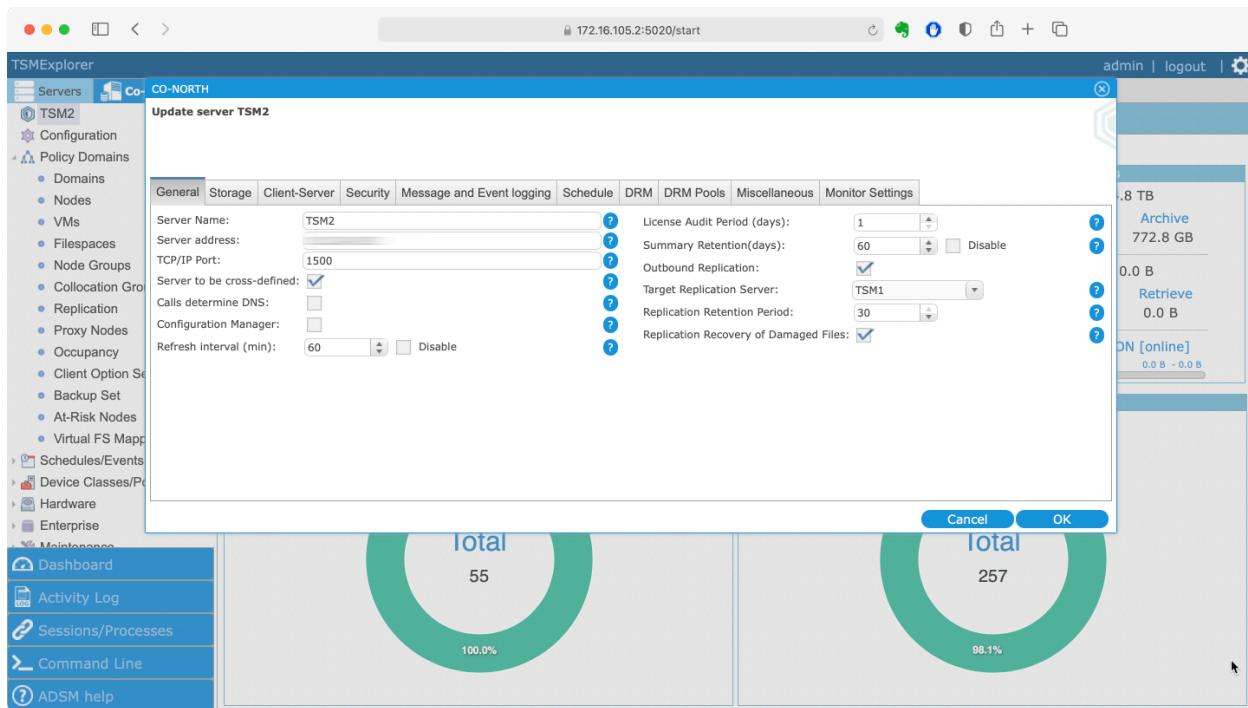
Most lists can be exported to HTML, CSV, EXCEL or PDF format.



Server configuration

“Server name” root item opens the SP server properties description.

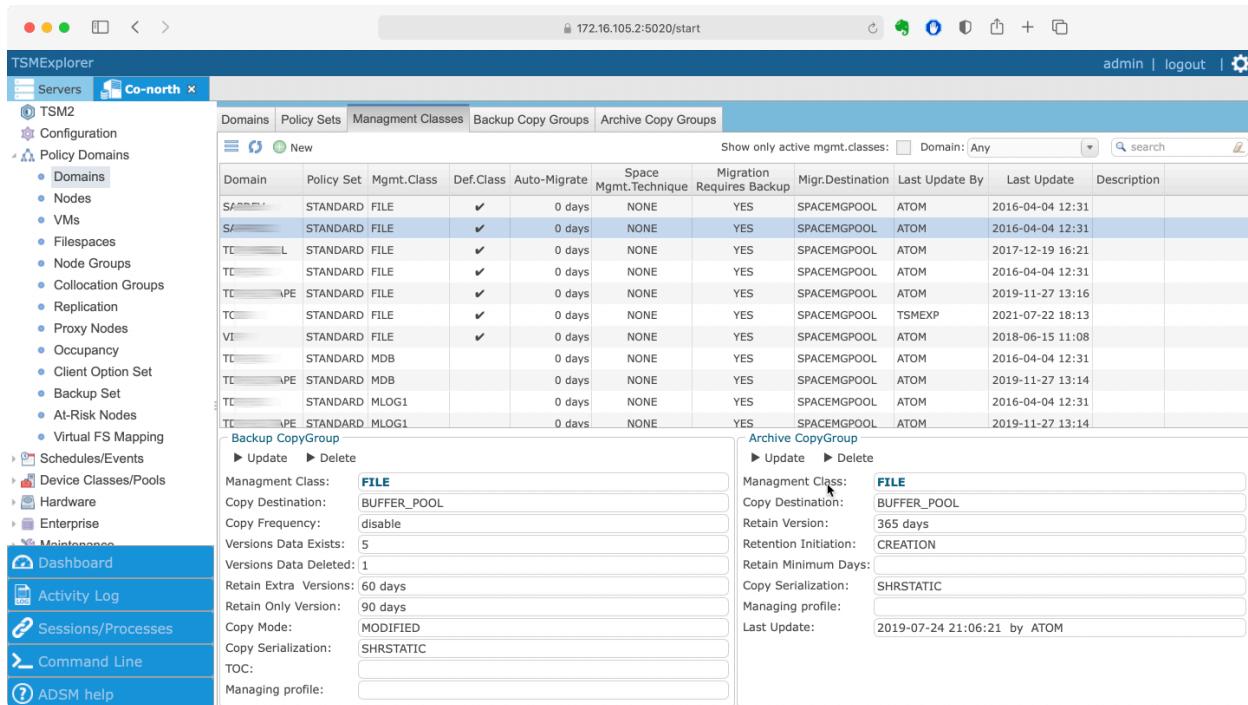
Server properties are grouped into tabs for convenient viewing.



Domains

Policy Domain item allows to perform the following operations:

- Create and change Domains, Policy Set
- Create and change Management class and Copy Groups



Nodes

The screenshot shows the TSM Explorer interface with the 'Nodes' tab selected. The main pane displays a list of nodes with columns for Node, Domain, Type, Platform, Version, TCP Name, Address, Lock, Password expiration, Collocation Group, OptionSet, Hypervisor, and Backup A... (partially visible). Below the list is a 'Details' panel for node 'AD'. The 'Details - 1' tab is active, showing fields for Node (AD), Domain (AD), Client Version (7.1.4.0), TCP/IP Name (DC2), Address (20.10.10.100), Platform (WinNT (6.03) VMware), URL (http://DC2), Sess.Initiation (ClientOrServer), Locked (x), and Node groups (CLIENT_CO). Other tabs in the details panel include Details - 2, Schedules, Notes, and Secure Notes.

Occupancy

The screenshot shows the TSM Explorer interface with the 'Occupancy by Node' tab selected. The main pane displays a table of occupancy statistics for various nodes. The columns include Domain, Node, TCP/IP Address, Platform, Objects, Reporting Space, Physical Space, and Volumes. The table shows data for nodes like DC2, D, E, F, G, K, DB, and B, with metrics such as 147 056 objects, 18.5 GB reporting space, and 75 volumes. Below the table is a 'Details' panel showing Domain (A) and Node (D) with Object count (147 056) and Space (18.5 GB).

Collocation groups

The screenshot shows the TSM Explorer interface for managing collocation groups. The left sidebar navigation includes 'Servers' (selected), 'Co-north' (selected), 'TSM2', 'Configuration', 'Policy Domains' (expanded), 'Domains', 'Nodes', 'VMs', 'Filespaces', 'Node Groups', 'Collocation Groups' (selected), 'Replication', 'Proxy Nodes', 'Occupancy', 'Client Option Set', 'Backup Set', 'At-Risk Nodes', 'Virtual FS Mapping', 'Schedules/Events', 'Device Classes/Pools', 'Hardware', 'Enterprise', 'Maintenance', 'Dashboard', 'Activity Log', 'Sessions/Processes', 'Command Line', and 'ADSM help'. The main content area has tabs for 'Groups' (selected) and 'New'. A search bar and a toolbar with icons for 'New', 'Edit', 'Delete', 'Associate nodes', and 'Associate filespaces' are at the top. Below is a table for 'Associated nodes/filespaces - FILES' with columns 'Node', 'Filespace', and 'Colloc.Type'. The table lists several entries. At the bottom is a 'Details' section with fields for 'Node' (set to 'FILE'), 'Domain' (set to 'FILES'), 'TCP Address' (set to '1'), and 'TCP Name' (set to '')).

Node groups

The screenshot shows the TSM Explorer interface for associating client nodes with a node group. The left sidebar navigation is identical to the previous screenshot. The main content area shows a dialog titled 'Associate Client Nodes with a Node Group (CLIENT_CO)'. It contains two tables: 'Nodes' (Number: 62) and 'Associated nodes' (Number: 195). Between the tables are arrows for navigating between pages. At the bottom right are 'Cancel' and 'OK' buttons, and a field for 'TCP Name' set to 'ARM_ZAKUPKI'.

Virtual Machines

The screenshot shows the TSMExplorer web interface. The left sidebar has a 'Servers' tab selected, followed by 'Co-north' and 'Co-south'. Under 'Co-south', there are sections for 'Configuration', 'Policy Domains' (with items like Domains, Nodes, VMs, Filespaces, Node Groups, Collocation Groups, Replication, Proxy Nodes, Occupancy, Client Option Set, Backup Set, At-Risk Nodes, and Virtual FS Mapping), 'Schedules/Events', 'Device Classes/Pools', 'Hardware', 'Enterprise', and 'Maintenance'. Below these are links for 'Dashboard', 'Activity Log', 'Sessions/Processes', 'Command Line', and 'ADSM help'. The main content area is titled 'Virtual machines' and displays a table with the following columns: Virtual Machine, Type, Node, Reporting, Physical, Saved, Saved %, Since, Risk Interval, Backup start, and Backup end. The table lists numerous VMs, mostly of type 'VMWare' and node type 'M_FE-MC-DATACENTER', with various reporting and backup details.

Virtual Machine	Type	Node	Reporting	Physical	Saved	Saved %	Since	Risk Interval	Backup start	Backup end
AKM-DC1	VMWare	M_FE-MC-DATACENTER	65.0 GB	4.8 GB	58.2 GB	92.33 %	3 days	default	2021-07-29 01:10:11	2021-07-29 01:16:19
AF	VMWare	M_FE-MC-DATACENTER	478.3 GB	193.5 GB	284.6 GB	59.53 %	130 days	default	2021-03-22 01:01:38	2021-03-22 02:54:08
AS	VMWare	M_FE-MC-DATACENTER	100.9 GB	1.2 GB	98.9 GB	98.78 %	1 hours	default	2021-08-01 01:02:01	2021-08-01 01:07:42
As		M_FE-MC-DATACENTER								
C-EW	VMWare	M_FE-MC-DATACENTER	856.7 GB	541.4 GB	303.5 GB	35.92 %	15 days	default	2021-07-16 01:02:21	2021-07-16 04:35:23
CE	VMWare	M_FE-MC-DATACENTER	182.3 GB	17.4 GB	162.1 GB	90.3 %	29 days	default	2021-07-03 01:02:18	2021-07-03 01:21:31
CE	VMWare	M_FE-MC-DATACENTER	105.0 GB	13.6 GB	90.8 GB	86.94 %	29 days	default	2021-07-03 01:02:10	2021-07-03 01:16:58
CL	VMWare	M_FE-MC-DATACENTER	193.7 GB	49.8 GB	138.9 GB	73.63 %	3 days	default	2021-07-29 01:09:45	2021-07-29 01:21:43
CM	VMWare	M_FE-MC-DATACENTER	388.7 GB	225.0 GB	60.76 %	12 days	default	2021-07-20 01:15:42	2021-07-20 01:59:53	
CM	VMWare	M_FE-MC-DATACENTER	102.2 GB	8.1 GB	93.8 GB	92.06 %	12 days	default	2021-07-20 01:15:19	2021-07-20 01:19:09
CM	VMWare	M_FE-MC-DATACENTER	835.3 GB	368.5 GB	446.6 GB	54.8 %	12 days	default	2021-07-20 01:14:39	2021-07-20 01:54:31
CM	VMWare	M_FE-MC-DATACENTER	163.7 GB	17.7 GB	144.6 GB	89.11 %	16 days	default	2021-07-16 01:03:01	2021-07-16 01:14:34
CM-NT	VMWare	M_FE-MC-DATACENTER	573.0 GB	362.2 GB	172.0 GB	32.2 %	15 days	default	2021-07-16 02:51:01	2021-07-16 04:41:58
CM	VMWare	M_FE-MC-DATACENTER	44.5 GB	6.3 GB	37.8 GB	85.75 %	15 days	default	2021-07-16 01:52:17	2021-07-16 02:57:24
CM	VMWare	M_FE-MC-DATACENTER	53.0 GB	4.4 GB	48.1 GB	91.66 %	15 days	default	2021-07-16 02:54:26	2021-07-16 02:57:45
CM-PROD	VMWare	M_FE-MC-DATACENTER	178.5 GB	25.8 GB	152.2 GB	85.49 %	15 days	default	2021-07-16 02:57:56	2021-07-16 03:03:11
CM	VMWare	M_FE-MC-DATACENTER	220.1 GB	61.6 GB	158.5 GB	72.02 %	254 days	default	2021-07-16 03:05:24	2020-11-16 09:49:46
CM	VMWare	M_FE-MC-DATACENTER	83.9 GB	26.1 GB	55.0 GB	67.79 %	15 days	default	2021-07-16 02:58:04	2021-07-16 03:28:18
CM	VMWare	M_FE-MC-DATACENTER	1.3 TB	327.3 GB	982.7 GB	75.02 %	254 days	default	2021-07-16 01:07:28	2020-11-16 13:21:39
CC	VMWare	M_FE-MC-DATACENTER	102.3 GB	8.5 GB	91.5 GB	91.51 %	16 days	default	2021-07-16 01:19:10	2021-07-16 01:44:56
CC		M_FE-MC-DATACENTER								
CC	VMWare	M_FE-MC-DATACENTER	450.3 GB	2.6 GB	447.4 GB	99.42 %	106 days	default	2021-04-14 11:57:51	2021-04-14 12:41:43
CC	VMWare	M_FE-MC-DATACENTER	450.3 GB	2.2 GB	447.8 GB	99.5 %	106 days	default	2021-04-14 11:56:18	2021-04-14 12:47:36
CC	VMWare	M_FE-MC-DATACENTER	463.0 GB	6.7 GB	455.1 GB	98.56 %	21 days	default	2021-07-11 01:07:57	2021-07-11 01:17:09

Schedules/Events

Schedule item allows to perform operations:

- Create and change Client's schedules
 - TSMExplorer has a convenient interface for viewing, creating and changing client's schedules, viewing and changing the associations of client nodes and schedules.
- Create and change Administrative schedules
- View Events/Events timeline
 - TSMExplorer allows viewing the events related to client and administrative schedules, as well as viewing graphical image of the start time and the duration of schedule for estimation of the schedule window load.

TSMEexplorer 172.16.105.2:5020/start admin | logout |

Servers **Co-north** **Co-south**

Clients schedules Number: 137 Domain: Any search

Domain	Schedule	Action	Type	Start date	Start time	Day	Day of Week	Duration	Nodes	Priority	Update by	Last Update
AS**	DEFAULT_INC_D	INCREMENTAL	Enh.	2010-04-30	04:00	Any	Mo Tu We Th Fr Sa Su	1 hours	0	5	ATOM	2019-10-18 14:10
AS**	DEFAULT_INC_D_UNIX	INCREMENTAL	Enh.	2010-04-30	04:00	Any	Mo Tu We Th Fr Sa Su	1 hours	5	5	ATOM	2019-10-21 10:47
BI**	BINU_INC_D	INCREMENTAL	Enh.	2010-04-30	00:00	Any	Mo Tu We Th Fr Sa Su	1 hours	2	5	ATOM	2019-11-11 14:04
BI**	BINU_INC_D_UNIX	INCREMENTAL	Enh.	2010-04-30	00:00	Any	Mo Tu We Th Fr Sa Su	1 hours	0	5	ATOM	2019-10-22 11:15
BI**	BINU_UNX_DB_A_D	COMMAND	Enh.	2010-04-30	23:00	Any	Mo Tu We Th Fr Sa Su	1 hours	0	5	ATOM	2017-10-30 21:04
BI**	BINU_UNX_DBF_W	COMMAND	Enh.	2010-04-30	23:00	Any	Mo Tu We Th Fr Sa Su	1 hours	0	5	ATOM	2017-10-30 21:04
BI**	BINU_WIN_DBF_W	COMMAND	Enh.	2010-04-30	22:00	Any	Mo Tu We Th Fr Sa Su	5 minutes	2	5	ATOM	2019-09-01 01:40
CR**	DEFAULT_INC_D	INCREMENTAL	Enh.	2010-04-30	04:00	Any	Mo Tu We Th Fr Sa Su	2 hours	6	5	ATOM	2019-10-18 14:11
CR**	DEFAULT_INC_D_ALL	INCREMENTAL	Enh.	2010-04-30	04:00	Any	Mo Tu We Th Fr Sa Su	2 hours	2	5	ATOM	2019-10-28 14:05
DE**	DEFAULT_INC_D	INCREMENTAL	Enh.	2010-04-30	03:00	Any	Mo Tu We Th Fr Sa Su	1 hours	40	5	ATOM	2019-07-16 14:14
DE**	DEFAULT_INC_D_UNIX	INCREMENTAL	Enh.	2010-04-30	03:00	Any	Mo Tu We Th Fr Sa Su	1 hours	18	5	ATOM	2019-07-17 11:02
DE**	DEFAULT_SYSTEM_STATE	BACKUP	Enh.	2019-07-14	15:00	Any	Mo Tu We Th Fr Sa Su	3 hours	37	5	ATOM	2019-10-14 10:44
DE**	DEFAULT_WIN_DB_A_D	COMMAND	Enh.	2010-04-30	23:00	Any	Mo Tu We Th Fr Sa Su	1 hours	2	5	ATOM	2017-10-30 21:04

Details Objects - 0 Associations nodes - 0

Name: **DEFAULT_INC_D** Start schedule: 2010-04-30 04:00:00 Month: Any
 Domain: **ASTO** Duration: 1 hours Day of Month: Any
 Priority: 5 Period: Week of Month: Any
 Action: INCREMENTAL Expiration: Never Day of Week: Mon,Tue,Wed,Thu,Fri
 Subaction: Schedule Style: ENHANCED Update by: ATOM
 Profile: Max.Run Time[min]: 0 min. Last update: 2019-10-18 14:10:57

Description: -subdir=yes -domain="ALL-LOCAL -systemstate"
 Options:

TSMEexplorer 172.16.105.2:5020/start admin | logout |

Servers **Co-north** **Co-south**

Clients schedules CO-SOUTH Update client schedule DEFAULT_INC_D

General **Objects** **Style**

Domain: DEFAULT **Name:** DEFAULT_INC_D **Description:** -subdir=yes -domain="ALL-LOCAL -systemstate"

Options:

Action: Incremental **Command:** **Subaction:** Vmware Wizard **Priority:** 5 **Max.Runtime:** 0

Start date: 30 / 04 / 2010 **Start time:** 03 : 00 **Duration:** 1 Hours **Expiration:** 01 / 08 / 2021 Never Expiration:

Help **Cancel** **OK**

Options:

Last Update
 2019-10-18 14:11
 2019-10-28 14:05
 2019-07-16 14:14
 2019-07-17 11:02
 2019-10-14 10:44
 2017-10-30 21:04
 2019-06-19 17:50
 2020-03-19 11:35
 2020-03-19 11:35
 2019-10-14 10:45
 2019-10-18 14:12
 2017-10-30 21:04
 2021-03-10 17:55

Events

Timeline: Type: Client Schedule: Any Begin: 31/07/2021 15:00 OK

Domain: Any Node: Any End: 01/08/2021 05:00

Policy Domain	Node	Schedule Name	Scheduled Start	Actual Start	Completed	Duration	Status	Result
SAPPD00N	[REDACTED]	DEFAULT_INC_D_POSTCMD	08/01/2021 02:00	08/01/2021 02:01:40	08/01/2021 02:57:13	00:55:33	Completed	All operations completed su
S	[REDACTED]	NIM02	08/01/2021 02:00	08/01/2021 02:00:12	08/01/2021 02:01:08	00:00:56	Completed	All operations completed su
S	[REDACTED]	R_DM2 VM_HOSTS_DISK_C	08/01/2021 01:00	08/01/2021 01:00:14	08/01/2021 02:19:30	01:19:22	Completed	At least one warning messa
S	[REDACTED]	SAPPROWD_INC_D	08/01/2021 00:00	08/01/2021 00:00:52	08/01/2021 00:03:37	00:02:45	Completed	All operations completed su
S	[REDACTED]	SAPPROWD_INC_D	08/01/2021 00:00	08/01/2021 00:10:40	08/01/2021 00:11:48	00:01:08	Completed	Some files were not proces
D	[REDACTED]	SAPPROWD_INC_D	08/01/2021 00:00	08/01/2021 00:07:25	08/01/2021 00:08:24	00:00:59	Completed	All operations completed su
D	[REDACTED]	DEFAULT_WIN_DBF_W	07/31/2021 23:00	07/31/2021 23:07:22	07/31/2021 23:51:01	00:43:39	Completed	All operations completed su
D	[REDACTED]	DEFAULT_WIN_DBF_W	07/31/2021 23:00	07/31/2021 23:00:41	07/31/2021 23:40:55	00:40:14	Completed	All operations completed su
M	[REDACTED]	UNIX_DBF_W	07/31/2021 23:00	07/31/2021 23:07:15	07/31/2021 23:10:42	00:03:27	Failed	Failed
M	[REDACTED]	UNIX_DBF_W	07/31/2021 23:00	07/31/2021 23:03:30	08/01/2021 00:03:42	01:00:12	Completed	All operations completed su
M	[REDACTED]	UNIX_DBF_W	07/31/2021 23:00	07/31/2021 23:00:17	08/01/2021 00:27:15	01:26:58	Completed	All operations completed su
M	[REDACTED]	UNIX_DBF_W	07/31/2021 23:00	07/31/2021 23:01:17	08/01/2021 00:59:10	01:57:53	Completed	All operations completed su
M	[REDACTED]	UNIX_DBF_W	07/31/2021 23:00	07/31/2021 23:05:54	08/01/2021 00:53:17	01:47:23	Completed	All operations completed su
M	[REDACTED]	UNIX_DBF_W	07/31/2021 23:00	07/31/2021 23:01:07	07/31/2021 23:19:45	00:18:38	Completed	All operations completed su
M	[REDACTED]	UNIX_DBF_W	07/31/2021 23:00	07/31/2021 23:01:33	08/01/2021 00:06:44	01:05:11	Completed	All operations completed su

Details

Node: [REDACTED] Domain: [REDACTED] Schedule: DEFAULT_INC_D_POSTCMD

TCP Address: [REDACTED] TCP Name: sapcps Platform: Linux x86-64

Result: All operations completed successfully

History: [REDACTED]

Device Classes/Storage Pools

Device Classes/Storage Pools item allows to:

- Create, change, delete, define Device Classes
- Create, change, delete Storage Pools
- Define Volumes for Storage Pool and perform operations on them

View Occupancy and Chart Occupancy

Occupancy

Storage Pool: BUFFER_POOL

Storage Pool Type: DEVCLASS

Storage Pool Type: PRIMARY

Device Class: DISK

Access: READWRITE

Estimated Capacity: 4.1 TB

Utilization: 789.6 GB (18.8 %)

Space Trigger Util: 18.8 %

Pct.Migration: 18.8 %

Pct.Logical: 100.0 %

Threshold migration: Low: 10 % - High: 60 %

Migration Processes: 1

Next Pool: LTOPOOL

Max.size Threshold:

Deduplicate Data: NO

Total Space Saved:

Overflow Location:

Cache Migrated Files: NO

Colocate:

Reclamation Threshold: %

Reuse Delay:

Compressed:

Deduplication Savings:

Compression Savings:

Cloud Type:

Cloud URL:

Cloud Identity:

Cloud Location:

Migration in Progress: NO

Amount Migrated[MB]: 28.7 GB

Elapsed Migration Time (sec): 799

Reclamation in Progress:

Migration Delay: 0

Migration Continue: YES

Storage Pool Data Format: NATIVE

Continue Copy on Error?: YES

CRC Data: NO

Reclamation Processes:

Offsite Reclamation Limit:

Reclamation Type:

Overwrite Data when Deleted:

Reclaim Storage Pool:

Copy Storage Pools:

Active Data Pools:

Last Update By: TSMEXP (2021-04-24 11:10:29)

Description:

172.16.105.2:5020/start admin | logout |

Device Classes

Define Device Class Define cold-data-cache Stg.Pool

Device Class	Device Type	Device Access	Stg.Pool Count	Library Name	Format	Mount Limit	Est/Max Capacity
DISK		Random	2				
DBB	LTO	Sequential	0	TS3500	DRIVE	1	
LTOLIB	LTO	Sequential	1	TS3500	DRIVE	DRIVES	

Storage pools

Storage Pool	Storage Type	Device Class	Pool Type	Capacity	Utilization	Pct. Migr	Low Mig	High Mig	Mig.Proc	Next Pool	Access	Cache	Copy Pool
BUFFER_POOL	DEVCLASS	DISK	PRIMARY	4.1 TB	18.8 %	18.8 %	10 %	60 %	1	LTOPOOL	READWRITE	NO	
LTOPOOL	DEVCLASS	LTOLIB	PRIMARY	417.7 TB	14.5 %	58.2 %	20 %	100 %	1		READWRITE		
R3_STGPOOL	DIRECTORY		PRIMARY	60.0 TB	71.6 %						READWRITE		
VMCTL	DEVCLASS	DISK	PRIMARY	200.0 GB	53.2 %	53.2 %	70 %	90 %	1		READWRITE	NO	
VMWARE_STGPOOL	DIRECTORY		PRIMARY	30.0 TB	76.3 %						READWRITE		

172.16.105.2:5020/start admin | logout |

Update Storage Pool

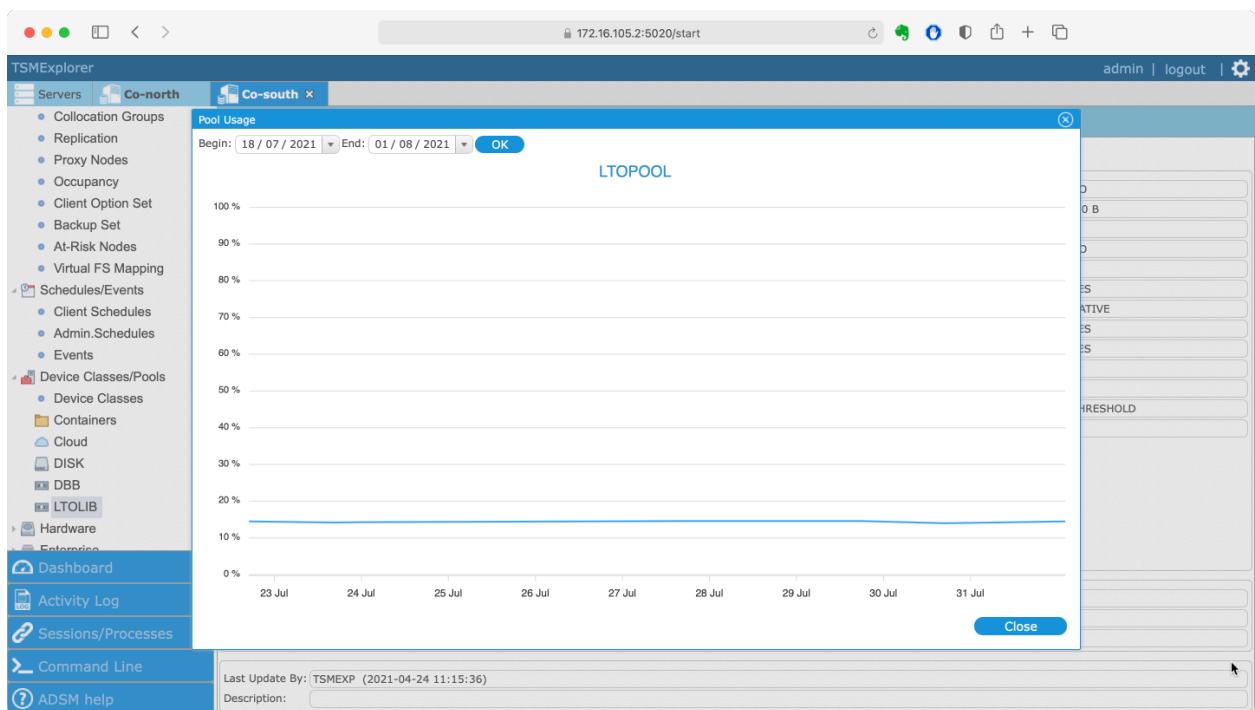
General Migration/Reclamation Copy/Active Pool

Storage Pool: LTOPOOL
Pool type: PRIMARY
Storage type: DEVCLASS
Max.scratch volumes: 170
Description:
Access: ReadWrite
Max.size Threshold (M,G,T):
CRC Data:
Collocate: No
Next Pool:
Reuse Delay (days): 2
Overflow Location:

Address: NO
 [MB]: 0.0 B
 Time (sec): 0
 Progress: NO
 0
 Use: YES
 Format: NATIVE
 Error?: YES
 Resizes: YES
 On Limit: 1
 Threshold: THRESHOLD
 When Deleted:

Help **Cancel** **OK**

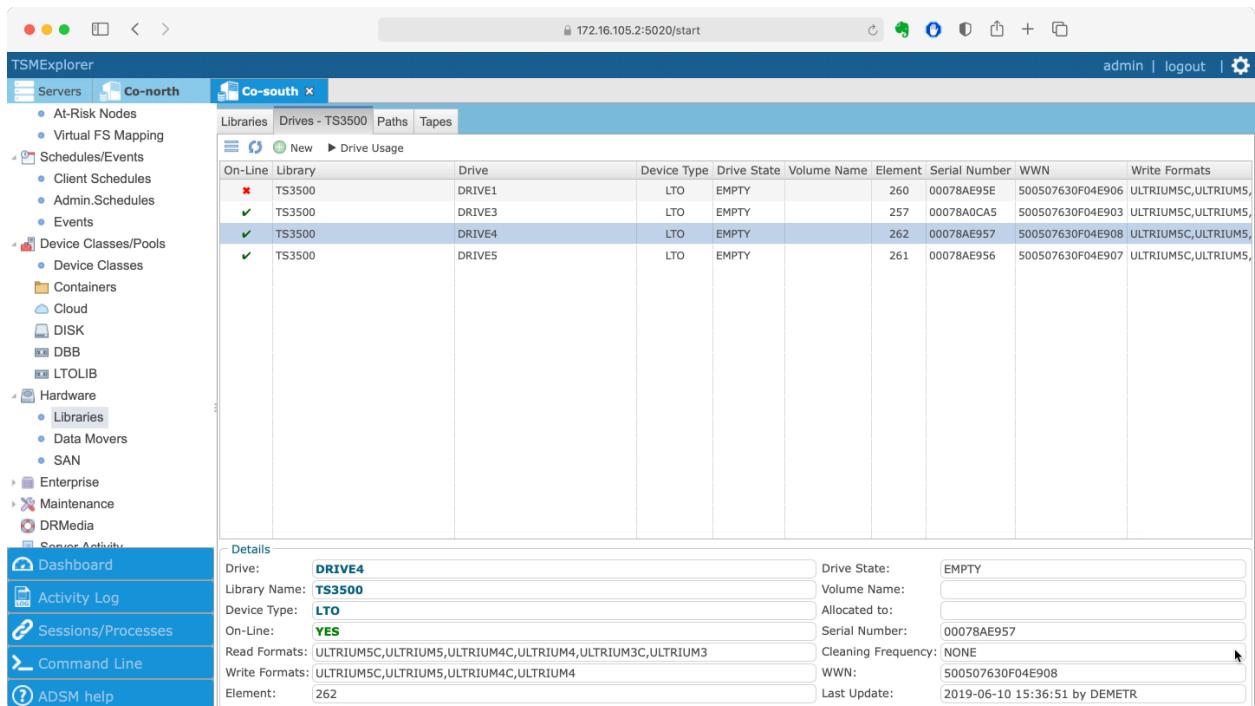
Last Update By: TSMEXP (2021-04-24 11:15:36)
 Description:



Hardware

Hardware item allows to:

- Create, change, delete libraries and define paths to them
- Create, change, delete drives and define paths to them
- View volumes
- Perform check-in, checkout, label operations
- Define data movers
- View SAN devices



TSM Explorer

Servers Co-north Co-south

Libraries Drives - TS3500 Paths Tapes

Checkin Checkout Label Number: 169 Scratch: 63

Library Name	Volume Name	Status	Last Use	Device Type	Media Type	Home Element	Owner	Cleanings Left
TS3500	LS0035L5	Private	Data	LTO	LTO-5	1041		
TS3500	LS0036L5	Scratch		LTO	LTO-5	1042		
TS3500	LS0037L5	Scratch		LTO	LTO-5	1146		
TS3500	LS0038L5	Private	Data	LTO	LTO-5	1044		
TS3500	LS0039L5	Private	Data	LTO	LTO-5	1045		
TS3500	LS0040L5	Private	Data	LTO	LTO-5	1076		
TS3500	LS0041L5	Private	Data	LTO	LTO-5	1077		
TS3500	LS0042L5	Private	Data	LTO	LTO-5	1078		
TS3500	LS0043L5	Scratch		LTO	LTO-5	1079		
TS3500	LS0044L5	Private	Data	LTO	LTO-5	1080		
TS3500	LS0045L5	Private	Data	LTO	LTO-5	1128		
TS3500	LS0046L5	Private	Data	LTO	LTO-5	1082		
TS3500	LS0047L5	Private	Data	LTO	LTO-5	1052		
TS3500	LS0048L5	Private	Data	LTO	LTO-5	1084		
TS3500	LS0049L5	Private	Data	LTO	LTO-5	1085		
TS3500	LS0050L5	Private	Data	LTO	LTO-5	1086		
TS3500	LS0051L5	Scratch		LTO	LTO-5	1087		
TS3500	LS0052L5	Scratch		LTO	LTO-5	1088		
TS3500	LS0053L5	Scratch		LTO	LTO-5	1089		
TS3500	LS0054L5	Private	Data	LTO	LTO-5	1090		
TS3500	LS0055L5	Scratch		LTO	LTO-5	1091		
TS3500	LS0056L5	Private	Data	LTO	LTO-5	1092		
TS3500	LS0057L5	Private	Data	LTO	LTO-5	1093		
TS3500	LS0059L5	Private	Data	LTO	LTO-5	1095		

Enterprise Administration

Enterprise Administration item allows to manage server's interaction

TSM Explorer

Servers Co-north Co-south

Servers

Server Name	High-level Address	Low-level Address	Node	Comm. Method
TSM2	1500			TCP/IP

Details

Server Name:	TSM2	Allow archive deletion?:	YES	Bytes Received:	217
Comm. Method:	TCP/IP	Grace Deletion Period:	5	Bytes Sent:	181
High-level Address:		SSL:	<input checked="" type="checkbox"/>	Duration:	0.205
TCP Port:	1500	Session Security:	Strict	Idle Wait:	0.018
Allow Replacement:	* <input checked="" type="checkbox"/>	Reg. Admin:		Media Wait:	0.0
Node:		Managing profile:		Virtual Volume Password Set:	No
Last Access:	2021-08-01 03:19:02	Server Password:	Yes	Validate Protocol:	No
Locked:	NO	Server Password Set Date/Time:	2019-08-03 20:13:12		
Compression:	NO	Invalid Sign-on Count for Server:			
Description:					
URL:					

Server Maintenance

Server Maintenance item allows to:

- Manage database SP, define volumes for database, define triggers
- Manage Recovery Log, define volumes for Recovery Log, define triggers
- View volume history
- Create and edit scripts
- Create and edit user accounts, define user rights
- View and register SP licenses
- View PVU
- View SP table structure

Database/Logs Usage

Database

Database Name:	TSMDB1	Full Device Class:	DBB	Arch.Log Used Threshold:	80 %
Size of file system:	1.0 TB	Last Complete Backup:	2021-07-31 20:22:58	Streams:	1
Space used	773.9 GB (76.1 %)	Buffer Poll Hit Ratio:	95.1 %	Sort Overflows:	0
Free space available:	243.5 GB	Reorg BeginTime:	14:00	Increments Since Last Full:	0
Compress DB backup:	*	Reorg Duration:	8	Allow Reorgtable:	✓
Protect keys:	*	Package Cache Hit Ratio:	99.8 %	Last DB Reorganization:	2021-07-31 19:49:02

Active Log

Total Space:	148.0 GB	Active Log Directory:	/netapp/activelog
Free Space:	80.4 GB	Mirror Log Directory:	/netapp/mirrorlog

Archive Log

Total size of file system:	700.0 GB	Archive Failover Log Directory:	
Archive Log Compressed:	*	Archive Log Directory:	/netapp/archivelog

Database Volumes - 4

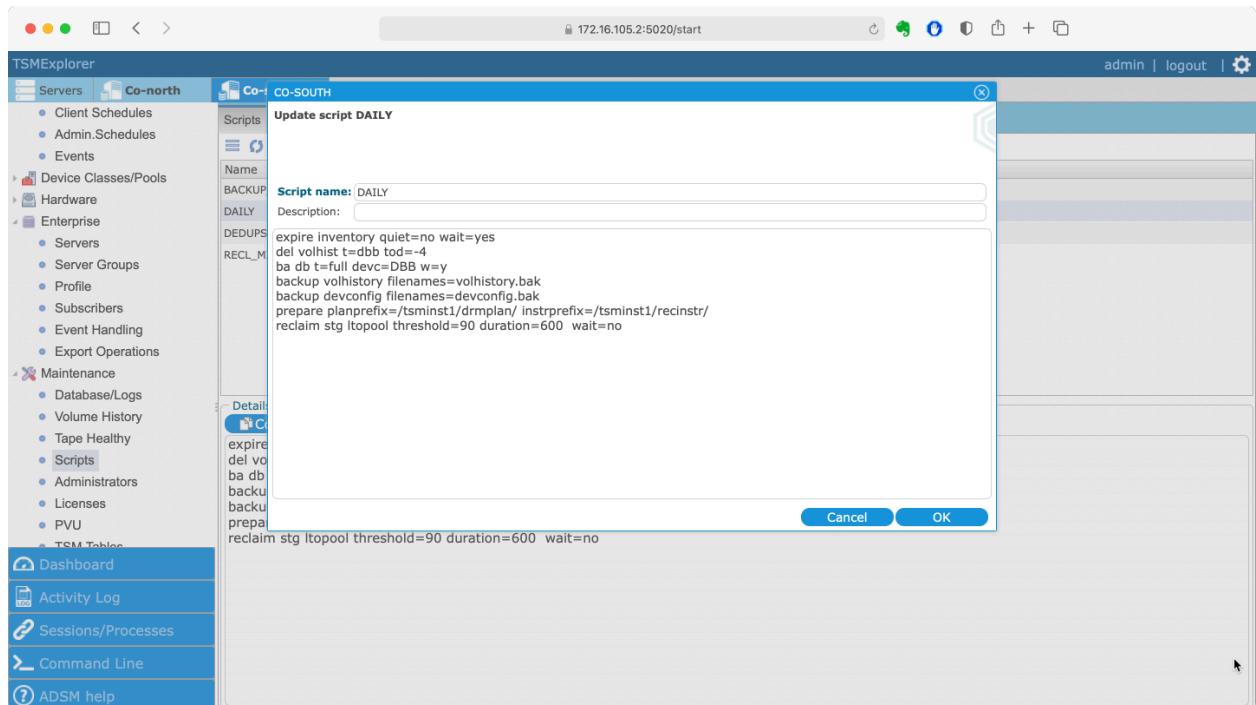
Volume Location	/tsmdb/tsmdb001
	/tsmdb/tsmdb002
	/tsmdb/tsmdb003
	/tsmdb/tsmdb004

Volume History

Date/Time	Type	Device Class	Volume Name
2021-07-31 20:23:22	BACKUPFULL	DBB	BN0170L5
2021-07-31 10:22:48	BACKUPFULL	DBB	KAP958L5
2021-07-31 04:15:18	STGNEW	LTOLIB	L50047L5
2021-07-30 20:03:09	BACKUPFULL	DBB	KAP948L5
2021-07-30 11:43:23	BACKUPFULL	DBB	KAP946L5
2021-07-29 05:13:14	STGNEW	LTOLIB	L50008L5

Details

Date/Time:	2021-07-31 20:23:22	Obj Id:	0
Type:	BACKUPFULL	DB Backup Home Position:	0
Backup Series:	1919	DB Backup Total Data Bytes[MB]:	0
Backup Operation:	0	DB Backup total Log Bytes[MB]:	0
Device Class:	DBB	DB Backup Stream Id:	1
Volume Location:		DB Backup Volume Sequence for Stream:	100001
Command:		Volume Name:	BN0170L5



Administrator	Contact	Email	Authentication	Session Security	System Privilege	Locked	Pass.expiration	Reg. Date	Last Access
ADMINTM			Local	Strict	YES	NO	NEVER	2017-01-13 00:16	2020-03-30 13:47
A	Administration Center		Local	Transitional	NO	NO	NEVER	2017-01-13 00:14	2017-06-04 19:23
A			Local	Strict	YES	NO	NEVER	2017-01-13 17:28	2021-04-07 18:24
D			Local	Strict	YES	NO	NEVER	2021-03-18 12:11	2021-05-13 10:48
I			Local	Strict	YES	NO	NEVER	2020-06-21 12:32	2021-02-12 10:00
M		3	Local	Transitional	NO	NO	NEVER	2021-01-03 16:00	2021-01-03 16:00
S			Local	Strict	YES	NO	NEVER	2017-01-13 00:14	
T			Local	Strict	YES	NO	NEVER	2020-06-20 15:20	2021-08-01 02:28
T			Local	Strict	YES	NO	NEVER	2021-05-23 13:47	2021-08-01 02:35
T			Local	Strict	YES	NO	NEVER	2020-06-21 12:31	2021-01-09 12:03
V			Local	Strict	YES	NO	NEVER	2020-10-27 11:33	2021-07-13 00:46

Details

Administrator Name: [REDACTED] Authentication: Local Session Security: Strict
Contact: [REDACTED] Email: [REDACTED] SSL Required: Default
Locked: NO Alert email: [REDACTED] Managing profile: [REDACTED]
Password Expiration: Never System Privilege: [REDACTED] Registered by: SERVER_CONSOLE / 2017-01-13 00:16:
Invalid Sign-on Count: 0 Operator Privilege: [REDACTED]
Domain Privilege: ** Included with system privilege **
Storage Privilege: ** Included with system privilege **
Client Access Privilege: ** Included with system privilege **
Client Owner Privilege: ** Included with system privilege **

DRMedia

The screenshot shows the DRMedia interface with the following details:

- Header:** TSMExplorer, admin | logout | gear icon.
- Left Sidebar:**
 - Enterprise: Servers, Server Groups, Profile, Subscribers, Event Handling, Export Operations.
 - Maintenance: Database/Logs, Volume History, Tape Healthy, Scripts, Administrators, Licenses, PVU, TSM Tables.
 - DRMedia (selected).
 - Server Activity.
 - Daily amount.
 - Remote Access.
- Top Bar:** Disaster Recovery Media, View DRM Status, Create a recovery plan, Move DRMedia, State: ALL, Location: ALL, search, refresh, and other icons.
- Table:** Disaster Recovery Media

Volume	State	Volume Type	Library	Storage Pool	Volume Location	Last Update
KAP958L5	MOUNTABLE	DBBackup	TS3500			2021-07-31 10:22:48
KAP948L5	MOUNTABLE	DBBackup	TS3500			2021-07-30 20:03:09
KAP946L5	MOUNTABLE	DBBackup	TS3500			2021-07-30 11:43:23
BN0170L5	MOUNTABLE	DBBackup	TS3500			2021-07-31 20:23:22
- Bottom Left:** Dashboard, Activity Log, Sessions/Processes, Command Line, ADSM help.

Server Activity

The item allows to perform the following operations:

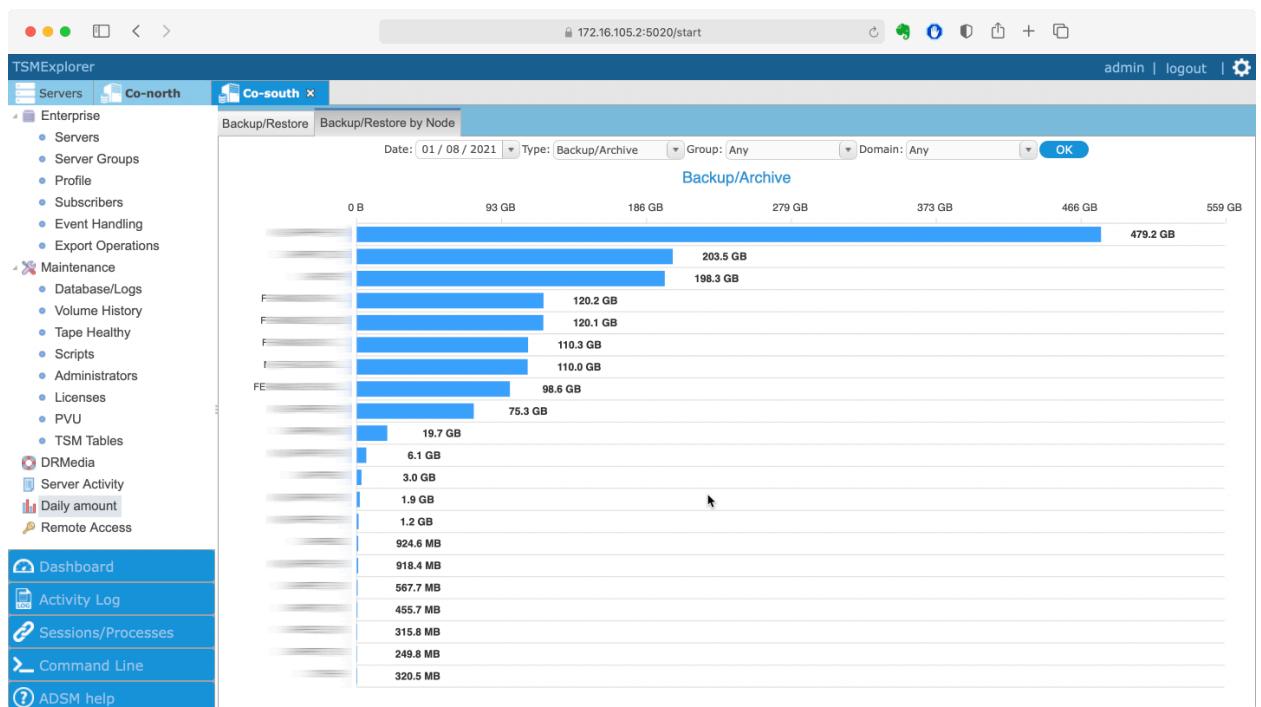
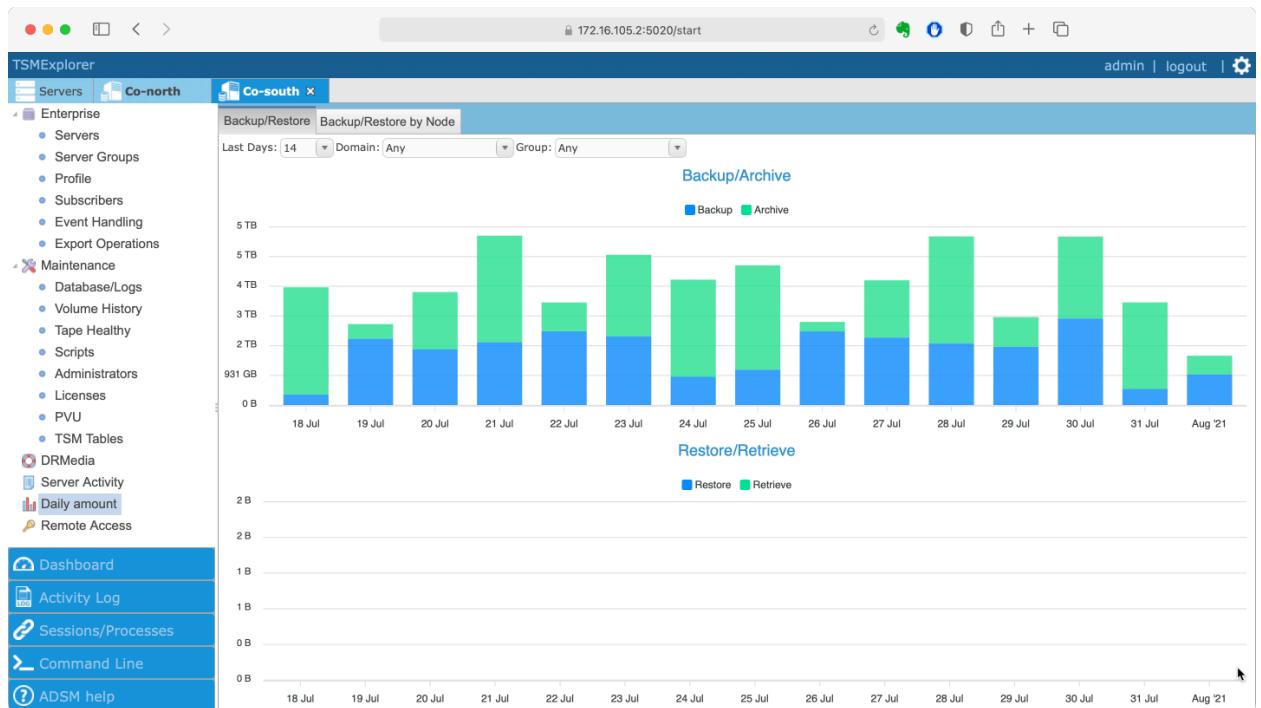
- View history of current activity
- View activity timeline of migration, backup, archive processes

The screenshot shows the Server Activity interface with the following details:

- Header:** TSMExplorer, admin | logout | gear icon.
- Left Sidebar:**
 - Enterprise: Servers, Server Groups, Profile, Subscribers, Event Handling, Export Operations.
 - Maintenance: Database/Logs, Volume History, Tape Healthy, Scripts, Administrators, Licenses, PVU, TSM Tables.
 - DRMedia.
 - Server Activity (selected).
 - Daily amount.
 - Remote Access.
- Top Bar:** Activity, Sessions/Rates, Time Activity, Num: 1256, Type: Any, Begin: 31 / 07 / 2021 15 : 00, End: 01 / 08 / 2021 05 : 00, OK, Unsuccessful: search, refresh, and other icons.
- Table:** Activity

Status	Start Time	Day	Duration	Process	Association	Schedule	Processed	Objects	MB/s	As Entity	Sub.Entity
✓	01-Aug 03:17:53	Sun	00:00:01	ARCHIVE	M_		1.5 MB	2	1.5		
✓	01-Aug 03:17:52	Sun	00:00:02	ARCHIVE	M_		128.0 KB	2	0.1		
✓	01-Aug 03:17:51	Sun	00:00:03	ARCHIVE	M_		256.1 KB	4	0.1		
✓	01-Aug 03:17:50	Sun	00:00:04	ARCHIVE	M_		384.1 KB	6	0.1		
✓	01-Aug 03:17:36	Sun	00:00:09	ARCHIVE	M_		149.3 MB	2	16.6		
✓	01-Aug 03:17:35	Sun	00:00:10	ARCHIVE	M_		145.9 MB	2	14.6		
✓	01-Aug 03:17:19	Sun	00:00:12	ARCHIVE	M_		156.6 MB	2	13.1		
✓	01-Aug 03:17:18	Sun	00:00:13	ARCHIVE	M_		160.9 MB	2	12.4		
✓	01-Aug 03:17:17	Sun	00:00:14	ARCHIVE	M_		152.9 MB	2	10.9		
✓	01-Aug 03:17:17	Sun	00:00:14	ARCHIVE	M_		150.5 MB	2	10.8		
✓	01-Aug 03:07:40	Sun	00:00:11	ARCHIVE	M_		25.4 KB	2			
✓	01-Aug 03:07:39	Sun	00:00:12	ARCHIVE	M_		693.0 B	2			
✓	01-Aug 03:07:37	Sun	00:00:14	ARCHIVE	M_		2.5 KB	4			
✓	01-Aug 03:07:36	Sun	00:00:15	ARCHIVE	M_		12.6 MB	8	0.8		
✓	01-Aug 03:05:20	Sun	00:02:12	ARCHIVE	M_		975.3 MB	26	7.4		
✓	01-Aug 03:05:19	Sun	00:02:13	ARCHIVE	M_		1.0 GB	24	7.7		
- Bottom Left:** Dashboard, Activity Log, Sessions/Processes, Command Line, ADSM help.

Daily Amount



Dashboard

The screenshot shows the TSM Explorer dashboard with the following sections:

- TSM1**: Shows sessions for the last 24 hours. One session is completed (57) and one is failed (1). A table lists sessions with columns: Client Name, TCP/IP Name, Address, Bytes Sent, Bytes Recvd, State, and Platform.
- Storage Pools**: Displays storage pool sizes and utilization for BUFFER_POOL, LTOPOOL, VMCTL, and R3_STGPOOL.
- Paths / Drives**: Shows paths and drives status, indicating some drives are not online.
- Tape Usage**: Shows tape usage for TS3500 with scratch and total capacities.
- Mounted volumes**: Lists mounted volumes with library name, device type, drive, volume name, and drive state.
- Rate [MB/s]**: A line chart showing data transfer rates over time (02:40 to 03:25) for received and sent clients and servers.
- Processes**: Lists processes running, such as generating deduplication statistics for nodes M_FE-MC-D and M_SAPRBP.

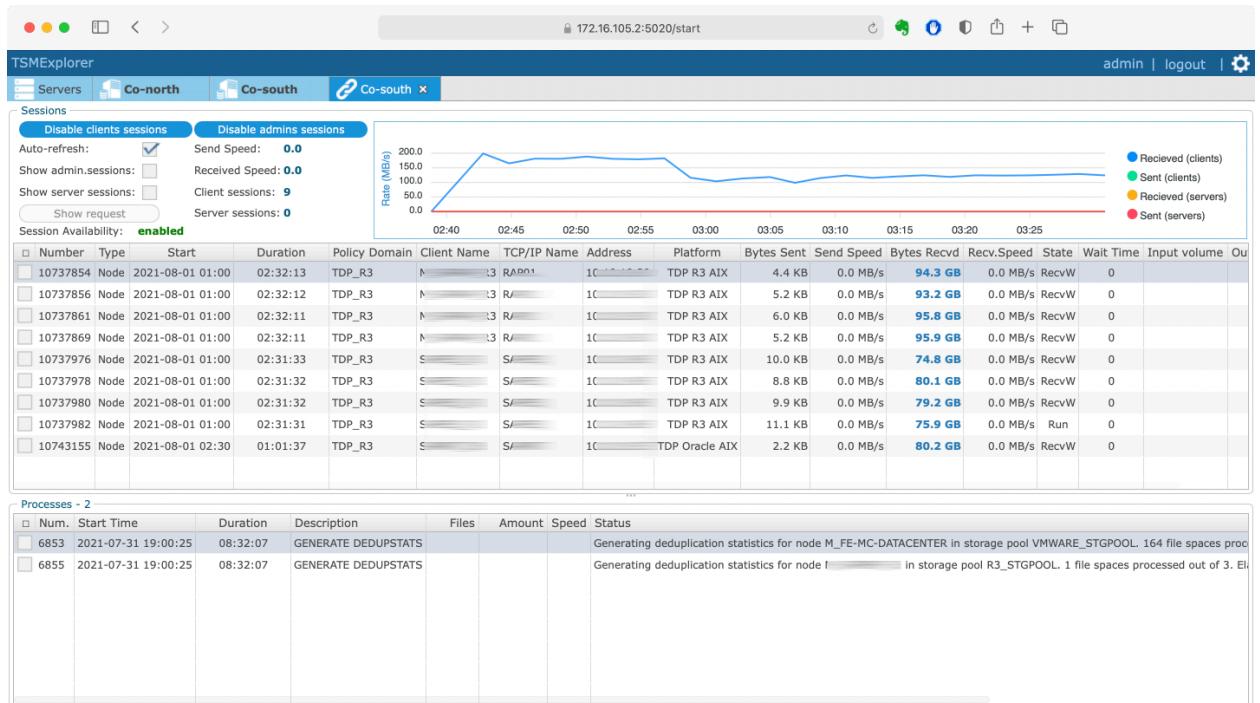
Activity Log

Open a tab or a separate window for convenient viewing of the Activity Log. You can indicate various parameters for the selection of logs, as well as select filters to choose the required log entries.

The screenshot shows the Activity Log table for CO-NORTH, displaying log entries from 2021-08-01 03:31:22 to 2021-08-01 03:30:18. The table includes columns for Date, Node, Schedule, Help, Code, Administrator, and Message. The log entries include various system events such as session processing, reclamation processes, and database entry removals.

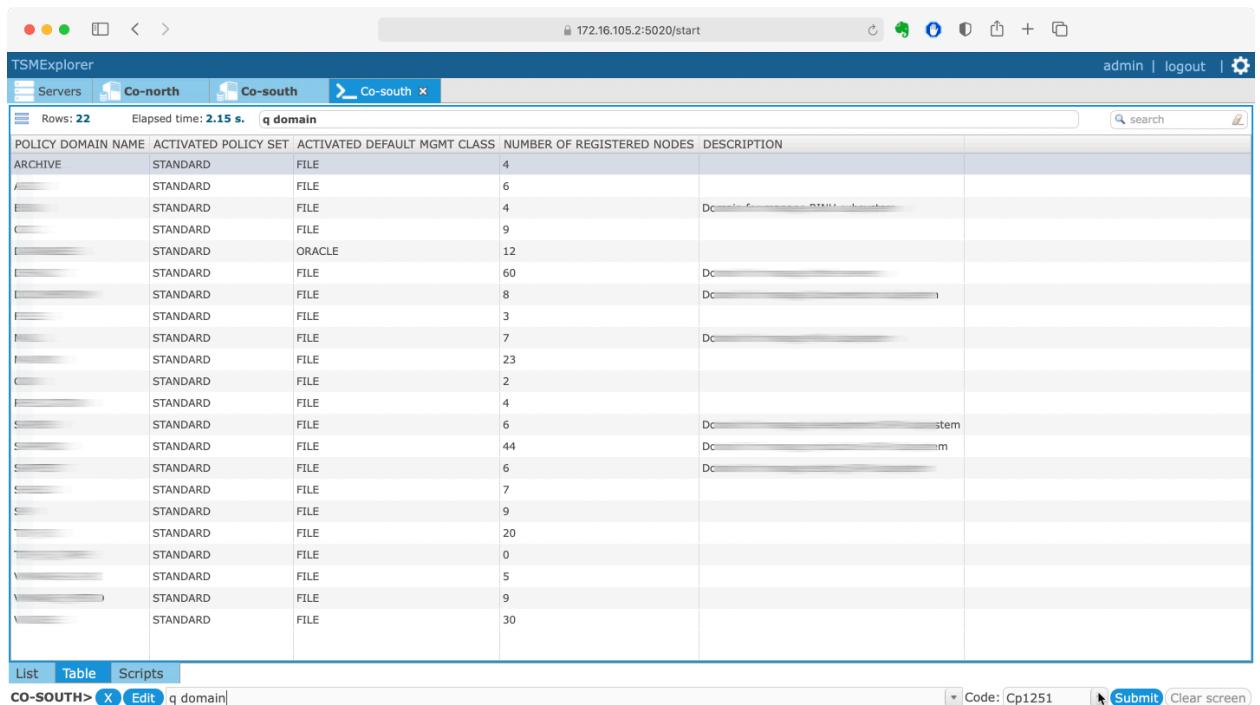
Date	Node	Schedule	Help	Code	Administrator	Message
2021-08-01 03:31:22				ANR0951I		Session 3571887 for node S processed 1 files by using inline data deduplication or compression, or both. The number of original bytes was 131,0
2021-08-01 03:31:22				ANR0951I		Session 3571885 for node S processed 2 files by using inline data deduplication or compression, or both. The number of original bytes was 262,1
2021-08-01 03:31:22				ANR0951I		Session 3571886 for node S processed 1 files by using inline data deduplication or compression, or both. The number of original bytes was 131,0
2021-08-01 03:31:22				ANR0951I		Session 3571884 for node S processed 4 files by using inline data deduplication or compression, or both. The number of original bytes was 1,704
2021-08-01 03:31:22				ANR0950I		Session 3571887 for node S is using inline server data deduplication or inline compression. (SESSION: 3571887)
2021-08-01 03:31:21				ANR0950I		Session 3571886 for node S is using inline server data deduplication or inline compression. (SESSION: 3571886)
2021-08-01 03:31:20				ANR0950I		Session 3571885 for node S is using inline server data deduplication or inline compression. (SESSION: 3571885)
2021-08-01 03:31:20				ANR0950I		Session 3571884 for node S is using inline server data deduplication or inline compression. (SESSION: 3571884)
2021-08-01 03:31:15				ANR0951I		Session 3571869 for node S processed 1 files by using inline data deduplication or compression, or both. The number of original bytes was 171,4
2021-08-01 03:31:15				ANR0951I		Session 3571868 for node S processed 1 files by using inline data deduplication or compression, or both. The number of original bytes was 171,0
2021-08-01 03:31:14				ANR0950I		Session 3571869 for node S is using inline server data deduplication or inline compression. (SESSION: 3571869)
2021-08-01 03:31:12				ANR0950I		Session 3571868 for node S is using inline server data deduplication or inline compression. (SESSION: 3571868)
2021-08-01 03:31:00				ANR0951I		Session 3571861 for node S processed 1 files by using inline data deduplication or compression, or both. The number of original bytes was 171,9
2021-08-01 03:30:58				ANR0950I		Session 3571861 for node S is using inline server data deduplication or inline compression. (SESSION: 3571861)
2021-08-01 03:30:18				ANR4936I		The reclamation of the LTOPOOL storage pool is complete. Number of files reclaimed: 0. Number of reclaimed bytes: 0. Number of reclaimed deduplicated b
2021-08-01 03:30:18				ANR0985I		Process 3367 for SPACE RECLAMATION running in the BACKGROUND completed with completion state SUCCESS at 03:30:18. (PROCESS: 3367)
2021-08-01 03:30:18				ANR4932I		Reclamation process 3367 ended for storage pool LTOPOOL. (PROCESS: 3367)
2021-08-01 03:30:18				ANR1041I		Space reclamation ended for volume AB0039L5. (PROCESS: 3367)
2021-08-01 03:30:18				ANR0197E		Removal of extraneous database entries for volume AB0039L5 failed due to contention with other server processes or activities. (PROCESS: 3367)
2021-08-01 03:30:18				ANR0199W		Not possible to repair volume AB0039L5 due to other database references to this volume. (PROCESS: 3367)
2021-08-01 03:30:18				ANR0195W		Attempting to remove extraneous database entries for volume AB0039L5. (PROCESS: 3367)
2021-08-01 03:30:18				ANR1044I		Removable volume AB0039L5 is required for space reclamation. (PROCESS: 3367)
2021-08-01 03:30:18				ANR1040I		Space reclamation started for volume AB0039L5, storage pool LTOPOOL (process number 3367). (PROCESS: 3367)
2021-08-01 03:30:18				ANR4930I		Reclamation process 3367 started for primary storage pool LTOPOOL automatically, threshold=70, duration=None. (PROCESS: 3367)

Sessions/Processes/Requests



Command Line

Command Line opens a separate window for enhanced graphic mode of SP dsmadmc console. The console allows you to display the results of commands in the List or Table mode. The user can run separate SP commands and predefined SP scripts.



Help ADSM

The screenshot shows the TSM Explorer interface with the 'TSM Help' window open. The help window contains the following information:

- Command or Code:** q node
- 3.45.45 QUERY NODE (Query nodes)**
- Description:** Use this command to view information about one or more registered nodes.
- Privilege class:** Any administrator can issue this command.
- Syntax:**

```

    .-*-----.
>>-Query Node--+-+-----+-----+-----+
      '-node_name-' |   .,------.
                      V   |
      -Domain-----domain_name-+
    .-Format----Standard----.
>>+-----+-----+-----+
      '-Format---Standard+-'
                      '-Detailed-'

    .-Type----Client----.
>>+-----+-----+-----+-----><
      '-AUTHentication---+Local+-'  '-Type---+Client+-'
                                '-LDAP--'           '+NAS---+
                                         '+Server-+
                                         '-Any---'
  
```
- Disk Usage Statistics:**

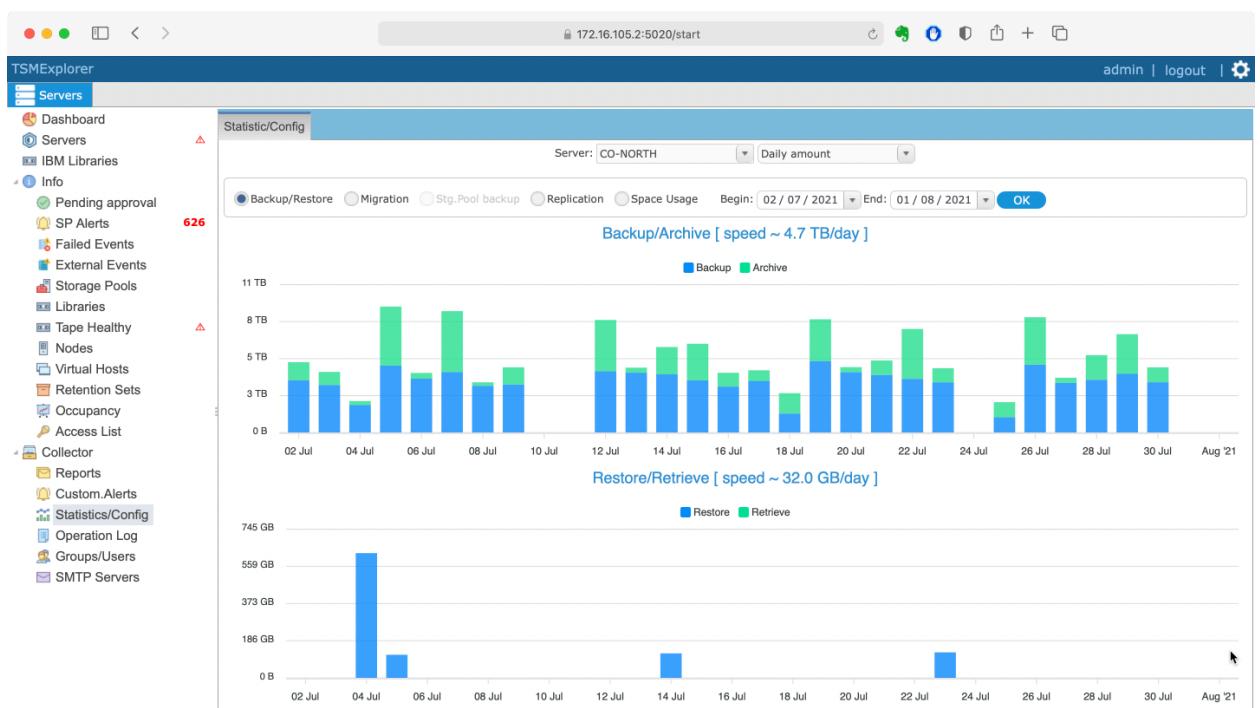
Volume	Size
SAPRXT_R3	455.7 MB
SAPEQ_R3	315.8 MB
SAPRBT_R3	249.8 MB
OTHER	320.5 MB

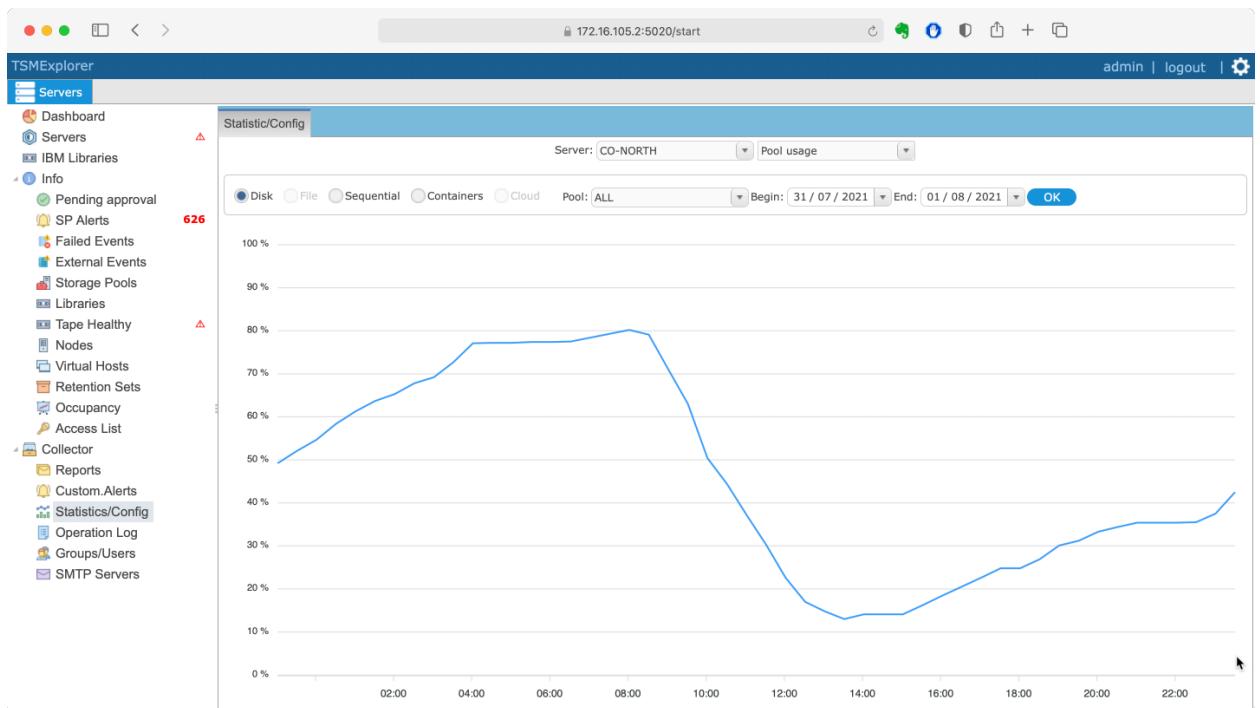
Statistical Reports

Collector performs statistics collection based on SP server with predefined intervals. Statistical data are displayed in charts for your convenience. Based on charts analysis you can understand the current state of the system and the dynamics of its development.

Statistical reports include:

- Database usage - stats are collected once a day
- Recovery Log Usage - stats are collected every 15 minutes
- Daily amount of operations backup, archive, restore, retrieve, migration - stats are collected once a day
- Disk and File pool usage - stats are collected every 15 minutes
- Sequential pool usage - stats are collected once a day
- Tape usage - stats are collected once a day
- Session - stats are collected every 15 minutes





Statistic/Config

Server: CO-NORTH Configuration

Type: Configuration Show Download Copy

*** --> SHOW TIME

Current Date and Time on the Server: 07/30/2021 23:45:55
UTC (GMT) Date/Time is: 07/30/21 20:45:55
Last Noted Date/Time is: 07/30/21 23:16:29
Daylight Savings Time is in effect: NO

*** --> QUERY STATUS

Storage Management Server for AIX - Version 7, Release 1, Level 10.100

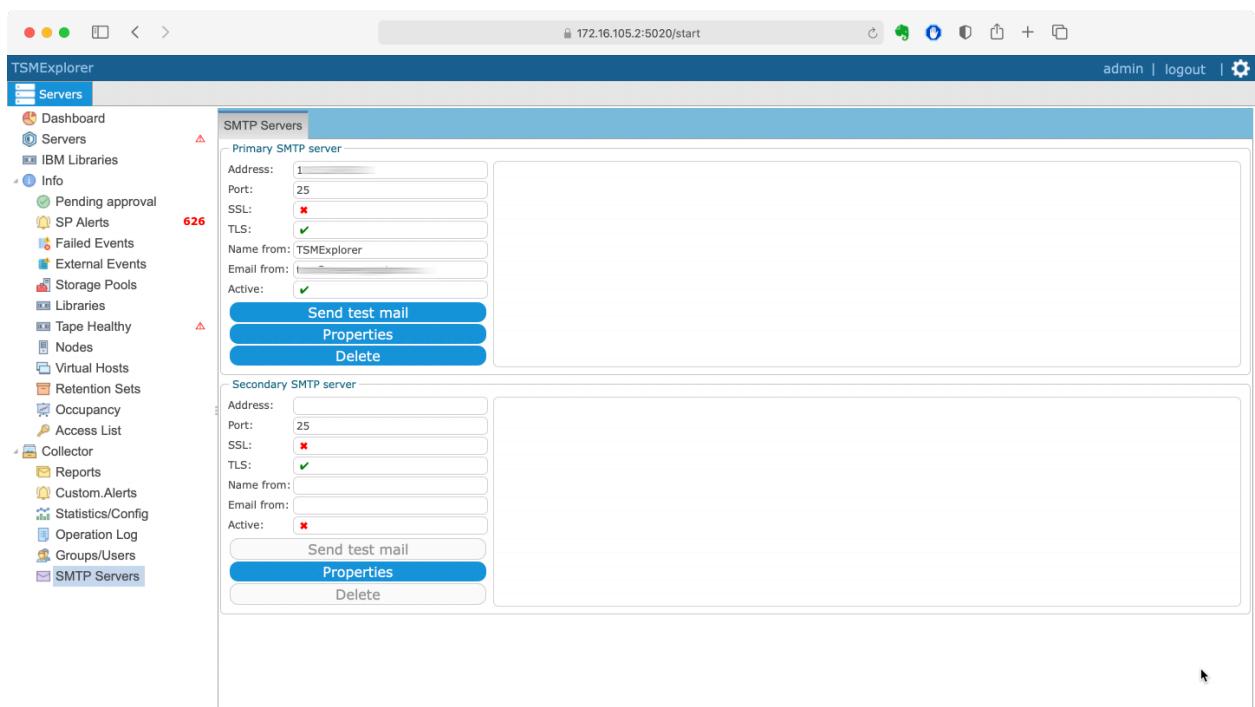
Server Name:	TSM2
Server host name or IP address:	[REDACTED]
Server TCP/IP port number:	1500
Crossdefine:	On
Server Password Set:	Yes
Server Installation Date/Time:	03/31/2016 16:01:50
Server Restart Date/Time:	01/01/2021 21:26:46
Authentication:	On
Password Expiration Period:	90 Day(s)
Invalid Sign-on Attempts Limit:	0
Minimum Password Length:	0
Registration:	Closed
Subfile Backup:	No
Availability:	Enabled
Inbound Sessions Disabled:	
Outbound Sessions Disabled:	
Accounting:	Off
Activity Log Retention:	30 Day(s)
Activity Log Number of Records:	1257684
Activity Log Size:	34 M
Activity Summary Retention Period:	60 Day(s)

Mail Server Registration

To send reports and alerts, users must first determine the SMTP mail servers. To improve reliability, you can define two SMTP servers. If one of them is unavailable, collector will attempt to send information via the second SMTP server.

Registration of any new SMTP Server includes the following parameters:

- SMTP server
- SMTP port
- From name
- From email
- Username and Password for SMTP with authentication
- Use SSL connection
- TLS enabled



User and Users Group Registration

In order to send reports and alerts it's necessary to create user and include him into the user's group.

Registration of any user includes the following parameters:

- Name
- Email
- Description
- Type user (System Administrator, SP Administrator, Client)
- Type authentication (local, login for LDAP: login@domain)
- Password

Local super administrators

- local authorization/ LDAP authorization
- add/modify users, groups, servers, remote access list, reports, alerts, smtp, connect to SP servers with registered credentials or "connect as" after authentication.

SP administrators/operators

- SP authorization only, administrator gets list of servers with current personal credential
- SP operations with personal SP credentials or "connect as" after authentication with new credential
- View statistic for successful access SP servers
- To access via SP authorization, there is no need to create a user account inside the application..
- **Using this role if you have many servers with other admins and operators with difference credentials and roles inside SP environment.**

Users

- local, LDAP user/LDAP group authorization or without authorization (for getting reports via email)
- Getting reports via email
- Access to mini-portal for controlling and checking status of backups for selected nodes groups

TSMEexplorer 172.16.105.2:5020/start admin | logout |

Servers

- Dashboard
- Servers
- IBM Libraries
- Info**
 - Pending approval
 - SP Alerts
 - Failed Events
 - External Events
 - Storage Pools
 - Libraries
 - Tape Healthy
 - Nodes
 - Virtual Hosts
 - Retention Sets
 - Occupancy
 - Access List
- Collector
- Reports
- Custom.Alerts
- Statistics/Config
- Operation Log
- Groups/Users
- SMTP Servers

Groups | Users

New > Get LDAP members

Active	Name	Email	Login	Role	Authentication	LDAP group	Last Update	Description
✓	C	c...	cf...	Client	LDAP User		2018-06-06 10:51	
✓	D	d...	dm...	Client	Local		2021-05-13 10:00	
✓	F	f...	fat...	Client	None		2021-01-21 10:39	
✓	G	g...	go...	Client	None		2018-06-20 15:33	
✓	K	k...	ku...	Client	None		2020-10-22 13:55	
✓	L	Administrator	ac...	System Administrator	Local		2021-08-01 12:14	
✓	C	ol...	at...	System Administrator	LDAP User		2019-11-27 13:26	
✓	S	s...	sa...	Client	None		2018-06-20 15:33	
✓	a		ac...	SP Administrator	SP Server		2020-01-31 10:59	
✓	b		br...	SP Administrator	SP Server		2021-07-22 17:12	
✓	d		de...	Client	None		2020-09-26 00:02	
✓	d		du...	System Administrator	LDAP User		2019-11-26 12:11	
✓	k		ko...	System Administrator	LDAP User		2020-02-03 13:50	

Details | Node groups - 1

Active:

Name: Chernov

Email: chernov-rv@rosenergoatom.ru

Login: Chernov

LDAP Group:

Authentication: LDAP User

Role: Client

Description:

Last update: 2018-06-06 10:51:53

TSMEexplorer 172.16.105.2:5020/start admin | logout |

Servers

- Dashboard
- Servers
- IBM Libraries
- Info**
 - Pending approval
 - SP Alerts
 - Failed Events
 - External Events
 - Storage Pools
 - Libraries
 - Tape Healthy
 - Nodes
 - Virtual Hosts
 - Retention Sets
 - Occupancy
 - Access List
- Collector
- Reports
- Custom.Alerts
- Statistics/Config
- Operation Log
- Groups/Users
- SMTP Servers

Groups | Users

New > Get LDAP members

Define

Role: Client.
Client can monitor: nodes from client's portal, get reports.

Role:	Client	SP Administrator	System Administrator
Name:			
Email:			
Description:			
Active:	<input checked="" type="checkbox"/>		
Type Auth:	None		
Login:			
Password:			
LDAP group:			

Details

Help

Cancel OK

Active:

Name: Chernov

Email: chernov-rv@rosenergoatom.ru

Login: Chernov

LDAP Group:

Authentication: LDAP User

Role: Client

Description:

Last update: 2018-06-06 10:51:53

User can access to simple interface with yourself list of nodes for monitoring.

The screenshot shows a web-based monitoring interface for TSMExplorer. At the top, there are navigation links: Events, Activity, Space Usage, Filespaces, Sessions, and a summary section showing Nodes: 57, Objects: 9 153 051, and Reporting: 143.6 TB. Below this, a table displays detailed information for each node, including Server, Domain, Node name, TCP Name, Address, Version, Platform, Objects, Space, Since, Risk Interval, Last Access, and Contact. The table has several columns: Failed (0), Missed (1), and Completed (42). The interface also includes a search bar and a 'Risk nodes' button.

Schedules for the last 24 hours						Objects		
			Failed:	Missed:	Completed:			
CO-SOUTH SA[REPO] SA[REPO]	sa[REPO]	1	7.1.8.0	AIX (7.2)	879 988	84.9 GB	1 hours	default
CO-SOUTH SA[V] SA[V]	sa[V]	1	6.3.1.2	Linux x86-64 (2.6.16.46-0)	182 969	25.9 GB	5 hours	default
CO-SOUTH SA[V] SA[V]	sa[V]	1	7.1.8.0	AIX (7.2)	399 524	43.1 GB	1 hours	default
CO-SOUTH SA[OD M1]	sa[OD M1]	1	7.1.8.0	AIX (7.2)	387 903	34.6 GB	3 hours	default
CO-SOUTH SA[OD M1]	sa[OD M1]	1	7.1.8.0	AIX (7.2)	6 352	9.8 GB	1 hours	default
CO-SOUTH SA[OD M1]	sa[OD M1]	1	7.1.8.0	AIX (7.2)	3 825	4.5 GB	0 hours	default
CO-SOUTH SA[OD M1]	sa[OD M1]	1	7.1.8.0	AIX (7.2)	1 744	4.3 GB	0 hours	default
CO-SOUTH SA[OD M1]	sa[OD M1]	1	7.1.8.0	AIX (7.2)	2 047	5.9 GB	0 hours	default
CO-SOUTH SA[OD M1]	sa[OD M1]	1	7.1.8.0	AIX (7.2)	627	1.4 GB	0 hours	default
CO-SOUTH SA[OD M1]	sa[OD M1]	1	7.1.8.0	AIX (7.2)	58 328	11.3 GB	0 hours	default
CO-SOUTH SA[OD M1]	sa[OD M1]	1	7.1.8.0	AIX (7.2)	2 550	2.9 GB	0 hours	default
CO-SOUTH SA[OD M1]	sa[OD M1]	1	7.1.8.0	AIX (7.2)	4 377	4.3 GB	0 hours	default
CO-SOUTH SA[OD M1]	sa[OD M1]	1	7.1.8.0	AIX (7.2)	8 809	4.3 GB	0 hours	default
CO-SOUTH SA[OD M1]	sa[OD M1]	1	7.1.8.0	AIX (7.2)	4 811	5.8 GB	0 hours	default
CO-SOUTH SA[OD M1]	sa[OD M1]	1	7.1.8.0	AIX (7.2)	4 245	9.3 GB	0 hours	default
CO-SOUTH SA[OD M1]	sa[OD M1]	1	7.1.8.0	AIX (7.2)	6 192	9.0 GB	1 hours	default
CO-SOUTH SA[OD M1]	sa[OD M1]	1	7.1.8.0	AIX (7.2)	126 484	45.6 GB	2 hours	default
CO-SOUTH SA[OD M1]	sa[OD M1]	1	7.1.8.0	AIX (7.2)	411 717	46.3 GB	2 hours	default
CO-SOUTH SA[OD M1]	sa[OD M1]	1	7.1.8.0	AIX (7.2)	80 940	37.8 GB	2 hours	default
CO-SOUTH SA[OD M1]	sa[OD M1]	1	7.1.8.0	AIX (7.2)	347 067	15.4 GB	3 hours	default
CO-SOUTH SA[OD M1]	sa[OD M1]	1	7.1.8.0	AIX (7.2)	74 170	12.9 GB	2 hours	default
CO-SOUTH SA[OD M1]	sa[OD M1]	1	7.1.8.0	AIX (7.2)	84 801	29.9 GB	2 hours	default
CO-SOUTH SA[OD M1]	sa[OD M1]	1	7.1.8.0	AIX (7.2)	130 087	15.0 GB	2 hours	default
CO-SOUTH SA[OD M1]	sa[OD M1]	1	7.1.8.0	AIX (7.2)	178 649	13.3 GB	2 hours	default
CO-SOUTH SA[OD M1]	sa[OD M1]	1	7.1.8.0	AIX (7.2)	337 401	10.6 GB	bypassed	
CO-SOUTH SA[OD M1]	sa[OD M1]	1	7.1.8.0	AIX (7.2)	331 293	64.5 GB	2 hours	default
CO-SOUTH SA[OD M1]	sa[OD M1]	1	7.1.8.0	AIX (7.2)	79 602	89.6 GB	0 hours	default

Details
Node: [redacted]
Contact: [redacted]

Reports

Collector has the function of creating reports on SP server work. The report is sent as schedule to addresses of the current group users. In case if you haven't selected the user's group, the report will still be saved in the database and can be viewed in the history tab. The report can be viewed both in TSMExplorer and browser.

List of reports

The following standard reports exist:

- Database utilization - report about the state of SP database
- Recovery log utilization – report about the state of Recovery log
- Volume history – report about current volume history
- Failed/Missed client Schedules – report about schedules with Failed/Missed status within the last N days
- All client Schedules – report about all schedules within the last N days
- Nodes without schedule - report about nodes without schedules
- Expiration for node less 5 days – report about nodes that expire within 5 days
- New registered nodes – report about new nodes for covered hours
- Administrative schedule - report about administrative schedules within the last 10 days
- Failed NAS backup – report about failed NAS backup for covered hours
- Server/storage agent not active – server and storage agent are not active for last hour
- Drives not online – report about the current state of drives
- Paths not online – report about the current state of paths
- DRMedia – report about the current state of DRM
- Virtual – report about client activity for virtual hosts
- Client activity - report about client activity for covered hours

- Storage pool summary – report about the current state of storage pool
- Library volumes – report about library volumes
- Volume read/write error - report about the current number errors for volumes
- Unavailable volumes - report about currently unavailable volumes
- Activity log message(originator=server) - server's activity log for covered hours
- Activity log message(originator=client) - client's activity log for covered hours

The screenshot shows the TSM Explorer web interface. The left sidebar has a tree view with nodes like Dashboard, Servers, IBM Libraries, Info (Pending approval, SP Alerts, Failed Events, External Events, Storage Pools, Libraries, Tape Healthy, Nodes, Virtual Hosts, Retention Sets, Occupancy, Access List), Collector (Reports, Custom Alerts, Statistics/Config, Operation Log, Groups/Users, SMTP Servers), and a reporting profile named '626'.

The main area displays 'Reporting profiles' with a table:

Active	Name	Users Group	Encoding	Format	Attach.	Start time	Day of month	Day of week	Covered hours	Last update	Description
✓	rea_reports	rea	UTF-8	HTML	✗	10:00:00	Any	Mo Tu We Th Fr Sa Su	24	2021-07-22 01:43	
✓	exchange	exchange	UTF-8	HTML	✗	11:00:00	Any	Mo Tu We Th Fr Sa Su	48	2020-08-24 16:37	
✓	south-north	admins	Cp1251	HTML	✗	10:00:00	Any	Any	24	2020-08-24 16:37	
✗	db-oracle	ospo	UTF-8	HTML	✗	11:00:00	Any	Any	24	2020-08-24 16:37	
✓	ospo	ospo	UTF-8	HTML	✗	11:00:00	Any	Any	24	2020-08-24 16:37	
✓	askid	askid	UTF-8	HTML	✗	10:10:00	Any	Any	24	2020-08-24 16:37	
✓	odk	odk	UTF-8	HTML	✗	09:00:00	Any	Any	24	2020-08-24 16:37	
✓	vip	vip	UTF-8	HTML	✗	09:00:00	Any	Mo Tu We Th Fr Sa Su	24	2020-08-24 16:37	

Below the table, there are two tabs: 'Details' and 'Requests'. The 'Details' tab is active, showing fields for 'Users group': 'exchange', 'Format': 'HTML', 'As attachment': '✗', 'Start time': '11:00:00', 'Start date': 'Any', 'Day of week': 'Mon', 'Covered hours': '48', 'Path to disk': '', 'Save copy to disk': '✗', 'Exclude lock nodes': '✗', 'Exclude ANR for act.log': '', and 'Description': ''.

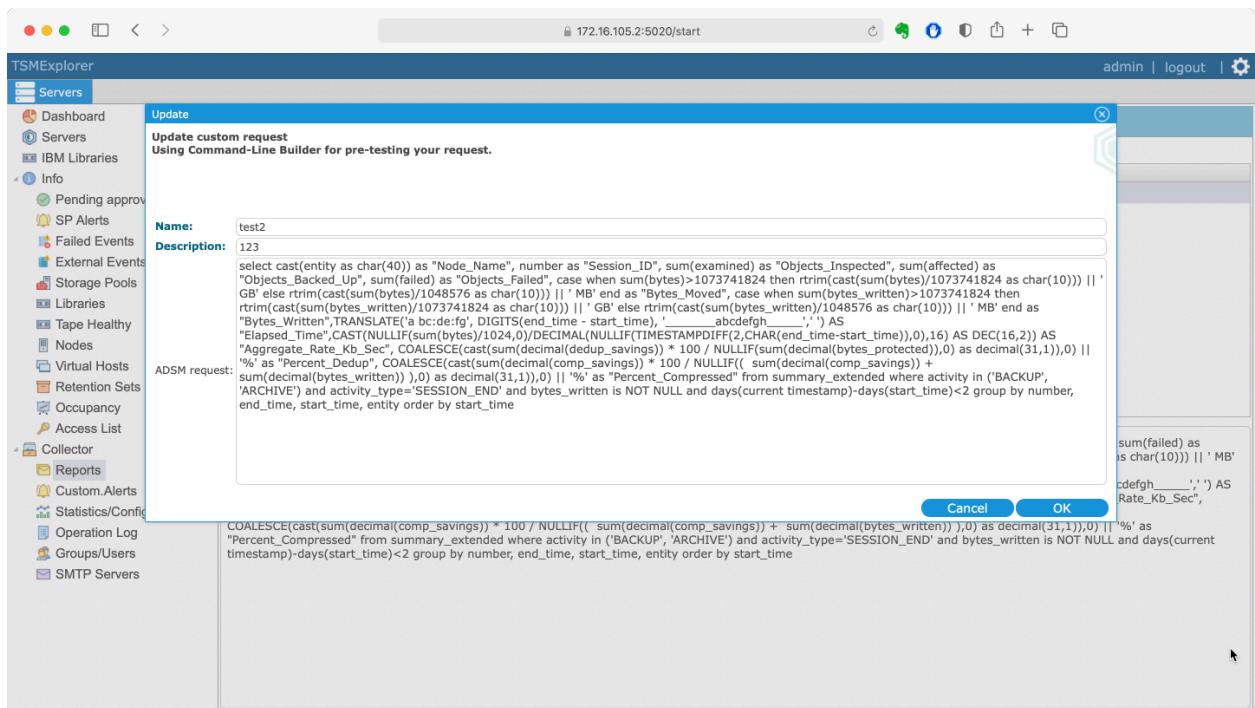
The 'Requests' tab shows sections for 'Servers' (CO-NORTH, CO-SOUTH) and 'Node Groups' (CO-NORTH EXCH-REPORT, CO-SOUTH EXCH-REPORT).

Define custom request

You can define a customized request for the report.

Registration of custom report includes the following parameters:

- Name of request
- Description of request
- ADSM request



Define new report

Define of new report includes the following parameters:

- Name of report
- Active report
- Description
- Users group
- SP server
- Covered hours
- Start time
- Start date
- Day of week
- Domains
- Default request
- Customized request

Define new report profile

Name:

Description:

Group: Show users Format: HTML Attachment: Encoding: UTF-8 Active:

Covered hours: 24 Start time: 00 : 00 Day of month: Any date Exclude lock nodes:

Days/Requests **Node Groups**

Servers	Day of week	Request
B1	Monday	Server utilization
B2	Tuesday	Database utilization
CC1TH	Wednesday	Administrative Schedules
CC2TH	Thursday	Drives not online
LA1	Friday	Paths not online
LA2	Saturday	Volume read/write error
TS	Sunday	Unavailable,Readonly volumes

Exclude ANR for act.logs: example

Save copy to disk (path):

Path to disk: Save copy to disk: Exclude lock nodes:

Exclude ANR for act.log:
Description:

Cancel OK

Report's Logs

Reporting profiles | Customized Requests | History

Begin: 02 / 07 / 2021 End: 01 / 08 / 2021 OK

626

Date	Profile
2021-07-31 11:02:17	ospo
2021-07-31 10:11:13	askid
2021-07-31 10:03:40	south-north
2021-07-31 09:02:13	odk
2021-07-30 11:03:28	ospo
2021-07-30 10:11:13	askid
2021-07-30 10:04:00	south-north

Browser ANALYTICS

ANALYST	INCREMENTAL	DATA	Linux	SIZE	DATE	TIME	OPERATIONS	COMPLETED	
KI	DOCUM_UNX_DBW_COMMAND	KI	Linux x86-64 - 7.1.6		2021-07-30 23:00:00	2021-07-30 23:15:02	2021-07-30 23:24:21	00:09:19	completed successfully
KI	DOCUM_INC_D_UNIX_INCREMENTAL	KI	Linux x86-64 - 7.1.6	601.5 MB	2021-07-30 05:00:00	2021-07-30 05:01:20	2021-07-30 05:04:54	00:03:34	completed All operations completed successfully
KI	DOCUM_UNX_DBW_COMMAND	KI	Linux x86-64 - 7.1.6		2021-07-25 23:00:00	2021-07-25 23:10:47	2021-07-25 23:54:40	00:43:53	completed All operations completed successfully
FF	DOCUM_UNX_DBW_COMMAND	FF	Linux x86-64 - 7.1.6		2021-07-30 23:00:00	2021-07-30 23:06:13	2021-07-30 23:08:06	00:01:53	completed All operations completed successfully
FF	DOCUM_INC_D_UNIX_INCREMENTAL	FF	Linux x86-64 - 7.1.6	401.3 MB	2021-07-30 05:00:00	2021-07-30 05:05:25	2021-07-30 05:07:09	00:01:44	completed All operations completed successfully
FF	DOCUM_UNX_DBW_COMMAND	FF	Linux x86-64 - 7.1.6		2021-07-25 23:00:00	2021-07-25 23:05:24	2021-07-25 23:31:37	00:26:13	completed All operations completed

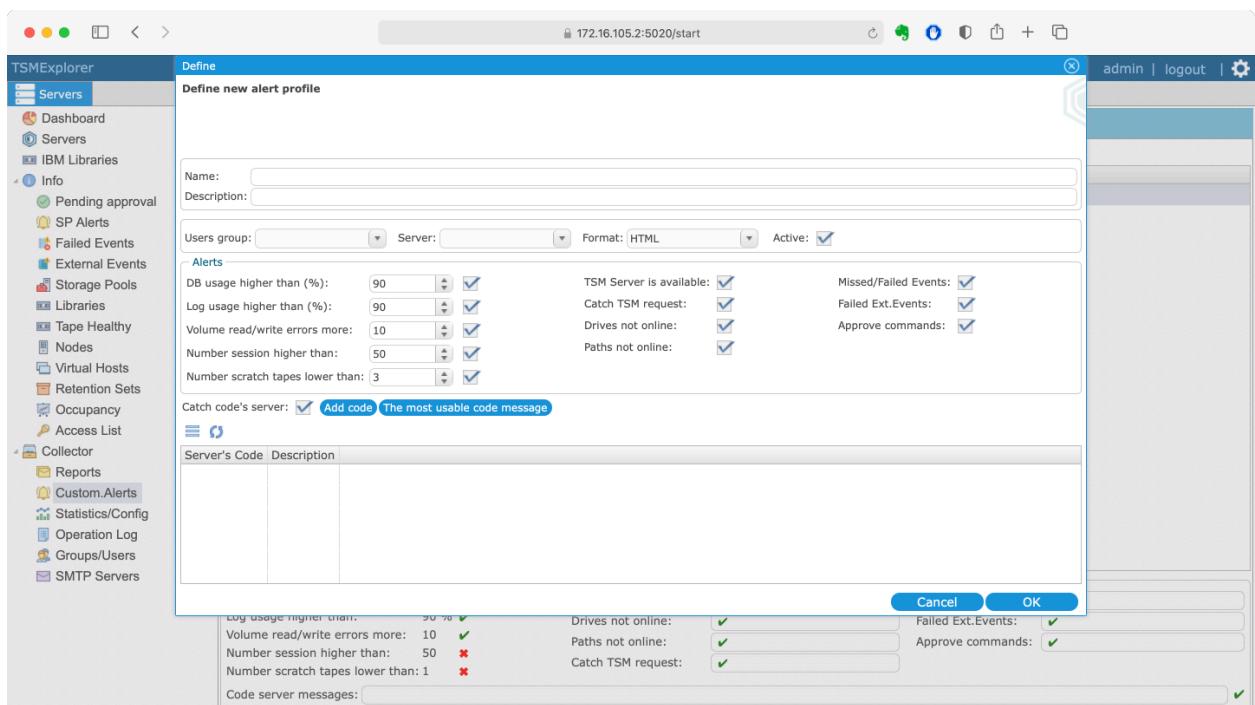
Alerts

Collector has the function of immediate alerts to users in case if any SP server parameter has exceeded the limit and established an invalid status or requires other administrator's actions. The standard alerts include:

- DB usage
- Log recovery usage
- Volume read/write errors
- SP server availability
- Number session higher than
- Number scratch tapes lower than
- Drives not online
- Paths not online

Registration of alert includes the following parameters:

- Name of alert
- Format alerts
- Active on/off
- SP server
- Users group
- Description
- Alerts
- Code server messages



Extended events

TSMEexplorer can get extended events from client scripts that doesn't use standard scheduler.

Check app.cfg file. For activation function REST-API you have to set **restapi=true**

Use sample files **event_unix.sh** or **event_win.cmd** for create their personal client scripts (path TSMEexplorer/files/extevent/curl_scripts/) for extended event

You can get CURL for windows <https://curl.se/windows/>

TSMExplorer server Rest-API

TSMExplorer has REST-API for connection to Spectrum Protect Servers.
Set variable for activation REST-API in app.cfg for activation function

```
restapi = true      // enable/disable REST-API for Spectrum Protect Servers
restport = 16020    // REST-API communication port for Spectrum Protect Servers
```

ADSM result (query or select)

Request

```
POST http://address:port/request
JSON body
{
  "server": "south",
  "admin": "admin",
  "password": "password",
  "request": "select domain_name from domains"
}
```

Response

```
{
  "request": "select domain_name from domains",
  "message": "",
  "code": "0",
  "server": "south",
  "result": [
    {
      "DOMAIN_NAME": "AAA1"
    },
    {
      "DOMAIN_NAME": "AD"
    },
    {
      "DOMAIN_NAME": "AIX_SB"
    }
  ]
}
```

ADSM command (define/update/delete and etc.)**Request**

POST http://address:port/command

JSON body

```
{  
  "server": "south",  
  "admin": "admin",  
  "password": "adminpassword",  
  "command": "define domain aaa1"  
}
```

Response

```
{  
  "command": "define domain aaa1",  
  "message": "ANR1500I Policy domain AAA1 defined",  
  "code": "ANR1500I",  
  "server": "south"  
}
```

email: info@tsmexplorer.com

web: <https://www.tsmexplorer.com/>