

Tivoli Storage Manager at Computer Science Department

Μάρτιος 2013

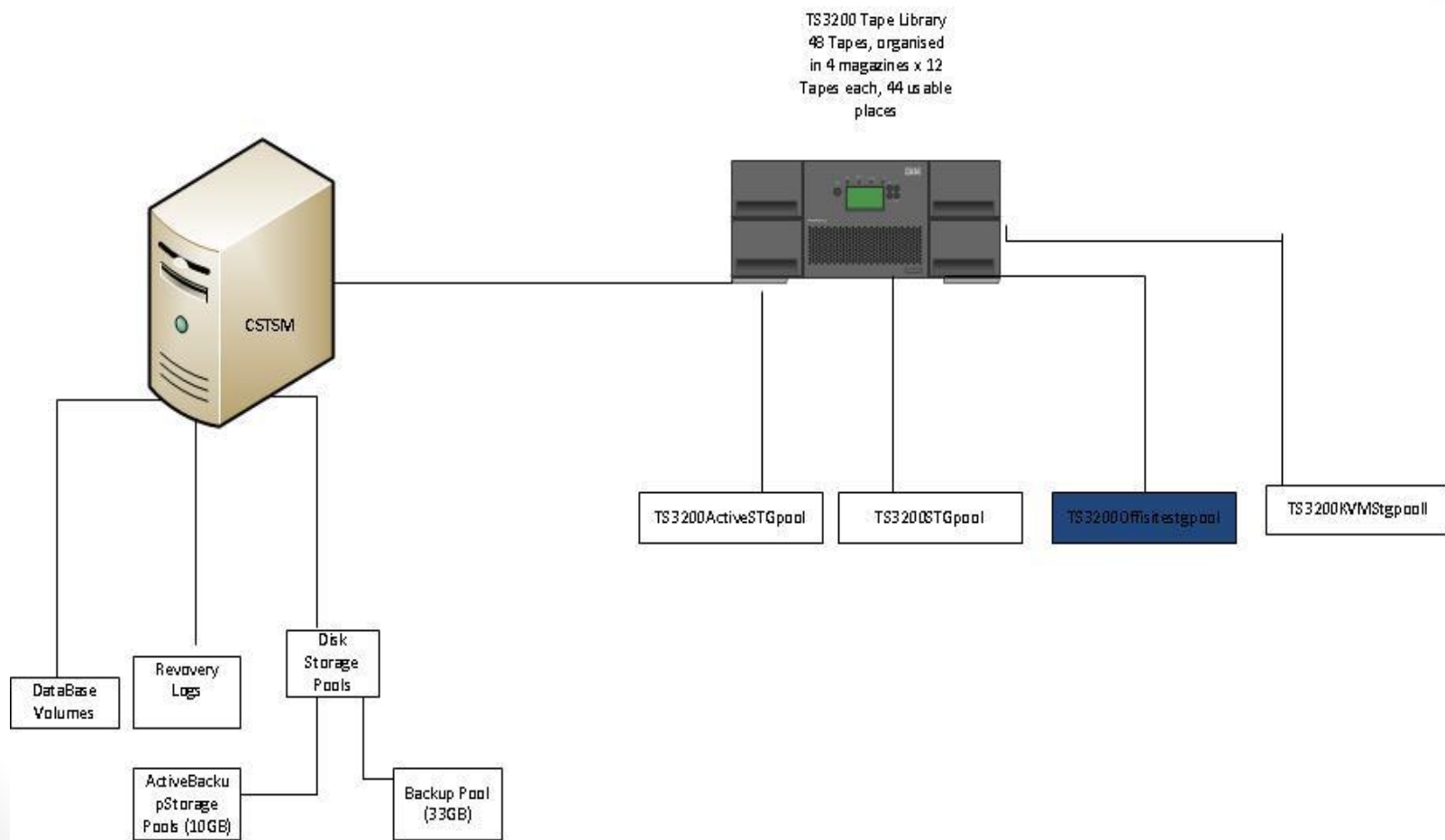
- **Τι είναι το TSM (Extended Edition);**
- **IBM Tivoli Storage Manager (TSM or ITSM)** is a centralized, policy-based, enterprise class, data backup and recovery package. The software enables the user to insert objects not only via backup, but also through space management and archive tools. It also allows retrieval of the same data via similar restore, recall, and retrieve methods.
- The Disaster Recovery Manager (DRM) - A set of commands which aid in the management of offsite secondary copies of data, the TSM Database backups required to access those media, and the configuration data required to recover the TSM database in case of a loss.

Περιεχόμενα παρουσίασης

1. CSTSM Server και οι λειτουργίες του
 - α. Μηχανογραφικός εξοπλισμός και λογισμικό που χρησιμοποιείται
 - β. Βασική οργάνωση και βασικές λειτουργίες του CSTSM Server
 - γ. Επεξήγηση του **D**isaster **R**ecovery **M**anager
2. Πως λειτουργεί το TSM στους πελάτες-clients

CSTSM Server και οι λειτουργίες του

α. Τεχνικός εξοπλισμός και λογισμικό που χρησιμοποιείται
Server : CSTSM, with Centos Linux , and TSM Server 6.2.0



Administration of TSM : dsmadm command line, login as admin WebGui : Tivoli Intergrated Portal

```
root@cstsm:~  
tsm: CSTSM>q stgp  
Session established with server CSTSM: Linux/x86_64  
Server Version 6, Release 2, Level 0.0  
Server date/time: 03/28/2014 10:27:07 Last access: 03/28/2014 09:50:16  
  
Storage Pool Name      Device Class Name      Estimated Capacity      Pct Util      Pct Migr      High Mig Pct      Low Mig Pct      Next Storage Pool  
-----  
ACTIVEBACKUPSTGPOOL    DISK                   10 G                    1.1          1.1          95           0           TS3200ACTIVEBACKUPS-  
                        TGPOOL  
ACTIVEHOMESTGPOOL      FILE_CLASSES_2         0.0 M                   0.0          0.0          95           0           TS3200ARCHIVEPOOL  
ARCHIVEPOOL            DISK                   40 G                    0.0          0.0          95           0           TS3200STGPOOL  
BACKUPPOOL             DISK                   33 G                    0.0          0.0          99           0           TS3200STGPOOL  
TS3200ACTIVEBACKUPS-  TS3200CLASS            155,815,081 G          0.0          0.0          90           70  
                        TGPOOL  
TS3200ARCHIVEPOOL     TS3200CLASS            0.0 M                   0.0          0.0          90           70  
TS3200DBSTGPOOL       TS3200CLASS            0.0 M                   0.0          0.0          90           70  
TS3200KVMSSTGPOOL     TS3200CLASS            230,783 G               4.8          8.5          90           70  
TS3200OFFSITESTGPOOL  TS3200CLASS            16,559,422 G           0.1          0.1          90           70  
TS3200STGPOOL         TS3200CLASS            14,966,260 G           0.0          0.1          90           70  
  
tsm: CSTSM>  
tsm: CSTSM>
```

Βασικές καθημερινές λειτουργίες και οργάνωση του TSM Server

- 1. Daily Backup of all register nodes
 - a. nodes = linux, windows, mac machines
 - b. Incremental backup of changed files/folders etc based on defined schedules, associated with nodes.

Based on policies we set, we defined number of active, inactive versions of file, how many copies we keep, when a file is deleted and for how long

root@cstsm:~

enhanced schedules. The period column is blank. Issue "query schedule format=detailed" to display complete information about an enhanced schedule.

tsm: CSTSM>q copyg

Policy Domain Name	Policy Set Name	Mgmt Class Name	Copy Group Name	Versions Data Exists	Versions Data Deleted	Retain Extra Versions	Retain Only Version
ACTIVE_D-OMAIN	ACTIVE	ACTIVE_M-ANAGMENT	STANDARD	3	1	60	90
ACTIVE_D-OMAIN	ACTIVEPOLICY	ACTIVE_M-ANAGMENT	STANDARD	3	1	60	90
ACTIVE_D-OMAIN_T-EST	ACTIVE	ACTIVEDE-FULT_M-GT_CLASS	STANDARD	3	1	60	90
ACTIVE_D-OMAIN_T-EST	ACTIVE	ACTIVE_M-ANAGMENT	STANDARD	3	1	60	90
ACTIVE_D-OMAIN_T-EST	ACTIVEPOLICY	ACTIVEDE-FULT_M-GT_CLASS	STANDARD	3	1	60	90
ACTIVE_D-OMAIN_T-EST	ACTIVEPOLICY	ACTIVE_M-ANAGMENT	STANDARD	3	1	60	90
CS_BACKUP_DOMAIN	ACTIVE	ALTERNATE_MGMT	STANDARD	7	1	60	90
CS_BACKUP_DOMAIN	ACTIVE	CS_BACKUP_MANAGEMENT	STANDARD	3	1	60	90
CS_BACKUP_DOMAIN	CS_POLICY_SET	ALTERNATE_MGMT	STANDARD	7	1	60	90
CS_BACKUP_DOMAIN	CS_POLICY_SET	CS_BACKUP_MANAGEMENT	STANDARD	3	1	60	90
KVM_BACKUP_DOMAIN	ACTIVE	STANDARD	STANDARD	3	1	60	90
KVM_BACKUP_DOMAIN	STANDARD	STANDARD	STANDARD	3	1	60	90

more... (<ENTER> to continue, 'C' to cancel)

UP_DOMA-
IN

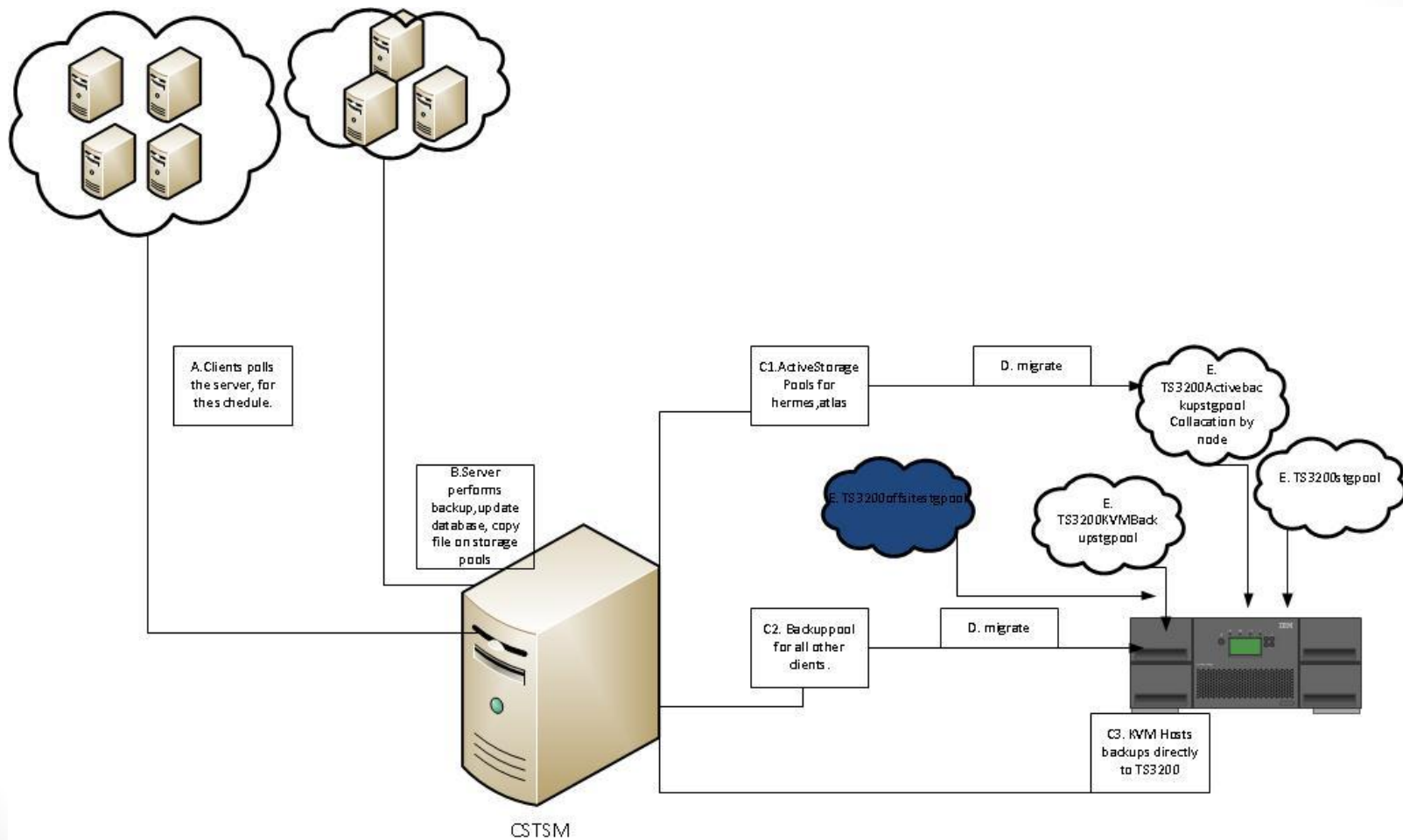
tsm: CSTSM>

Βασικές καθημερινές λειτουργίες και οργάνωση του TSM Server

2. Image Backup of KVM Hosts (Saturday,Sunday , every 15 days)
3. DRM , creates copy of all storage pools, to tapes, and move them to vault (147A)

Daily Tasks run by TSM:

- a. expiration of inactive files
- b. Migration from disk storage pools to tape storage pools
- c. Reclamation of tapes

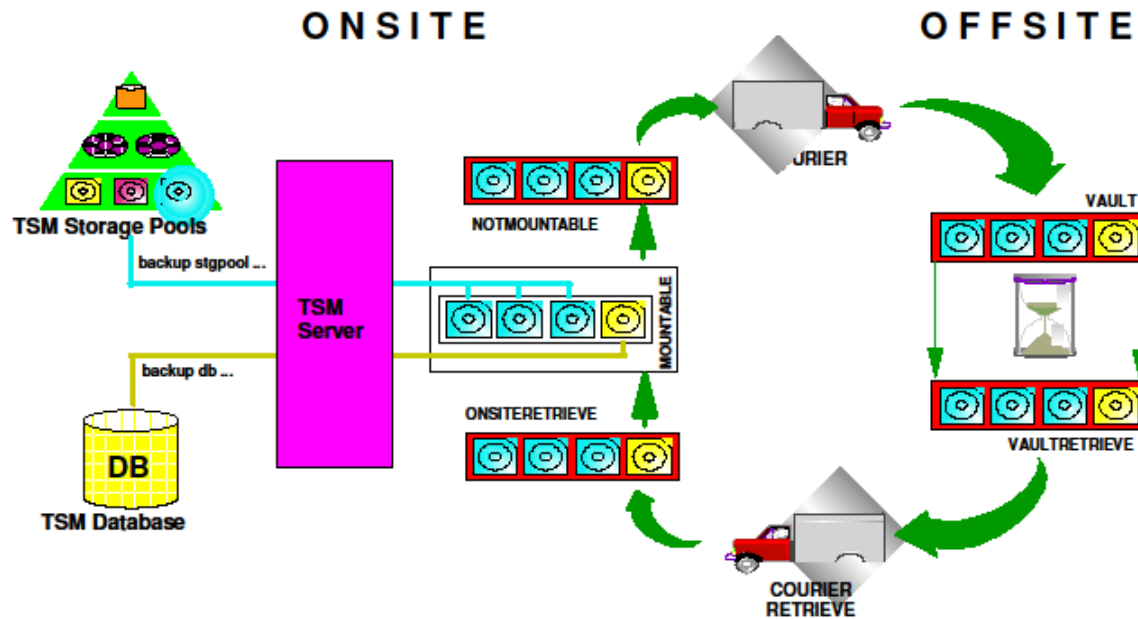


Disaster Recovery Manager

Planning for Disaster Recovery with Tivoli Storage Manager



Understanding the DRM State Values



```
tsm: CSTSM>q scr MAINTENANCE_PLAN_CUSTOM
Session established with server CSTSM: Linux/x86_64
Server Version 6, Release 2, Level 0.0
Server date/time: 03/28/2014 10:52:27 Last access: 03/28/2014 10:27:07
```

Name	Description	Managing profile
MAINTENANCE_PL- AN_CUSTOM	This is the Custom Maintenance Script. Do NOT rename this script.	

```
tsm: CSTSM>q scr MAINTENANCE_PLAN_CUSTOM f=d
```

```
          Name: MAINTENANCE_PLAN_CUSTOM
          Line Number: Description
          Command: This is the Custom Maintenance Script. Do NOT rename this script.
Last Update by (administrator): ADMIN
          Last Update Date/Time: 11/01/2013 10:20:12
```

```
          Name: MAINTENANCE_PLAN_CUSTOM
          Line Number: 1
          Command: PARALLEL
Last Update by (administrator): ADMIN
          Last Update Date/Time: 11/01/2013 10:21:08
```

```
          Name: MAINTENANCE_PLAN_CUSTOM
          Line Number: 2
          Command: BACKUP STGPOOL BACKUPPOOL TS3200OFFSITESTGPOOL WAIT=YES
Last Update by (administrator): ADMIN
          Last Update Date/Time: 11/01/2013 10:21:08
```

```
          Name: MAINTENANCE_PLAN_CUSTOM
          Line Number: 3
          Command: BACKUP STGPOOL TS3200STGPOOL TS3200OFFSITESTGPOOL WAIT=YES
Last Update by (administrator): ADMIN
          Last Update Date/Time: 11/01/2013 10:21:08
```

```
          Name: MAINTENANCE_PLAN_CUSTOM
          Line Number: 4
          Command: BACKUP STGPOOL ACTIVEBACKUPSTGPOOL TS3200OFFSITESTGPOOL WAIT=YES
Last Update by (administrator): ADMIN
          Last Update Date/Time: 11/01/2013 10:21:08
```

```
          Name: MAINTENANCE_PLAN_CUSTOM
          Line Number: 5
          Command: BACKUP STGPOOL TS3200ACTIVEBACKUPSTGPOOL TS3200OFFSITESTGPOOL WAIT=YES
Last Update by (administrator): ADMIN
          Last Update Date/Time: 11/01/2013 10:21:08
```

```
          Name: MAINTENANCE_PLAN_CUSTOM
          Line Number: 6
```

TSM on clients

Common steps for all clients

On client :

1. Install TSM client software
2. Configure dsm.opt, dsm.sys , include,exclude statements
3. Start scheduler

On TSM server

1. Register node on TSM server
2. Associate node with a schedule

On client :

/Tsm/dsmsched.log ->entries for all the files processed
->check if backup was successfull

Τέλος