



# **Centralised Backup of the Talis Application Environments**

**Technical Note**

**April 2009**

## About this document

This document contains the information required for integrating the Talis servers into a centralised backup system.

It is intended for System Managers.

It is assumed that the reader is familiar with managing the Talis LMS system.

## Contacting Talis

If you are experiencing difficulties, please contact your System Manager/IT Department in the first instance.

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# 1. LMS server

This is the main database server running Sybase Adaptive Server Enterprise on top of a Solaris Operating System.

## 1.1 Database backups

The following backup schedule is recommended:

Database	Description	Typical Size	Frequency	Type	Retention
prod_talis	LMS data	(4-50GB)	Daily	Full	3 weeks
prod_talis	LMS data	(10-100MB)	Hourly	Transactional	1 week
prod_list	Reading list data	1 GB	Daily	Full	3 weeks
prod_signpost	Community list data	1 GB	Daily	Full	3 weeks
Inform	Community information data	512 MB	Daily	Full	3 weeks
tutor_talis	Tutor environment	100 MB	Monthly	Full	3 months
prod_meta	LMS metadata	25 MB	Monthly	Full	3 months
tutor_meta	Tutor metadata	25 MB	Monthly	Full	3 months
master	System database	25 MB	Monthly	Full	3 months
model	System database	25 MB	Monthly	Full	3 months
sybssystemprocs	System database	128 MB	Monthly	Full	3 months
dbccdb	System database	512 MB	Monthly	Full	3 months

Note that:

- ◆ In a centralised backup environment these databases can be dumped online into the /sybdump file-system while the system is live, usually without any noticeable performance impact.
- ◆ The databases should also be dumped before and after any major upgrades.

## 1.2 File-system Backups

The following backup schedule is recommended:-

File-system	Description	Typical Size	Frequency	Type	Retention
/sybdump	Database dumps	1 – 50 GB	Daily	Full	3 weeks
/scratch/altoindexes	Marc21 Indexes	1 - 16 GB	Daily	Full	3weeks*
/scratch/prod_talis	Transaction Dumps	1 GB	Weekly	Full	3 weeks
/scratch/blcmp	Data area	1 GB	Weekly	Full	3 weeks
/, /usr, /opt, /var	OS	1 - 4 GB	Monthly	Full	3 months
/usr/local					
/usr/opt/sybase	Sybase data-server	500MB	Monthly	Full	3 months
/usr/opt/blcmp /usr/opt/til	Talis software	1 GB	Monthly	Full	3 months
/users	User home areas	1 GB	Monthly	Full	3 months

File-system	Description	Typical Size	Frequency	Type	Retention
/scratch	Work Area	2 – 8 GB	Monthly	Full	1 month
/sybdata	Live Databases	2G	N/A	N/A	N/A
full UFS dump	Entire System or OS only		Bi-Annually	Full	1 year

Notes:

- ◆ A full file-system dump should also be done before and after any software or operating system upgrades or patch cluster installations.
- ◆ If the server is equipped with a tape drive then a full ufsdump should be taken of the system every 3-6 months to aid in disaster recovery situations where the operating system is destroyed unless the backup solution incorporates 'bare-metal' recovery without having to re-install the OS.
- ◆ The /sybdata filesystem can be backed up if using snapshots to speed up recovery of system databases (which are fairly static) but as the data can be recovered from the database dumps in /sybdump it can be omitted.
- ◆ \* If space is an issue then the retention on this can be decreased as the Marc21 indexes can be rebuilt if necessary although this is a time-consuming task.

## 2. Talis Prism (Online Web Catalogue) Server(s)

These are the main application servers that provide access to the online catalogue and are either running Solaris or Red Hat Enterprise Linux.

### 2.1 Database backups

There are no databases on these systems as they use the LMS server's database server.

### 2.2 File-system Backups

These systems can be rebuilt quite easily so they are usually not equipped with backup hardware or backed up on a schedule. The configuration data for this is held on the LMS server so will be backed up with that. The exception to this is any custom HTML files or images that have been loaded onto the server.

The following backup schedule is recommended:

File-system	Description	Typical Size	Frequency	Type	Retention
/, /usr, /opt, /var	OS	500 MB	Monthly	Full	3 months
/usr/local	3 <sup>rd</sup> Party Software	250 MB	Monthly	Full	3 months
/usr/opt/til/talisie	Talis software	500 MB	Monthly	Full	3 months
/users	User home areas	100 MB	Monthly	Full	3 months
full UFS dump	Entire System or OS only		Bi-Annually	Full	1 year

Notes:

- ◆ A full file-system dump should also be done before and after any software or operating system upgrades or patch cluster installations.
- ◆ If the server is running Solaris and is equipped with a tape drive then a full ufsdump should be taken of the system to aid in disaster recovery situations where the operating system is destroyed. This is not needed for the RHEL (Linux) OS as it can be re-installed trivially using the Talis kick-start profile disk and installation media.

## 3. MIS Database Server

This is the MIS environment database server running Sybase Adaptive Server Enterprise on top of a Solaris Operating System.

### 3.1 Database backups

The following backup schedule is recommended:

Database	Description	Typical Size	Frequency	Type	Retention
prod_talis	LMS data	N/A	N/A	N/A	N/A
prod_meta	LMS metadata	N/A	N/A	N/A	N/A
bo_repository	Business Objects 5.x	100 MB	Weekly	Full	3 weeks
talis_aggregates	Business Objects / Talis Decisions	50 MB	Weekly	Full	3 weeks
Master	System database	25 MB	Monthly	Full	3 months
Model	System database	25 MB	Monthly	Full	3 months
sybssystemprocs	System database	128 MB	Monthly	Full	3 months

Notes:

- ◆ In a centralised backup environment these databases can be dumped online into the /sybdump file-system while the system is live.
- ◆ The databases should also be dumped before and after any major upgrades. Some of the non-system databases are copies of the main LMS server and therefore do not usually require back up on the MIS server.

### 3.2 File-system Backups

The following backup schedule is recommended:-

File-system	Description	Typical Size	Frequency	Type	Retention
/sybdump	Database dumps	300 MB	Weekly	Full	3 weeks
/, /usr, /opt, /var	OS	1 - 4 GB	Monthly	Full	3 months
/usr/opt/sybase	Sybase data-server	500MB	Monthly	Full	3 months
/usr/opt/blcmp /usr/opt/til	Talis software	1 GB	Monthly	Full	3 months
/users	User home areas	1 GB	Monthly	Full	3 months
/scratch	Work Area	2 – 8 GB	Monthly	Full	1 month
/sybdata	Live Databases	1GB	N/A	N/A	N/A
full UFS dump	Entire System or OS only		Bi-Annually	Full	1 year

Notes:

- ◆ If the server is equipped with a tape drive then a full ufsdump should be taken of the system to aid in disaster recovery situations where the operating system is destroyed.
- ◆ File-system dumps should also be done before and after any software or operating system upgrades or patch cluster installations.

## 4. Talis Decisions / Business Objects Xi Server

This is the MIS environment application server running on a Windows Operating System.

### 4.1 Database backups

The Business Objects Repository is held in a MySQL database on the system and usually backed up to a flat file that includes file-system data into \DecisionsBackups.

### 4.2 File-system Backups

The following backup schedule is recommended:

File-system	Description	Typical Size	Frequency	Type	Retention
\DecisionsBackups	Decisions Backups	0.1-10GB	Weekly	Full	3 weeks
C:\, [X]:\	System and applications	2 – 20 GB	Bi-Annually	Full	1 year
System Image	Bare-metal recovery	2 - 20 GB	Annually	Full	1 year

Notes:

- ◆ The main advantage of System Image backups would be if your software supports unattended automatic restores including the operating system by booting off CD, network, etc.
- ◆ See Talis Decisions documentation for details on backup options.