

Centre for Advanced Computing at Queen's University (CAC)

Spectrum Protect Architecture Guide Version 1.2

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1. Introduction

The Centre for Advanced Computing at Queen's University (CAC) is proud to provide a data protection platform based on IBM's flagship Spectrum Protect product line to its clients. Designed and implemented in collaboration with IBM's Professional Services, this platform provides state of the art secure backup and recovery services with dual-copy encrypted onsite and offsite retention.

This document presents an architecture overview of IBM TSM Server, Client BA and TSM Space Management (HSM) configuration and policies. Note that the terms "TSM" and "Spectrum Protect" are used interchangeably due to product renaming by IBM.

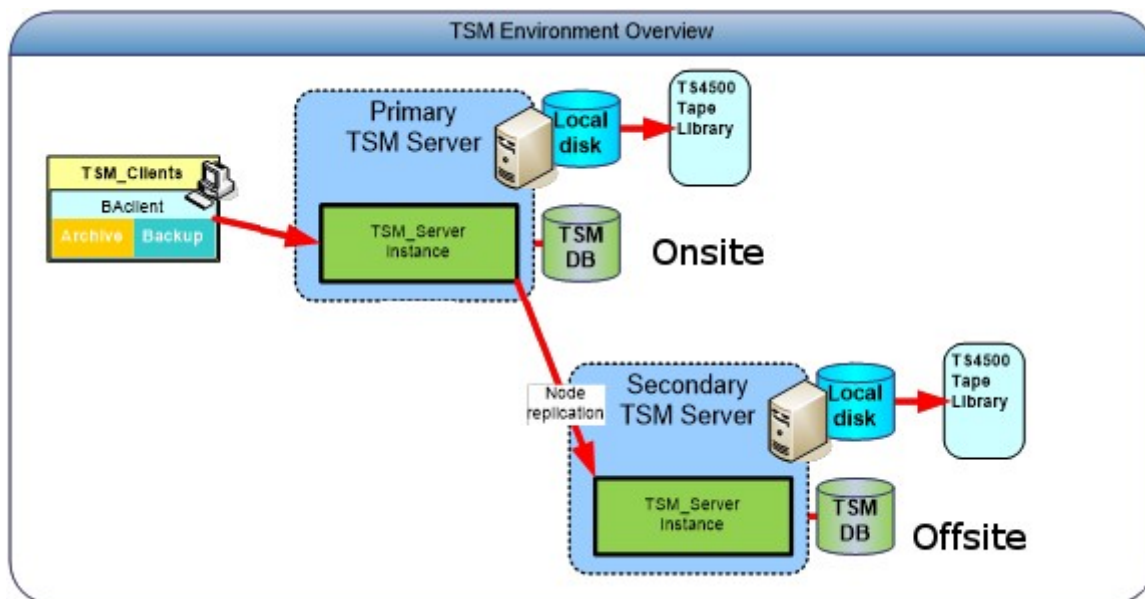
2. Solution overview and configuration

This section provides a high level architecture information and configuration regarding the TSM and TSM-HSM storage solution.

2.1 Infrastructure

The backup solution leverages two physical locations, a local onsite TSM installation at CAC and an offsite TSM installation on Queen's campus. Both installations have identical server and tape library hardware, consisting of IBM TS4500 tape libraries with TS1150 encryption-enabled drives.

2.2 Architecture diagram



3. TSM backup planning and software requirements

A backup solution needs to be based on actual SLA and responsibilities from a data management perspective. This information needs to be reviewed often as the requirement and expectations change. Do not hesitate to contact CAC to discuss your backup requirements.

3.1 Identified data protection needs

These are the basic rules to follow based on actual component role in the environment.

Function/Application	Backup	Archive	Space Management	Encryption
High_Sec	Yes	No	No	Yes
Medium_Sec	Yes	No	No	Yes

3.2 Backup retention

The table bellow should give an indication of the actual need for each client group (domain). In our case we have multiple settings based on management class and data location so TSM Client should include the folder used for backup.

TSM domain	Type	Window	Function	Active File		Deleted File	
				Versions	Days	Versions	Days
High_Sec	BA	06pm-00am	Daily incremental	No limit	62	2	3660
Medium_Sec	BA	06pm-00am	Daily incremental	No limit	31	2	1830

Please note that all backups will be performed at filesystem level and any database files must be excluded from the backup. Database backups will leverage static dump files for data protection purposes and those files will be backed up by daily TSM job.

3.3 TSM communication requirements

Note that clients may only connect to the primary TSM installation and only via SSL encrypted connections.

TSM	Server SSL TCP Port	Server TCP SSL Admin Port
TSM1	1510	1500