ADSM Operation & Management
Experiences With TME 10

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Agenda

- ADSM operational challenges
- Tivoli introduction
  - TME 10 framework
  - Management applications
  - Event automation
- ADSM Version 3 event management
- Tivoli Plus Module for ADSM
  - Client and server tasks
  - S/W distribution
  - Monitoring
  - Version 1.2 enhancements
- Server automation
- Summary
ADSM Management Challenges

Multiple servers and 100’s of clients

- Central control and administration
- S/W distribution and change management
- Resource monitoring
  - Client and server processes on multiple platforms
- Event monitoring
  - Scheduled client activity - local logs
  - Client errors - local logs
  - Server events - internal activity log
- Event automation
  - Client and server errors
  - Server operations
TME 10 Framework

Object oriented systems management platform
- Run time environment for TME 10 services and applications
- Administrator interfaces
- Regions and management policies
- Management profiles
- Management by subscription
- Tasks, jobs, and schedules

TME 10 Framework

TME Server
Unix/NT

TME Managed Node
Unix/NT

TME Managed Node
Unix/NT

Administrator Desktop

PC
Managed Nodes
OS/2
NetWare
Win 95/NT
Win 3.1
ADSM TME Tasks

Useful for day-to-day admin tasks: running scripts, etc..

Managing client scheduled backup activity logs:

- Rename schedule log
- Transfer to admin system
- Delete original on client

Run on daily basis using TME scheduler

```
"hostname".SCHEDLOG."datetime"
```

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TME 10 Management Applications

Sentry monitoring
- Monitors and subscribers
- System resource monitoring
  - H/W, processes, etc.
- Managed nodes only

Plus modules
- Packaged management applications
- Application specific, i.e. ADSM
- Makes use of framework services and applications

Courier S/W distribution
- File packages and subscribers
- Distribution and installation
- Managed and PC managed nodes

Plus Modules
Sentry Monitoring
Courier S/W Distribution
TME 10 Framework
TME Server Unix/NT
TME Managed Node Unix/NT
TME Managed Node Unix/NT
PC Managed Nodes
OS/2
NetWare
Win 95/NT
Win 3.1

Application specific, i.e. ADSM
Makes use of framework services and applications

Courier S/W distribution
File packages and subscribers
Distribution and installation
Managed and PC managed nodes
TME 10 Event Automation

Tivoli/Enterprise Console
- Event server, consoles, adapters
- Event integration
  - Event adapters
  - NetView, OpenView, NT, SNMP, Logfile, ....
- Notification to Event Consoles
- Event automation
  - Rules based task execution
  - Administrator defined

TME 10 Framework
- Event Server
- Event Consoles
- Event Adapters Event Automation
- TME Server Unix/NT
- TME Managed Node Unix/NT
- TME Managed Node Unix/NT
ADSM Version 3 Event Management

Client and server event logging and reporting

- Client error messages logged to server as events
- Client and server events can be routed to one or more configured event receivers
  - User and file exits
  - NetView for MVS
  - SNMP managers
  - Tivoli event adapter
ADSM Version 3 Tivoli Event Adapter

Native T/EC event adapter
- Integrated in Version 3 servers
- TME managed and non-managed platforms
- TCP/IP socket connection to Event Server
- Pre-defined event classes
  - ADSM server events
  - ADSM client events

![Diagram of ADSM Version 3 Tivoli Event Adapter]
Tivoli Plus Module For ADSM

Framework products: Courier, Sentry, T/EC and
Version 1.1 Plus Module
- Task library with ADSM admin and client tasks
- Profile managers for clients, servers, and monitors
- Courier file packages
- Sentry profiles and indicator collection
- T/EC logfile adapter for server console monitoring

Availability - Feb 1997
Plus Module Tasks

Packaged administrative and client commands
- Executed from Tivoli admin desktop on multiple managed nodes
- TLL based GUI dialog for underlying ADSM commands

Version 1.1 restrictions
- UNIX platforms only
- No interactive dialogs
- Admin commands are single server oriented
- Subset of ADSM Ver 2 admin commands
Client Software Distribution

Courier file packages for ADSM client distribution
- Initial installation or updates
- Configuration files
- Scheduled distribution
- Before/After/Commit scripts for:
  - Checking available disk space
  - Automatic installation using "InstallShield silent" or Installp scripts
  - Stop and start scheduler service with "net stop" and "net start" commands

Ver 1.1 Plus Module provides basic file packages to which the following must be added
- User defined before/after scripts
- User configured client S/W
Client Monitoring with Sentry

Version 1.1 Plus Module provides
- Sentry profile managers for ADSM 'Servers', 'Clients', 'Recall & Migration' with subscribers defined
- Two basic monitors defined
  - Network availability
  - Network collisions
  - Indicator collections

Other resources can be monitored
- Scheduled client processes
  - DSMC
  - DSMCSVC
- HSM client processes
  - DSMonitorD
  - DSMrecallD
- Client error logs
  - DSMERROR.LOG

and routed to T/EC for notification
Plus Module Server Monitoring

Version 1.1 Plus Module

- Icon for starting server and re-directing server output to file
- T/EC logfile adapter which monitors /var/spool/Tivoli/adsm.log
- Default rules base with multiple event correlation but no event automation

**Logfile and T/EC configuration**

- INITTAB for server start-up
- tecad_logfile.conf file for monitored logfiles
- For servers on non-managed nodes
  - run admin client in console mode
  - DSMADMC -console ... >> /var/.../adsm.log
- Each server must be monitored from a managed node with logfile adapter installed
- Configure event groups for multiple servers
Multiple Server Monitoring

Server Event Groups

Separate Event Groups for multiple logfile adapters
- AIX servers on managed nodes
- Admin clients on managed nodes for servers running on non TME managed platforms i.e. MVS, OS/400
Version 1.2 ADSM Plus Module

Additional platform support
- AIX, HP-UX, Solaris, and NT ADSM servers
- UNIX, NT, 95, OS/2, and NetWare ADSM clients

New functions
- ADSM Version 3 compatibility
- Courier distribution scripts
  - Disk freespace
  - Automatic installation
- Sentry monitors
  - Database utilization
  - Recovery log utilization
  - New indicator collections
- Enhanced administrative security

Availability - Feb 98
Server Automation

Not implemented in Plus Module or with ADSM Version 3
  ➔ Multiple ADSM server platforms...
  ➔ Monitoring from multiple sources...
  ➔ Server resources are platform specific...

ADSM uses consistent message numbers on all platforms
T/EC GUI rules builder is simple to use and very powerful

Server automation examples using T/EC tasks
  ➔ ADSM server database running out of space
    ➔ Run a task that defines temporary database volume on the server and extends the database
  ➔ Media error on tape in automated library
    ➔ Run a task that performs a "move data" command to move data to other available volumes and mark the bad volume as unavailable
Summary

- ADSM Version 3 provides Tivoli event integration
- TME 10 applications and the Tivoli Plus module enables
  - Centralized operations
  - Distribution and installation of client software
  - Client and server monitoring
  - Server automation

The products provide the framework and tools that have to be properly implemented and exploited

Redbooks:
ADSM Operation and Management With TME 10: SG24-2214
ADSM Version 3 Technical Guide: SG24-2236
http://www.redbooks.ibm.com