International Technical Support Organization
San Jose Center

IBM

ADSM Operation & Management

Experiences With TME 10

Tim Mortimer

ITSO San Jose Center

MORTIMT@US.IBM.COM

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

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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
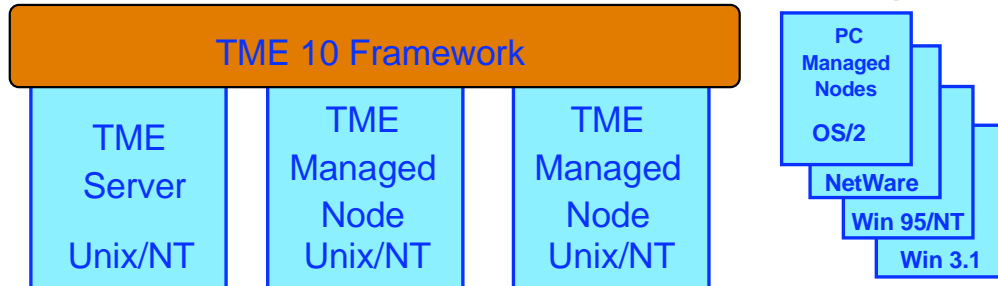
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TME 10 Framework

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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

Administrator Desktop

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

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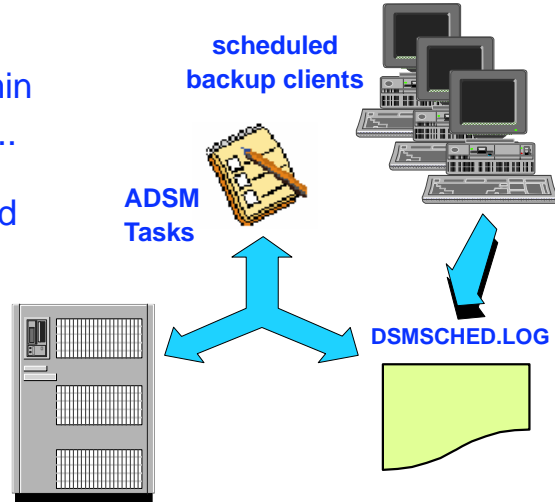
Useful for day-to-day admin tasks: running scripts, etc..

Managing client scheduled backup activity logs:

➡ Rename schedule log

➡ Transfer to admin system

➡ Delete original on client

Run on daily basis using TME scheduler

scheduled backup clients

ADSM Tasks

DSMSCHED.LOG

....
"hostname".SCHEDLOG.*"datetime"*
....

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TME 10 Management Applications

IBM

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

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

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

Plus Modules

Sentry Monitoring

Courier S/W Distribution

TME 10 Framework

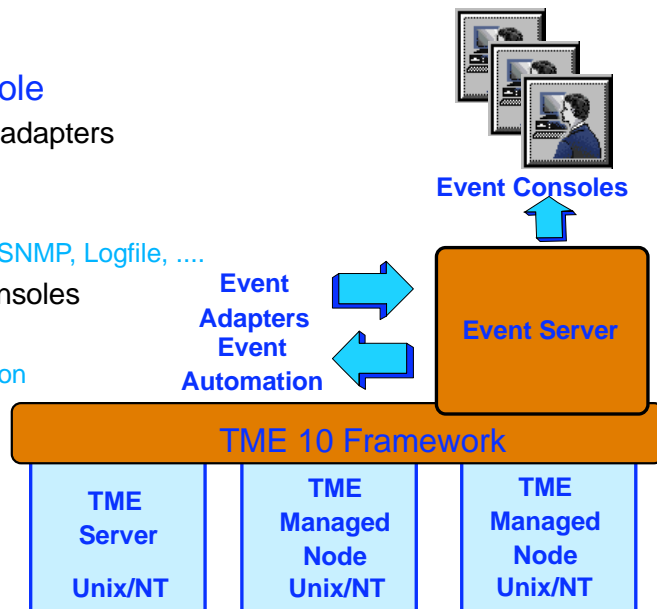| TME Server Unix/NT	TME Managed Node Unix/NT	TME Managed Node Unix/NT	PC Managed Nodes OS/2

NetWare
Win 95/NT
Win 3.1
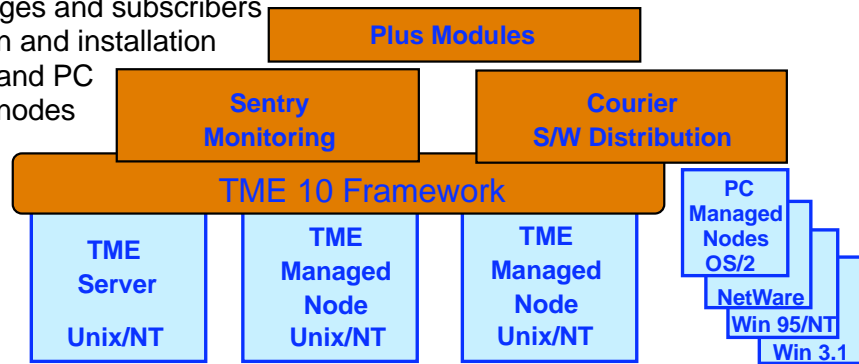
TME 10 Event Automation

IBM

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

Event Consoles

Event Adapters Event Automation

Event Server

TME 10 Framework

TME Server Unix/NT	TME Managed Node Unix/NT	TME Managed Node Unix/NT

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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
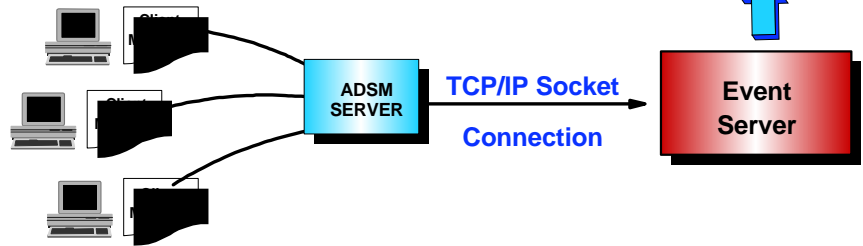- ▸ SNMP managers
- ▸ Tivoli event adapter
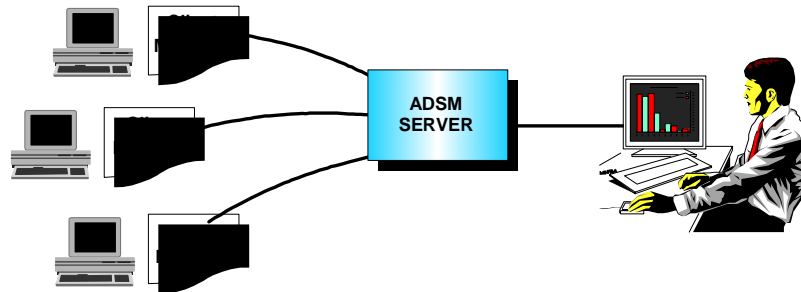
ADSM SERVER

ADSM Version 3 Tivoli Event Adapter

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Native T/EC event adapter

�íntegrated in Version 3 servers
➔ TME managed and non-managed platforms
➔ TCP/IP socket connection to Event Server
➔ Pre-defined event classes
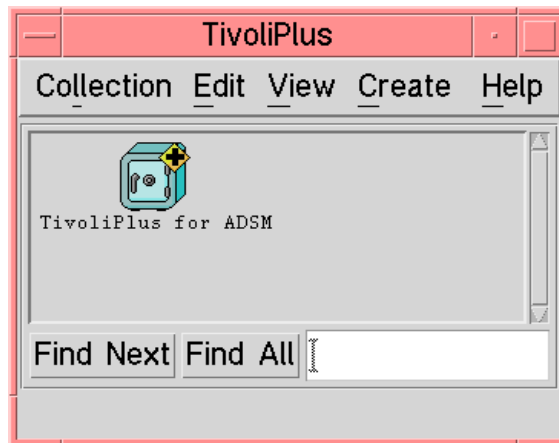 ▸ ADSM server events
  ▸ ADSM client events

Event Consoles

ADSM SERVER

TCP/IP Socket

Connection

Event Server

Tivoli Plus Module For ADSM

IBM

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

TivoliPlus

Collection Edit View Create Help

TivoliPlus for ADSM

Find Next Find All

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Plus Module Tasks

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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

DSMC Incremental Backup Options

File System(s) To Backup:

Backup Server:

Node Name:

Password:

Domain:

Tape Prompt?   ● Yes ○ No

Display Messages?   ● Yes ○ No

Date Format: MM/DD/YY

Time Format: 23:00:00

Number Format: 1,000.00

OK   Cancel   Help...

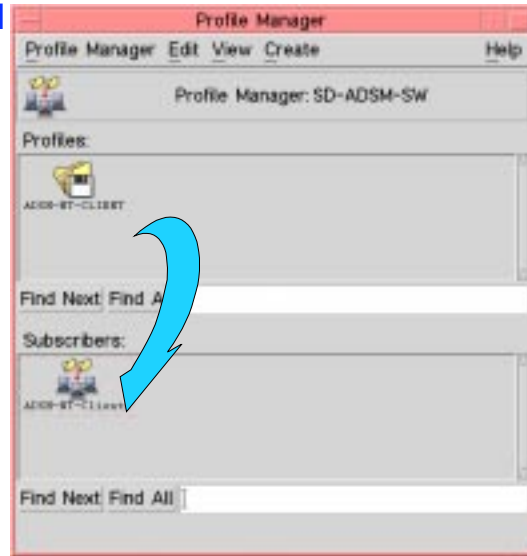# Client Software Distribution

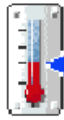## Courier file packages for ADSM client distribution

- ➡ 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

Profile Manager

Profile Manager   Edit   View   Create   Help

Profile Manager: SD-ADSM-SW

Profiles:

ADSM-NT-CLIENT

Find Next: Find A

Subscribers:

ADSM-NT-Client

Find Next: Find All

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# Client Monitoring with Sentry

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Version 1.1 Plus Module provides

ADSM Monitors

➡ Sentry profile managers for ADSM 'Servers', 'Clients',
  'Recall & Migration' with subscribers defined
➡ Two basic monitors defined
  ▸ Host availability
  ▸ network collisions
➡ Indicator collections

Other resources can be monitored

➡ Scheduled client processes
  ▸ DSMC
  ▸ DSMCSVC
➡ HSM client processes
  ▸ DSMMONITORD
  ▸ DSMRECALLD
➡ Client error logs
  ▸ DSMERROR.LOG

and routed to T/EC for notification

Enterprise Console

Source Groups Options

Event Sources

Sentry   WARNING

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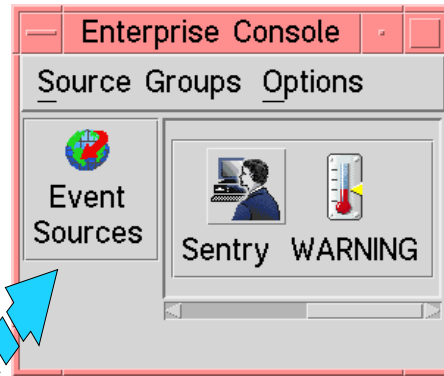
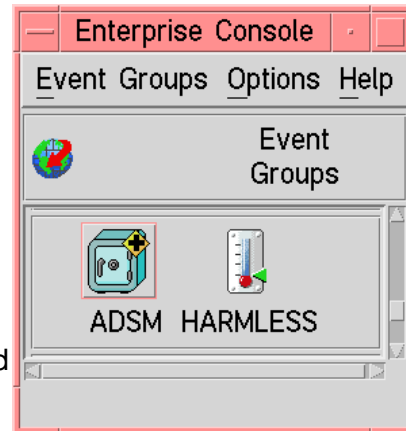# Plus Module Server Monitoring

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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

Enterprise Console

Event Groups Options Help

Event
Groups

ADSM HARMLESS

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

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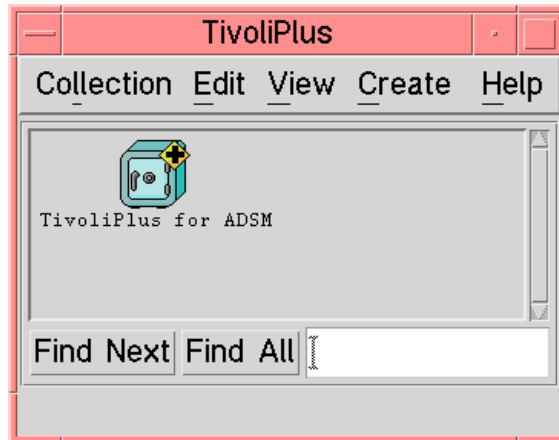
Version 1.2 ADSM Plus Module

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

TivoliPlus

Collection Edit View Create Help

TivoliPlus for ADSM

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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

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Summary

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- 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

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