



Welcome

跨平台管理—

Microsoft System Center Operations Manager 2007 R2 新功能

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What Will We cover?

- 綜觀 System Center Operations Manager
2007 R2
- 跨平台管理
- 服務水平報表
- 存取稽核報表

Operations Manager 的演進



2004 MOM 2005 RTM
 2005 MOM 2005 SP1
 2006
 2007 SCOM 2007 RTM
 2008 SCOM 2007 SP1
 2009 SCOM 2007 R2

	MOM 2005	OpsMgr 2007	OpsMgr 2007 R2
被管理端環境	伺服器的角色	服務、線上服務的應用程式、線上交易相關服務、用戶端	延伸到跨異質平台的環境
偵測	State	Health Model	Synthetic Transactions + Health Model
架構	WS based Tiering and Integration	Model based Management	Model based Management
Actions	工作	以知識為管理基礎	服務水平回報

Opsmgr 2007 R2的功能

集中化安全稽核



- 蒐集與整合安全事件紀錄
- 產出符合稽核的遵循報表
- 預設報表支援客製化

主動平台監控



- 跨Linux、UNIX與Windows平台集中化監控
- 監控重要設定變更狀態
- 監控及管理微軟與其他的虛擬化平台

應用程式與服務水平監控



- 應用程式與服務水平監控
- 問題解決知識庫
- 服務水平追蹤與報表產出
- 服務水平監控儀表板

跨平台資訊溝通與延伸平台



- 標準的作業系統監控
- 延伸技術支援客製化開發
- 跨平台溝通異質管理平台與Helpdesk

其他管理的需求

需要在單一畫面
呈現所有平台的
監控訊息

監控多種作業系統
最少的設定
支援更多的版本

如何獲得更正確的
服務水平訊息

服務的關鍵效能指標
使用者對IT service 的體驗
是否符合與業務單位協定的服務水平
易讀的介面

如何減少人力與時
間在存取控制的審
視報表上

帳號登入失敗的統計
高權限群組的稽核
重要檔案的存取稽核
異常登入稽核

誰需要Opsmgr 2007 R2?

- 系統管理者

佈署與管理 Operations Manager 2007

- 營運管理者

評估IT 服務的監控需求、依據需要設定管理原則
定義服務水平的目標與建立
服務水平儀表板

- Operator

監控所有服務、系統與應用程式，第一線反應服務異常

Opsmgr 2007 R2如何幫助系統管理者?

- 降低佈署成本與資源
- 降低採購成本與技術門檻
- 增加整合的效益
- 增加問題處理的效率



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Operations Manager 2007 R2

Opsmgr 2007 R2如何幫助營運管理者？

- 降低管理範本的成本與資源
- 增加服務水平管理彈性
- 提供整體的服務監控



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Operations Manager 2007 R2

Opsmgr 2007 R2 如何簡化 Operator 的工作

- 提升監控介面的效能
- 網頁管理介面提升管理彈性
- 支援Visio與 SharePoint 整合



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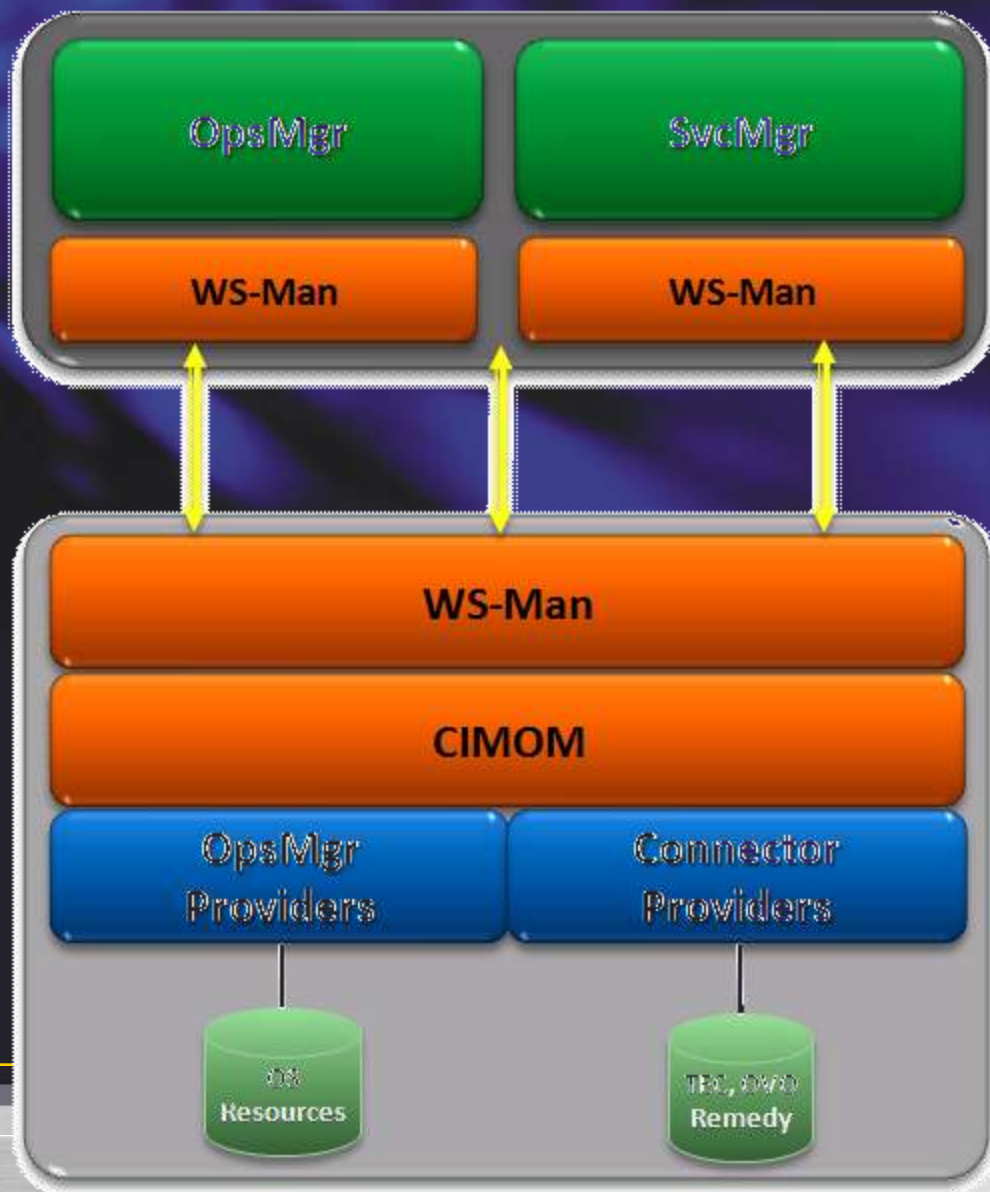
Operations Manager 2007 R2

LEARNING

LIVES
HERE 

Opsmgr 2007 R2在異質平台上的管
理

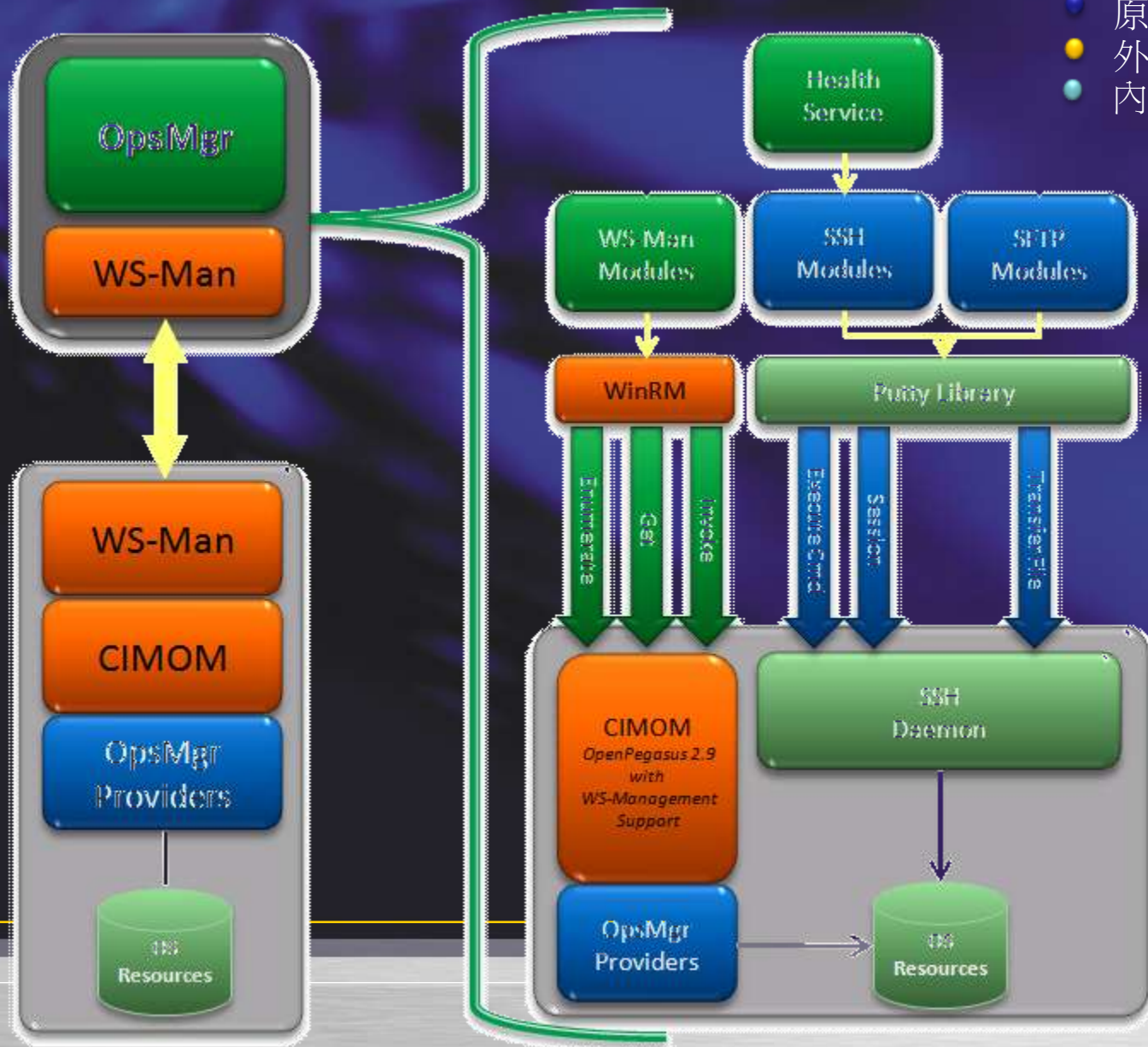
架構概觀



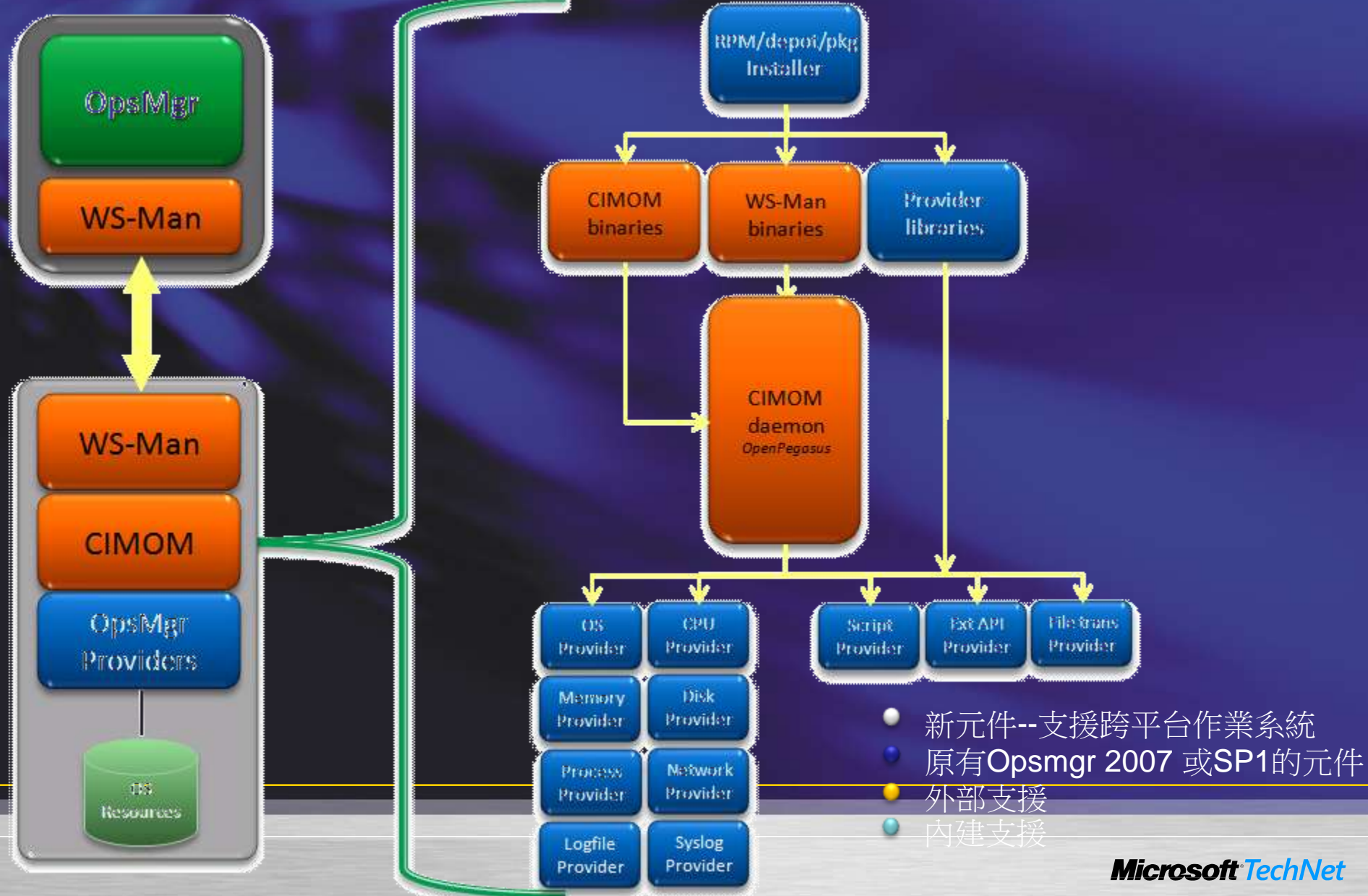
- 新元件--支援跨平台作業系統
- 原有Opsmgr 2007 或SP1的元件
- 外部支援
- 內建支援

模組內容

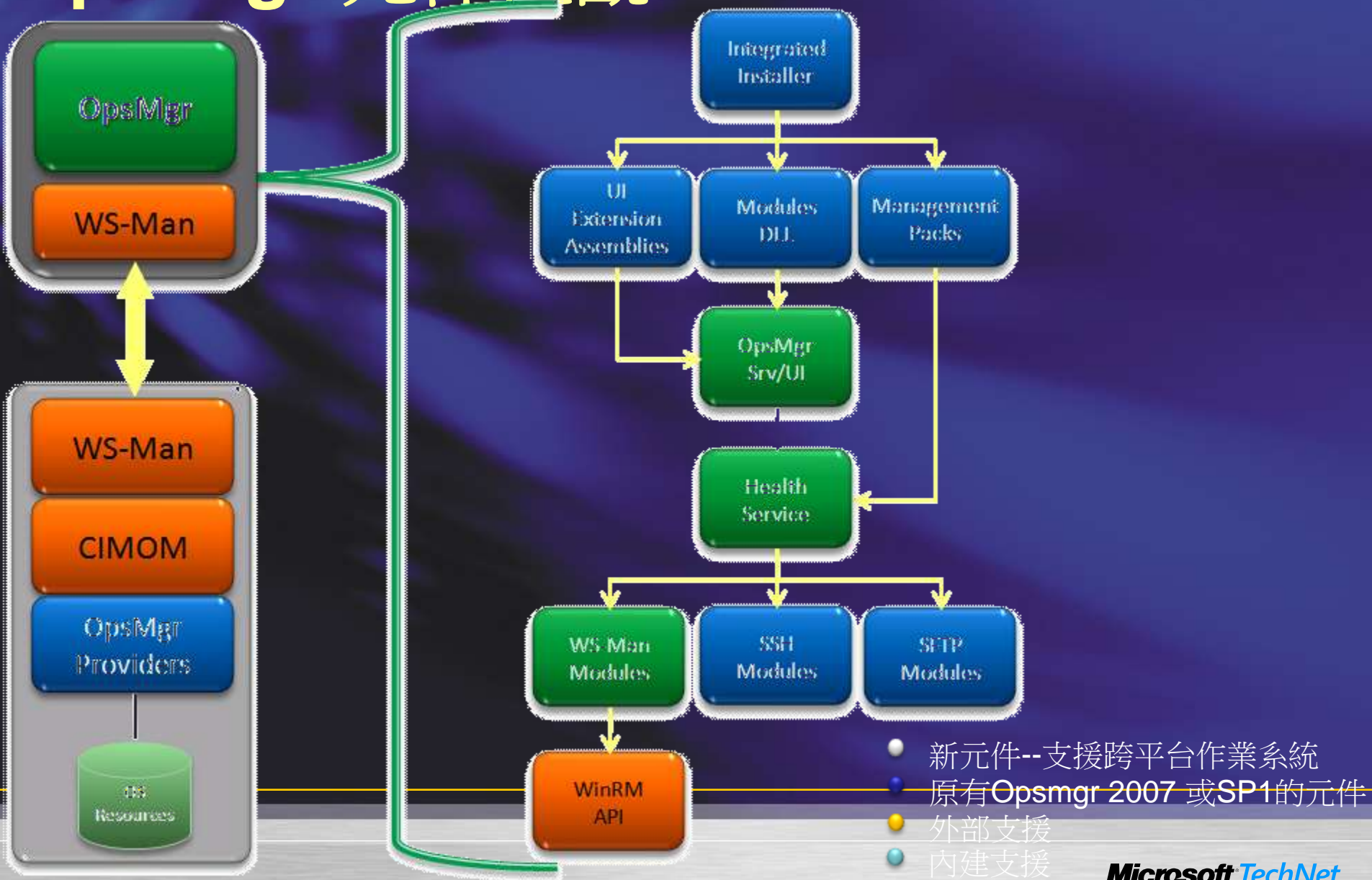
- 新元件--支援跨平台作業系統
- 原有Opsmgr 2007 或SP1的元件
- 外部支援
- 內建支援



UNIX/Linux 元件概觀

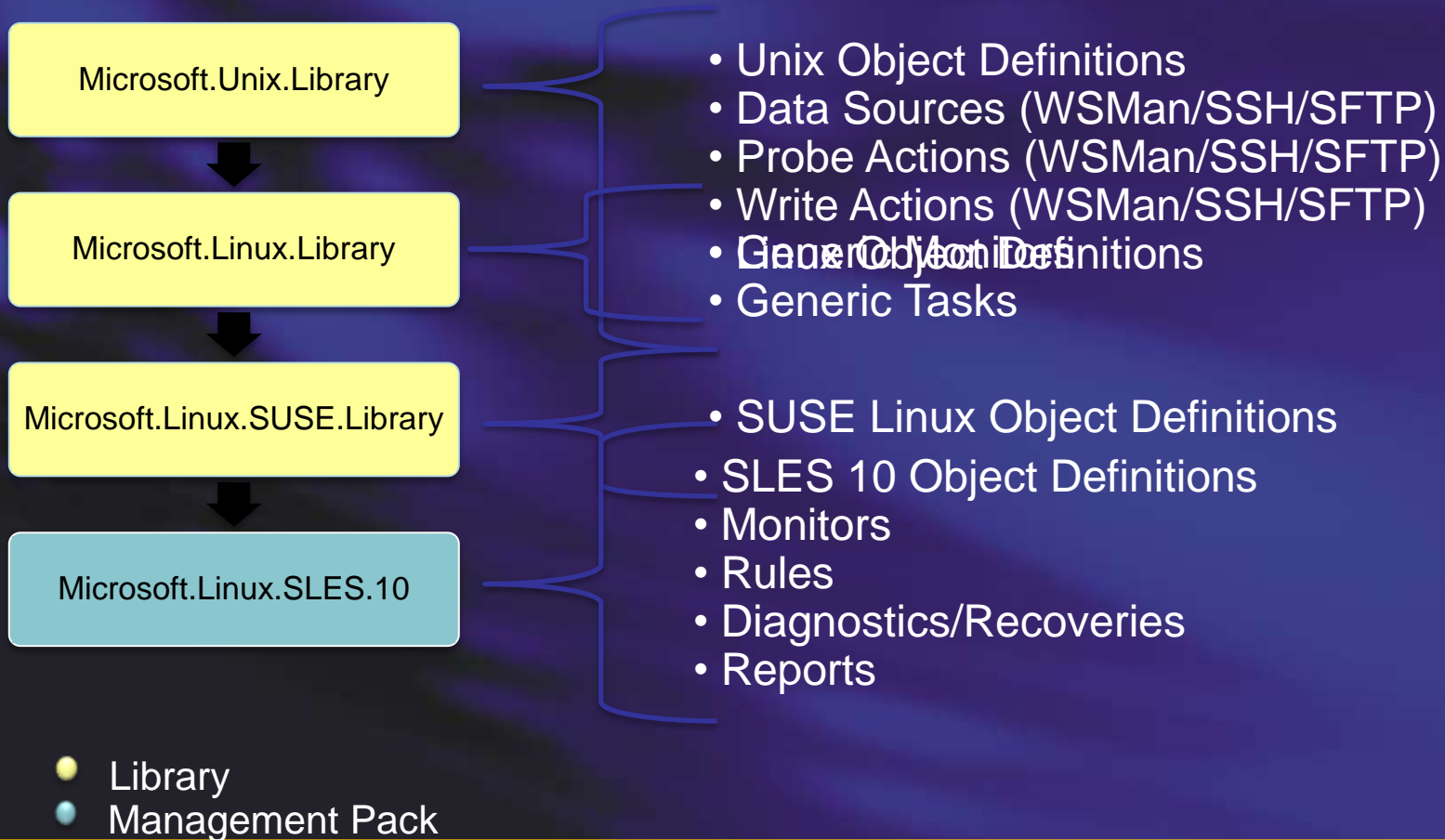


Ops Mgr 元件概觀



- 新元件--支援跨平台作業系統
- 原有Opsmgr 2007 或SP1的元件
- 外部支援
- 內建支援

管理套件的架構



Opsmgr 2007 R2支援的異質平台

- AIX

 - Version 5.3 (Power)

 - Version 6.1 (Power)

- HP-UX

 - Version 11iv2 (PA-RISC/IA64)

 - Version 11iv3 (PA-RISC/IA64)

- Solaris

 - Version 8 (SPARC)

 - Version 9 (SPARC)

 - Version 10 (SPARC/x86)

- SUSE Linux

 - Enterprise Server

 - Version 9 (x86)

 - Version 10 SP1 (x86/x64)

管理套件

- Generic libraries (imported

Name	Description
Microsoft.Unix.Library	Defines all objects, DS, WA, PA for Unix-type systems
Microsoft.Unix.Views	Defines all generic views used with Cross Platform
Microsoft.Unix.LogFile.Library	Used by Unix/Linux LogFile Management Pack Template
Microsoft.Unix.Service.Library	Used by Unix/Linux Service Management Pack Template

管理套件

- OS Type Libraries

Name	Description
Microsoft.AIX.Library.mp	Generic AIX Operating System Library
Microsoft.HPUX.Library.mp	Generic HP-UX Operating System Library
Microsoft.Linux.Library.mp	Generic Linux Operating System Library
Microsoft.Linux.RedHat.Library.mp	Generic Red Hat Operating System Library
Microsoft.Linux.SUSE.Library.mp	Generic SUSE Linux Operating System Library
Microsoft.Solaris.Library.mp	Generic Solaris Operating System Library

管理套件

- Base OS Management Packs

Name	Description
Microsoft.AIX.5.3.mp	AIX 5.3 Base OS MP
Microsoft.AIX.6.1.mp	AIX 6.1 Base OS MP
Microsoft.HPUX.11iv2.mp	HP-UX 11iv2 (11.23) Base OS MP
Microsoft.HPUX.11iv3.mp	HP-UX 11iv3 (11.31) Base OS MP
Microsoft.Linux.RHEL.4.mp	Red Hat Enterprise Linux 4 Base OS MP
Microsoft.Linux.RHEL.5.mp	Red Hat Enterprise Linux 5 Base OS MP
Microsoft.Linux.SLES.9.mp	SUSE Linux Enterprise Server 9 Base OS MP
Microsoft.Linux.SLES.10.mp	SUSE Linux Enterprise Server 10 Base OS MP
Microsoft.Solaris.8.mp	Solaris 8 Base OS MP
Microsoft.Solaris.9.mp	Solaris 9 Base OS MP
Microsoft.Solaris.10.mp	Solaris 10 Base OS MP

預設管理套件支援的平台與版本

- Base OS Management Packs

Name	Description
Microsoft.AIX.5.3.mp	AIX 5.3 Base OS MP
Microsoft.AIX.6.1.mp	AIX 6.1 Base OS MP
Microsoft.HPUX.11iv2.mp	HP-UX 11iv2 (11.23) Base OS MP
Microsoft.HPUX.11iv3.mp	HP-UX 11iv3 (11.31) Base OS MP
Microsoft.Linux.RHEL.4.mp	Red Hat Enterprise Linux 4 Base OS MP
Microsoft.Linux.RHEL.5.mp	Red Hat Enterprise Linux 5 Base OS MP
Microsoft.Linux.SLES.9.mp	SUSE Linux Enterprise Server 9 Base OS MP
Microsoft.Linux.SLES.10.mp	SUSE Linux Enterprise Server 10 Base OS MP
Microsoft.Solaris.8.mp	Solaris 8 Base OS MP
Microsoft.Solaris.9.mp	Solaris 9 Base OS MP
Microsoft.Solaris.10.mp	Solaris 10 Base OS MP

跨平台管理的功能

Feature

Tasks that execute script on non-Windows System and return output to UI

Support for customized UI pages for non-Windows templates, monitors etc

Support for using non-Windows entities in Distributed Application Designed

Reports for data from non-Windows Systems and entities

Templates for creating custom monitoring rules and MPs

Agent Uninstall

Agent Upgrade

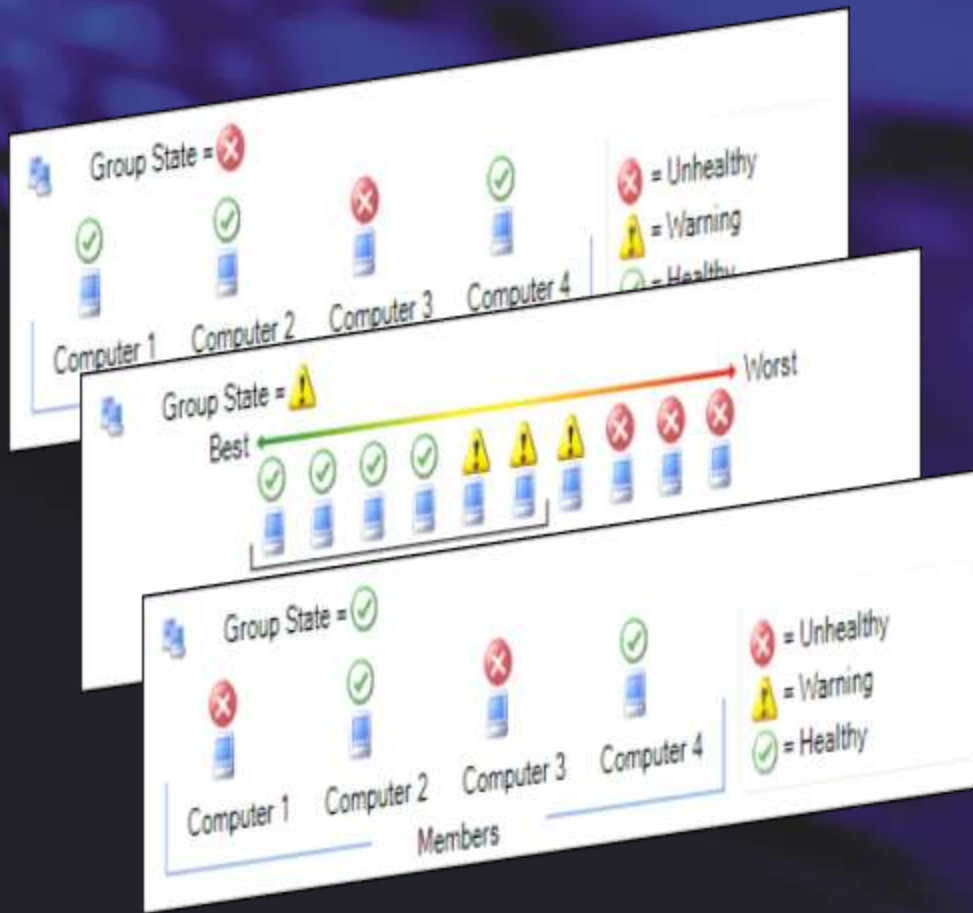
Fully data driven

DEMO

跨作業平台監控

服務水平追蹤

甚麼是Service Level Tracking?



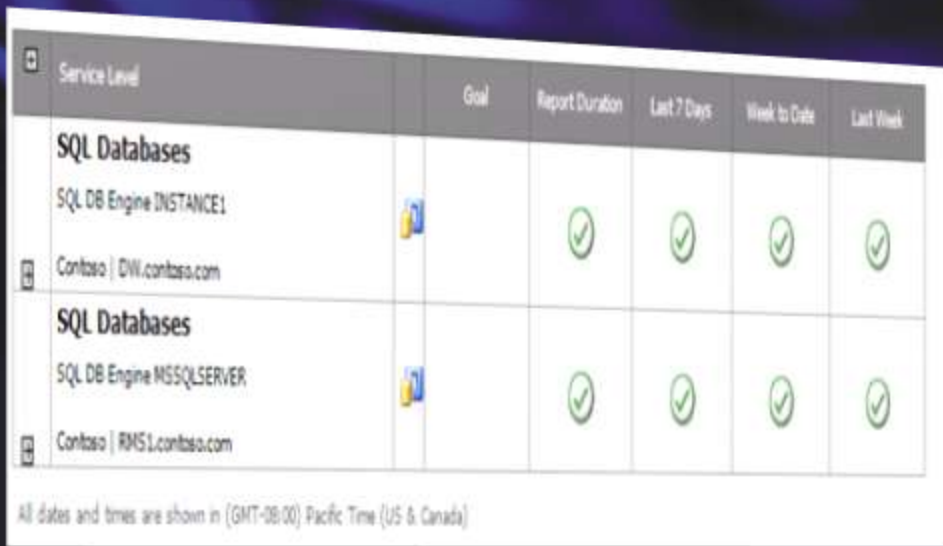
- Opsmgr 2007 R2 內建的功能
- 紀錄服務的水平
- 以“服務”為紀錄目標











甚麼是Service Level Tracking?



- 容易閱讀
- 容易產出
- 結合System Center

Service Level 追蹤

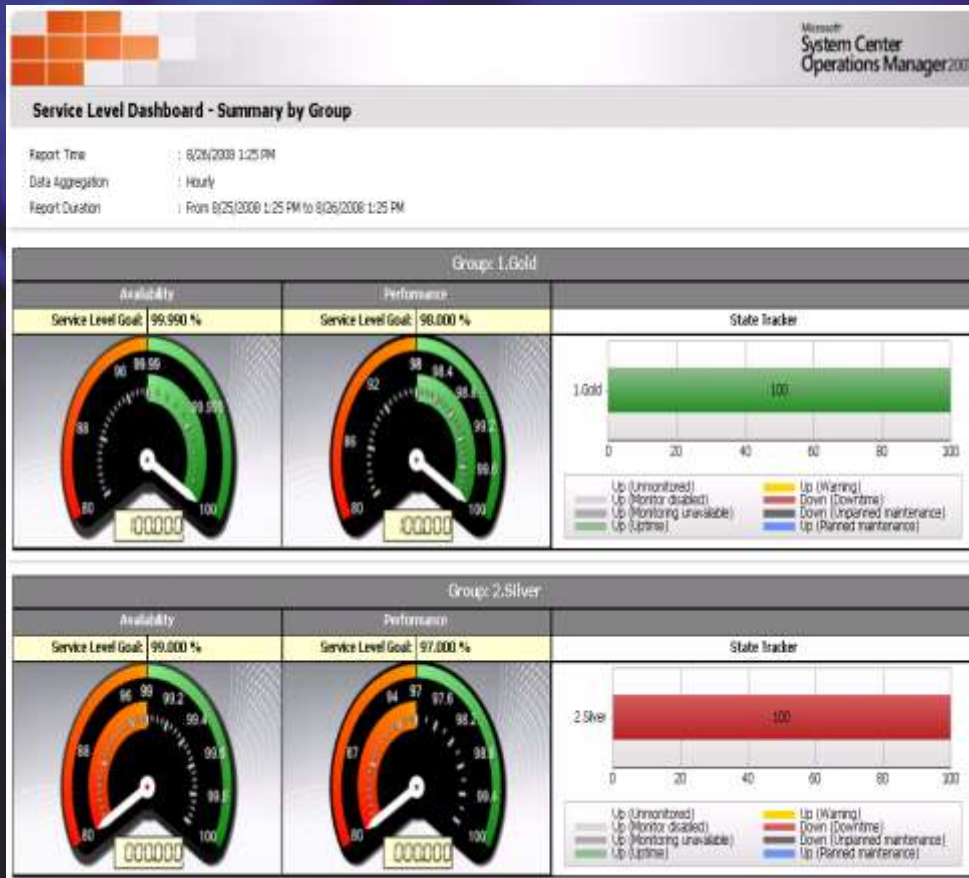


Service Level	Goal	Report Duration	Last 7 Days	Week to Date	Last Week
SQL Databases					
SQL DB Engine INSTANCE1 Contoso DW.contoso.com					
SQL Databases					
SQL DB Engine MSSQLSERVER Contoso RMS1.contoso.com					

All dates and times are shown in (GMT-08:00) Pacific Time (US & Canada)

- 支援SQL 報表服務，定期產出報表
- Service Level 是IT服務的關鍵

Service Level 追蹤



- 儀表板與報表呈現目前的服務水平與預期達到的目標
- 定期產出報表，定期審視
- 支援MOSS Web part

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設定服務水平追蹤

存取稽核與報表審視

ACS 基本原理

- 主要設計的原理:

接近即時的匯出安全存取稽核

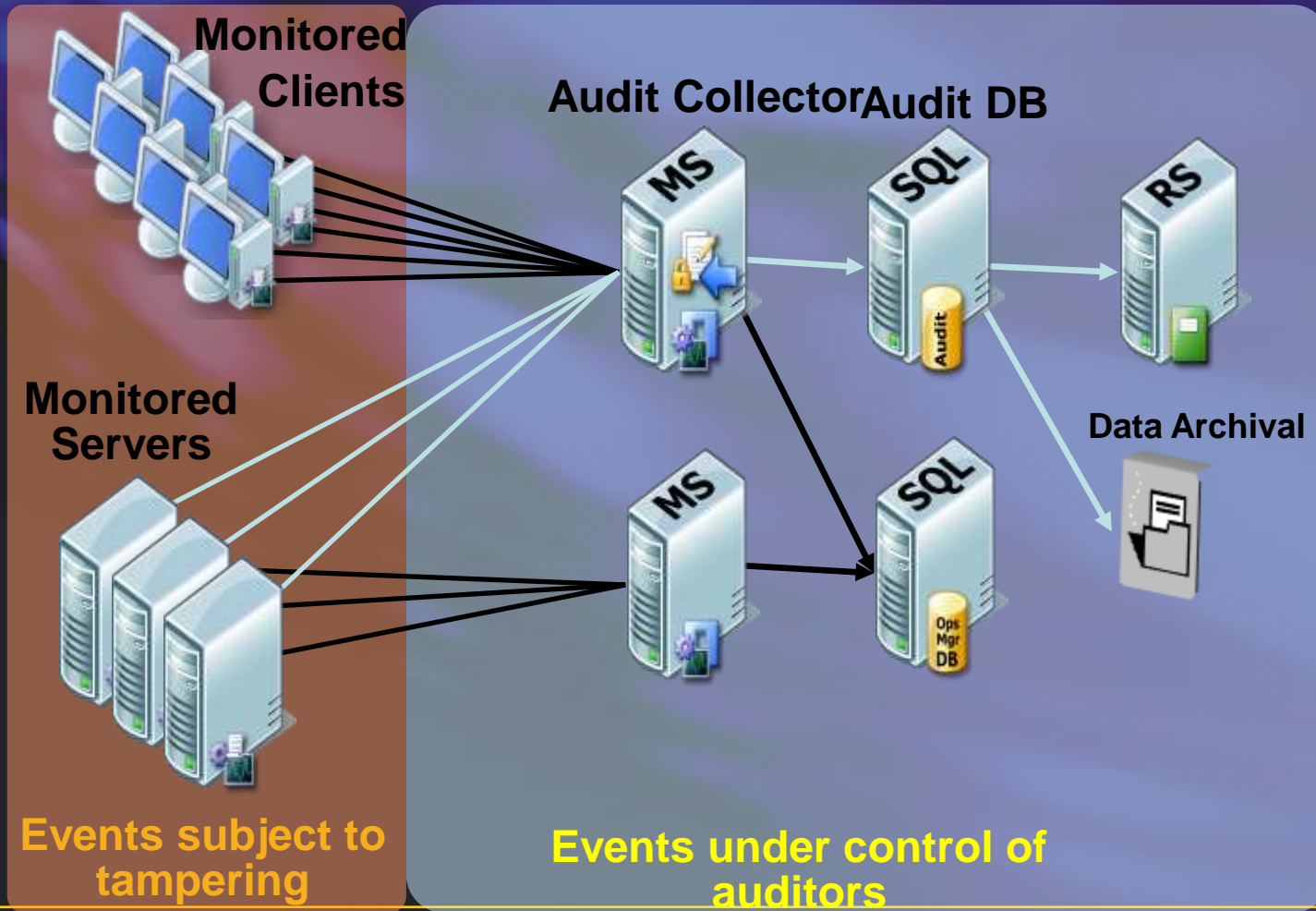
一致的蒐集原則

減少網路負擔—壓縮、輕量

可延伸架構

效率

ACS 架構



ACS 主要元件

Roles	Description	Requirements	Security
Forwarder 	蒐集本機的安全事件，即時轉送到 Collector Server	<ul style="list-style-type: none">• Windows XP• Win2000 w/SP4• Win2003• Vista• Win2008	<ul style="list-style-type: none">• SLDC compression• 128-bit RC4 encryption• Kerberos if domain-joined• TLS/SSL with certificates• Port 51909 to Collector• Default Network Service Acct.
Collector 	Collector 負責處理從 Forwarder 轉送過來的安全事件，事件經過濾篩選，儲存在稽核資料庫中	<ul style="list-style-type: none">• Windows Server 2003 or 2008	<ul style="list-style-type: none">• TLS/SSL between Collector & Audit database• Port 1433 inbound to Audit Database
Audit Database 	Audit database 負責集中儲存 Collector 送進來的安全事件紀錄，每個 Collector 對應一個 Audit Database。	<ul style="list-style-type: none">• Windows Server 2003 or 2008• SQL Server 2005 Standard with SP1• <i>SQL Enterprise and SP2 recommended</i>	<ul style="list-style-type: none">• SQL Security or Windows Integrated Security• End users require db_datareader rights only
Report Server 	Reporting Server 可以與 Audit Database 安裝在同一部伺服器，但是為效能考量，建議安裝在獨立伺服器。		<ul style="list-style-type: none">• SCOM Reporting• SQL 2005 SSRS

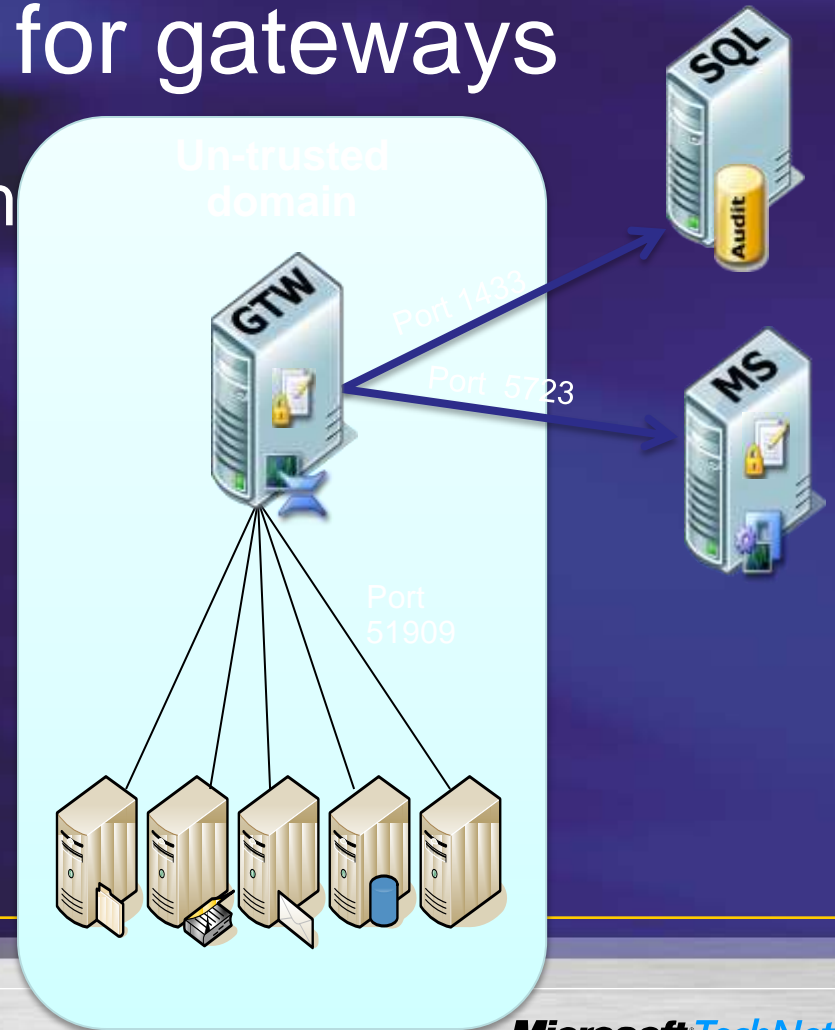
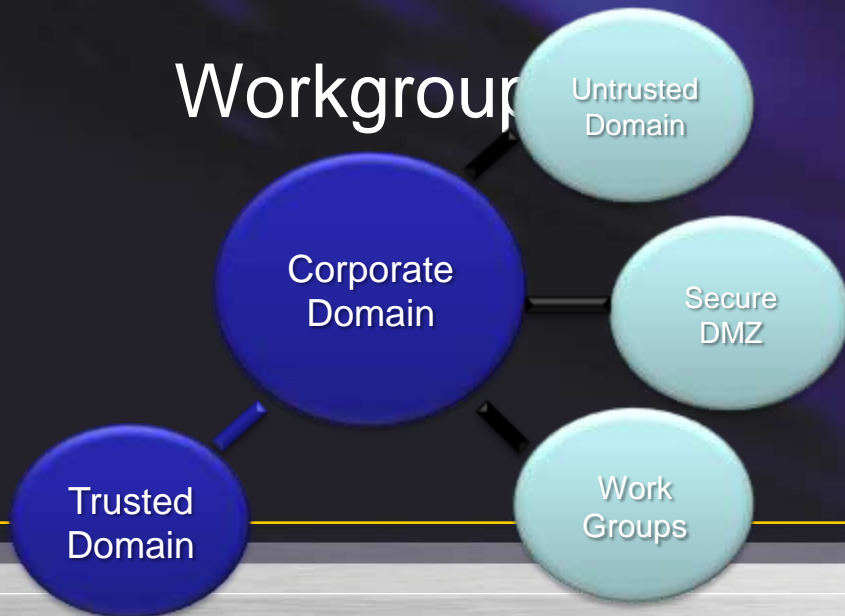
ACS and Gateways

- Common scenarios for gateways

Untrusted forest or domain

Secure DMZ

Workgroup



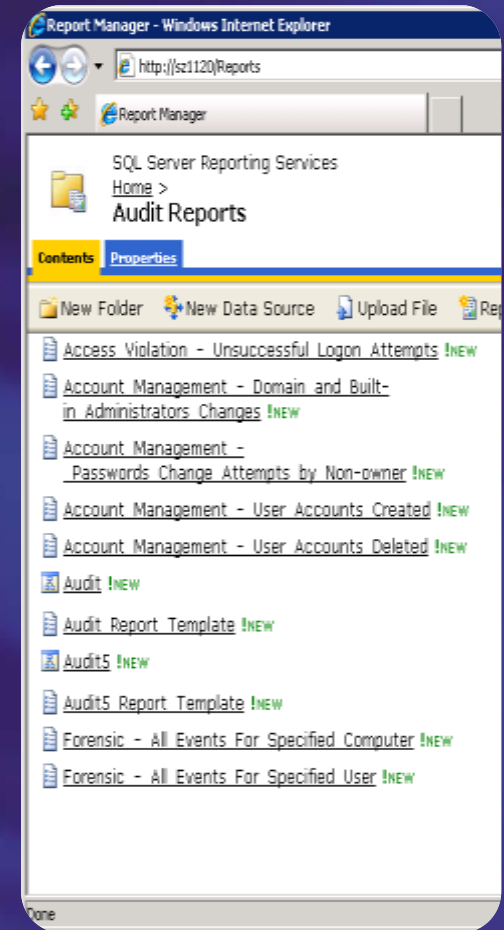
Security Management

- 反映每天的資安狀態
- 管理套件提供
監控, 管理原則, 檢視 ..
通知
- 可自行開發管理套件, 或是套用
協力廠商的現有的支援
- 可從微軟網站下載: Windows
Server稽核管理套件



安全稽核

- 存取稽核的歷史紀錄報表
- 存取行為分析
- 報表提供：
 - 內建可立即套用的表物件
 - 協力廠商增值報表
- Osmgr 2007 R2內建報表



ACS 預設報表物件

- Forensic_-_All_Events_For_Specified_User.rdl
- Forensic_-_All_Events_With_Specified_Event_ID.rdl
- Planning_-_Event_Counts.rdl
- Planning_-_Event_Counts_by_Computer.rdl
- Planning_-_Hourly_Event_Distribution.rdl
- Planning_-_Logon_Counts_of_Privileged_Users.rdl
- Policy_-_Account_Policy_Changed.rdl
- Policy_-_Audit_Policy_Changed.rdl
- Policy_-_Object_Permissions_Changed.rdl
- Policy_-_Privilege_Added_Or_Removed.rdl
- System_Integrity_-_Audit_Failure.rdl
- System_Integrity_-_Audit_Log_Cleared.rdl
- Usage_-_Object_Access.rdl
- Usage_-_Privileged_logon.rdl
- Usage_-_Sensitive_Security_Groups_Changes.rdl
- Usage_-_User_Logon.rdl
- Access_Violation_-_Account_Locked.rdl
- Access_Violation_-_Unsuccessful_Logon_Attempts.rdl
- Account_Management_-_Domain_and_Built-in_Administrators_Changes.rdl
- Account_Management_-_Passwords_Change_Attempts_by_Non-owner.rdl
- Account_Management_-_User_Accounts_Created.rdl
- Account_Management_-_User_Accounts_Deleted.rdl
- Audit_Report_Template.rdl
- Audit5_Report_Template.rdl
- Forensic_-_All_Events_For_Specified_Computer.rdl

稽核規劃










- 制定一致性的稽核政策

決定應該要稽核甚麼

定義可以得到哪些資訊

制定稽核原則與存取控制

蒐集、觸發與分析

 Audit account logon events	No auditing
 Audit account management	No auditing
 Audit directory service access	No auditing
 Audit logon events	No auditing
 Audit object access	No auditing
 Audit policy change	No auditing
 Audit privilege use	No auditing
 Audit process tracking	No auditing
 Audit system events	No auditing

容量規劃

- Log and Database Drives

[Average number of disk I/O per event for (transaction log or database file)] *

[Events per second for all computers] * [disk RPM] * 60 sec/minute =
[number of required drives] * 2 (for RAID 1)

Variable	Value
Average number of logical disk I/O per event for transaction log	1.384
Average number of logical disk I/O per event for database file	0.138
Events per second for all computers	Estimated by using the script and the To estimate the number of events per second for all computers procedure
Disk RPM	Varies, determined by disk device

容量規畫的小訣竅

- Use SQL enterprise
- Document every aspect of your 'solution'
- Collector 'load' will decrease when using "noise filters"
- Separate SQL reporting services server or not?
- Server configuration

Use 64-bit

Use dedicated hardware / management server

Plan your disks for the ACS database

強化Opsmgr 2007 R2

- Support for Windows Server 2008 and Windows Server 2008 R2
- New Windows Server 2008 and Windows Server 2008 R2 integrated ACS reports
- Improved report performance
- New multi-staged indexing design that further enhance robustness and performance
- Support for Cross Platform by CY 2H09

DEMO

稽核報表範本

嘗試登入稽核報表

Unsuccessful Logon Attempts

Event 529-537 and 539 indicates that somebody has tried to logon unsuccessfully. This report details who and where. Large number of unsuccessful logon attempt for the same user or computer may indicate a potential intrusion.

User	IP Address	Computer	Logon Process	Auth Package	Logon Type	Count
JEFF\Administrator	-	W2KSRV	Negotiate	n/a	Interactive	2
			Total			2
		Total			2	
		Total			2	
JEFF\jjs	-	W2KSRV	Negotiate	n/a	Interactive	1
			Total			1
		Total			1	
		Total			1	
Total					3	

Total rows: 2

Filter: Dv Alls with: All of (Start Date on or after (prompted), End Date on or before (prompted), Any of (Event Id from 529 to 537, Event Id = 539))

帳戶管理: 網域管理者關係異動

Domain and Built-in Administrators Membership Changes

This report details membership changes in the Domain and Built-in Administrators group. It looks for event 632, 633, 636 and 637 (membership change event for local and global groups) with target sid - S-1-5-33-544 (Built-in Admin group sid) or target sid that ends with 512 (domain admins group).

Group	Action	Changed By	Member User	Date/Time	Computer
Builtin\Administrators	Member Added	JEFF\Administrator	JEFF\User01	9/4/2007 3:24 PM	DC1
			JEFF\User02	9/4/2007 3:24 PM	DC1

Total rows: 2

Filter: Dv Alls with: All of (Start Date on or after (prompted), End Date on or before (prompted), Any of (Event Id = 632, Event Id = 633, Event Id = 636, Event Id = 637), Any of (Target Sid = "S-1-5-32-544", Last 3 Sid Digt = "512"))

帳戶管理：帳號新增與刪除



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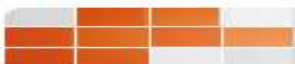
User Accounts Created

This report shows user accounts created within the specified date/time range.
The report looks for events 624 which track account creation.

Date/Time	Account Name
9/4/2007 3:23 PM	JEFF
9/4/2007 3:22 PM	JEFF
9/4/2007 3:22 PM	JEFF

Total Dv Alls: 3

Filter: Dv Alls with: All of (State Date on or after (prompted), End Date on or before (prompted), Event Id - 624)



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Operations Manager 2007

User Accounts Deleted

This report shows user accounts deleted within the specified date/time range.
The report looks for event 630 which tracks account deletion.

Date/Time	Account Deleted	Deleted By	Computer
9/4/2007 3:53 PM	JEFF\User03	JEFF\Administrator	DC1

Total Dv Alls: 1

Filter: Dv Alls with: All of (State Date on or after (prompted), End Date on or before (prompted), Event Id - 630)

使用者登入狀態

User Logon

This report display all user logon activity for a specified user within a specific time range
it looks for event 540 and 528 to identify logon activity

Date/Time	Computer	IP Address	Auth Package	Logon Process	Logon Type
9/10/2007 11:29 AM	DC1	192.168.1.10	Kerberos	Kerberos	Network
9/10/2007 11:29 AM	DC1	192.168.1.10	Kerberos	Kerberos	Network
9/10/2007 10:38 AM	DC1	192.168.1.10	Kerberos	Kerberos	Network
9/10/2007 10:38 AM	DC1	-	NTLM	NtLmSsp	Network
		192.168.1.10	Kerberos	Kerberos	Network

Total rows: 5

Filter: Dv Alls with: All of (Event Id in 540, 528, Start Date on or after (prompted), End Date on or before (prompted), UPPER (Domain\User) = UPPER(Parameter: Domain\User))

特殊群組關係異動

Sensitive Security Groups Changes

Group Type	Action	Group Name	Changed By	Member User	Date/Time
Domain Local	Group Changed	JEFF\OMAdmins	JEFF\Administrator	n/a\n/a	9/10/2007 11:44 AM
					9/10/2007 11:40 AM
Global	Member Added	JEFF\OMAdmins	JEFF\Administrator	JEFF\User01	9/10/2007 11:40 AM
				JEFF\User02	9/10/2007 11:44 AM

Total rows: 4

Filter: Dv Alls with: All of (Start Date on or after (prompted), End Date on or before (prompted), Any of (Event Id = 631, Event Id = 639, Event Id = 634, Event Id = 632, Event Id = 633, Event Id = 635, Event Id = 641, Event Id = 638, Event Id = 636, Event Id = 637, Event Id = 658, Event Id = 659, Event Id = 662, Event Id = 660, Event Id = 661))

物件存取稽核記錄

Object Access

This report shows all object access related audit event within the specified time range.
It uses the events 560 (permission requested) and 567 (permission exercised) to track items with object access auditing enabled

Computer	Object Type	Handle ID	Event Id	Path	Date/Time	User	Process	Access
JEFF\DC1\$	File	816	(560) Permission Requested	C:\WINDOWS\Tasks\SchedLgU.Txt	9/10/2007 10:30 AM	JEFF\DC1\$	C:\WINDOWS\system32\svchost.exe	%% 1538="READ_CONTROL" %% 1541="SYNCHRONIZE" %% %4416="ReadData (or ListDirectory)" %% 4417="WriteData (or AddFile)" %% 4418="AppendData (or AddSubdirectory or CreatePipeInstance)" %% 4419="ReadEA" %% 4420="WriteEA" %% 4423="ReadAttributes" %% %4424="WriteAttributes"
			(567) Permission Exercised		9/10/2007 10:30 AM		C:\WINDOWS\system32\svchost.exe	%%4417="WriteData (or AddFile)" %% 4418="AppendData (or AddSubdirectory or CreatePipeInstance)"
		984	(560) Permission Requested	C:\WINDOWS\Tasks\SA.DAT	9/10/2007 10:30 AM	JEFF\DC1\$	C:\WINDOWS\system32\svchost.exe	%% 1538="READ_CONTROL" %%1539="WRITE_DAC" %% 1541="SYNCHRONIZE" %% %4416="ReadData (or ListDirectory)" %% 4417="WriteData (or AddFile)" %% 4418="AppendData (or AddSubdirectory or CreatePipeInstance)" %% 4419="ReadEA" %% 4420="WriteEA" %% 4423="ReadAttributes" %% %4424="WriteAttributes"

安全稽核清除記錄

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Audit Log Cleared

Event 517 indicates that somebody has cleared the Audit Log. This may suggest the person who cleared the log is trying to cover his/her tracks on the computer. This report shows which computer's audit log was cleared and who cleared it.

Computer	Cleared By	Date/Time
DC1	JEFF/Administrator	9/10/2007 11:28 AM
		9/10/2007 11:27 AM

Total rows: 2

Filter: Dv All with: All of (Start Date on or after (prompted), End Date on or before (prompted), Event Id = 517)

在何處取得 TechNet 相關資訊？

- 訂閱 **TechNet** 資訊技術人快訊
<http://www.microsoft.com/taiwan/technet/flash/>
- 訂閱 **TechNet Plus**
<http://www.microsoft.com/taiwan/technet/>
- 參加 **TechNet** 的活動
<http://www.microsoft.com/taiwan/technet/>
- 下載 **TechNet** 研討會簡報與錄影檔
<http://www.microsoft.com/taiwan/technet/webcast/>

Your potential. Our passion.TM