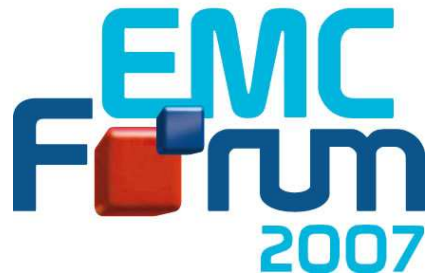




Network-Aware Service Management with EMC Smarts and Microsoft



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Infraestructura de información EMC APOyA

leverage –y Aprovecha

enterprise content management: **Documentum**
 adquisición de información: **Captiva, Acartus**
 BPM, colaboración: **ProActivity, eRoom**
 búsqueda empresarial: **AskOnce**

optimize -Optimiza

virtualización: **VMware, Rainfinity, Invista**
 administración de la información: **Legato, Documentum, EMC Infospace**
 administración de recursos: **ControlCenter, Smarts, nLayers**

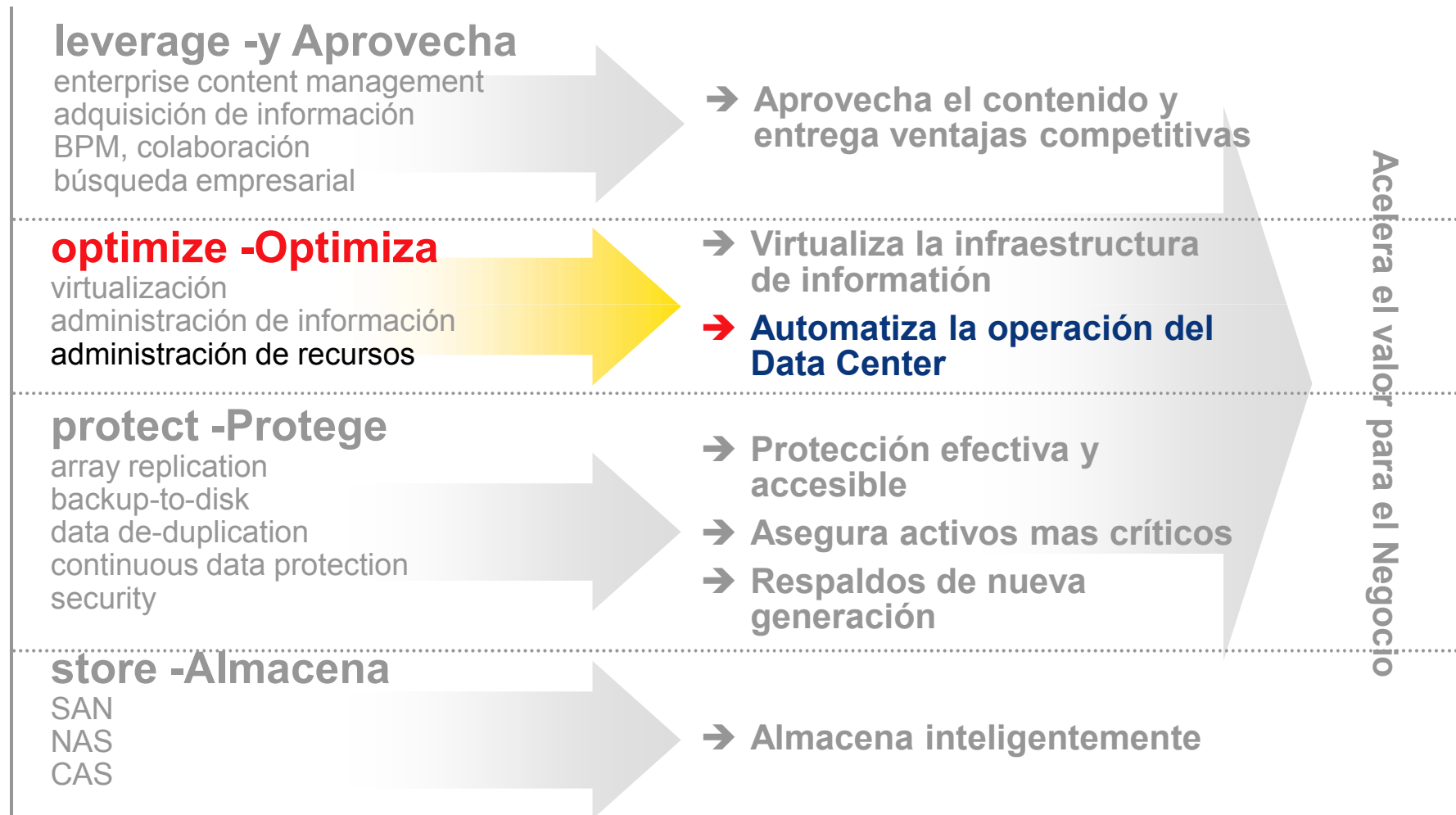
protect -Protege

replicación entre arreglos: **SRDF, MirrorView, etc.**
 backup a disco: **Legato**
 de-duplicación de datos: **Avamar**
 protección continua de datos: **Recover Point**
 seguridad: **RSA, Authentica, Network Intelligence**

store -Almacena

SAN: **Symmetrix, CLARiiON, Connectrix**
 NAS: **Celerra**
 CAS: **EMC Centera**

Infraestructura de información EMC APOyA



Today's Data Center Challenges

Reducing data center total cost of ownership

Ensuring availability of critical business services and applications without adding staff

Managing complex infrastructure and networks

Diagnosing root cause of performance or availability issues

Satisfying increased business/end-user demands

Solution: network-aware service management



EMC Smarts Package for Microsoft System Center Operations Manager 2007

Completes Network-Aware Service Management

Broadens management capabilities

- Advanced network discovery
- Root-cause analysis

Integrates seamlessly

- EMC Smarts Package plugs into Microsoft Operations Manager 2007 via adapter software

Extends visibility to entire service chain

- Servers, applications, Web services, clients, and networks

Provides flexible management

- View root-cause information from either Microsoft console or EMC Smarts console



**Announced at
MMS 2007**

Microsoft Operations Manager 2007 Overview



Service Oriented

Proactive management of your IT services

Integrated monitoring of distributed applications, the end user perspective, and supporting infrastructure



Easy to Use

- Simplifies managing your IT environment and improves time to value
- Leverages Active Directory, self tuning thresholds, and improved reporting



Knowledge Driven

- Reduces your problem resolution time
- Management packs that include Microsoft expertise for applications, servers, and clients
- Integration of error reporting and audit collection



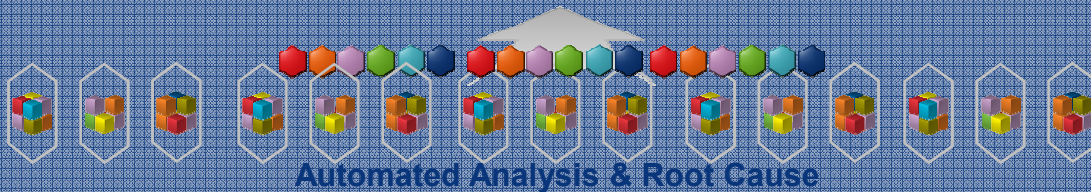
Enterprise Class

- Reliably scales across your operations team and enterprise IT environment
- Role based security, self monitoring infrastructure, and improved scalability

EMC Smarts Key Technologies

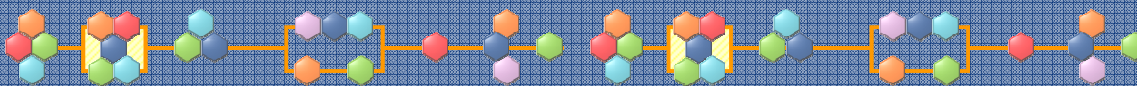


Cross-Domain Behavior Automation



- Automated behavior analysis
- Root cause automation
- Interrelationships amongst components
- No Rules Writing
- Common Information Model

Model-Based Management



- Cross-domain behavior models
- Cross silo relationships
- Storage, network, apps
- Software description of the IT environment

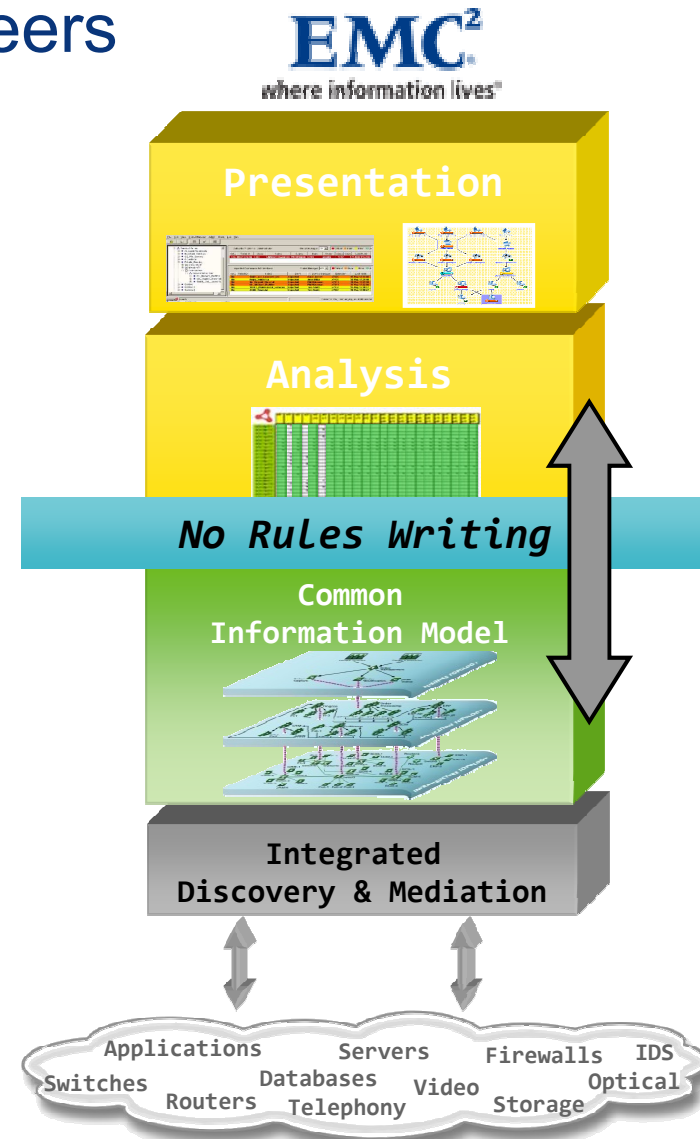
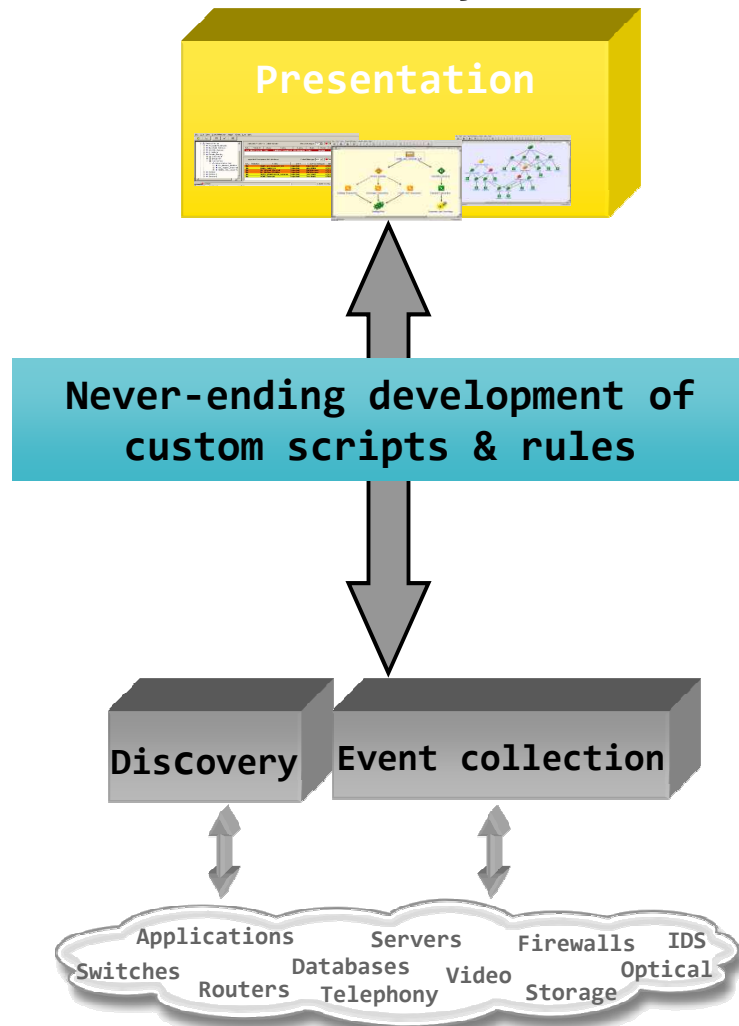
Discovery



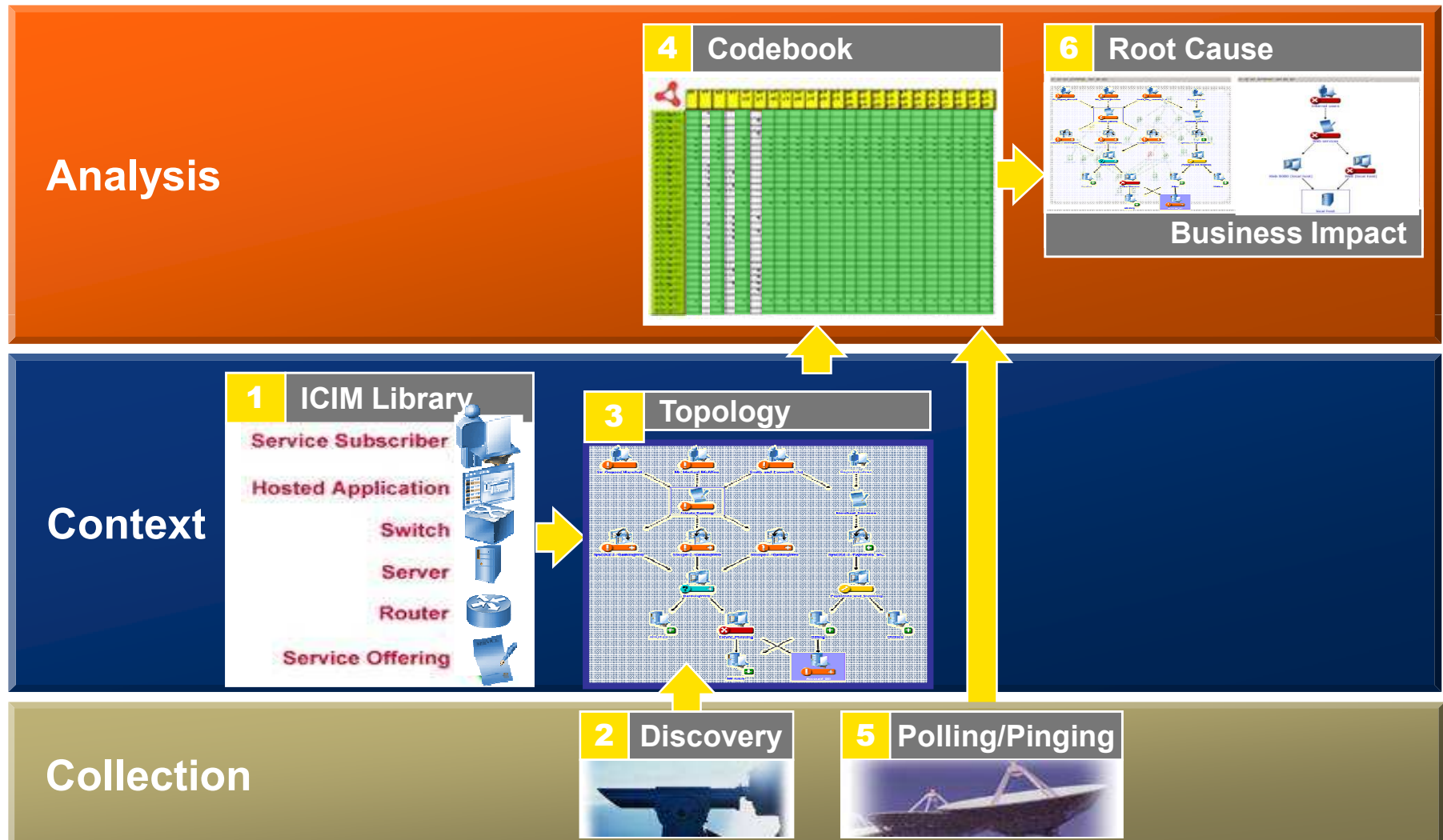
- Network discovery
- Device mediation & adapters
- Layer 1/2/3
- Storage discovery
- Server discovery
- Application discovery

EMC Smarts Architecture vs. Peers

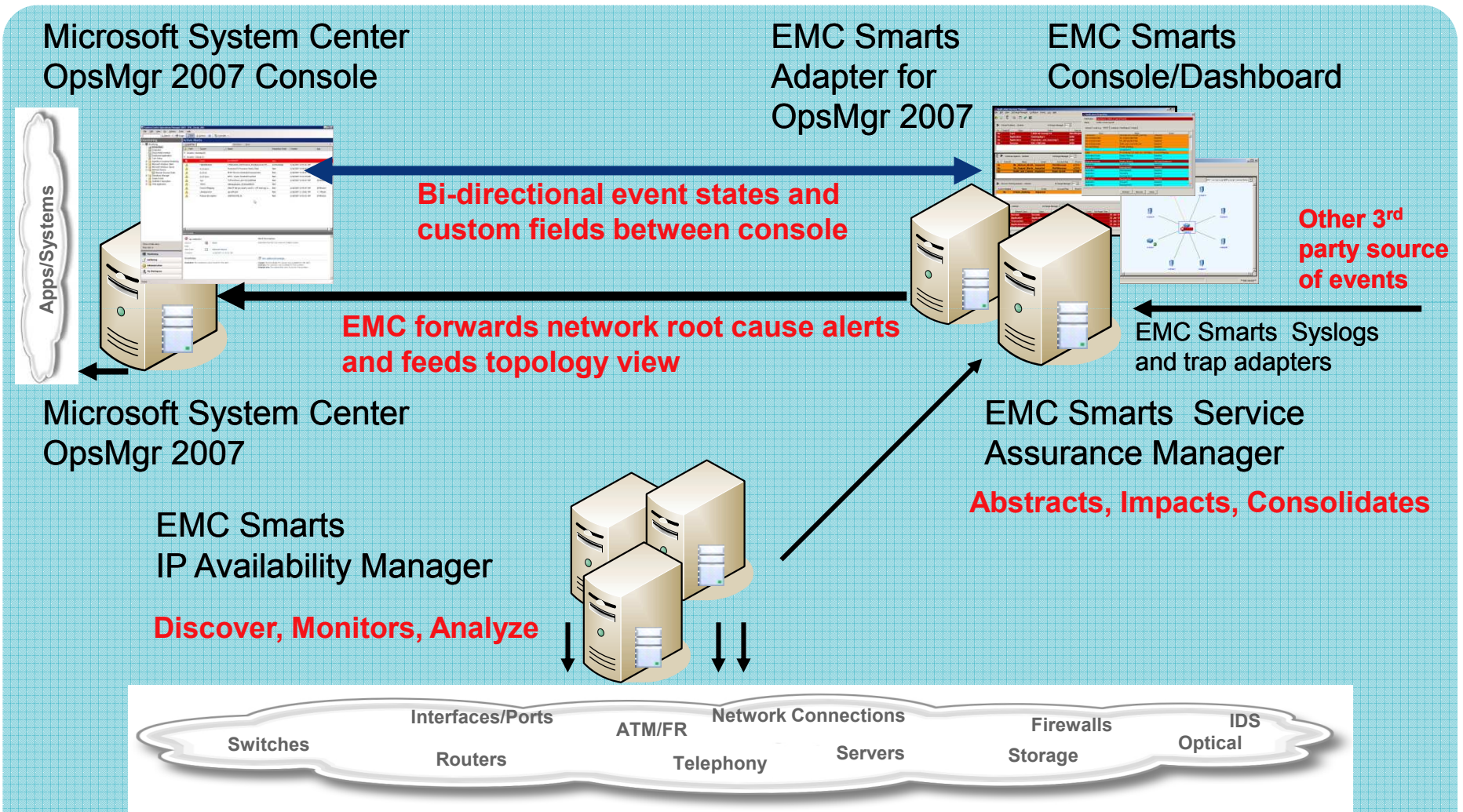
Common Industry Approach



EMC Smarts Discovery and Analysis



Joint EMC/Microsoft Solution Today



Microsoft Operations Manager 2007 Console

Single, Integrated View of IT Environment

System Center Operations Manager 2007 - EMC_Group_004

File Edit View Go Actions Tools Help

Search Find Actions Overrides

Monitoring

- Monitoring
 - Active Alerts
 - Computers
 - Discovered Inventory
 - Distributed Applications
 - Task Status
 - Agentless Exception Monitoring
 - Microsoft Windows Client
 - Microsoft Windows Server
 - Network Device
 - Network Devices State
 - Operations manager
 - Smarts Event
 - Synthetic
 - Web Ar

Active Alerts

Look For: Find Now Clear

Path	Source	Name	Resolution State	Create
Severity: Warning (8)				
Severity: Critical (1)				
Down	qa-swRack4	New		
HighUtilization	I-FileSystem_Performance_HostResources-FS...	Acknowledge		L/18/2007 10:53:21 AM
Exch-Hucln	Processor(% Processor Time)_Total	New		L/18/2007 10:48:47 AM
Exch-dc	DHCP Service terminated unexpectedly...	New		L/18/2007 10:48:47 AM
Exch-Hucln	NTFS - Quota Threshold reached	New		L/18/2007 10:44:15 AM
TCP	TCPPortCheck_25=+3162d059a5	New		L/18/2007 10:48:47 AM
Yahoo	WebApplication_fb36+ed15026	New		
DownOrFlapping	LINK-IF-leb-gw.smarts.com/3<->IF-moto-gw.s...	New		L/18/2007 10:48:47 AM
Unresponsive	ca-swRack4	New		L/18/2007 11:18:01 AM
ResourceException	USENTLEVISLLE	New		L/18/2007 10:53:21 AM

Root cause identified by EMC

Network devices populated by EMC

EMC sends network root-cause issues to Microsoft Operations Manager 2007

Accelerates problem-resolution time

Joint EMC/Microsoft Solution v2

Operations Manager will include EMC/MSFT joint model & network discovery

EMC retains analysis technology as add-on to Operations Manager

EMC Value-Add Plug-in Solutions
EMC²
where information lives[®]

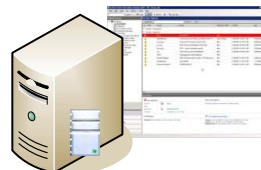
EMC Root Cause Analysis Management Pack



EMC Specialized Behavior Models Management Pack(s)



Microsoft System Center Operations Manager



End-to-End Service Management

Best of Breed For Windows

Management Packs

Shared Behavior Models



Partner Ecosystem Behavior Models



Model-Based Management

Licensed Network Discovery



Switches

Interfaces/Ports

Routers

ATM/FR

Telephony

Network Connections

Servers

Firewalls

Storage

IDS

Optical

Benefits of Joint EMC/Microsoft Solutions

EMC adds the **network visibility** to complete the true end-to-end service management

EMC's behavioral-based modeling approach
– **root-cause problems to Operations Manager** –
relieves from sorting and filtering through numerous
– and likely conflicting or inconclusive –
alert messages, and chasing after the wrong problems

EMC and Microsoft are leading the way
in helping enterprises and operations teams
manage services end-to-end, simply and intelligently,
without increasing complexity or cost

EMC Smarts IP Availability Manager

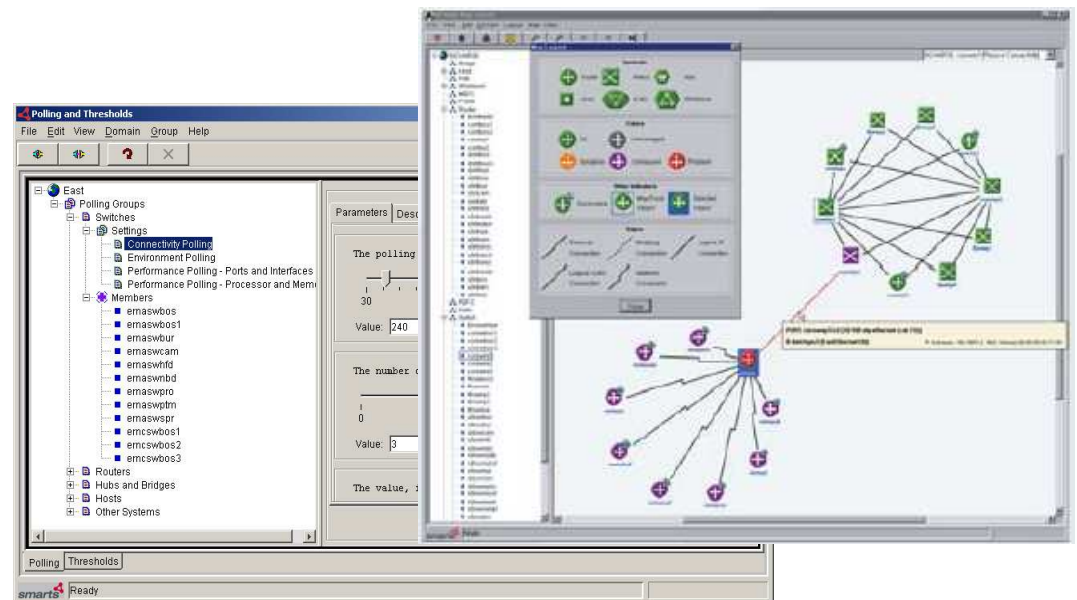
Automates real-time root cause analysis of all critical network connectivity problems at all layers

Auto-discovers IP network details

- Logical & physical entities and relationships
- Layer 1,2,3 (IP)

Dynamically adapts to network changes

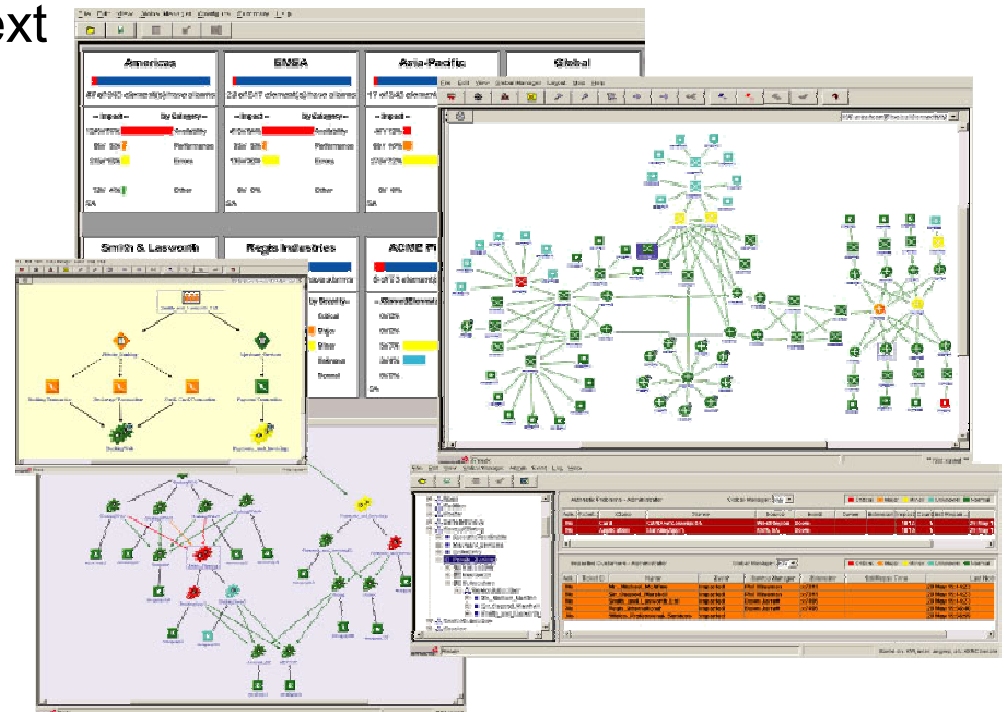
Uses cross-domain correlation



EMC Smarts Service Assurance Manager

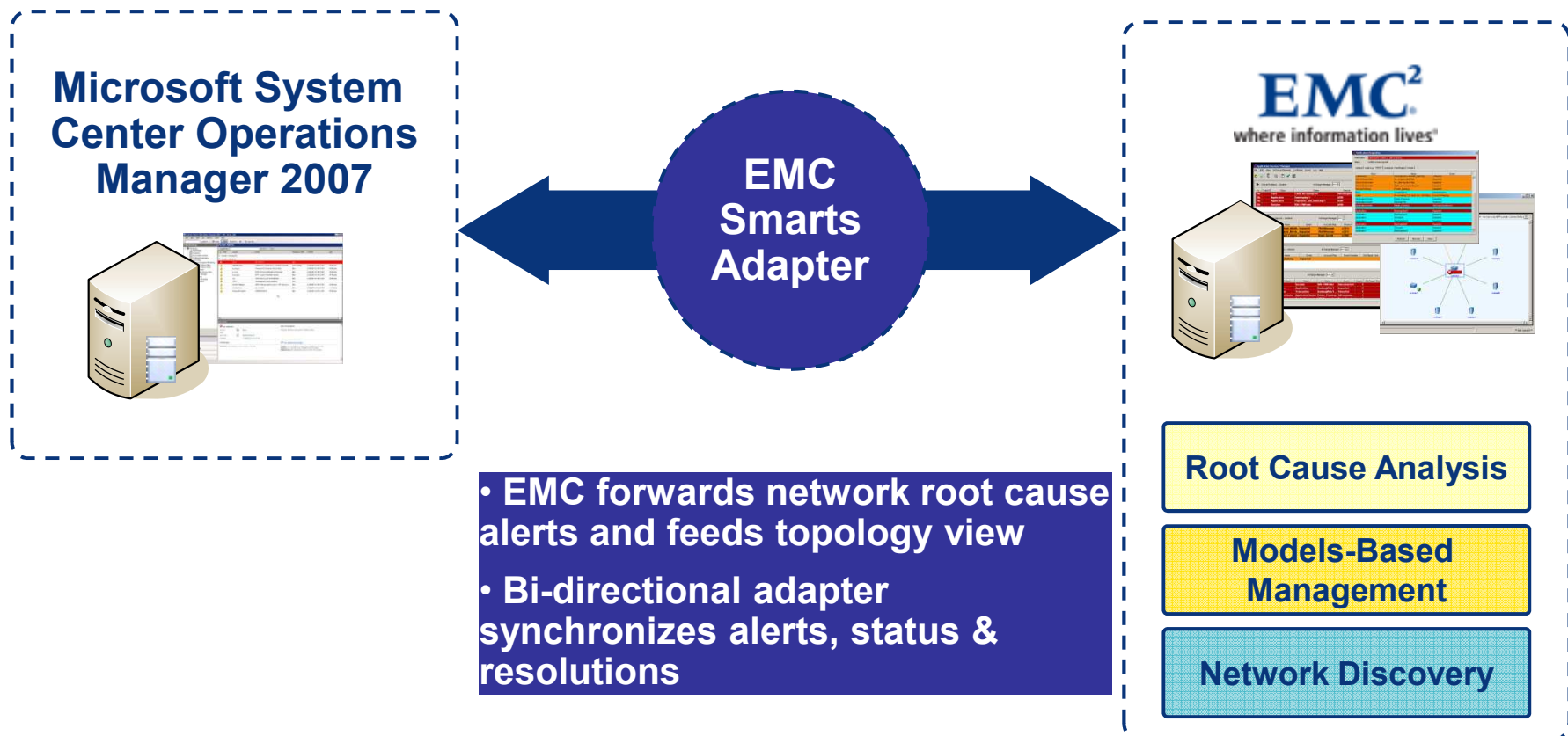
Integrates and correlates management information from any source across networks

- Imports topology and event information from the underlying managed domains, consolidates the information, and interprets root cause problems in the context of their impact on services
- Cornerstone of integration for all EMC Smarts analysis modules
- Provides domain specific details of the individual analysis modules

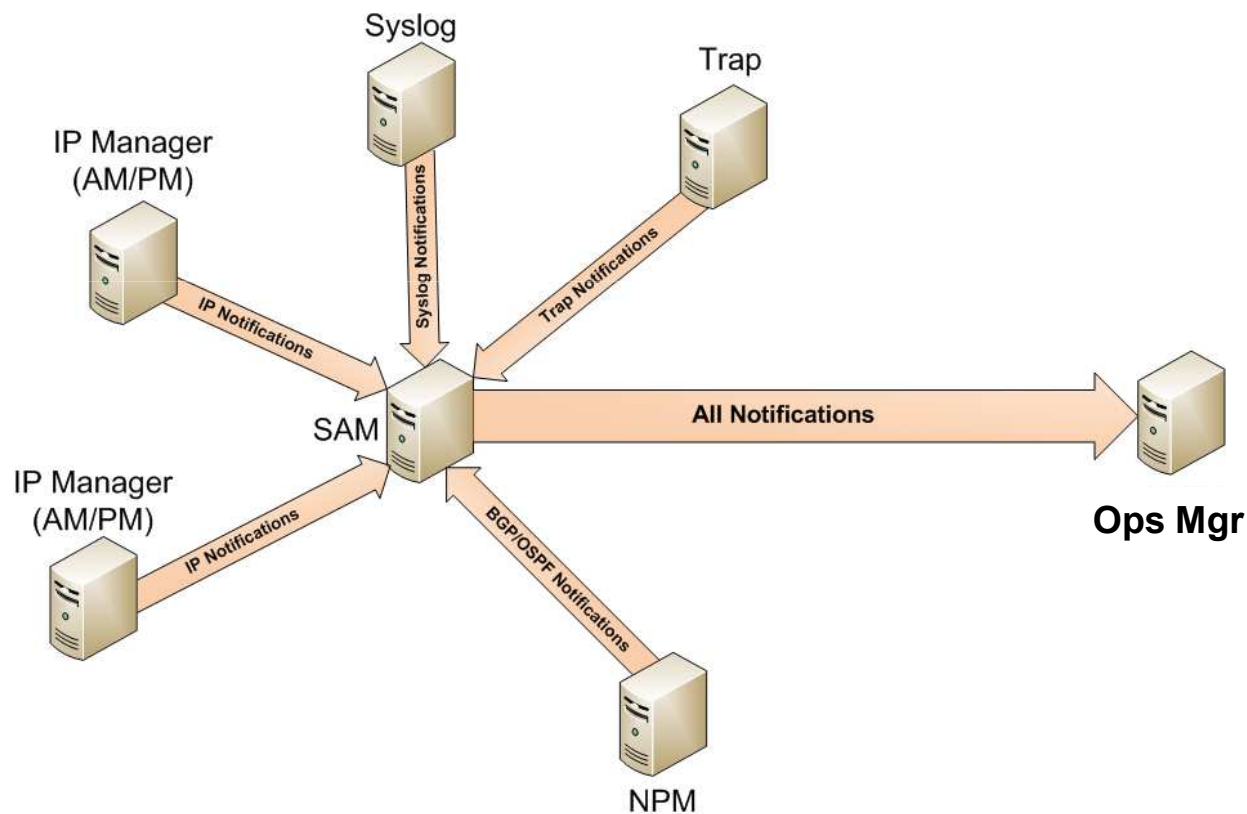


EMC Smarts for Operations Manager 2007

EMC Smarts Adds Network awareness to Operations Manager



Solution in Action: Microsoft IT



Key Points

- 10,900 network devices
- Smarts monitors network devices
- Smarts pushes network alert data into Ops Manager
- Quicker and more accurate workflow and problem resolution
- Reduced costs by using only one console

Summary: EMC Smarts for Microsoft System Center Operations Manager 2007

Network-Aware Service Management

EMC adds network awareness without adding headcount or complexity

- Provides the visibility into the network environment that IT operations sorely needs

Determines root causes automatically

- Eliminates wasted time chasing the wrong problems, or manually sorting and filtering numerous alert messages

Ensure viability of critical business services and applications

- Manages Microsoft environments and workloads—such as Microsoft Exchange and SQL Server—simply and intelligently



Preguntas y Respuestas

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