

Making your System the Best it can be with ECM System Monitor

Steven Bass, IBM



Agenda

- Overview
- Capabilities
- What's New in ESM 5.1?
- Customer Success Stories
- Demo
- Key Sales Contacts, Collateral

The Business Need – IBM ECM is essential

- IBM ECM supports mission-critical business processes
 - Availability is key, downtime is not an option!
 - Management of IT Services instead of IT components (ITIL)

- Cost of operations / TCO of ECM
 - Need to be kept under control
 - ECM specialists need to focus on value-adding activities
 - Delegation of 24x7 routine monitoring to IT Operations

- Service Management Studies:
 - 73% of problems reported by enduser, not detected by administrators
 - 63% of problems require 4+ hours to isolate root cause
 - Involve multiple specialists to solve one enduser problem
 - it's always the ECM administrators who gets blamed!
 - substantial room for improvement



IBM ECM System Monitor

Improve Availability / Lower TCO of IBM ECM

- Proactive monitoring of IBM ECM platforms → functional ECM health monitoring
 - IBM ECM components
 - Middleware components, e.g. database & application servers
 - Input & Output Management
 - Custom monitoring for add-on applications (3rd party & custom-built)

- Holistic ECM Service Level Management
 - Simple **Red** / **Yellow** / **Green** traffic light paradigm
 - IT Service Management (ITSM) integration
 - Event forwarding to central Event Management (IT Operations)
 - Trouble Ticket opening in Incident Management (Service Desk)

- Single Point of Control
 - Monitoring and Logfile Management
 - Knowledge Base
 - Tasks Automation
 - Reporting

Capabilities



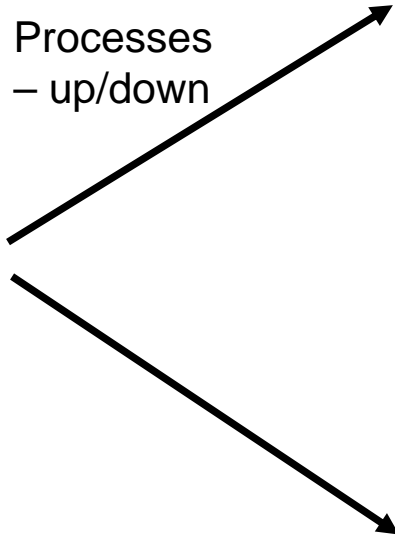
Before IBM ECM System Monitor

– no proactive monitoring of app health status

IBM. **Tivoli.** software



Processes
– up/down



No application health status information
= black box!



Processes and details –
up/down, tablespaces, etc.

IBM ECM System Monitor Automates the Management of your ECM Systems

Problem



ECM System



Solution

Component	Status	Time	Severity
SYSTEM [3 C]			
DATASTREAM [3 C]			
ALLMKFDatabasesAvailable	OK		
ApplicationServerMonitoring	OK		
CacheRecordSize	OK		
cala_check_status [1 W]	Warning		
CALAProcesses	Critical	2012-10-02 13:40:17	Critical
CALARexProcesses	Critical		
ComponentManage	Warning	2012-10-02 12:55:22	Warning
ComponentStatus	OK	2012-10-02 12:55:20	Harmless
CPUUsage	OK	2012-10-02 12:54:25	Harmless
FileNetWebApplicati	OK	2012-10-02 12:53:50	Harmless
GeneralDiskSpace	OK	2012-10-02 12:53:45	Harmless
ImageServicesSystem	OK		
IndexDatabaseAvail	OK	2012-10-02 12:52:41	Harmless
JPSMonConfJMXMon	OK	2012-10-02 12:52:37	Harmless
JPSMonConfPCHMor	OK		
JPSMonConfWMIMon	OK		
MemoryUsage [1 W]	Warning		



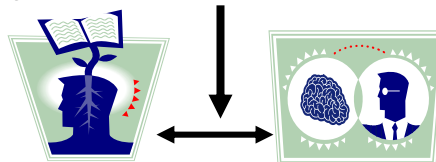
Result



1. Database error prevents document access

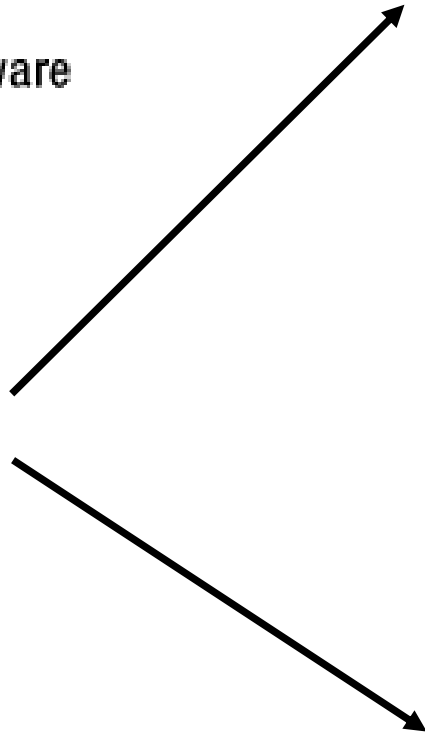
2. System Monitor identifies error, alerts Administrator who instantly solves the problem with the built in knowledge base, or SysMon can auto correct the outage

3. Increased uptime, meeting your SLA, satisfied users



After IBM ECM System Monitor – Proactive monitoring with insight into ECM application health

IBM. **Tivoli.** software



SYSTEM	Icon	Timestamp	Severity
SYSTEM [3 C]	✖	2012-10-02 13:40:17	Critical
DATASTREAM [3 C]	⚠	2012-10-02 12:55:22	Warning
ALLMKFDatabasesAvailable	✔	2012-10-02 12:55:20	Harmless
ApplicationServerMonitoring	✔	2012-10-02 12:54:25	Harmless
CacheRecordSize	✔		
cala_check_status	⚠		
CALAProcesses	✔		
CALARexProcesses	✔		
ComponentManager	✖		
ComponentStatus	✔		
CPUUsage	✔		
FileNetWebApplicat	✔		
GeneralDiskSpace	✔		
ImageServicesSyst	✔		
IndexDatabaseAvailability	✔		
JPSMonConfJMXMon [1 W]	⚠		
JPSMonConfPCHMon	✔		
JPSMonConfWMIMon	✔		
MemoryUsage [1 W]	⚠		
MKFNNonvirginBlocks	✔		
MSSQLProcesses	✔		

Event Detail	Value	Count	Severity
Datastream	ComponentManagerStatus	50	Harmless
Sequence Number	-1	45	Harmless
Value	not_ok	41	Harmless
Duplicate Count	1	37	Harmless
Event Class	FileNetBasis		
Log			
Annotation			
Timestamp (UTC)	2012-10-02 16:45:59.0 +0000 UTC		
Full Qualified Host Name	demo		
IP Address	192.169.1.5		

Host	✖	⚠	✔
hqdemo1	2	1	9
demo	1	14	32

Knowledge Base Entry

STANDARD

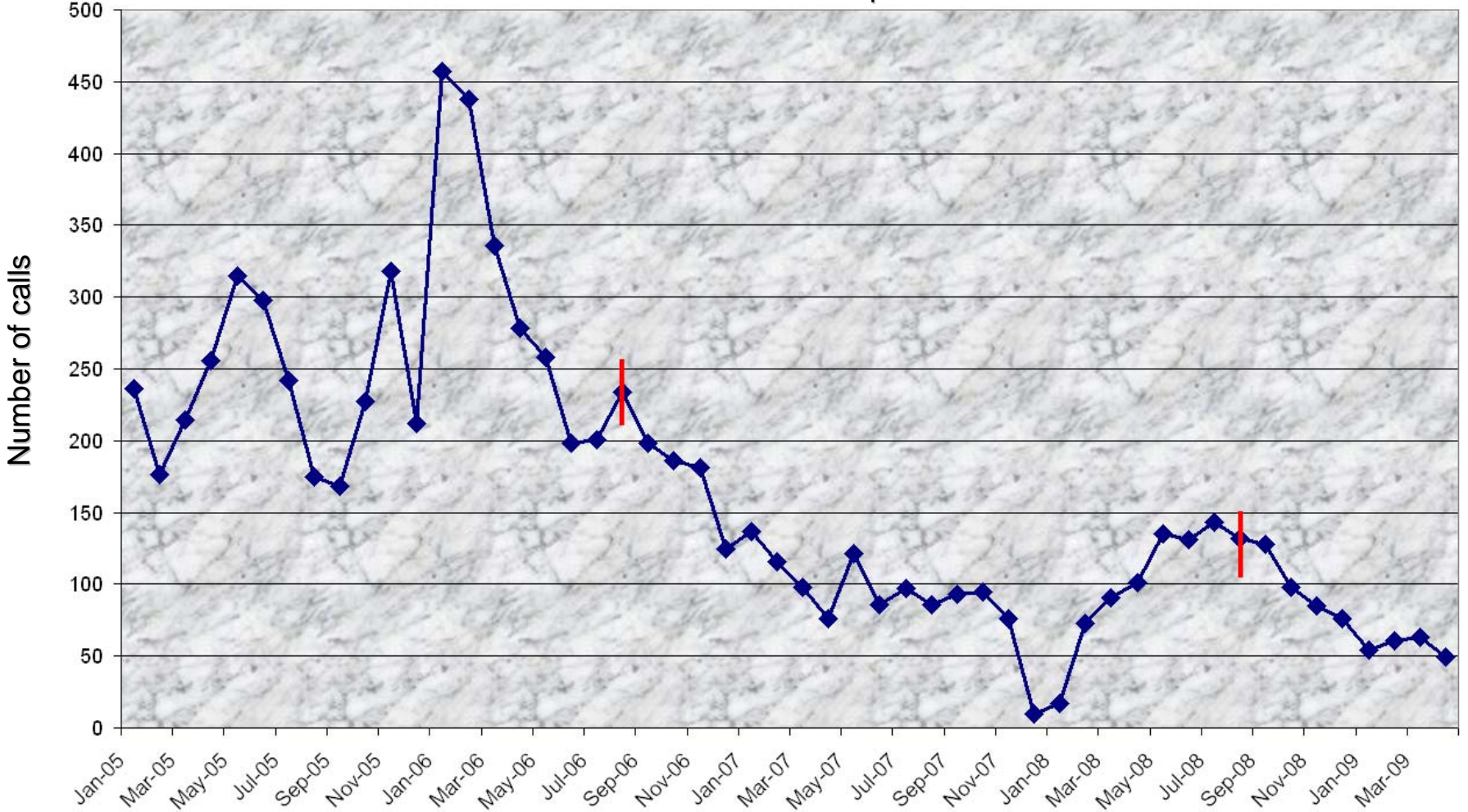
This monitor checks if all required CALA processes are running. Possible return values are 'ok', 'not_ok', 'logctlsrv_down' or 'ERROR_*'.

What can I do to resolve the problem?

If you receive 'logctlsrv_down' or 'ERROR_*' check the monitor details for more information. If you receive 'not_ok', at least 1 CALA process is not running. Restart CALA to correct this problem.

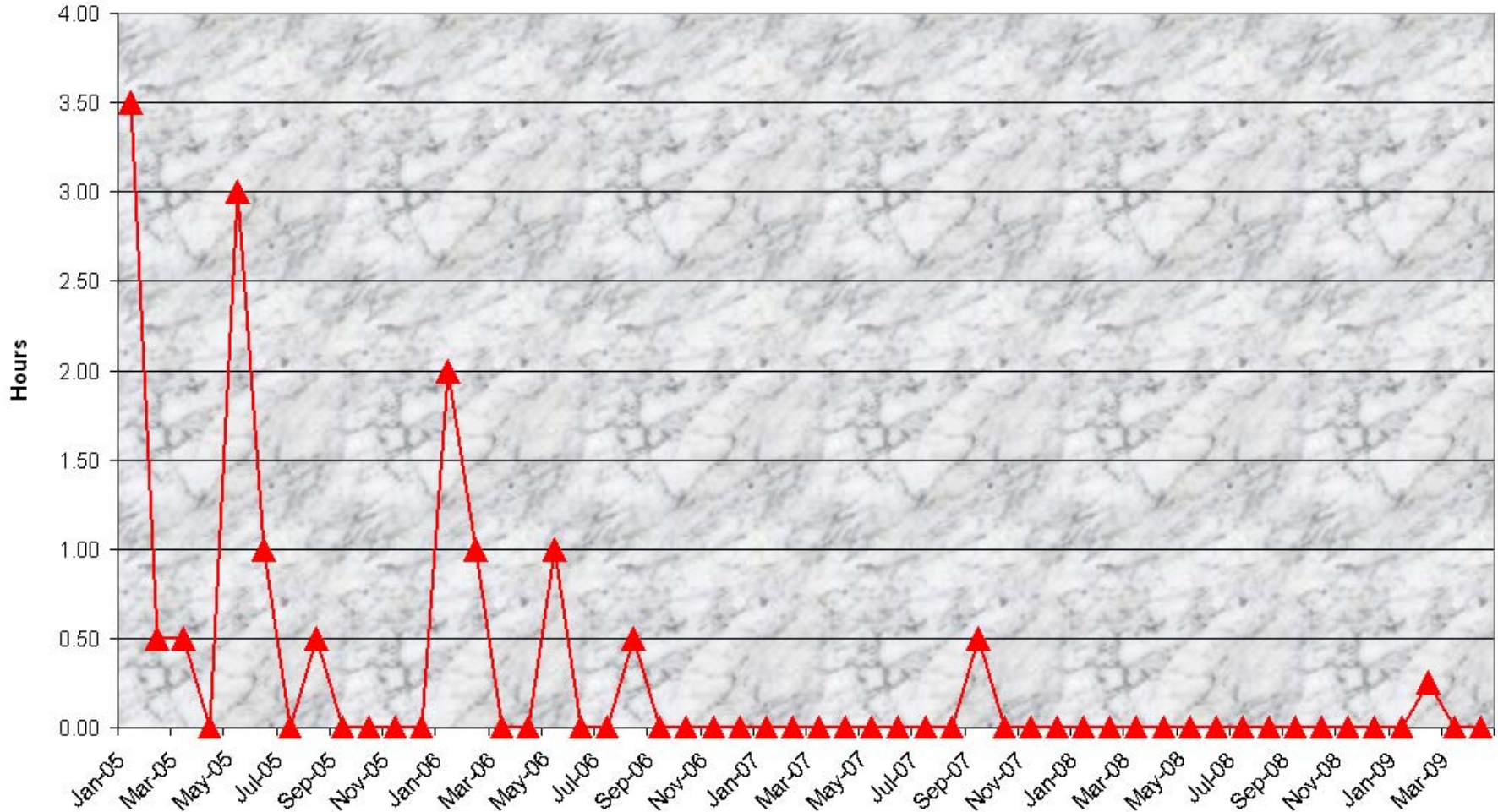
Benefits – before and after ESM Installation

Calls Routed from the Help Desk

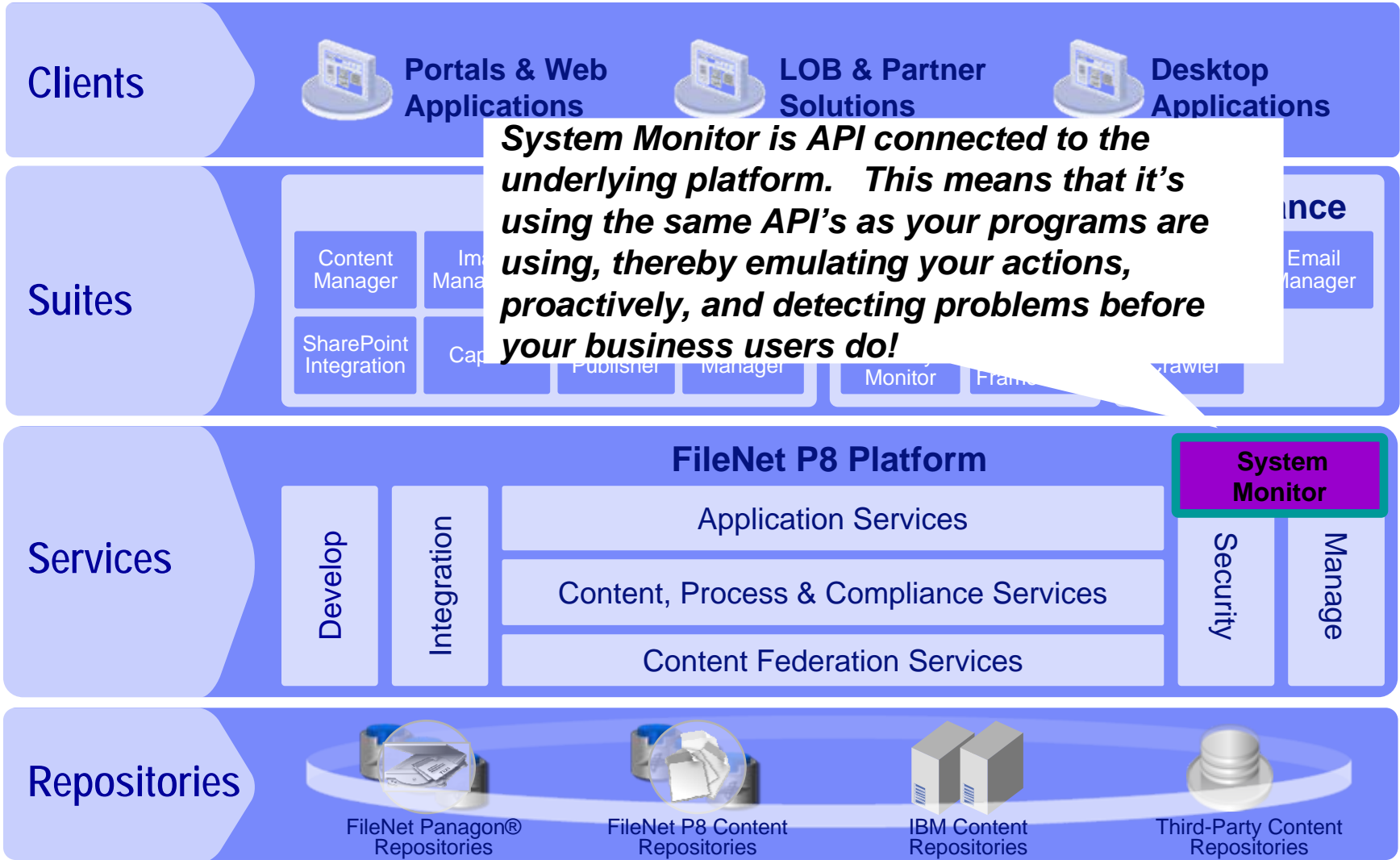


Benefits (continued)

Production impact



ESM is part of the Enterprise Reference Architecture



System Monitor is API connected to the underlying platform. This means that it's using the same API's as your programs are using, thereby emulating your actions, proactively, and detecting problems before your business users do!

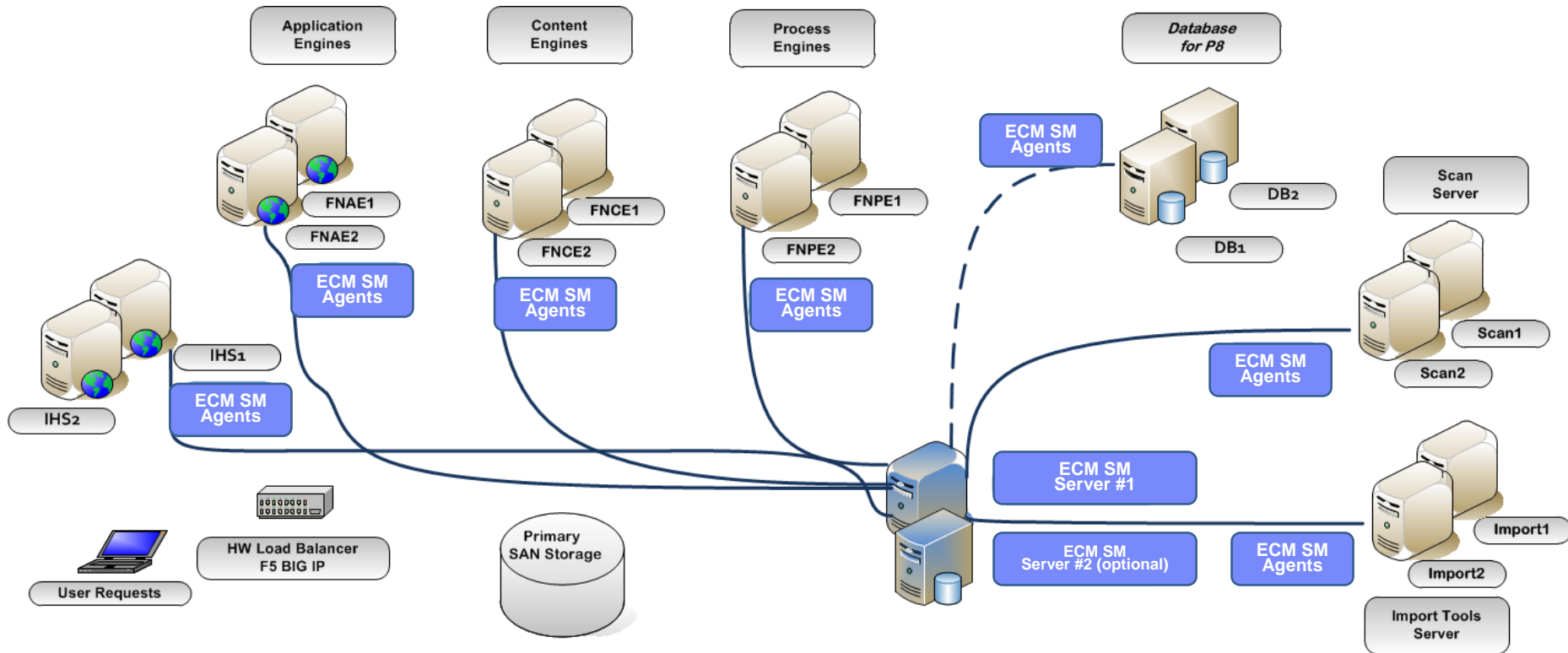
IBM ECM System Monitor is the Answer to Address These Challenges

Challenge	Benefits
End user knows ECM applications are down before you do	✓ Immediately notifies you before end users do (proactive vs. reactive)
Unable to meet Service Level Agreement (SLA) / uptime requirements	✓ Increases uptime and ability to meet SLA
Trouble diagnosing problems and determining the corrective action to take	✓ Faster time to diagnose problems by providing corrective actions, knowledge base
Data Center / Network Operations unable to remotely monitor ECM applications	✓ Enables Data Center / Network Operations to remotely monitor ECM applications
Unable to increase productivity of ECM administrators	✓ Increases productivity by automating manual tasks

IBM ECM System Monitor Capabilities


- **Proactive monitoring and logfile management**
 - 1800+ performance & system parameters
 - 900+ RPC level Listener metrics
 - 28+ ECM logfiles
 - JMX and WMI object interface
 - Real-time alerts via Blackberry, pager, email, console, SMS
- **InstallAnywhere support**
- **Automate 90 manual administration tasks**
- **Seamless integration with enterprise system mgmt. tools**
 - Pre-defined SNMP MIB
 - Logfile
 - Email / Command Line
 - Direct API Integration into IBM Tivoli and HP OpenView
- **New Management reports and enhanced knowledge base**
 - Analysis of historical events – identifying weak spots
 - Analysis of resource utilization – trending and capacity planning

IBM ECM System Monitor Architecture



- Dedicated SM Management Server (stand-alone or HA set-up)
- SM Agents on managed ECM systems
- Databases can optionally be monitored remotely (only DB monitoring)
- Event forwarding from SM Management Server to IT Service Management tools

Products monitored by IBM ECM System Monitor

- FileNet Image Manager
 - FileNet Content Manager
 -  ▪ FileNet Content Search Services
 - FileNet Business Process Manager
 -  ▪ IBM Case Manager
 - IBM Content Manager 8
 - IBM Content Manager OnDemand
 -  ▪ IBM Content Navigator
 - IBM Content Collector for Mail / Files
 - IBM eDiscovery Manager
 - IBM Enterprise Records
 -  ▪ IBM Datacap
- Middleware & Infrastructure
 - Databases (DB2, Oracle, MS SQL-Server)
 - Application Servers (WAS, WebLogic, JBoss, Tomcat)
 - Web Servers
 - LDAP Connection
 - IBM Tivoli Storage Manager
 - JMX / SNMP / WMI
 - UNIX, Linux & Windows systems
 - VMWare & VMWare ESX Host 
 - Input & Output Management (Best Practices from projects)
 - 3rd Party & custom-applications on demand

Monitoring of IBM FileNet Content Manager / Business Process Manager / Case Manager


- Content Engine
 - Availability & Status
 - Object Store Performance & Statistics
 - File Store
 - CFS-IS
 - Publishing Queue Entries
 - J2EE Application Server
 - Web Server
- Content Search Services
 - Availability & Status
 - Number of CSS index requests of an Object Store
 - Indexing errors
 - CBR Queue Monitoring & Statistics
- Application Engine / Workplace / Workplace XT
 - Availability & Status
 - AE – CE Communication and Connectivity
 - J2EE Application Server
- Component Manager
 - Status
 - Queue Status & Statistics
- Process Engine
 - Availability & Status
 - Statistics
 - Queues & Roster
- Case Manager
 - Case Manager Status
 - P8 components connected
 - Case status for all or a list of defined cases
- Listener – AE/CE/PE/Case Manager
- Logfiles – AE/CE/PE/Case Manager
- BPF
- BAM
- Process Analyzer / Case Analyzer
- Rendition Engine
- Content Navigator



Monitoring of 3rd party applications & systems – get the full picture of your ECM-based Business Services

- Databases – from an ECM perspective!
 - Oracle / Oracle RAC
 - MS SQL-Server
 - DB2 Database
- Application Server (JMX)
 - WebSphere Application Server
 - Oracle Bea WebLogic
 - JBoss
 - Tomcat
- Web Server
 - Apache
 - IBM HTTP Server
 - MS IIS
 - LDAP Connection
 - Tivoli Storage Manager
- Systems
 - Unix / Windows Logfiles
 - VMWare ESX Hosts
 - Centera
- JMX
- SNMP
- WMI
 - All Functionality exposed to Performance Monitor
 - Parsed at Common Information Model (CIM) Object Level
- Other applications on demand
 - 3rd Party Applications
 - Homegrown Applications

Monitoring of IBM Content Manager 8 Multi Platform

- Library Server
 - Database
 - Status & Usage
 - Details
 - NetSearch Extender Errors
 - NetSearch Extender File Systems (Working and Index directories)
 - Connectivity - Resource Manager Heartbeat
 - Services & Processes
 - Library Server Monitor Service
 - NetSearch Extender Processes
 - Logfiles
 - icmsserver.log
 - ICMSTSYSADMEVENTS (Database table)
 - ICMSTITEMEVENTS (Database table)
 - II4C / IICE
 - Connectivity & Status
 - RMI
 - CM8 Listener
- Resource Manager
 - Database
 - Status & Usage
 - Details
 - Volume Space – 7 Device Managers
 - Filling Level
 - Online Status
 - Cross-check
 - WebSphere AS
 - RM Service Status
 - RM Application Status → icrmr and snoop
 - http Status
 - JMX Monitoring
 - Services & Processes
 - RM File Systems
 - Migrator, Replicator, Purger and Stager → for each instance
 - Logfiles → Migrator, Replicator, Purger and Stager Logs
- Web Apps → end user access
- Content Navigator 

Monitoring IBM Content Manager OnDemand Multi Platform

- OnDemand Archives
 - Database (DB2, MSSQL, Oracle)
 - Status
 - Usage
 - Details (Statistics, Logspace, Rollback Segments, etc.)
 - Services & Processes
 - System Logging Entries - SL2 (Database table)
 - OnDemand Logon Status
 - OnDemand System and User Error
- Knowledge Base - for SL2-related Log entries
- OnDemand Tasks
 - Status OnDemand Services / Processes
 - Start and Stop OnDemand Services / Processes
- OnDemand Web Applications
 - WebSphere Application Server
 - Application Status (WEBi, Admin GUI)
 - JMX Monitoring (JVM parameters like HeapSize, Connections, Threads, etc)
 - Logfiles
 - Web Application Server Status Logfile
 - Web Application Server Error Logfile
- Listener Metrics
 - Performance Metrics
 - Capacity Metrics
 - Events
- Content Navigator



Monitoring of IBM FileNet Image Manager

- IM System Status
- IM Processes
- MKF Databases
 - Availability
 - Status
 - Details
- Index Database
 - Availability
 - Status
 - Details
 - Cache
 - Percentage
 - Sectors
 - Statistics
- PPMOI
- Storage
 - xSAR
 - Integral-SDS
- User Information
- ServerLink
- Workflow Queues
- Print Queues
- IM Listener
- Logfiles
- ImageImport (HP/II/MR/II)
 - Errors
 - Processes
 - Statistics
- Web Services
- Capture
- Content Services

Monitoring of Datacap and Information Lifecycle Governance

New

- IBM Datacap Taskmaster
 - Datacap Status
 - Datacap Database Status and Thresholds
 - Datacap Listener Metrics
 - Datacap log entries (logfiles and Windows Eventlog)
- IBM Content Collector for Mail
 - Status & Availability
 - Logfiles
 - New Monitors:
 - Number of objects not indexed yet
 - Number of objects indexed, but not moved to final location
 - Number of archived mail objects
 - Number of instances of mail objects
- IBM Content Collector for Files
- FileNet Records Manager / IBM Enterprise Records
- eDiscovery Manager
 - Workmanager Status
 - Taskfinder Status
 - Requested Tasks Status
 - CMS Connection Status (to CM8 or P8 CE)
 - Task Statistics
 - Total time for processing (in sec)
 - Number of documents in search task
 - Number of documents processed
 - Number of documents not processed
 - Average documents processed per second

New

Intelligent Logfile Management | 28+ ECM Logfiles

Real-time Logfile Monitoring

- Processing of unknown events, classification by ECM error numbers
- Event information contains original error message, error description from ECM error catalog, possible error cause and corrective action
- Instructions can be extended by customer
- Filtering and adjustable duplicate recognition
- Self-monitoring

ECM Logfile Coverage

- ELOG / WAL / ISRA
- HP11 / MR11 / ServerLink
- CS Index and Replication / Verity
- CM8 database entries
- BPM RMI, PPM Trace and Router
- Content Engine
- Process Engine
- CMOD
- Component Integrator
- All ECM related messages in Windows Eventlog

Task Management | Automate 85+ Manual Tasks

Configuration tasks

- Configure ECM domain
- Configure module for a ECM server
- Configure FileNet ELOG logfile adapter
- Setup TEC event server for FileNet
- Setup FileNet logfile adapter filepacks
- Setup event console for FileNet

Administrative tasks

- Starting/stopping of systems, domains
- Starting and viewing of reports and statistics, e.g.:
 - Capacity reporting of databases and cache server
 - Status of services
 - Statistics of roster and queues
 - Statistics for license compliance (how many users, which users, etc.)

ECM System Monitor 5.1



What's New in ECM System Monitor 5.1?

**Shipping now
FP2**

- Support for IBM Content Collector (2.2x and 3.0) and Content Search Services (5.1, 5.2)
- GUI enhancements – enhanced task scheduling and reporting functions
- Service Level Monitoring
- Monitors for IBM Case Manager and Content Navigator
- Support for Datacap / demos available
- Support for CM 8.5, CMOD 9.0 / demos available
- OD Report Distribution Server support
- Support for OD Full Text Search Server 9.0
- Database enhancements, Customized columns in event view
- Oracle RAC monitoring – custom JDBC connection
- WAS 8.5 support
- Many More new features

Customer Success



Select Customers

 Ministerie van Volksgezondheid, Welzijn en Sport



Bundesamt für Informatik und Telekommunikation BIT
Office fédéral de l'informatique et de la télécommunication OFIT
Ufficio federale dell'informatica e della telecomunicazione UFIT
Uffici federal da l'informatica e dalla telecomunicazionum UFIT



Challenges | SunTrust



- Negative end-user perception of system stability
- Business users notified FileNet administrators of system outages
- Dependency on custom monitor scripts
- Administrators in a reactive mode, continually firefighting platform issues
- Time consuming manual system checks
- There was no audit trace of system outages or problem resolution documentation
- Remote connections to distributed servers were time consuming

System Monitor Benefits | SunTrust



- Higher availability
 - Administrators immediately notified of warnings and critical errors via SMS
- Leverage existing CA Unicenter Monitoring infrastructure
 - Real time dashboard view of servers for IT and business users
 - Automatic trouble ticket creation for critical and fatal events
- Provided reports and statistics for SLA governance

System Monitor Benefits | SunTrust



- Remote Task Execution eliminated need for remote logon to distributed servers
- Single administrative portal to FileNet platform streamlined administrative work effort
- FSM Console provided “at a glance” System availability assurance
- Help Desk tickets reduced by 65%+

System Monitor Benefits | SunTrust



- Optimize system performance by identification of system bottlenecks
- Higher productivity for FileNet Admins – ability to focus on new development activities
- Eliminated throughput bottlenecks
- Business users embrace enterprise content management technology
- Eliminated dependency on custom scripts
- Provided an customer extensible knowledge base for problem resolution documentation

Summary

- Unsurpassed monitoring coverage for IBM ECM Solutions
- Support for all IBM ECM products such as P8, IBM Content Manager, Content Manager On Demand, Datacap, Case Manager, and ICC
- Easily monitor non-ECM products
- Seamless integration with existing System Mgmt. tools
- Deployed successfully by many companies worldwide

Key Sales Contacts & Collateral



Collateral

- Datasheet
- Technical white paper – new WMI Monitoring guide prepared by Steven Bass, FSM SME
- Customer link
 - <http://www-306.ibm.com/software/data/content-management/filenet-system-monitor/>

Contacts

- North America
 - Steve Bass, sbass@us.ibm.com
- Installation Packages and Scheduling
 - Contact local IBM Lab Services Manager
- IBM ECM Community
 - Join the Conversation: www.ibm.com/community/ecm

Thank You

