IBM Software Group

Tivoli Service Automation Manager



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IT infrastructure is reaching a breaking point

85% idle

In distributed computing environments, up to 85% of computing capacity sits idle.

1.5x

Explosion of information driving 54% growth in storage shipments every year.

70¢ per \$1

70% on average is spent on maintaining current IT infrastructures versus adding new capabilities.

40 billion

Consumer product and retail industries lose about \$40 billion annually, or 3.5 percent of their sales, due to supply chain inefficiencies.

33%

33% of consumers notified of a security breach will terminate their relationship with the company they perceive as responsible.



It's time to start thinking differently about infrastructure.

Operations have industrialised to become smarter.

Telcos automate traffic through switches to assure service and lower cost.

Manufacturers use robotics to improve quality and lower cost.

Banks use automated teller machines to improve service and lower cost.





... breakthroughs like these are enabled by service management systems.

What if you could industrialise your data center?

Reduce the headaches of integrating and maintaining servers, storage & software

With a service management system that provides:

- Dramatic improvement in time to market
- Clients with what they need when they need it
 - Self-service
 - Service in one day, not six weeks
- The lowest per-unit cost
 - Hands-free operation
 - Elimination of mundane tasks from skilled personnel



Tivoli Service Automation Manager

Provides core Cloud Services lifecycle management

- Dynamic instantiation and management of Cloud Services along their lifecycle
- Automation based on templates and management plans including human and automated management component
- Raises the level of abstraction for Service Management in data centers from single LPARs, storage volumes, SW installations to Cloud Services as the units of management

Enables "as-a-Service" models

Delivery and Management of Infrastructure Services
Delivery and Management of Platform Services



Customer Benefits:

- Improve Quality of Service Delivery
 - Standardised delivery models and templates
 - Consistency of configuration
- Faster Service Deployment
 - Expose service offerings directly to service consumers
 - Automate service provisioning
- Lower Cost of Service Delivery
 - Improve server/admin ratios
 - Improve server & power utilisation
 - Low or no touch deployment

Integrated Service Delivery

Infrastructure as a Service

Challenge: Self-service access to basic computing resources



The new credit application will need 5 servers to host the application and expected transaction load by the end of the month.

Application Architect



Service Deliverv

Manager

How do I manage resource requirements for multiple projects ? How do I enable self-service for end users? How do I create system configurations automatically? How can I automate the deployment of IT management tools?



- Self-Service GUI allows end users to request IT Resources, and optionally automatically fulfill that request
- Ability to reserve IT resources for specific projects both in development or production environments
- Simplified and repeatable deployment of Virtualised Operating systems and software stacks
- Automated configuration of systems and test tools
- Deployment and Integration of Service Management for various parallel projects (for example, monitoring)

Platform as a Service

Integrated Service Delivery

Challenge: Rapid provisioning of Middleware components to support a business application



What are the WAS/ND configuration settings which are necessary as standard corporate policy? Which application developer has the database requirements?

How can I efficiently and reliably operate cross platforms, across departments and automate according to best practices? How can IT prove its ability to rapidly support business innovation?





- Eliminates the need to rely on manual deployment of middleware Landscapes which are error-prone, slow, and labor intensive
- Best Practices and standard configurations are executed automatically without time intensive coordination of multiple internal teams
- Reduces reliance on specialised SMEs and System Admins
- Improve IT responsiveness to the business demands

Integrated Service Management for Cloud

Challenge: How do I manage and control the cloud deployment throughout the service lifecycle?

I need to let IT know about our new summer promotion which will cause a higher number of transactions . I left 3 voicemails for the IT manager. Is he on vacation?

Service Analyst

I wonder who can tell me about these alerts I'm seeing on the new credit application. What was the name of that application developer I worked with last month?

Service Delivery Manager

Integrated Service

Deliverv



We need to document and record our procedures at every step of the service lifecycle for regulatory compliance, corporate policy, and to meet our SLAs. If I could automate and streamline these processes, IT agility would improve dramatically.

Owner



- Appropriately manage growth, outages, changes, and other lifecycle aspects of the cloud
- Automate actions on the cloud based on monitoring metrics and threshold measurements
- Control the process workflow to be documented, approvals recorded, and measured by KPIs for SLA adherence
- Integrate monitoring, configuration management, incident mgmt, change and release mgmt for your cloud services

TSAM: What is it?

An integration of existing Tivoli capabilities and additional new capabilities, workflows, and best practices packaged together as a single solution



TSAM: What is it? (cont)

TSAM Base

- Provisioning of zLinux- and zOS-Guests under z/VM
- Provisioning of Virtual Servers under VMWare as well as into AIX LPARs
- WebSphere Extension
 - Provisioning of WebSphere Clusters residing on multiple servers

Cloud Computing requires Service Management

Visibility

User Request Interface and IT Operational Views

- Enable end users to request services
- Enable end users and IT staff to monitor status of requests
- Enable IT operations staff to manage the delivery of the services
- View monitoring statistics of cloud deployments, including breached thresholds

Control

Orchestration of People, Processes, Data, Technology

- Enable the fulfillment of user requests based on best practices for request types & conformance to organisational processes
- Consistently enforce operational policies for service delivery
- Provide usage and accounting management for cloud services
- Provide security for cloud services
- Enable green initiatives through optimised utilisation of resources

Automation

Automate Requests and Operational Tasks to Improve Efficiency and Effectiveness

- Automate the orchestration of technology to fulfill user requests for cloud services
- Automate processes and repetitive IT administration tasks for optimised utilisation of resources
- Provide the ability to automatically meet higher scalability demands
- Provide process automation capabilities, enabling the value of change, release, and configuration management disciplines in a cloud computing environment

"Virtualisation without good management is more dangerous than not using virtualisation in the first place," –Gartner

Example Scenario - Simple Deployment

- John, a Test Center Manager, submits a request to create a deployment of VMWare servers through a self service GUI.
- The deployment is to be used by Anne, Bob, and Linda (Testers) to run tests.

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John selects Create New Deployment

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....Selects the software to be deployed

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... and submits the request

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Example Scenario processing

- The out of the box approval workflow automatically approves the request. The approval process may be customised if desired.
- Once the request is approved, the Service Request is automatically picked up for processing by the Tivoli Service Automation Manager back end.
- Appropriate resources are selected from within CMDB, Management Plans are executed to create the requested Virtual Servers and to provision the requested software.
- User is notified when the provisioning is completed.

John's request is INPROG – it is being provisioned

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Request completed

When the request has completed, John will receive an e-mail with the details of how to access his newly created virtual servers.

CC 11/12/2008 05:18 PM cc	
Default custom expiration date of bcc	
11/12/2009 Subject	w: Your request to start a new Deployment has been processed
Dear John Jones	•
You have started a new Deployment Test 0001 wi	th the following topology:
The server testhostname7 has been added with t Hostname of Server: testhostname7 Number of CPU(s): 2 Amount of Memory: 4096 MB Username/Password: root/12345 Name of Software Stack: 1001 Host Platform: backendlessPlatform Link to the Server: http://testhostname7:80	he following parameters:
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Example Scenario – Additional Capacity Required

- Two more testers are assigned to the project. Additional tests must be run so additional capacity is needed.
- John submits a request to modify the capacity of one of the virtual servers in his deployment.

John selects Modify Virtual Server Capacity

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Initiates selection of one of his Virtual Servers

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Selects the appropriate server

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Enters the required changes and submits the request

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Example Scenario – Approval Required

- User requests deployment for another person
- Approval Required
- The out of the box approval workflow automatically requires approval from the user on whose behalf the request is being submitted. The approval process may be customised if desired.

Nancy launches her start center and selects the Service Automation Manager Offering Catalog application

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Nancy selects the offering to Create a New Deployment and Provision LPAR servers.

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She initiates selection from a list of people

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And uses filtering to quickly locate the appropriate person

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Nancy fills in the desired attributes

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And submits the request on Kent's behalf.

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Nancy returns to her Start Center where she can see that her request is Waiting for Approval.

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Kent receives an e-mail requesting his approval



MAXIMO Administrator/Austin/Contr/IBM@IBMUS

11/25/2008 07:22 AM

To Kent Hayes Jr/Raleigh/IBM@IBMUS

сс

Subject Maximo Service Request Approval Required

Dear Kent Hayes

You have a workflow approval task for a Service Request 'Create New Deployment and add LPAR Server' for Service Request 1149 requested by Nancy Gore.

Please verify the Service Request approval task in your inbox, or follow this link to approve the service request:

http://kentsc.raleigh.ibm.com:7001/maximo/ui/maximo.jsp?event=loadapp&value=viewsr

Please Do not reply to this message as it was automatically generated.

Regards,

Your Service Automation Team

—

Body of message



He logs into his Start Center where he views the task requiring his approval. He clicks on the route workflow icon.

Welcome, Kent Hayes			🔋 <u>B</u> ulle	tins: (1) 🛛 🎓 <u>G</u> o '	fo 🌆 <u>R</u> eports	s ♣ Start <u>C</u> enter	≗Profile [™] Sign Out	? Help IBM.
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The View Service Requests Application is launched and the user is prompted for approval

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Status WAPPR	19	Classification Des	cription Create a new Deployment and add virtual serve
Asset		Su Su	Immary Create New Deployment and add LPAR Server
Location			Details Provision one or more LPAR virtual machines containing a software
Configuration Item			package.
Target Contact			
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Target Finish	1	Complete Markflow Assignment	
Reported Date 2008-11-25 07:17:51			
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The request is approved, and QUEUED for automatic processing by the TSAM engine

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Both Nancy and Kent receive an e-mail with information about the completed deployment

6	MAXIMO Administrator/Austin/Contr/IBM@IBMUS	То	Nancy C Gore/Austin/IBM@IBMUS, Kent Hayes Jr/Raleigh/IBM@IBMUS						
	11/25/2008 07:57 AM	cc							
	Default custom expiration date of 11/25/2009	bcc							
		Subject	Your request to start a new Deployment has been processed						
Dear Nam	Dear Nancy Gore								
You have	e started a new Deployment DeploymentForKent	with th	ne following topology:						
The serv Hostna Number Amount Userna Name o Host I Link t	ver host3 has been added with the following ame of Server: host3 : of CPU(s): 2 : of Memory: 4096 MB ame/Password: root/12345 of Software Stack: 1001 Platform: backendlessPlatform :o the Server: <u>http://host3:80</u>	paramete	ers:						
The user Please 1 &http://	The user of group has been notified. Please follow the link to find more detailed information about the service request:								
Regards,									
Your Ser	rvice Automation Team								
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Benefits of Cloud Computing and Tivoli Service Automation Mgr

From state

To state

Template and catalog based configurations
Few configurations, reduced compliance.
Hours or minutes to provision new system
Responsive, user in control, value recognised.
100's or 1000's of servers per administrator
>60-80% CPU / server utilisation
Minimised human intervention to deploy systems



Tivoli Service Automation Manager V7.1: Product Details

Functional scope

- Generic TSAM functionality
 - Base platform for dealing with service templates and service instances
 - Allow integration of manual steps into the execution of any management plan
 - Track task progress and email-based notification on completion of management plan execution
 - Logging of changes ("who changed what")
 - Integrated installation of all required components
 - Supports customisation (e.g. use customer-specific naming conventions)
- WebSphere & DB2 service template
 - Customisable deployment & configuration of WAS ND services instances on zLinux and AIX
 - Management of WAS ND service instances on zLinux and AIX
 - Change size of existing WAS ND service instance
 - Start WAS ND service instance
 - Stop WAS ND service instance
 - Terminate WAS ND service instance
 - Customisable, codified best practices for problem analysis and corrective actions (integration of ITM 6.x for monitoring WAS ND resources)
 - Integrated Monitoring of DB2 on z/OS
 - Co-existence with existing ITM 6.x installations
- System z service template
 - Deployment & Configuration of zOS (on zVM)
 - Deployment & Configuration of DB2 on zOS (on zVM)
 - Deployment & Configuration of Linux on System z (on zVM)
- Single OS-image deployment & management ("RDP") template
 - Integration of SRM service catalog
 - Self-service request for single virtual machine image
 - System p5 / p6: LPAR creation, image deployment + CPU/memory change supported)
 - X86/VMware: Create/delete VM, incl. CPU/RAM allocation. Supports Windows + RH Linux

Supported Platforms / Management Software

- Supported management server platforms
 - Linux on System z: SuSE Linux (SLES) 9.0 Enterprise Server System z SP4 or later
 - IBM AIX 5L V5.3 ML level 5300-06
 - Linux on x Series: RedHat Enterprise Linux 4 update 5 or later

Managed environment:

- zVM 5.3
- SLES 10 z/Linux operating system
- z/OS V1.8 and V1.9 operating system (with DB2 V9 software installed optionally)
- WebSphere Application Server ND Version 6.1
- IBM Tivoli Monitoring V6.2 Fixpak 1
- OMEGAMON XE for zOS V4.1.0
- OMEGAMON XE for DB2/PE V4.1.0



