Operations Orchestration “Automating Your Data Center”

May 21, 2014
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Hosted by

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HP Software
Housekeeping

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  Recordings are available to all Vivit members

• Session Q&A:
  Please type questions in the Questions Pane
Webinar Control Panel

Toggle View Window between Full screen/window mode.

Questions
HP Operations Orchestration

“Automating Your Data Center”

Manish Balooja (manish.balooja@hp.com)
21st May 2014
What is Orchestration?
Coordination of automated tasks and activities
Today’s Data Center Challenges

Lack of process visibility and manual handoffs across groups, departments and cloud services

Silo tools and silo orchestration products like VMware VCO, MS SCO, BMC Atrium Orchestrator focused on respective technology stacks

Manual handoffs and Run Books still manual and outdated in traditional and cloud based services

Time, Resource and Agility constraints
Addressing the challenges

HP Operations Orchestration: Next-generation ITPA and orchestration for the new style of IT

**HP OO Studio**
- Easy-to-use interface using an intuitive drag-and-wire design to create and customize new flows and debug flows

**HP OO Central**
- Flow engine that executes the flows and an administrative interface to manage users and flows with automation self-service

**HP OO Content (Process automation libraries)**
- 5000 out-of-the-box operations, flows, and integration adapters to support many different platforms and management products.
HP Operations Orchestration Architecture

- Multi Authors
- Multi Geographies
- Standalone Studio
- Standard Source Control Integration
- Fine grained customer Content
- Fine grained HP Content
- Annotation based content

- Improved User Experience
- Live scale out
- High performance
- Highly parallelized runs
- Automatic content distribution
- Simpler RAS management
- Isolated content dependencies
- Updated Support Matrix

- Complete REST API
- Live event stream
- Embeddable

- Simplified execution gateway
# Extensive out of the box content

## Accelerator Packs

<table>
<thead>
<tr>
<th>Category</th>
<th>Supported Platforms</th>
<th>Out-of-the-box Content Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Systems</td>
<td>Microsoft Windows, Red Hat/SUSE Linux, Solaris, FreeBSD</td>
<td>Filesystem / Memory Diagnostics, Service Status, Service Restart, Start / kill process, Server Reboot, Clean Logs, Delete Files, Health Check</td>
</tr>
<tr>
<td>Application Servers</td>
<td>BEA WebLogic, Citrix Presentation Server, JBoss, Tomcat, IBM WebSphere</td>
<td>Check Application List, Get Application State, Query Server Configuration, Start / Stop Server, Deploy / Start / Stop Application, Add / Remove User, Run Garbage Collection</td>
</tr>
<tr>
<td>Networking</td>
<td>Cisco, Network Diagnostics, Web operations</td>
<td>Enable / Disable CDP, Enable / Disable Routing, Remove / Modify VLANs, Add / Delete Users to Routers, Change Interface IP, Set Banner for Routers, Connectivity diagnostics, Web site health check, Find web pages with dead links</td>
</tr>
<tr>
<td>Databases</td>
<td>Oracle, MS SQL Server, Sybase</td>
<td>List databases, Number of active connections / processes, Integrity check for database / table, Database server / tablespace diagnostic, PLSQL search, Top SQL stats</td>
</tr>
<tr>
<td>Virtualization</td>
<td>VMware Server, VMware Virtual Infrastructure, Microsoft Hyper-V, Citrix XenServer, Citrix Presentation Server</td>
<td>Create / Start / Stop VMs, Migrate (Hot / Cold) VMs, Snapshot VMs, Get VM info, Reboot / Shutdown Guest, Virtual Network operations</td>
</tr>
</tbody>
</table>
# Extensive out of the box content

## Integrations

<table>
<thead>
<tr>
<th>Category</th>
<th>Supported Platforms</th>
<th>Content Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Desk</td>
<td>HP Service Desk, HP Service Manager, BMC Remedy, HP Peregrine Service Center, CA Service Desk</td>
<td>Open incident / change ticket, Update incident / change ticket, Close incident / change ticket, Kick off OO flow from ticketing tool</td>
</tr>
<tr>
<td>Monitoring</td>
<td>HP Openview Operations, HP Operations Manager, HP Network Node Manager, BMC Patrol, IBM Netcool, CA Network and Systems Management, IBM Tivoli, MOM, SCOM 2007</td>
<td>Own alert, Acknowledge alert, Close alert, Create alert, Update Priority, Enumerate alerts</td>
</tr>
<tr>
<td>Configure and Change</td>
<td>HP Server Automation, HP Network Automation, HP Client Automation, HP Storage Essentials, Microsoft SCCM, Symantec Altiris</td>
<td>Provision server, Remediate server, Attach server to policy, Add patch to policy, Approve blocked job / task, Start VM create, Provision storage to host</td>
</tr>
<tr>
<td>CMDB</td>
<td>HP uCMDB, BMC Atrium</td>
<td>Add / delete object, Add / delete relationship, Get topology map, Get / list class, Get / list Job runs</td>
</tr>
</tbody>
</table>
Use Case for your Data Center
HP Operations Orchestration

IT Process Automation End to End

OO Usage in the Field

110 Responses of OO Customer Survey FY13

- Application Deployment: 49
- Change Management: 50
- Cloud Automation: 54
- DevOps: 20
- Disaster Recovery: 18
- Hardware Deployment: 22
- Incident Management: 61
- Provisioning: 76
- Remediation: 59
- Service Deployment: 49
- Task Based: 72

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Use Case 1: Automated Remediation

Service down detected in HP Operations Manager, OM launches OO flow

OO opens incident ticket in Service Manager

OO kicks off a compliance audit in SA which detects that a configuration file was updated

OO disables monitoring and initiates repair

OO flow updates Service Manager ticket with full audit trail

OO flow acknowledges the OM alert event

OO closes service ticket
Use Case 1: Automated Remediation Incident Management - Self-healing flow

HP Operations Manager alert indicates that disk space is low on a critical application server.

Operator launches OO flow to verify, troubleshoot and resolve the issue.

Operator interacts with OO flow – electing to run automated procedure to clean up disk.

OO flow opens and populates incident ticket in HP Service Manager.

OO flow resolves the issue by freeing up space.

OO flow annotates the OM alert and closes the SM incident ticket.
## Customer Success

**Customer:** Large financial services company

<table>
<thead>
<tr>
<th>Task</th>
<th>Before HP</th>
<th>With HP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incident Resolution</td>
<td>68M raw events</td>
<td>1,500 actionable alerts</td>
</tr>
</tbody>
</table>

### HP Operations Manager

- **68,000,000 raw events daily**
  - Automate Collection
  - Automate Correlation
  - Prioritize

- **5,000 Alerts**

### HP Operations Orchestration

- **5,000 Alerts**
  - 3,500 Actionable Alerts remediated via Automation
  - Automate Correction
  - Automate Troubleshooting & Repair

- **1,500 Alerts to be investigated**
## Use Case 2: Integrated Change Management

**Large Financial Services Customer**

<table>
<thead>
<tr>
<th>Task</th>
<th>Before HP</th>
<th>With HP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change management: patching 500 servers</td>
<td>12 hours</td>
<td>30 minutes</td>
</tr>
</tbody>
</table>

![Diagram of Change Management Process]

- **Before HP**:
  - 12 hours to patch 500 servers.

- **With HP**:
  - 30 minutes to patch 500 servers.
Use Case 3: Disaster Recovery Planning

Large Healthcare Services Provider

<table>
<thead>
<tr>
<th>Task</th>
<th>Before HP</th>
<th>With HP</th>
</tr>
</thead>
<tbody>
<tr>
<td>OO flows for cluster failover health check tasks</td>
<td>90 Minutes</td>
<td>14.4 Seconds</td>
</tr>
</tbody>
</table>
Use Case 4: Virtual Provisioning
Global Telecom & Infrastructure Services Provider

<table>
<thead>
<tr>
<th>Task</th>
<th>Before HP</th>
<th>With HP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provisioning, maintenance and teardown tasks across multiple tools</td>
<td>97 days</td>
<td>4 hours</td>
</tr>
</tbody>
</table>

- **Task:**
  - Connect hosts to network and storage
  - Connect guest operating systems to antivirus and software updates
  - Create and configure networking on the ESX hosts
  - Install VMware ESX on hosts
  - Clone and configure virtual machines
  - Register hosts in Virtual Center
  - Create and configure networking on the ESX hosts
  - Connect hosts to network and storage

- **Before HP:**
  - 97 days

- **With HP:**
  - 4 hours
Summarizing ....
Benefits with HP Operations Orchestration

**Improved process quality**
Provides you the ability to create predictable and repeatable process that can be automated

**Reduced operational cost**
Automates manual, repetitive, and error-prone tasks so your IT staff can refocus on strategic initiatives

**Coordinated change**
Reduces your inefficiency, complexity, and risk associated with manual hand-offs

**Improved service quality**
Reduces your escalations and mean time to repair (MTTR) by automating event and incident triage, diagnosis, and resolution

**Platform for Cloud**
Allows you to reduce costs by orchestrating your traditional and cloud infrastructure processes

**Increased business agility**
You can react more quickly to changing business needs by reducing time to deploy new infrastructure and provision end-to-end business services

**Auditble processes**
You can document and enforce ITIL-compliant, standardized processes

**Increased time-to-value**
Allows you to use out-of-the-box content based upon best practices and integrations to HP and third-party system management tools

**Ease of workflow creation**
Allows you to reduce administrative complexity by decreasing the need for dedicated development resources to author flows
Competitively more compelling than others ...

**Figure 2. What Vendor or Vendor Type Do You (or Would You) Look To For Your Primary IT Operations Process Automation Needs? (N = 50)**

- **BMC**: 22%
- **CA Technologies**: 12%
- **IBM/Tivoli**: 0%
- **HP**: 24%
- **Microsoft**: 15%
- **Another vendor providing IT operations management capabilities (e.g., VMware, Citrix)**: 20%
- **One of the smaller ITPA tool vendors (e.g., Network Automation, generationE, UC4)**: 7%

From the Gartner U.S. Data Center Conference in 2011.

**Operation Orchestration on HP.com**
Proven customer success

Real-world results from using HP Operations Orchestration

**Incident management and resolution**
- 5k-8k incidents per month, staff of 8
- With HP $5M annual savings, reduced MTTR

**Change management**
- Weeks for end-to-end provisioning
- With HP it takes <1 day for provisioning and saved $4M by automating

**Disaster recovery and failover**
- DR test requires 40-50 people, 6-7 hours of the day
- Failover process codified in OO 80% reduction in resources

**Provisioning virtualized infrastructure**
- Took up to 97 days
- Self-service portal reduced provisioning to 4 hours or less, reduced errors
Gain powerful results with **HP OO-CE**

**Reduce errors**

The majority of IT organizations reduced errors by 50% or more.

<table>
<thead>
<tr>
<th>Error reduction with HP Operations Orchestration</th>
<th>0%–25%</th>
<th>25%–50%</th>
<th>50%–75%</th>
<th>&gt; 75%</th>
</tr>
</thead>
<tbody>
<tr>
<td>24%</td>
<td>18%</td>
<td>26%</td>
<td>25%</td>
<td>31%</td>
</tr>
</tbody>
</table>

**Go faster**

The majority of IT organizations reduced task and process execution time by 50% or more.

<table>
<thead>
<tr>
<th>Time savings</th>
<th>0%–25%</th>
<th>25%–50%</th>
<th>50%–75%</th>
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<tr>
<td>23%</td>
<td>35%</td>
<td>30%</td>
<td>20%</td>
<td>15%</td>
</tr>
</tbody>
</table>

It’s easy to get started—and realize benefits

1. Download the **free** software.
2. Set up the software in **2 hours**.
3. See benefits in **< 30 days**.
Thank you

hp.com/go/oo
SAP Process Automation Pack: Overview
SAP Process Automation Pack

- Automate SAP R/3 change requests
- Automate Business Function Changes
- Organize and Perform Transports
- Streamline Change Management

SAP Wizard

OO Flows
SAP Process Automation Pack

**Authoring**
- HP-OO Automation Engineer
  - Runs Wizard
  - Identifies BAPIs
  - SAP Expert
- HP-OO SAP Wizard
  - Access
  - Operations available for flow authoring
  - Creates flows
  - HP-OO Automation Engineer

**Operations Orchestration**
- SAP System
  - Generates Operations available for flow authoring

**Execution**
- SAP Power User
  - Runs flows
  - Change request flows
  - HP ITSM
  - Update and close ticket
  - HP ITSM
- HP ITSM
  - Open ticket
  - Approved ticket
  - HP Operations Orchestration
  - Update and close ticket
  - HP ITSM
HP Operations Orchestration SAP Wizard

HP-OO Wizard helps to wrap SAP BAPIs and auto-generate Operations
Auto-generated Flows and Operations

Generated Operations

Generated Sample Flow
Case: Automate Changes

Create Request
• This flow is used to create a request in the Change and Transport System.
  – Creates either a workbench or a customizing request, by invoking the BAPI_CTREQUEST_CREATE function module

Release Task or Request
• This is used to release tasks or requests in the Change and Transport System.
  – Releases either a single task, an empty request or a request together with all its tasks, by invoking the BAPI_CTREQUEST_RELEASE function module.