How to build and deliver an Intelligent Orchestration Platform

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Differentiation Points for Building an Intelligent Orchestrator

Intelligent is as many ways possible

Predictive vs Preemptive Actions

Tightly knit Orchestration & Management

Agnostic and no vendor lock-in

Delivers true Thought Leadership

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A Common Framework

Single pane of glass for Business & IT service management tightly knit with orchestration functions

Service portal with RBAC that provides an abstracted view of complex services for all end-users

Deep analytics engine, real-time preemptive decisions for performance optimization, capacity planning, security policies, etc.

Deep insight for inventory, analysis & assessment of workload components supporting robust reporting features

Intelligent orchestration & automation workflows based on complex rules, policies, templates for compute, network and storage

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Logical Architecture
Orchestration Framework Components

- Service UI based on Open Source
- Customizable
- Common IT policies
Orchestration Framework Components - Service Integration

CMDB
Lifecycle Management
DNS / DHCP
Service Management
Integration of Event Management
COTS
Security & Enterprise Directory
DevOps
ITSM Tools / IPAM
Billing & Metrics
Service Catalog
Backup Management
Orchestration Framework Components – Decision Engine

- Harness Control to enforce policies across any platform, any Cloud any where
- Software Decisions can be automated, build intelligence, deliver at speed with no error. Delivers strategic direction
- Optimize your infrastructure to deliver more efficient services, lower hardware costs, and increase agility
- Stabilize through consistency. Holistically manage infrastructure or public cloud from top down approach
- Real-time decisioning ensures workloads receive proper resources
- Integration to Service Management and ITSM systems
- Intelligent placement across platforms at global scale
Orchestration Framework Components – Core Orchestrator

- Manages and coordinates all workflows and tasks needed to operate enterprise workloads
- Used to deliver templates, policies, security integration, governance and more
- The CMP has a Catalog and CMDB as part of its core framework
Orchestration Framework Components - Automation

- Integrated automation and DevOps to drive continuous deployment capabilities through Agile methods and common DevOps processes
- Run as an API software integrated solution
- AIOP can deliver the capability through the orchestration platform
- All operational automation in a defined library; easy to access for operational staff and orchestration developers
Orchestration Framework Components - Network

- AIOP offers integrated network orchestration for SDN and NFV solutions
- Allows control from custom UI and ensures an integrated operation processes
- Allows operations to leverage liquid resources (infrastructure and/or people)
  - logical views
  - workflows
  - policy management
  - governance
  - analytics
  - blueprinting

Software-Defined provides liquid assets
Policy-Based control between resources, cloud platforms and physical layer
Integrated Orchestration and automation provide greater control
Making Operational Decisions

**Choosing core components**

- Decisioning from Source to Target
- Compliance and Audit control
- On Boarding… Brown vs Green
- Integration of Existing and New Tools
- Process Automation
- Take Control: Optimize, Stabilize, Placement
- Application integration considerations
- Reduce complexity through prescriptive design
- Software Controlled Decisioning
- Collapsing consoles Single Pane of Glass
- Catalogs, CMDB
Delivering Value Through Intelligent Orchestration

Key Levers

➢ Service Integrator & Resource Broker
➢ Service Catalog
➢ Orchestration Engine
➢ Insight Engine
➢ Analytics & Decision Engine

Key Outcomes

✓ Tightly knit Orchestration & Management to drive Cloud strategy
✓ Faster speed-to-market to increase customer satisfaction
✓ Increased performance, Reduced Noise & Optimized processes
✓ Rapid integration with any Cloud & Legacy tools
✓ Increased visibility & security
✓ Reduced TCO to Drive Innovation

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Accenture Advantage #1: Going Beyond COTS

- OPEN API driven
- No one tool solves breadth of problem domain
- Analytics to provide Decisioning for Workload optimization, placement, and Day 2 operations
- Integrated automation
- Software-driven, not script driven
Accenture Advantage #2: Open Source Contributor

- Developed technology requirements for Ansible OpenStack automation and integration
- Developed requirements for integration of Ansible into CloudForms (4.5 release)
- Developed network requirements for Nuage integration into CloudForms
- Developed Turbonomic integration points into CloudForms
Accenture Advantage #3: The Power of Partnerships

- Holistic capability in multiple industries
- Diverse skill sets across alliance
- Developed new patterns and enabled partner technology
Use Case:

Intelligent Management of workloads between virtual infrastructure and Cloud Environments
Use Case: Intelligent Management of Workload Through AIOP
Migration Tooling: from Virtualization to Cloud (on-prem and public)

Overview
Accenture and Red Hat developed a fully automated service, leveraging Accenture’s Cloud Migration methods and Red Hat open source tooling to migrate virtual workloads to cloud for a Financial Sector Client.

Migrating legacy virtual environments to cloud Provides:
• Reduced cost in license and management fees
• Reduced complexity
• End to End automation, orchestration, and service management
• Enhanced speed to market

Tools & Methods
The Virtual to Cloud accelerator and core Orchestration methods allow the team to migrate large volumes of legacy virtual workloads at scale.

Virtual to Cloud Converter
Integrated tool that provides capability of automation to orchestrator. Fully supported open source code allows customization for unique client needs.

Orchestration
Provides policy and rule management for source and target environment. Supported open source solution is the backbone for machine templates, rules engine and integration to CMDB and ticketing system.

Value Delivered
• Migrated 10,000+ VMs to date
• Significantly increased migration throughput, with the ability to migrate 3 terabytes of workloads in 4 hours delivered using NFS
• Reduced migration support headcount by 75%
• Workload upgrades are virtually seamless, significantly reduced dependencies on application teams and reducing the potential for human error
• Significant reduction in software licensing, maintenance
• Reduction of complexity through single pane of glass
• Developed core set of templates to reduce complexity and drive measureable success
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