How to build and deliver an Intelligent Orchestration Platform

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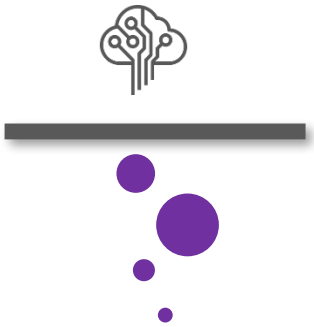
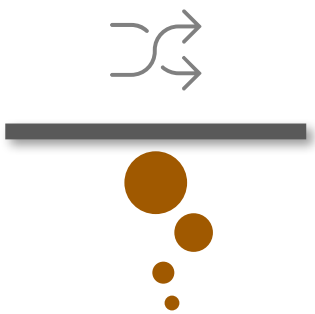
Differentiation Points for Building an Intelligent Orchestrator

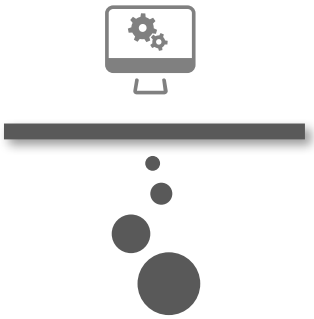
Intelligent is as many ways possible



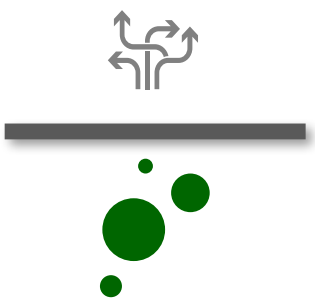
Predictive vs Preemptive Actions



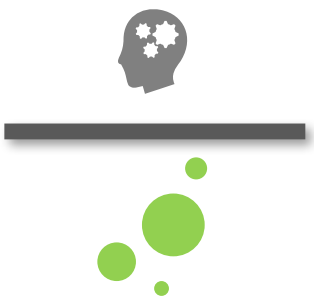
Tightly knit Orchestration & Management



Agnostic and no vendor lock-in



Delivers true Thought Leadership



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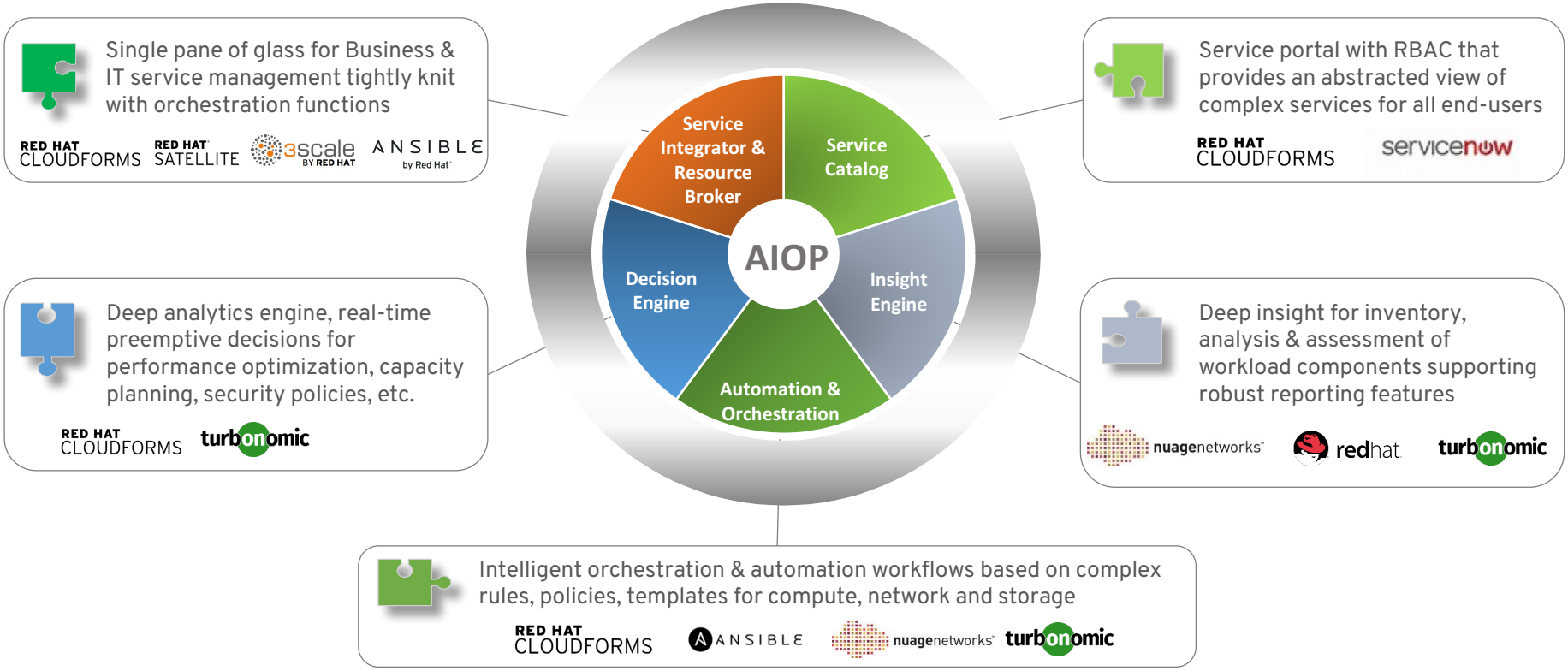
A Common Framework



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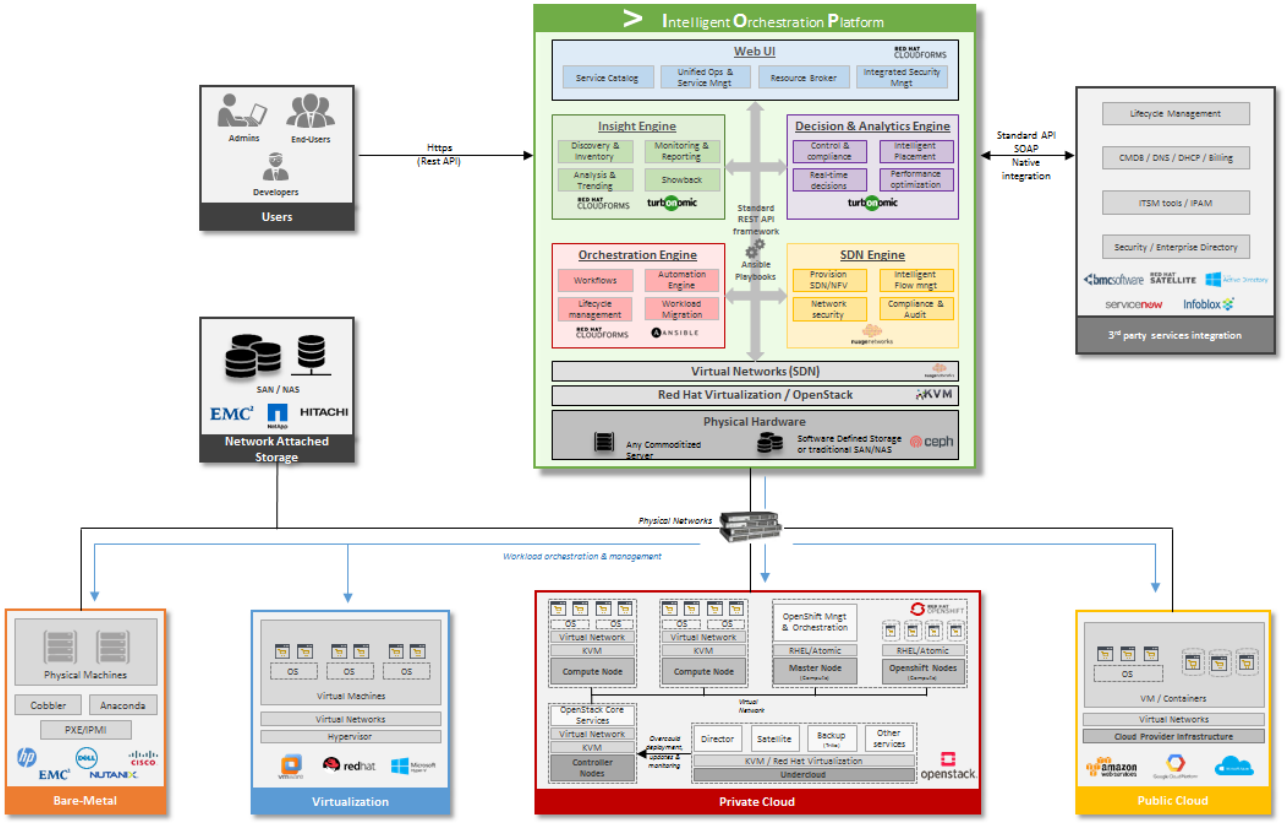
Logical Architecture



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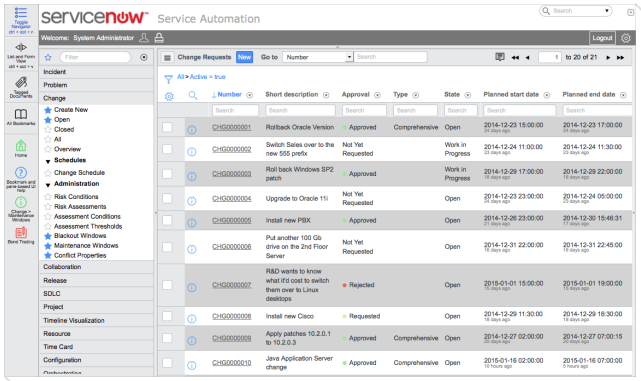
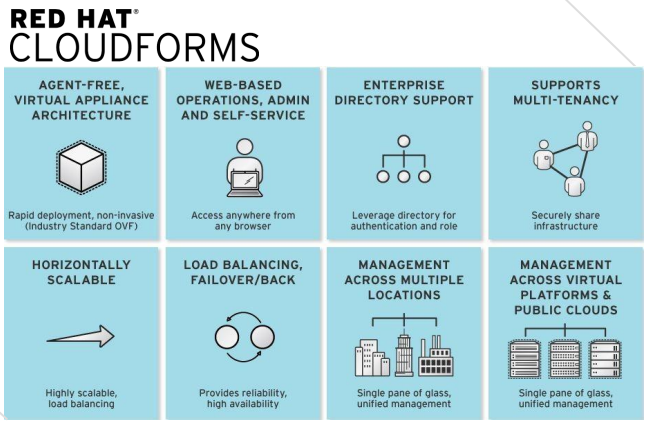
Orchestration Framework Components





- Service UI based on Open Source
- Customizable
- Common IT policies

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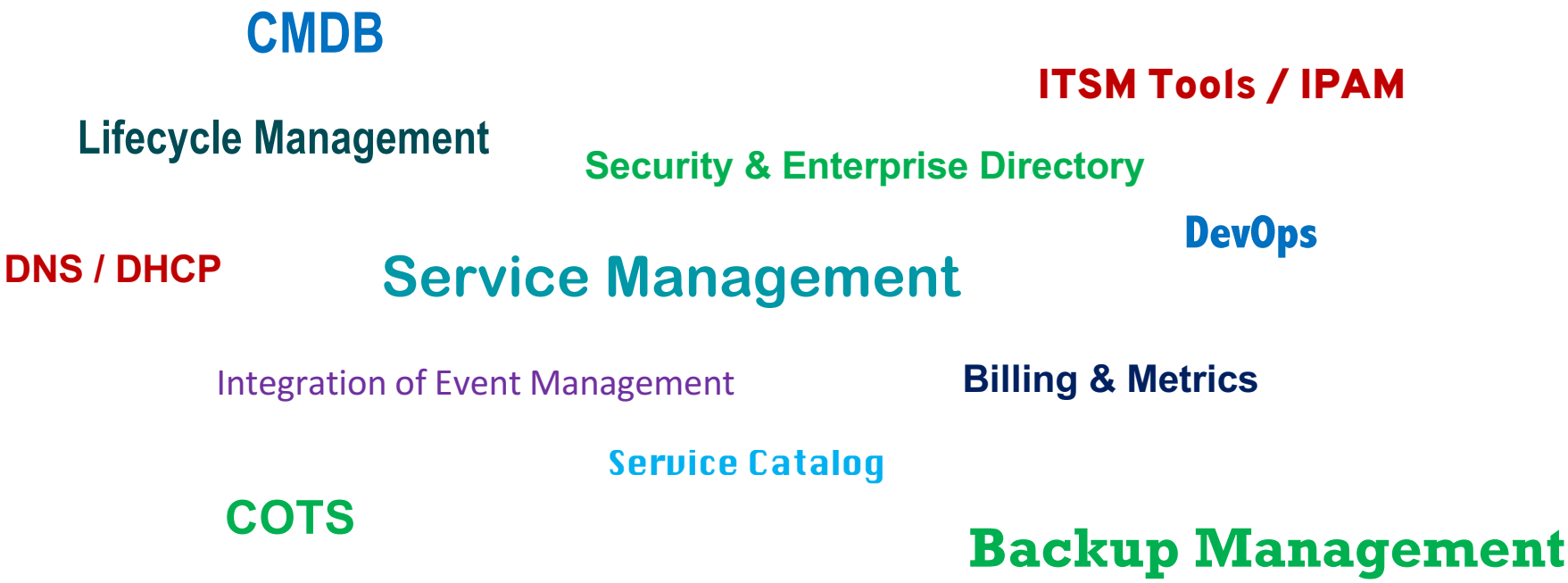
Orchestration Framework Components - Service Integration



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Orchestration Framework Components – Decision Engine

CONTROL *your workloads*
SOFTWARE-DRIVEN *builds agility and tight integration*
OPTIMIZE your Infrastructure
STABILIZE your Cloud
INTELLIGENTLY Place workload at SCALE

- 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

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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

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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

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Orchestration Framework Components - Network

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

- 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

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Making Operational Decisions

Choosing core components

Take Control:
Optimize, Stabilize, Placement

Decisioning from
Source to Target

Compliance and
Audit control

Application integration
considerations

On Boarding…
Brown vs Green

Process Automation

Integration of Existing
and New Tools

Reduce complexity through prescriptive design

Software Controlled Decisioning

Collapsing consoles
Single Pane of Glass

Catalogs, CMDB

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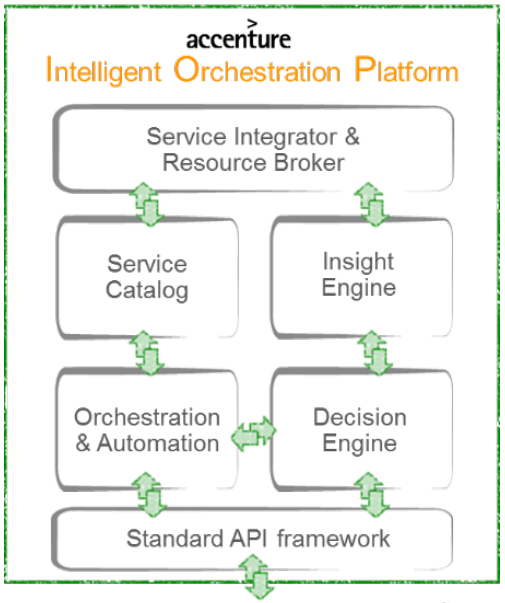
Delivering Value Through Intelligent Orchestration

Key Levers

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



redhat turbonomic nuagenetworks ANSIBLE

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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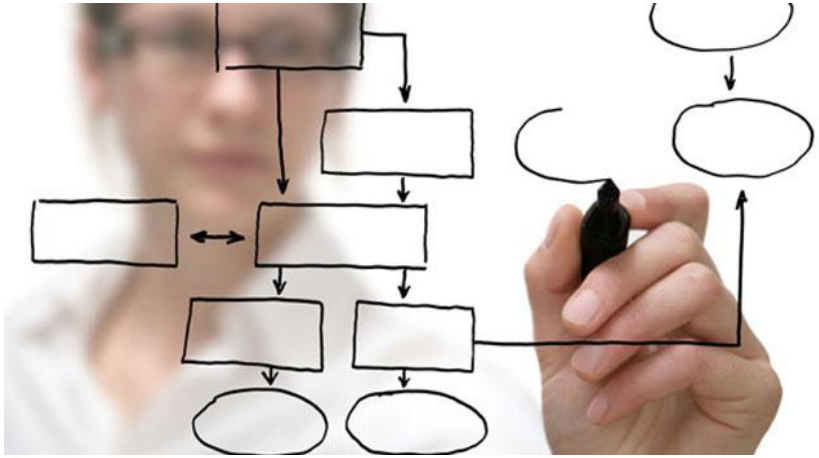
Accenture Advantage #1: Going Beyond COTS



- 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

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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

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Accenture Advantage #3: The Power of Partnerships

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

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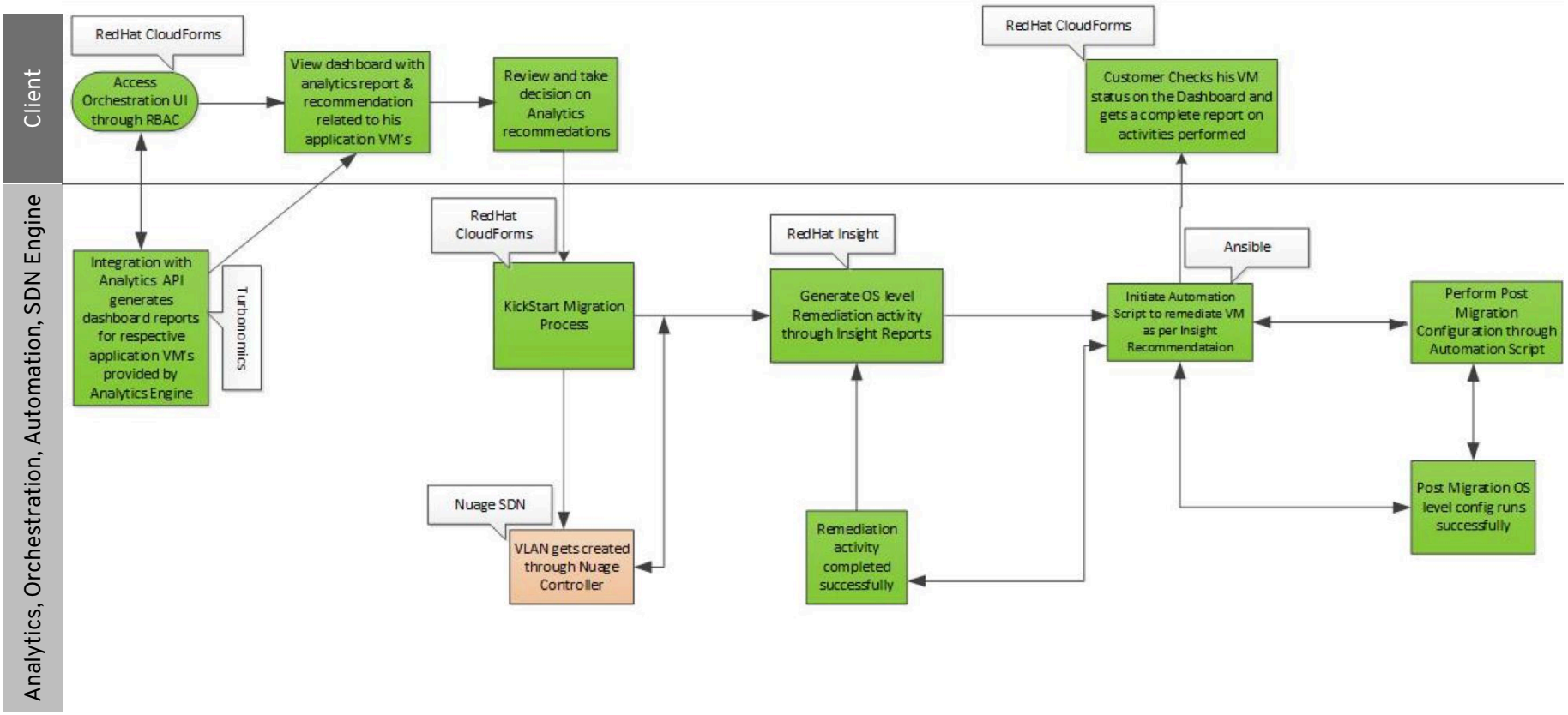
Use Case:

Intelligent Management of workloads between virtual infrastructure and Cloud Environments

redhat.

Use Case: Intelligent Management of Workload Through AIOP



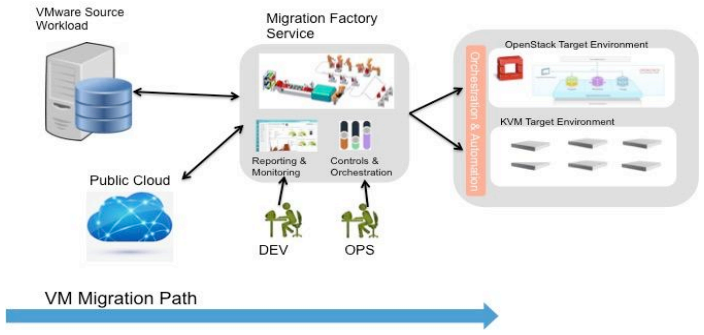
Migration Tooling: from Virtualization to Cloud (on-prem and public)

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 opensource code allows customization for unique client needs.

Orchestration

Provides policy and rule management for source and target environment. Supported opensource 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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