What You Make Possible
Orchestrating the Cloud Infrastructure using Cisco Intelligent Automation for Cloud
BRKSPG-1663
## Orchestrating the Cloud Infrastructure

### Business Drivers for Cloud

<table>
<thead>
<tr>
<th>Issue</th>
<th>Lack of agility</th>
<th>High cost of IT staff</th>
<th>Business-it dissonance</th>
<th>Low capacity utilisation</th>
<th>High operating costs</th>
<th>Overcrowding of datacentre</th>
<th>Labor-intensive, manual processes</th>
<th>for service management</th>
<th>High error rates due to disconnected processes</th>
<th>Infrastructure sprawl</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long Provisioning Times for New Services</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High Capital Costs Due to Provisioning for Peak Loads</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pressure to Move towards Proactive SLA Management</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lack of Centralised Control and Governance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Orchestrate the Cloud Infrastructure
The NEXT Transition to Self-Service Orchestrated Cloud

Legacy Management:
Slow, Complex, Brittle, Expensive

Cloud Management:
Fast, Simple, Flexible, Cost-Effective

IT-as-a-Service
- Measured Service
- Rapid Elasticity
- On-Demand Self Service
- Broad Network Access
- Resource Pooling

Legacy IT
Orchestrate the Cloud Infrastructure
Journey to IT Delivered as a Service

- Consolidate Assets
- Virtualise the Environment
- Standardise Operations
- Automate Service Delivery

Increased IT Operational Excellence (Agility, Efficiency and Simplicity)
Increased Cloud Readiness (Physical - Virtual - Cloud)
Orchestrate the Cloud Infrastructure
IT-as-a-Service Requires a New Management Approach
Orchestrate the Cloud Infrastructure
Cisco’s approach to Cloud Computing
Cisco Intelligent Automation for Cloud

Cloud Solution Components
Cisco Intelligent Automation for Cloud
Solution Highlights

- One-stop shop self-service portal
- IT service catalogue with tiers and pricing
- Governance, policies, approvals, & controls
- Lifecycle management & tracking
- Resource management & reservations

- Orchestrated infrastructure provisioning
- OS & app provisioning
- Virtual Data Centre Provisioning (VDC)
- Integration with ITIL tools & processes
- Automation of ongoing operations:
  - Monitoring, incident, fault mgmt
Cisco Intelligent Automation for Cloud

How it Works..

- Policies & Governance
- Approvals & Controls
- Security
- Operations
- DR
- Orchestrate Delivery
- Report Consumption
- Bi-directional Orchestration Adapters
- Existing IT Management Systems
- Lifecycle Management
- Self-Service Request
- Track and Manage
- Chargeback or Showback
- Define and Publish Standard Options
- Architecture & IT

Self-Service Portal and Service Catalogue

- Developers
- Management

Process Orchestration and Automated Provisioning

- Chargeback or Showback

Define and Publish Standard Options

Developers

Self-Service Request

Track and Manage

Lifecycle Management

Orchestrate Delivery

Report Consumption

Processes Orchestration and Automated Provisioning

Bi-directional Orchestration Adapters

Existing IT Management Systems
Cisco Intelligent Automation for Cloud
Network Services Manager (NSM)

- Infrastructure architectures designed, tested and validated specifically for Cloud operations (VMDC).

- Seamless physical and virtual service components integrated with demand-driven Compute (UCS).

- Designed for automation to quickly deploy physical/virtual services, infrastructure support services and bare-metal workloads.

- Dynamically configure resources to accommodate diverse tenant needs and workloads.

- Elastic scaling: rapidly scale-out tenancy and services for high demand; remove tenant infrastructure, supporting services and reduce power during low demand.
IAC Network Services Manager
Cloud Enabled Network Infrastructure

- Fully isolated tenant environment (integrated security)
- Abstraction of complexities (enables speed)
- Automated processes and controls (ensures scale)
- Streamlined, holistic coordination of resources and services (maximises capacity)
- Customisable service definitions and implementation (shortens time to market)
- Proven, tested solutions – infrastructure and automation/orchestration (reduces risk)

Virtualised Multi-tenant Data Centre
IAC Network Services Manager
Network Services as Containers

**Bronze**
- Load Balancing 1 VLAN
- Virtual Firewall and Private VLANs
- Shared VMFS and No Data Protection

**Silver**
- Multiple VLANs
- SLB and SSL Offload
- System Configuration
- Virtual Firewall and Private VLANs
- Dedicated VMFS and DP Through Snapshots

**Platinum**
- Multiple VLANs
- VPN Offload Firewall
- SLB and SSL Offload
- System Configuration
- Virtual Firewall and Private VLANs
- Dedicated VMFS, 100% DP, and Cloning
IAC Network Services Manager
Flexible Network Services

Tenant Creation

- Basic Network Container
- Enhanced Network Container
- Large Network Container
- Security and Load Balancing Services
- Multi-Tiered
Sample Customer Use Case

- Computing and storage resources attached to a routable VLAN
- Capability to partition and zone virtual machines and access within their containers
- Accessible from a VPN connections (hybrid cloud)

This use case supports creation of a protected private zone. The customer requires that the only way to reach this zone is through a private VPN (MPLS, SSL, and IPsec). To build this solution, Cisco® Network Services Manager will build both the private zone and the network container within it.
Cisco Intelligent Automation for Cloud (DEMO)
IAC and Cloupia Unified Infrastructure Controller (CUIC)
Cisco Intelligent Automation for Cloud
Cloupia Unified Infrastructure Controller (CUIC)
Cisco Intelligent Automation for Cloud
CUIC Converged Infrastructure Management and Automation

Mobile Devices
CloudGenie™

Self Service Console
Admin Console
Dashboard
ID & Access Manager
Policy Manager
Resource Pools
OS Provisioning
Database
Event Manager

Compute
Network
Storage
Customer Choice

Physical Infrastructure
Virtual Infrastructure

Virtual Infrastructure

Open API
Cisco Intelligent Automation for Cloud
CUIC Seamless Data Centre Management Strategy

Self-Service Infrastructure Provisioning

Enforce Best Practices with Consistent Infrastructure Policies

Manage Hardware with the Flexibility of Software

Management Across Global Operations

Data Centre 1
- Performance Intensive Apps
- Scale-up Apps

Data Centre 2
- Virtualised Applications
- Virtual Desktops

Data Centre 3
- Business Continuity
- Disaster Recovery

Data Centre 4
- Enterprise-Grade Cloud
- Big Data Grid

Cisco Public
Cisco Intelligent Automation for Cloud
Cloud (IAC) and Infrastructure Management (CUIC)

Hybrid Cloud Services

End-User IT Services

Self-Service Infrastructure

Converged Infrastructure Automation

Cisco Intelligent Automation for Cloud

Cloud Portal

Process Orchestrator

Policy-Driven Infrastructure Services

Compute, Network, Storage, Hypervisor

Ecosystem Integrations
- BSS/OSS
- LDAP / AD / Email
- CMDB / Service Desk
- Monitoring / Assurance
- Image / Config Mgt
- Billing / Chargeback
- Heterogeneous Environments

Cloud Service Providers

Multi-Cloud

Cisco Intelligent Automation for Cloud
Cisco Unified Management
Solutions for Cloud and Infrastructure Management
### Cisco Intelligent Automation for Cloud

#### Why Cisco Customers Choose IAC?

<table>
<thead>
<tr>
<th>‘Right Size’ solution</th>
<th>• Core service automation (catalogue, orchestrator)</th>
</tr>
</thead>
</table>
| Leverage existing investments | • Open to heterogeneous hardware, virtualisation, IT software  
• Allows customer flexibility and customer choice |
| Flexibility | • Agile cloud use case build-out  
• Extensible from IaaS to PaaS and other services  
• Content packs for rapid service creation & deployment |
| World class user experience | • Your friendly face to the business  
• Visual, no-code design of catalogue & automation |
| Best in class platform | • Optimised to Cisco UCS and other Cisco solutions  
• Support for common vendor infrastructure & OSS/BSS  
• RBAC, policy controls, order governance & lifecycle mgmt |
| This is our focus | • We specialise in IT automation & self-service |
| Single support model | • For management, infrastructure and solution content |
Cisco Intelligent Automation for Cloud

To Learn More ……

- For details about the following capabilities…
  - Vblock orchestration
  - FlexPod orchestration
  - vCloud director integration
  - Hybrid clouds / cloudbursting
  - Multi-tenancy
  - VDI/VXI solutions
  - OpenStack integration
  - Other use cases
  - Integration framework, adapters and packs
  - Closer look at automation workflows
  - Closer look at catalogue & portal
  - Product screenshots
  - Demo videos
  - Advanced services offerings
  - Product road map and NSM integration

- We can organise a deep dive for you.
Q & A
Complete Your Online Session Evaluation

Give us your feedback and receive a Cisco Live 2013 Polo Shirt!

Complete your Overall Event Survey and 5 Session Evaluations.
- Directly from your mobile device on the Cisco Live Mobile App
- By visiting the Cisco Live Mobile Site www.ciscoliveaustralia.com/mobile
- Visit any Cisco Live Internet Station located throughout the venue

Polo Shirts can be collected in the World of Solutions on Friday 8 March 12:00pm-2:00pm

Don’t forget to activate your Cisco Live 365 account for access to all session material, communities, and on-demand and live activities throughout the year. Log into your Cisco Live portal and click the "Enter Cisco Live 365" button.