Cisco Intelligent Automation for Cloud & Compute

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Intelligent Automation Solutions Business Unit

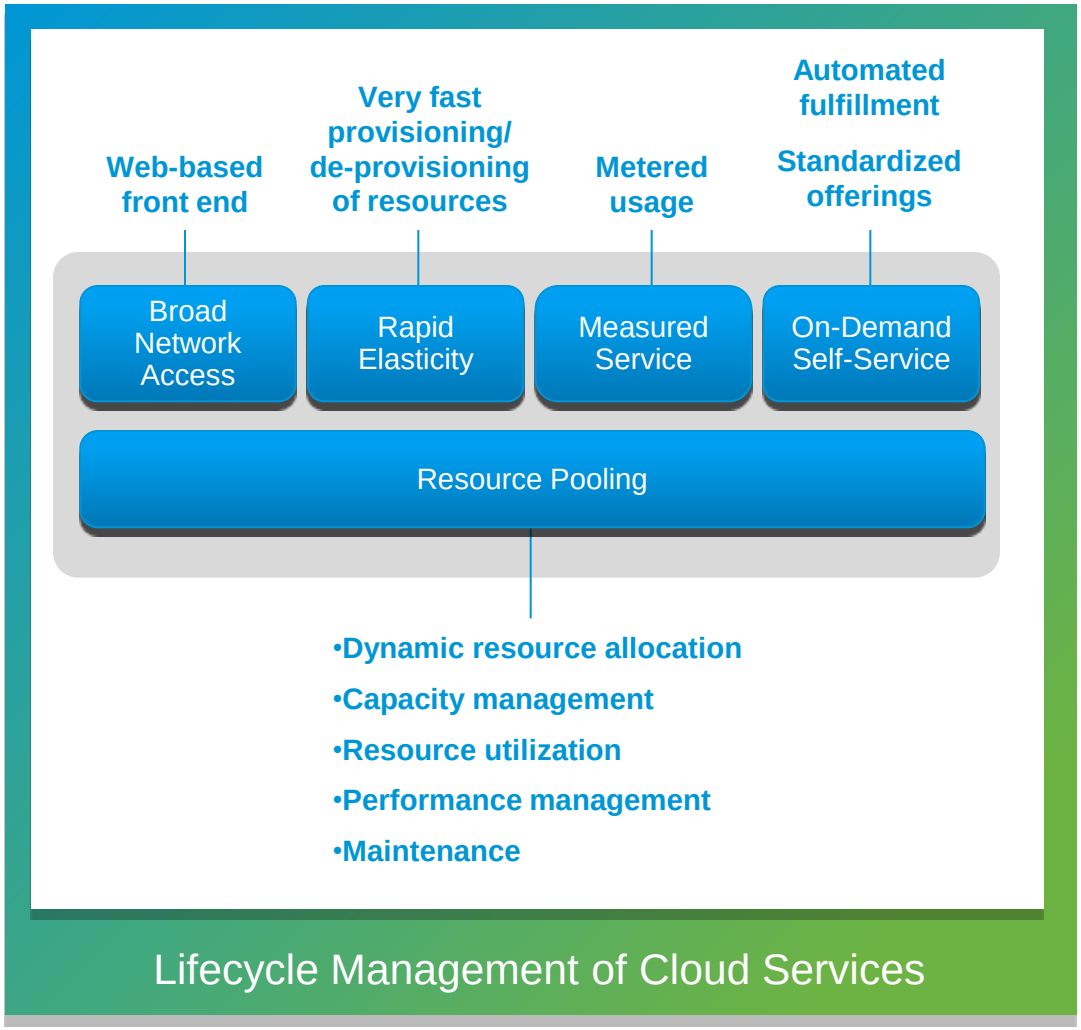
Business Drivers for Private Cloud

Long Provisioning Times for New Services	• Lack of agility • High cost of IT staff • Business-it dissonance
High Capital Costs Due to Provisioning for Peak Loads	• Low capacity utilization • High operating costs • Overcrowding of datacenter
Pressure to Move Towards Proactive SLA Management	• Labor-intensive, manual processes for service management
Lack of Centralized Control and Governance	• High error rates due to disconnected processes • Infrastructure sprawl

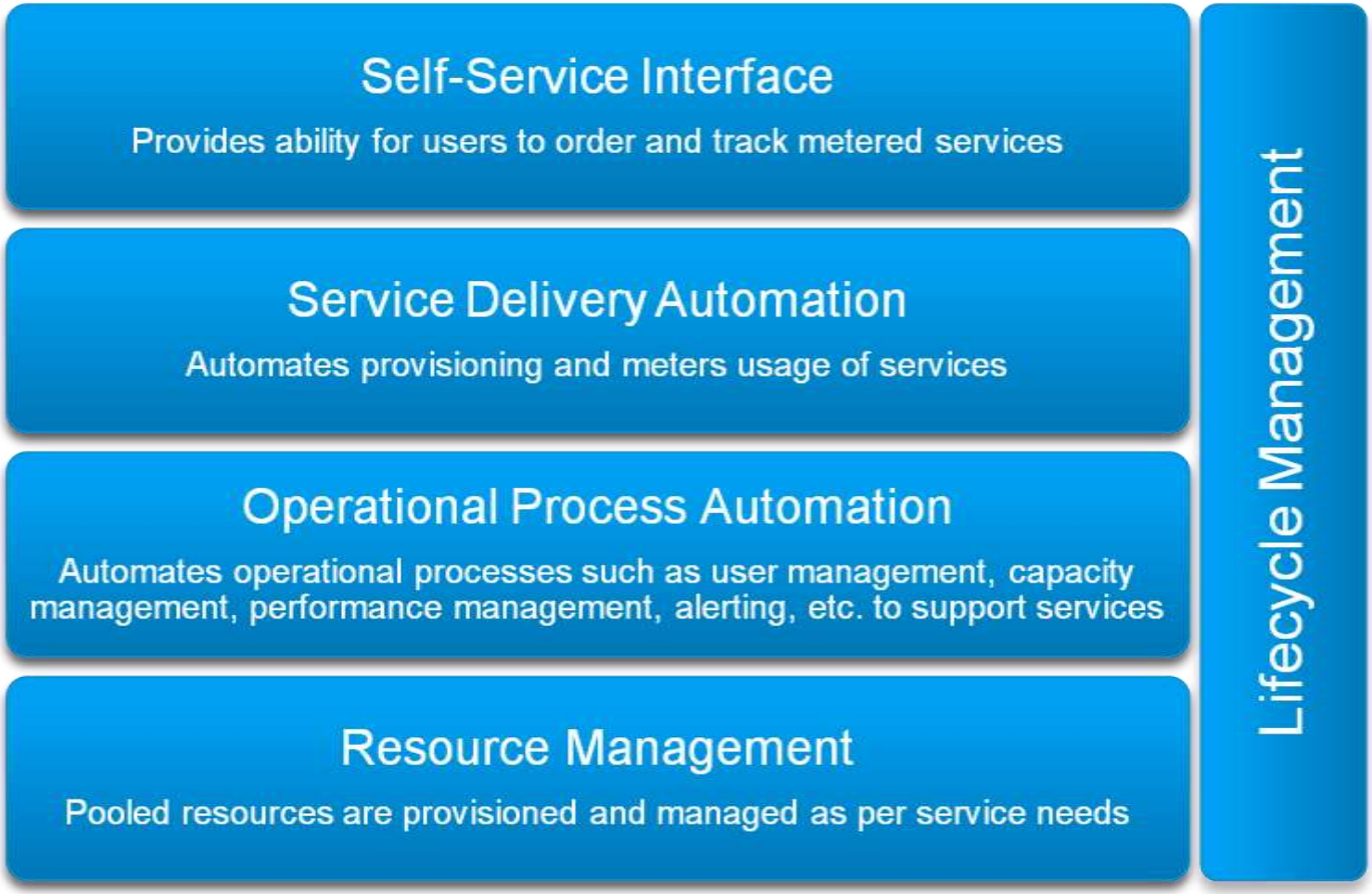
Lack of IT-Business Alignment

Elements of Private Cloud Computing

- Self-Service Interface: Provides ability for users to order and track metered services
- Service Delivery Automation: Automates provisioning and meters usage of services
- Resource Management: Resources are provisioned and managed as per service needs
- Operational Process Automation: Automates operational processes such as user management, capacity management, service level management, service desk integration, alerting…
- Lifecycle Management



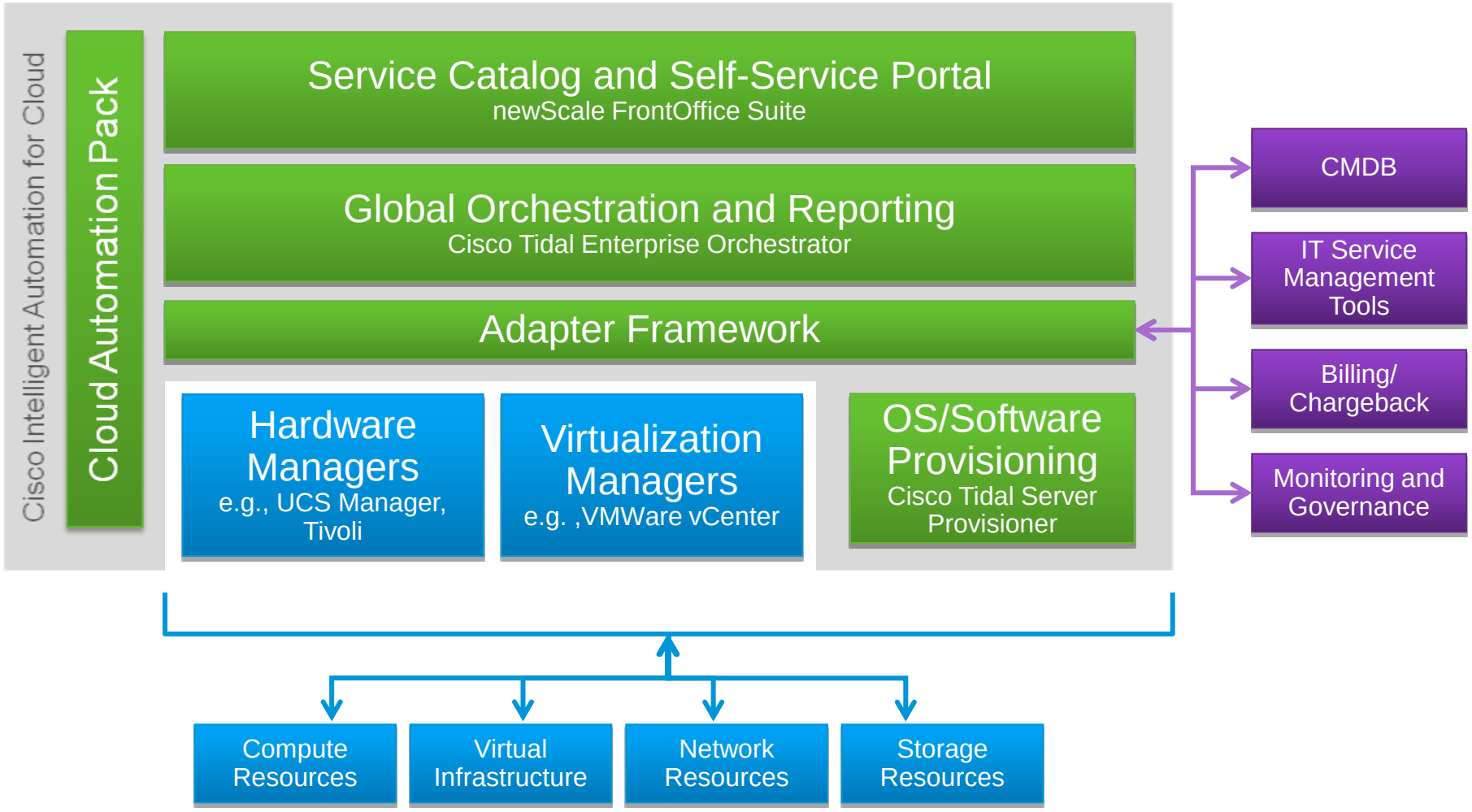
Elements of Private Cloud Computing



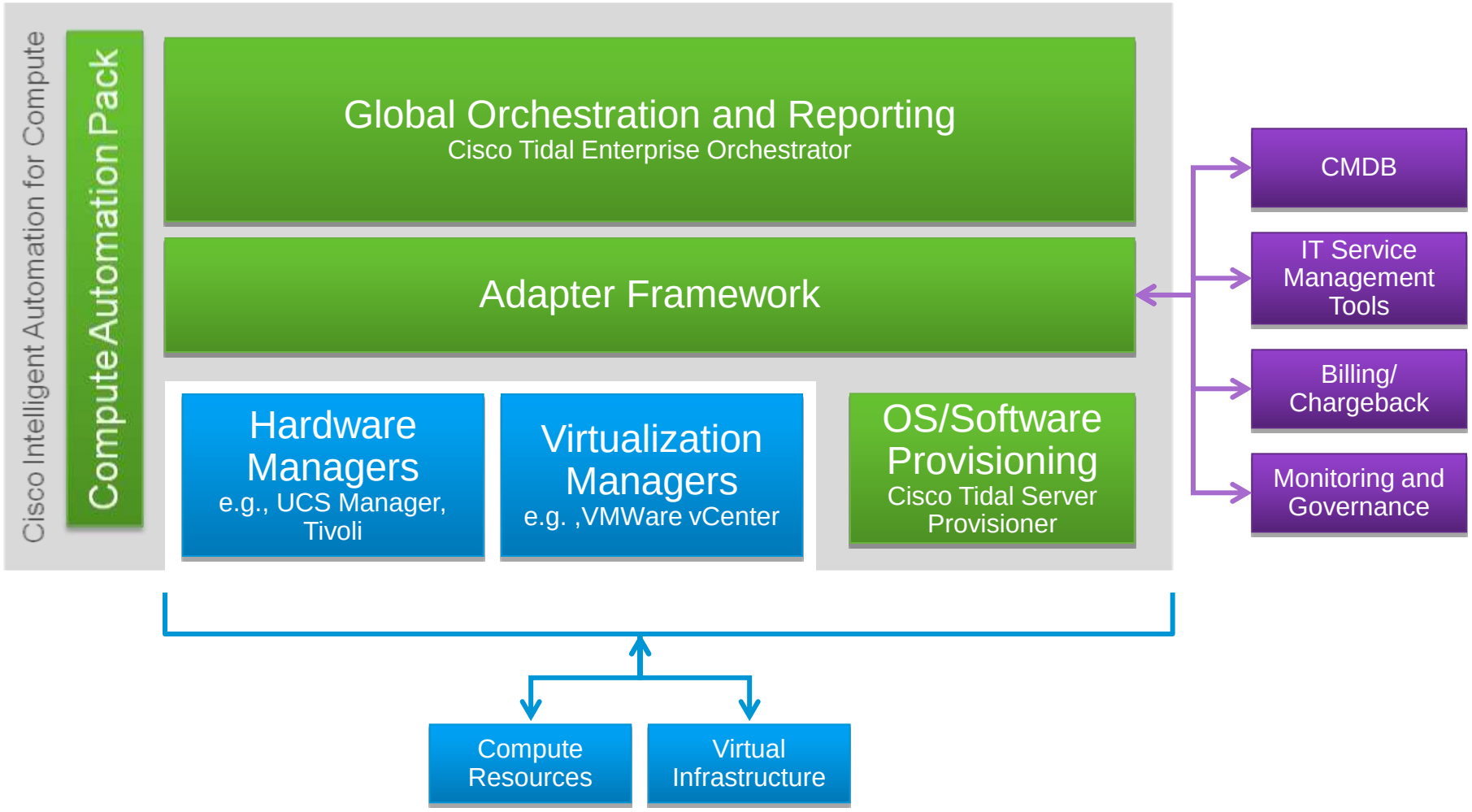
Cisco Intelligent Automation Cloud Offers

Cloud Automation Non-Technical User Orders a "SQL Server" and Everything Is Provisioned	**Compute Automation** Technical User Manages IT Processes Across Compute Tools
Cisco Intelligent Automation for **Cloud**	Cisco Intelligent Automation for **Compute**
Supports heterogeneous infrastructure — both virtual and physical	
Set of sample automation packs	
Full Infrastructure as a Service (IaaS) stack	Global orchestration across compute resources: server/virtual server, OS and application software,
Order to global orchestration to infrastructure provisioning	Services engagement for integration for CMDB, ticketing, monitoring, etc.
Orchestration of compute, network and storage provisioning and deployment, OS and software provisioning	
Services engagement for setting up automation workflows, and integration for metering, chargeback, CMDB, ticketing, monitoring, etc.	

Cisco Intelligent Automation for Cloud



Cisco Intelligent Automation for Compute



Solution Highlights

Intelligent Automation for Cloud

Service catalog and ordering portal provides 1-stop shopping for infrastructure as a service

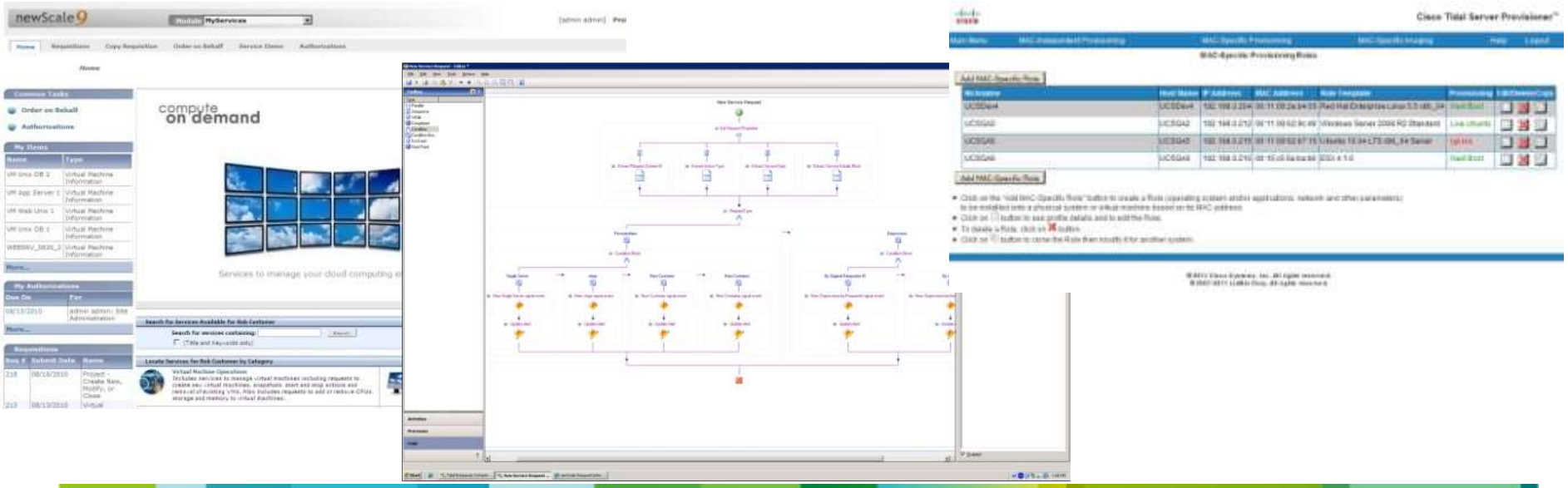
Single point orchestration of provisioning across all required components—compute, virtualization, network and storage

Intelligent Automation for Compute

Software provisioning including OS and application provisioning

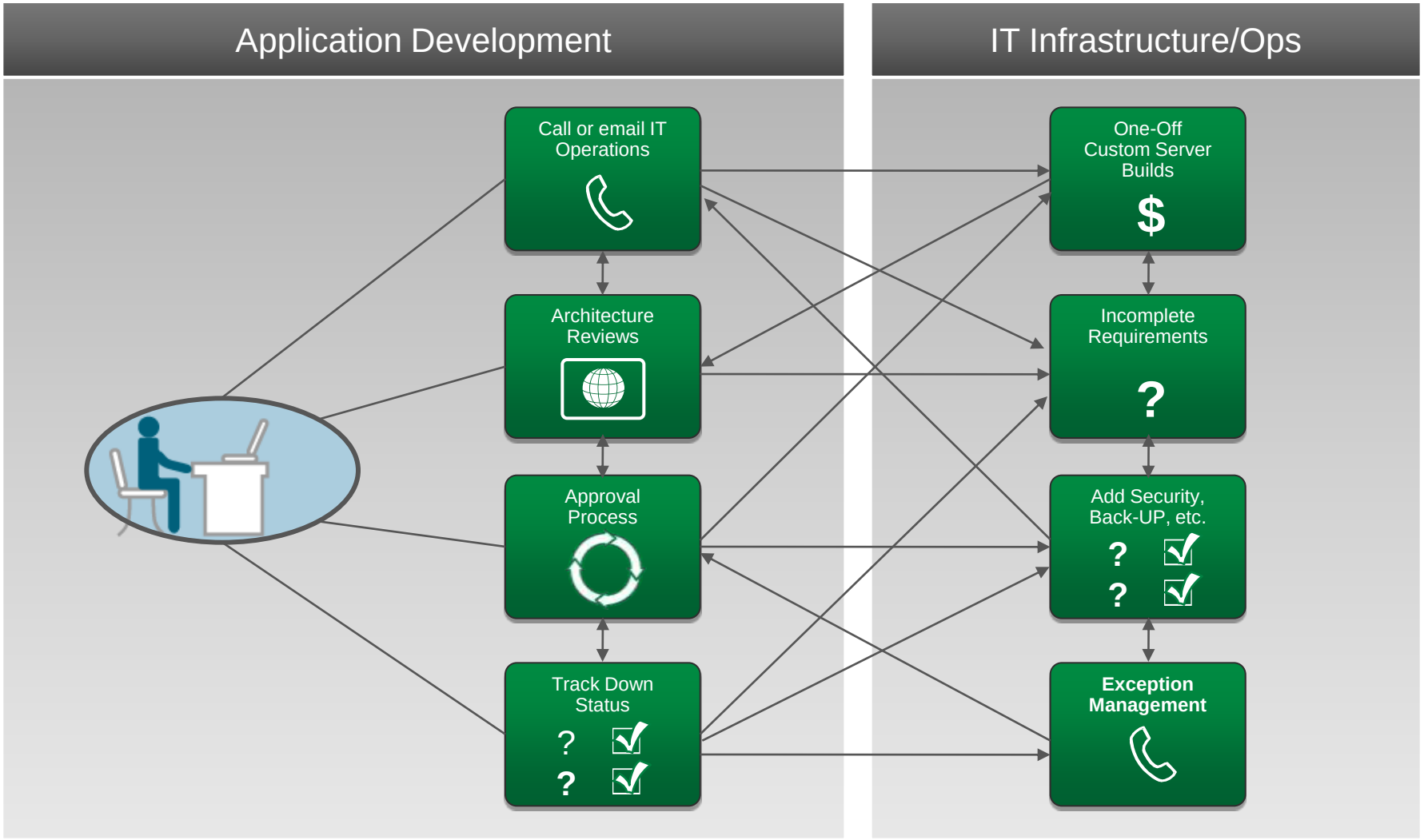
Open Architecture provides for integration with existing CMDB and ITIL investments and tools

Automation of ongoing operations

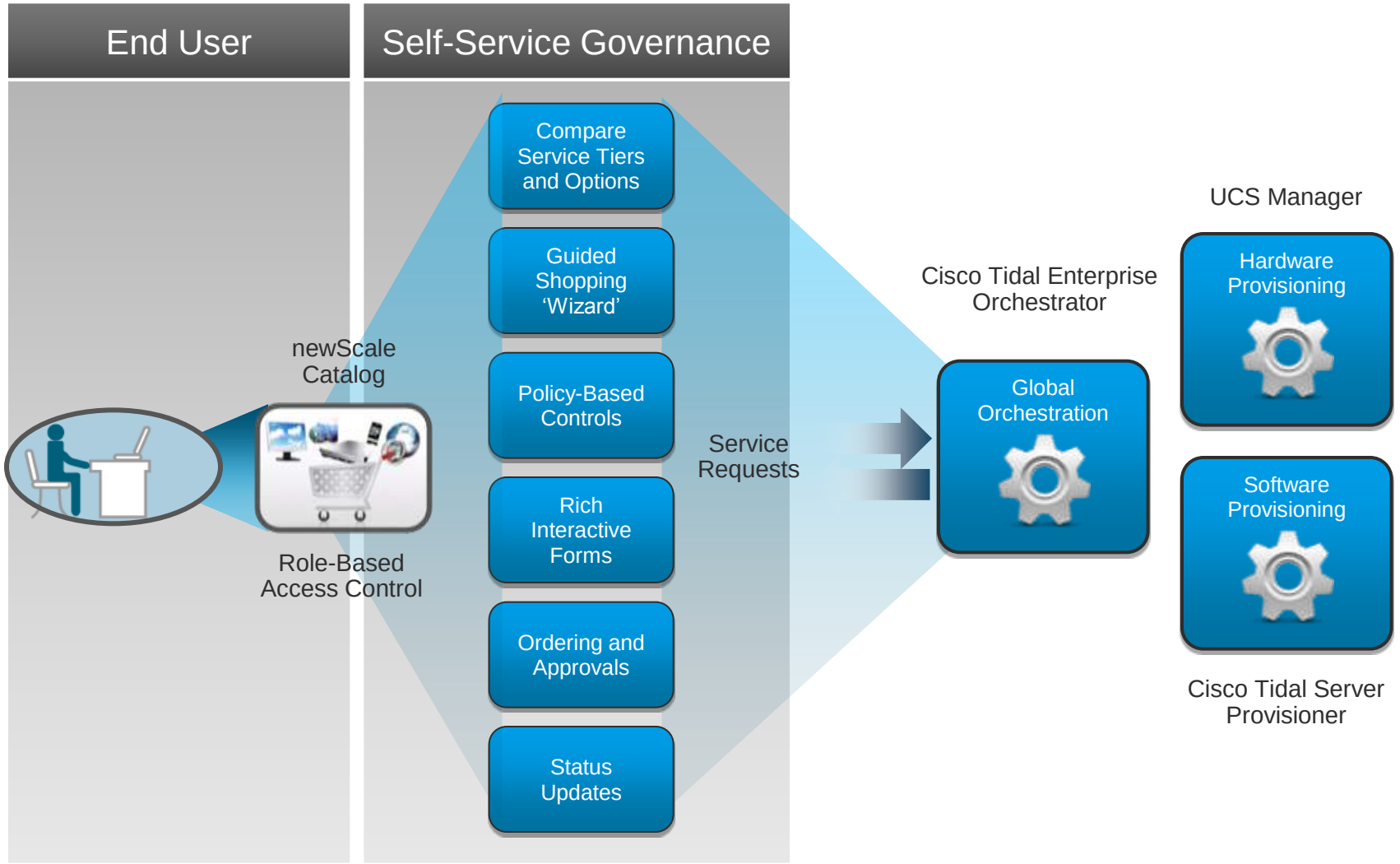


Use Case: Application Dev/Test

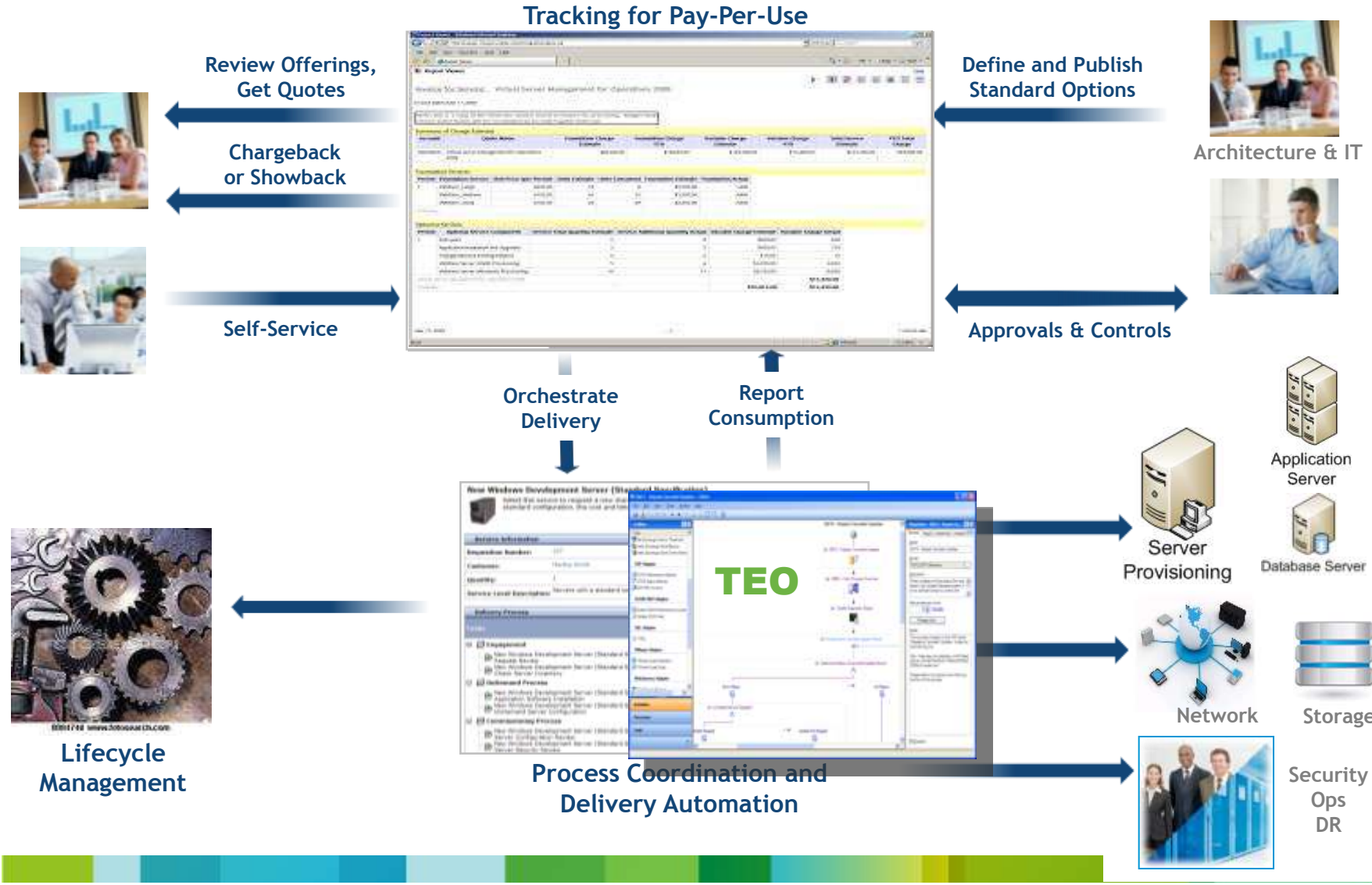
Complex, Time-Consuming, Expensive Provisioning Process



Service Delivery with Cisco Intelligent Automation for Cloud



Our Solution at Work



Tidal Enterprise Orchestration Platform

Cisco UCS Manager

- Activate UCS Firmware
- Associate UCS Service Profile to S...
- Bind UCS Service Profile to Template
- Boot UCS Server
- Collect UCS Statistics
- Correlate UCS Faults
- Create UCS Configuration Backup
- Create UCS Host Firmware Package
- Create UCS Management Firmware...
- Create UCS Service Profile from Te...
- Delete UCS Service Profile
- Disassociate UCS Service Profile
- Download UCS Firmware Package ...
- Execute UCS Manager Command
- Find UCS Managed Objects
- Get UCS Fabric Interconnect Confi...
- Get UCS Interface Card Configurati...
- Get UCS IO Module Configuration
- Get UCS Server Configuration
- Modify UCS Service Profile
- Shutdown UCS Server
- Unbind UCS Service Profile from T...
- Update UCS Firmware

SAP - ABAP

- CCMS Performance Attribute
- CCMS Status Attribute
- Complete CCMS Alert
- Correlate CCMS Alerts
- Get SAP Server Down Time
- SAP RFC Function

VMware Adapter

- Clone Virtual Machine
- Create Snapshot
- Enter VM Host Maintenance Mode
- Exit VM Host Maintenance Mode
- Migrate Virtual Machine
- Power Down Host to Standby
- Power Off Virtual Machine
- Power On Virtual Machine
- Power Up Host from Standby
- Query Host Properties
- Query Virtual Machine Properties
- Query Virtual Machine Snapshots
- Reboot Guest
- Reboot VM Host
- Reconfigure Virtual Machine
- Relocate Virtual Machine
- Remove All Snapshots
- Remove Snapshot
- Rename Snapshot
- Reset Virtual Machine
- Revert to Current Snapshot
- Revert to Snapshot
- Shutdown Guest
- Standby Guest
- Suspend Virtual Machine
- Upgrade Virtual Machine Hardware
- Upgrade Virtual Machine Tools

Database - Oracle

- Bulk Insert Into Oracle
- Check Oracle Library Cache
- Check Oracle Row Cache Hit Ratio
- Check Oracle Table Scan
- Delete from Oracle
- Display Oracle Free Memory
- Execute Oracle SQL Script
- Insert Into Oracle
- List Oracle Heavy Queries
- List Oracle Running SQL Queries
- Oracle Database Lock
- Oracle Table Space
- Select from Oracle
- Update Oracle

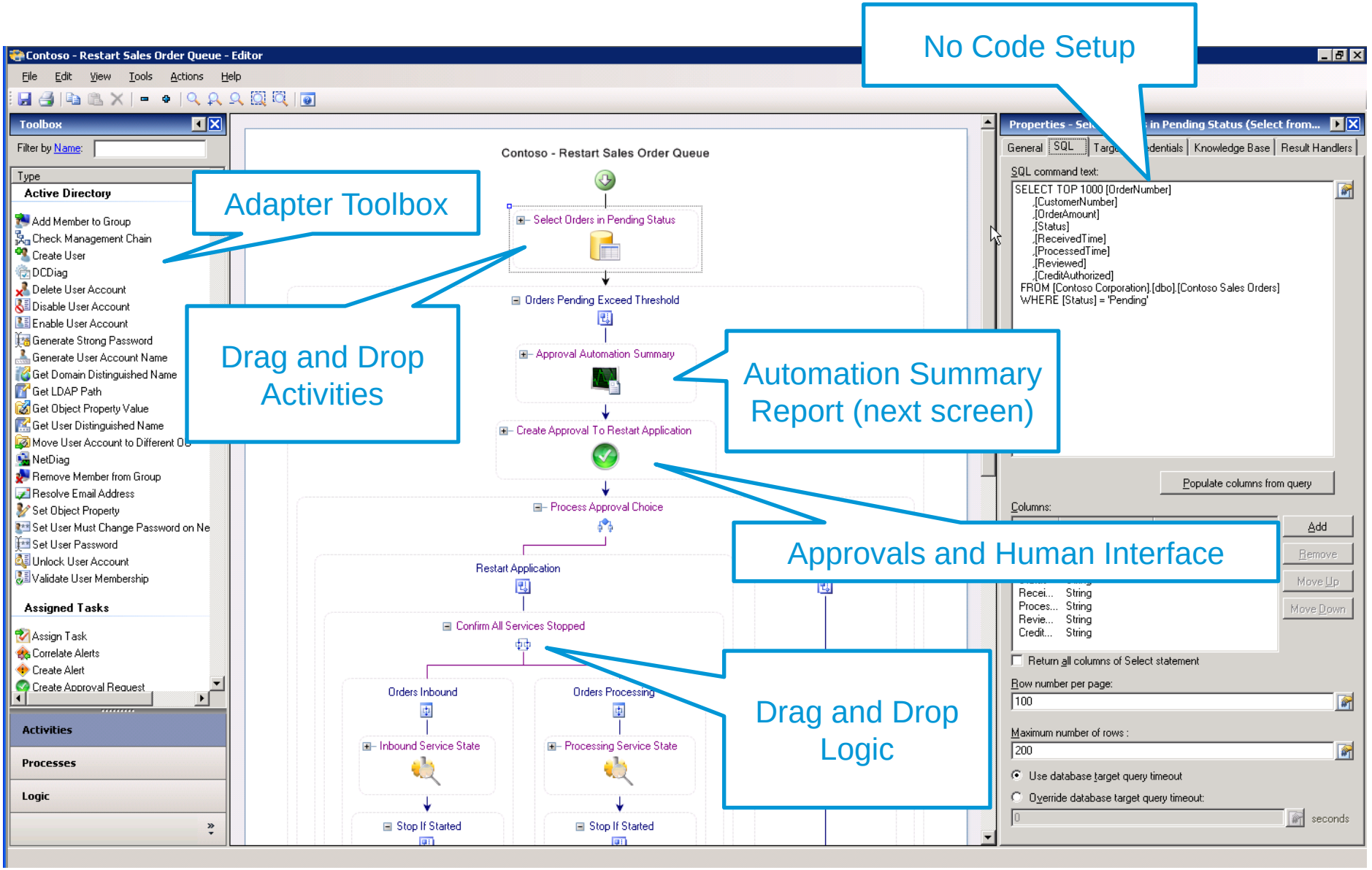
Terminal

- Close Terminal Session
- Execute Terminal Command(s)
- Open Terminal Session

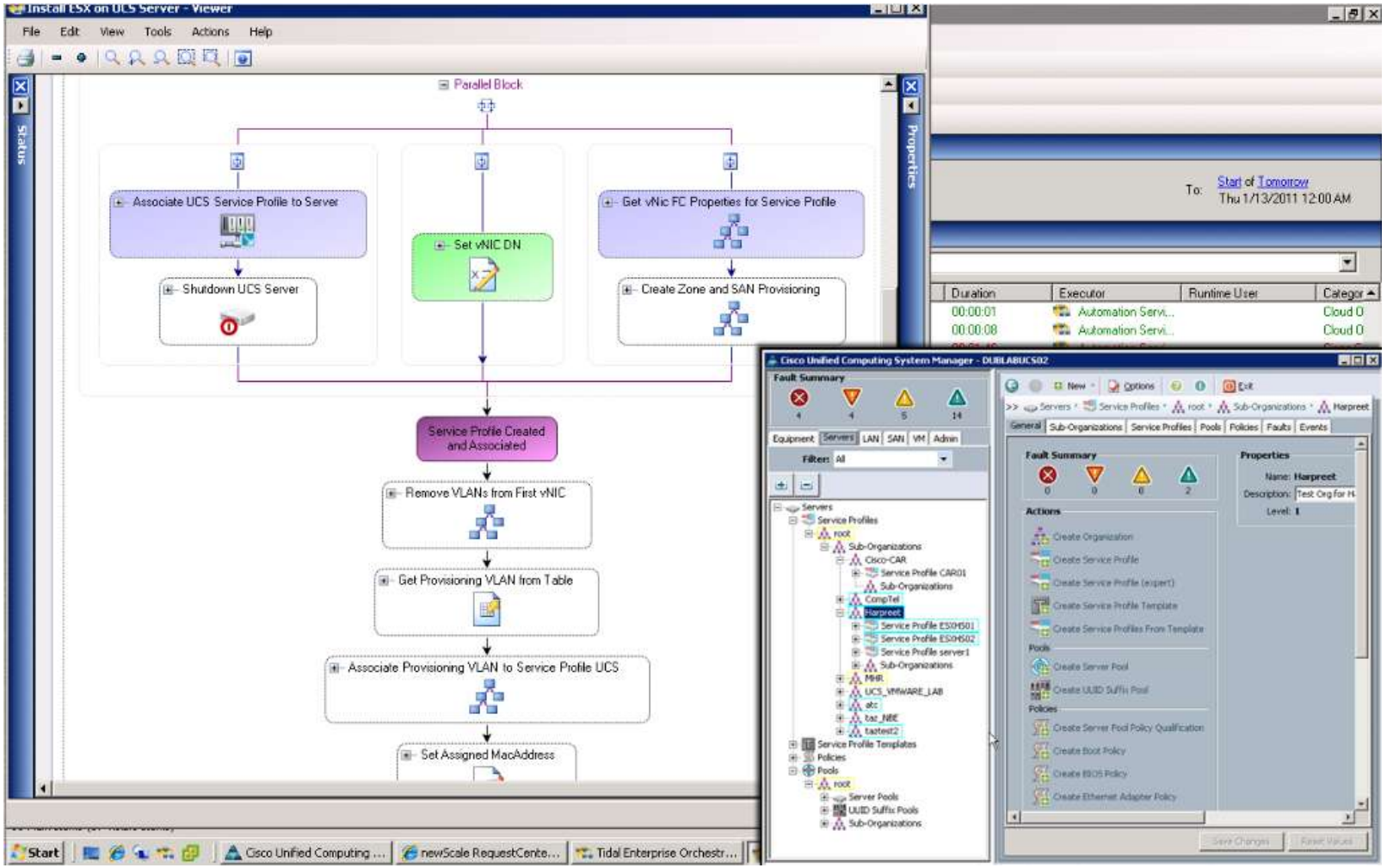
Secure Shell (SSH)

- Execute Unix/Linux SSH Command
- Execute Unix/Linux SSH Script
- Get File
- Put File

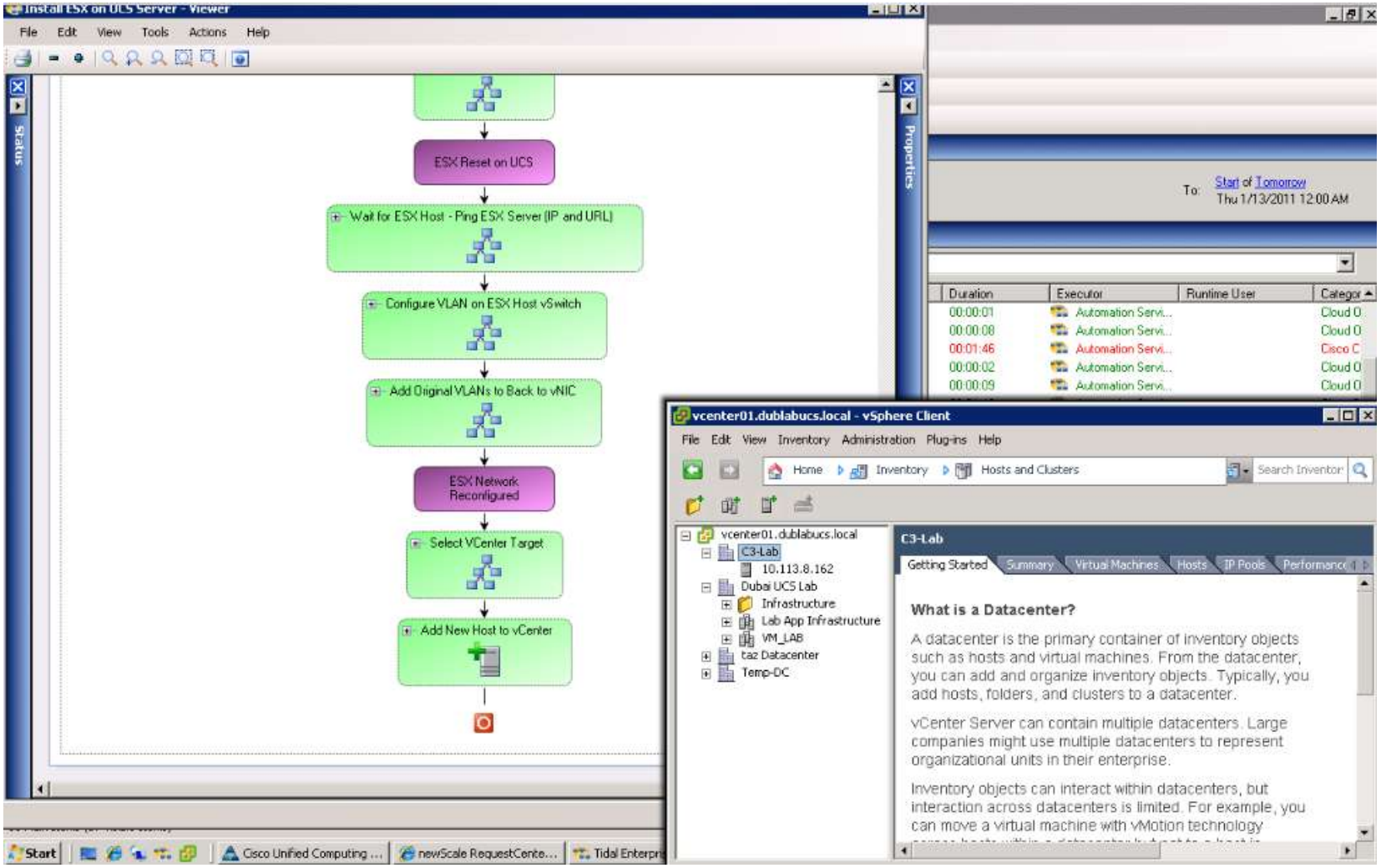
Intelligent Process Editor



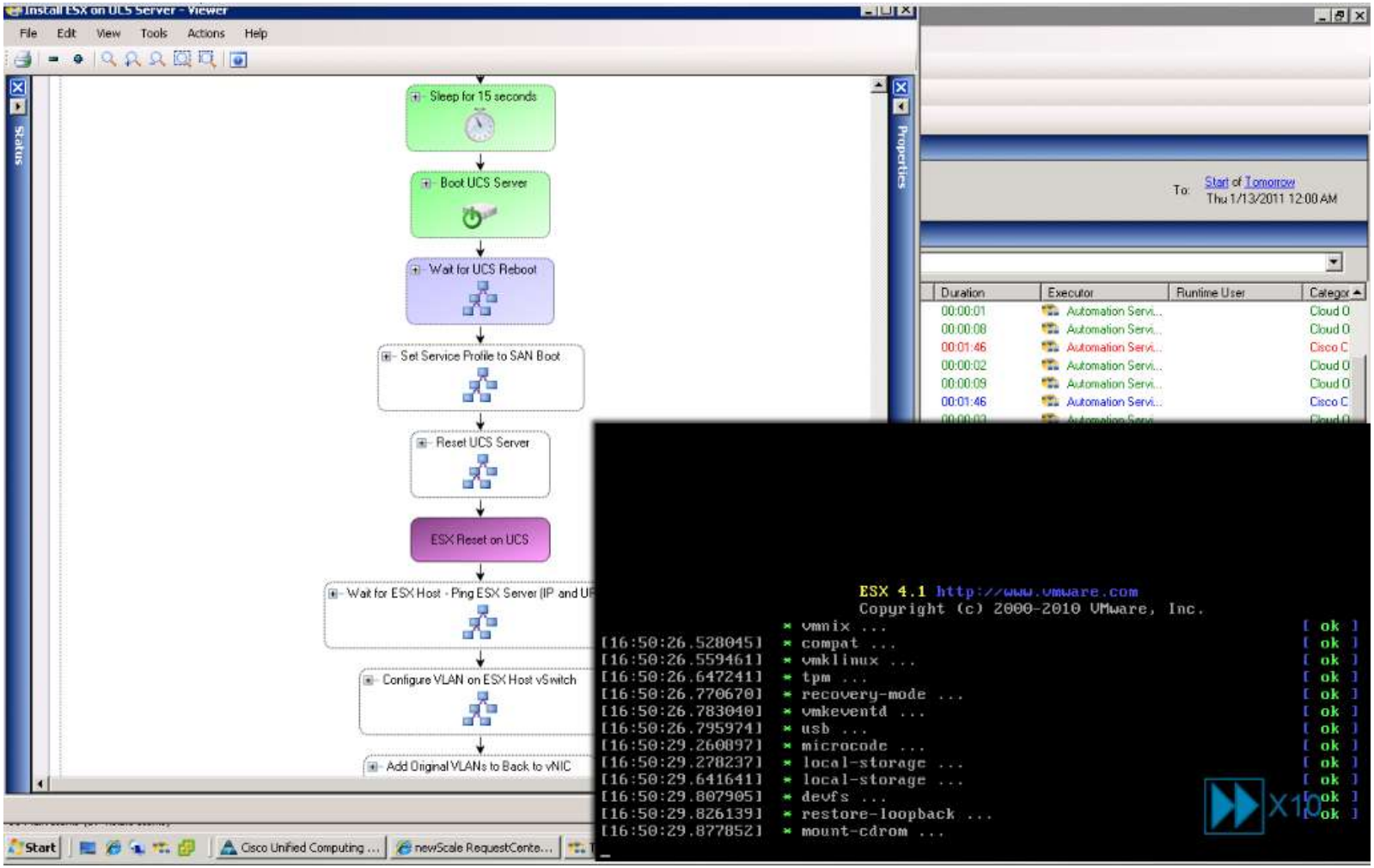
TIGHT UCS INTEGRATION



Virtualization Integration is Key



Video screen shot of bare metal ESX provisioning



IDC Collateral due out soon….

I D C V E N D O R S P O T L I G H T

Automated Provisioning and Orchestration Critical to Effective Private Cloud Operations

March 2011

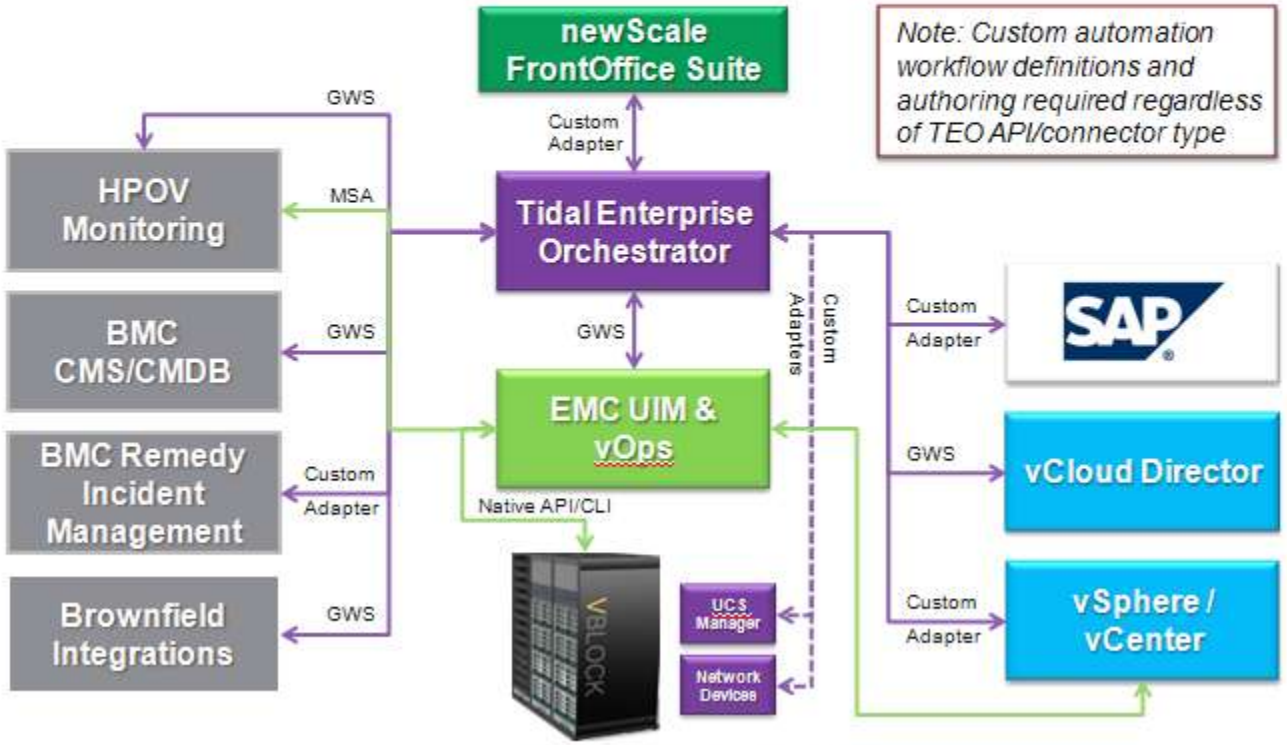
Adapted from: Market Analysis Perspective: Worldwide Enterprise System Management Software 2010 - Evolving Strategies for Virtual and Cloud Data Centers
By Tim Grieser and Mary Johnston Turner, December 2010, IDC #226085

Sponsored by Cisco

VCE uses newScale and TEO

vmware cisco EMC²

Tidal Enterprise Orchestrator Connector View



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IA for Cloud / Compute – What is coming next (over 4 quarters)

- Multi-hypervisor white papers and VODs
  - Citrix/Xen
  - HyperV
  - Redhat KVM
  - AIX / HPUX
- Demonstrations across multiple hardware platforms
- vCloud Director Integration
- UIM Integration
- Public Cloud Integration
  - Amazon
  - Savvis
  - Verizon / Terremark
  - Cloud.com

I need a DB server now…..