



Hybrid Cloud: Overview of Intercloud Fabric

Sutapa Bansal

Sr. Product Manager

Cloud and Virtualization Group

Agenda

> Why Hybrid cloud?

> Cisco Intercloud Fabric Vision

> Hybrid Cloud Use Cases and Intercloud Fabric ROI

> Intercloud Fabric Architecture Overview

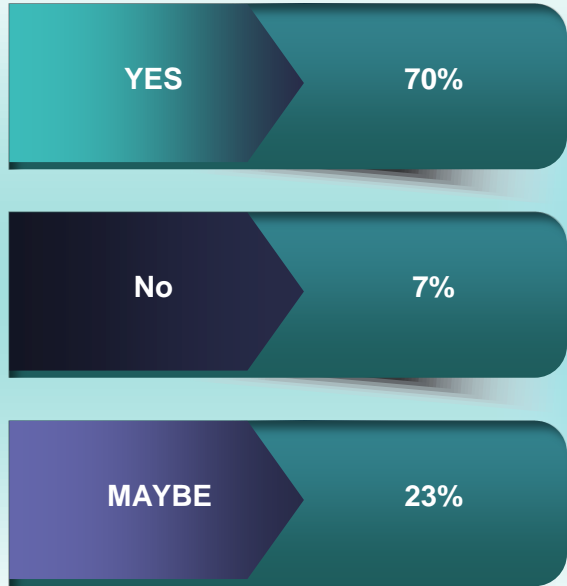
> Deployment Model and Offering

> Summary

Why Hybrid Cloud?

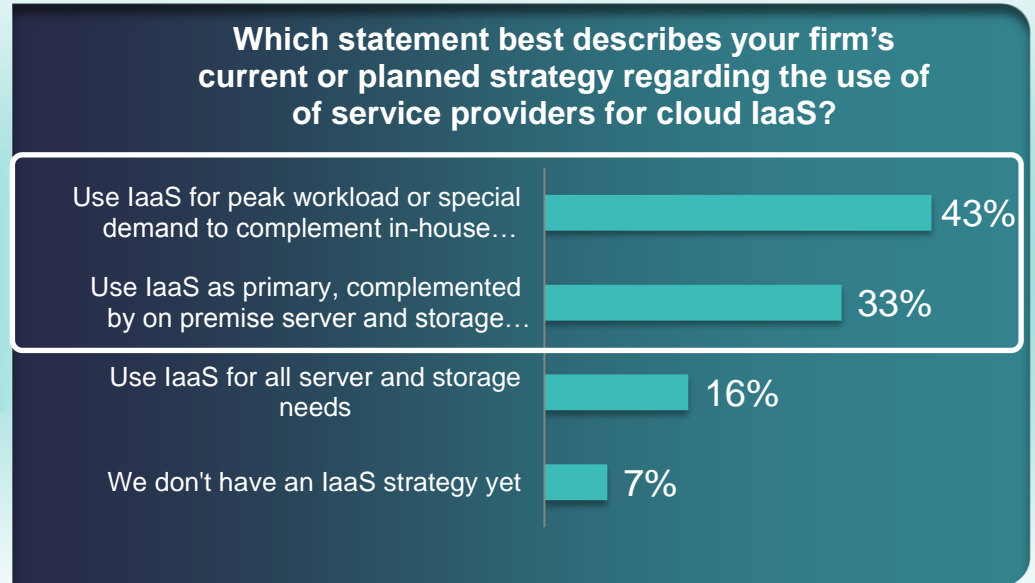
Customers Want Hybrid Clouds, Not Just IaaS

Will your enterprise be pursuing a hybrid cloud strategy by 2015?



Source: Gartner DC Summit , December 2012
(Base 400+ Enterprise customers)

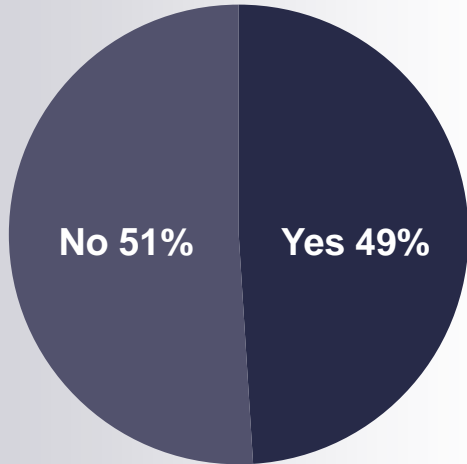
Enterprises seek to augment on-premise servers with service provider clouds



Source: Forrester, 2013 (study commissioned by Cisco)

Hybrid Cloud Adoption and IT Departments Serving as Cloud Brokers Are Accelerating

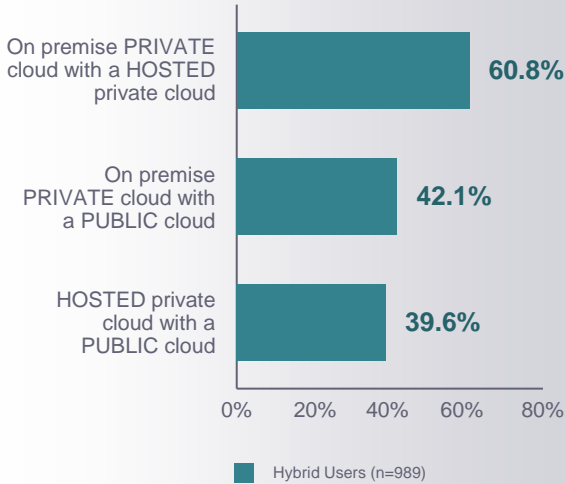
Q6. Has your organization configured any of the following clouds for interoperability. (Check all that apply)



n=2002

Source: 451 Research – Hosting and Cloud Study 2014

% of Hybrid Users

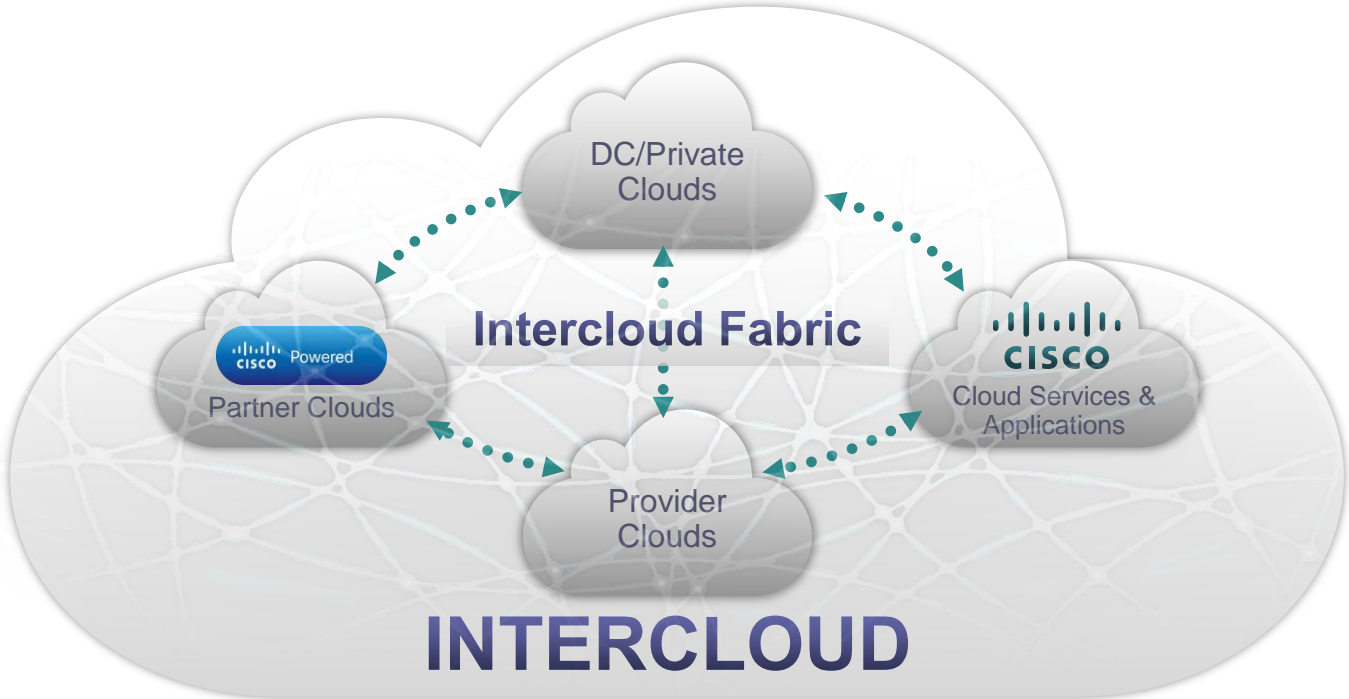


76%

IT will act as a “broker” of cloud services across internal and external clouds for LOBs*

*Cisco-Intel Cloud Study, Sep. 2013

Cisco Intercloud and Intercloud Fabric



Why Hybrid?

Striking the perfect balance

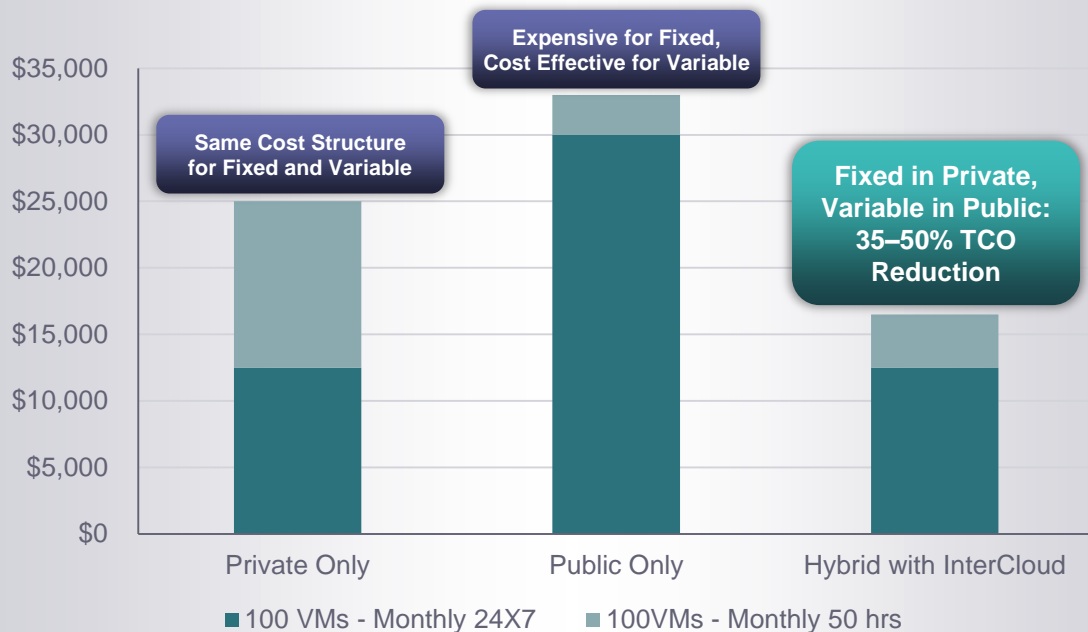


Hybrid Cloud Business Model and ROI: Buy the Base, Rent the Peak

ILLUSTRATIVE

- Most suitable for a blend of fixed and variable workloads
- Fixed cost CapEx model for private cloud
- Subscription based OpEx model for public cloud
- Up to 50% cost reduction over Private only or Public only models

Total Monthly Cost of 200 VMs: 100 Sustained, 100 Variable



Cisco Intercloud Fabric Vision

Reality of Hybrid Cloud and Key Challenges



Loss of Security

- Unsecure Connection
- Limited Workload Protection



Siloed Infrastructure

- Inconsistent Cloud Architectures
- Fragmented Solutions Solving Networking and Security Challenges
- Different Management Tools



Slow and Complex

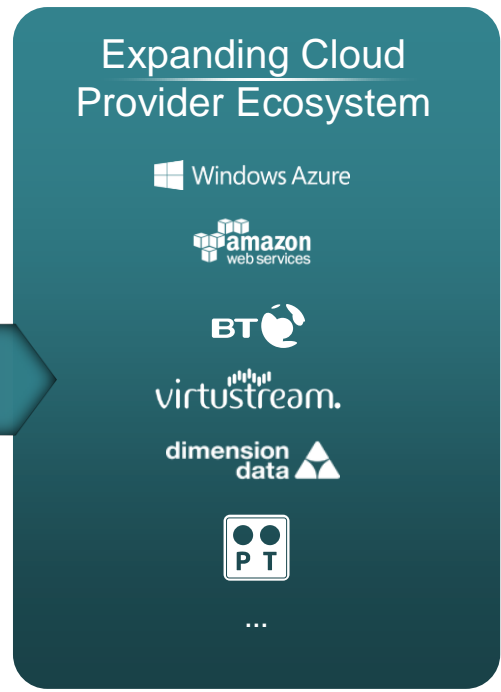
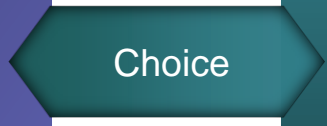
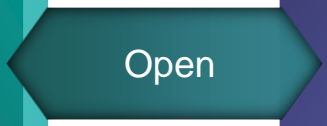
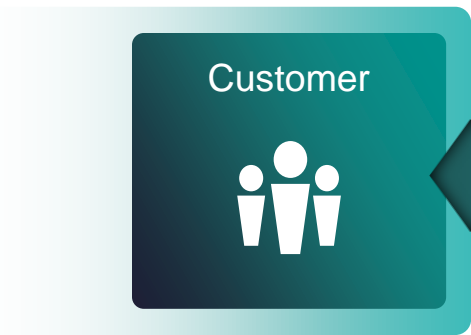
- Require App Re-configuration
- Slow and Manual Process of Discovering Infrastructure Dependencies
- No Visibility or Control

Cisco's Hybrid Cloud Approach

No Vendor Lock-In

Any Hypervisor to Any Provider

Heterogeneous Infrastructure



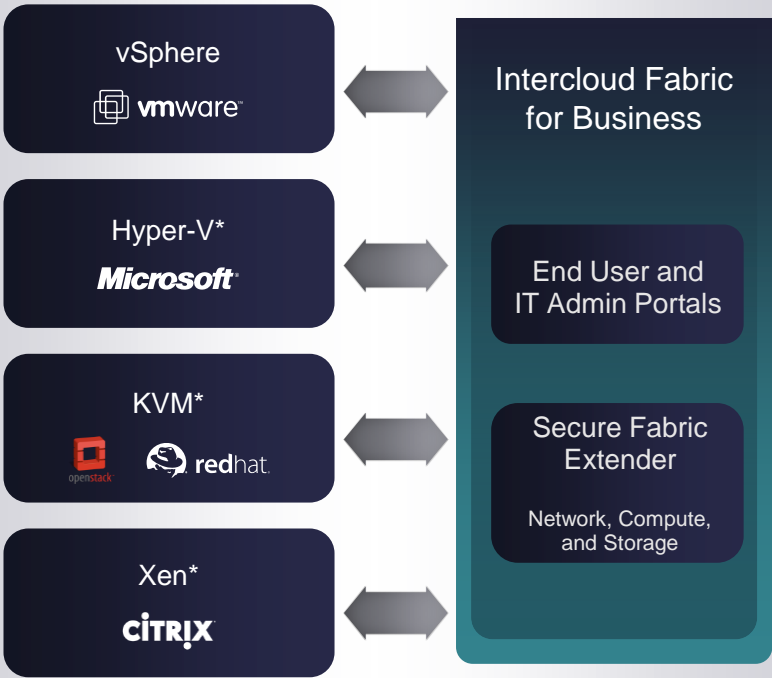
End-to-End Security

Unified Workload Management and Governance

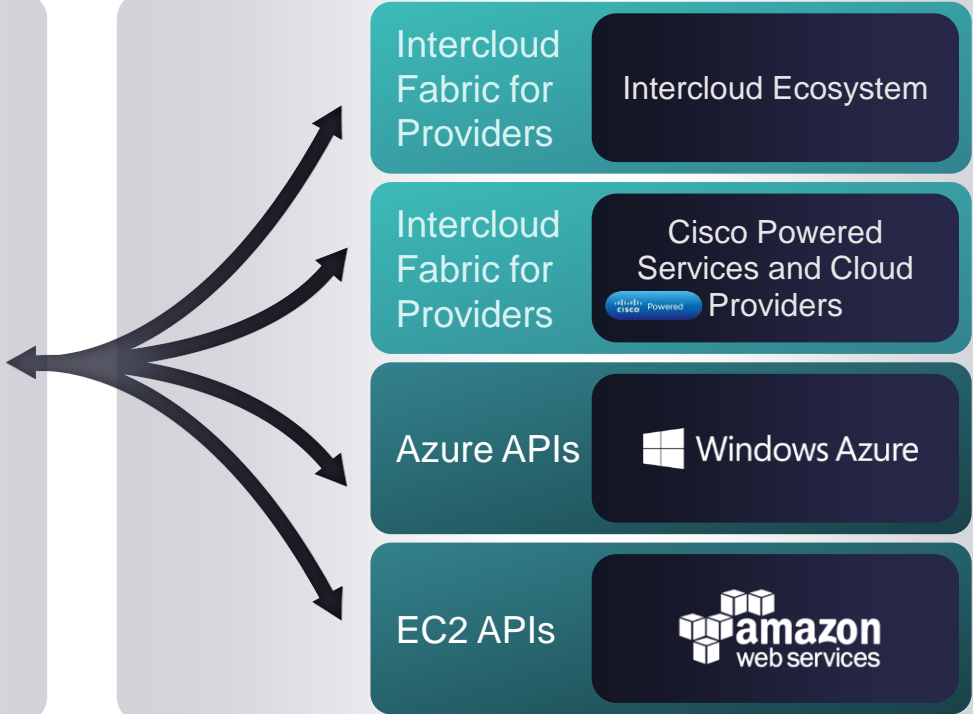
Workload Mobility Across Clouds

Cisco Intercloud Fabric: Solution Overview

DC/Private Cloud



Provider Clouds

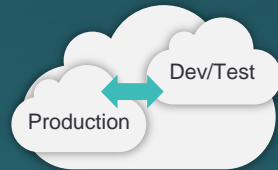


* Available in subsequent releases

Hybrid Cloud Use Cases and Intercloud Fabric ROI

Hybrid Cloud Use Cases and Intercloud Fabric Value Propositions

Dev/Test



Dev/Test Application
Across Private and
Public Cloud

*Bring Back Workload
for Production Scale*

Shadow IT Control



Providing Rapid
Access to Hybrid
Cloud Capacity

*IT in Control of What
and Where Applications
Can Be Deployed*

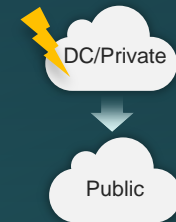
Capacity Augmentation



Bursting from Private
Cloud to Public Cloud for
Peak Workloads

*No Change to
Application, Networking
and Security*

Disaster Recovery*



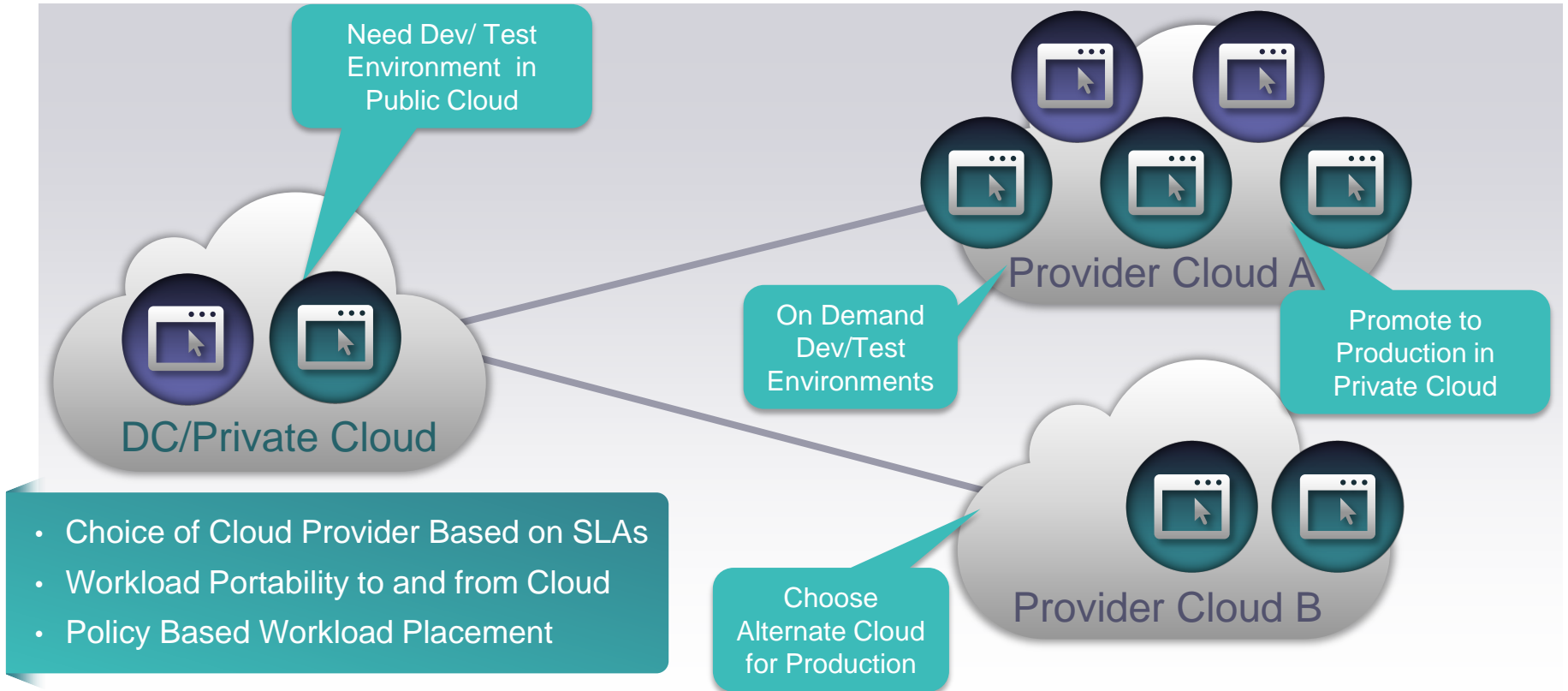
Use Public Clouds
for Backup and
Disaster Recovery

*Securely Extend DC
with Consistent Policies*

* Available in subsequent release

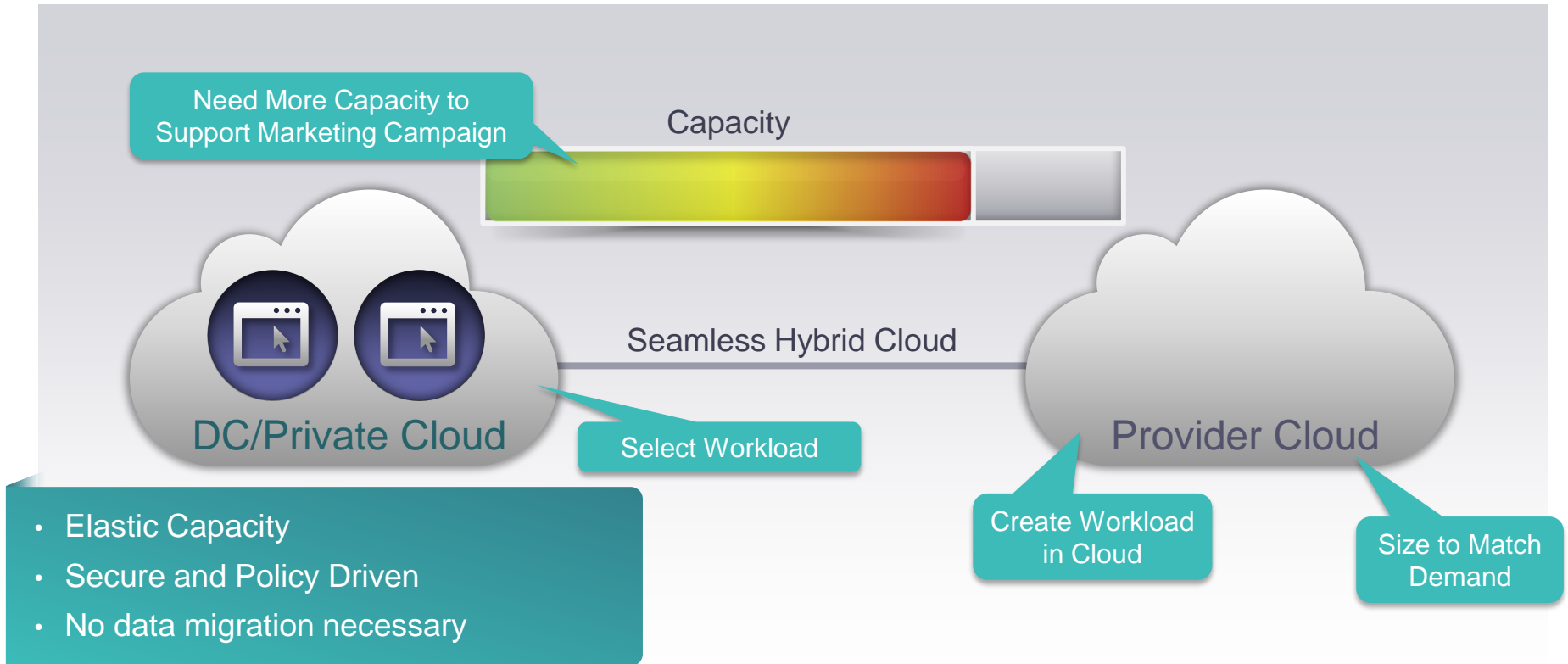
Intercloud Fabric Enabling Dev/ Test Use Case

Online Gaming Company Needs Faster Access to Resources to Test New Games



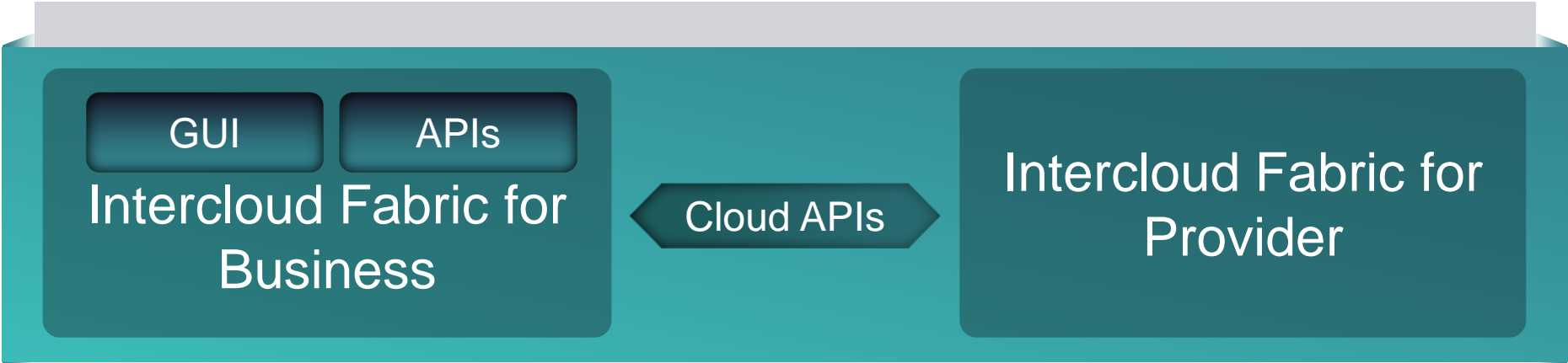
Intercloud Fabric Enabling Capacity Augmentation

Marketing Company Needs Resources to Run Time Sensitive Web Campaign

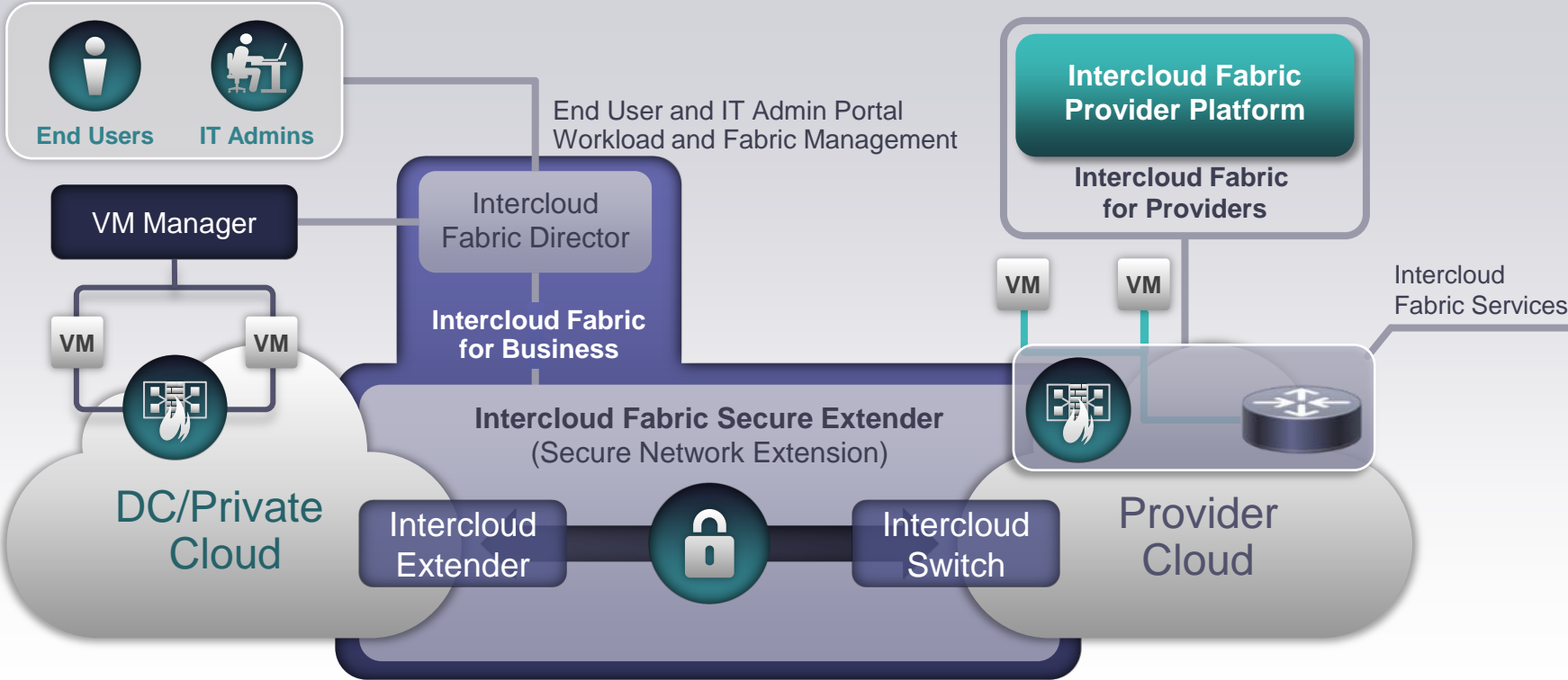


Architecture Overview

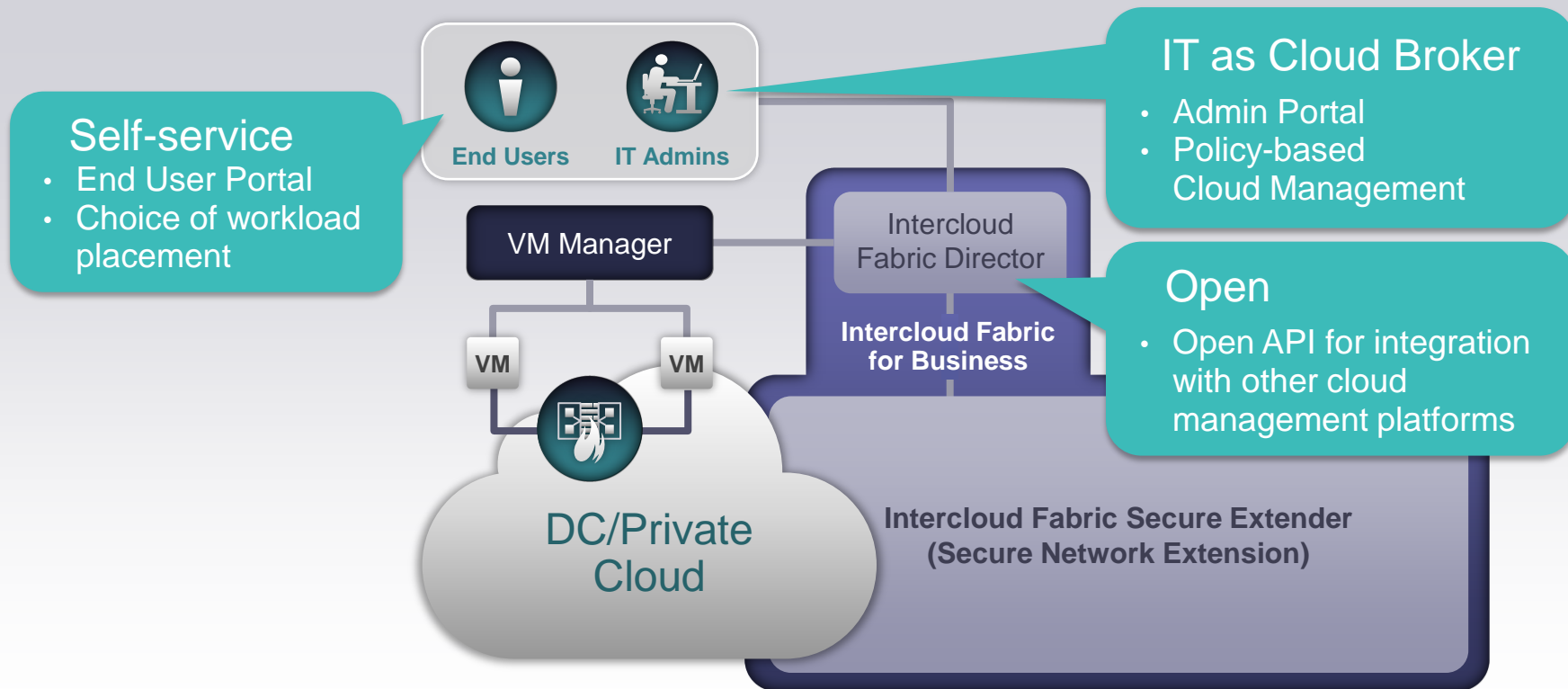
Cisco Intercloud Fabric: Software-based Solution



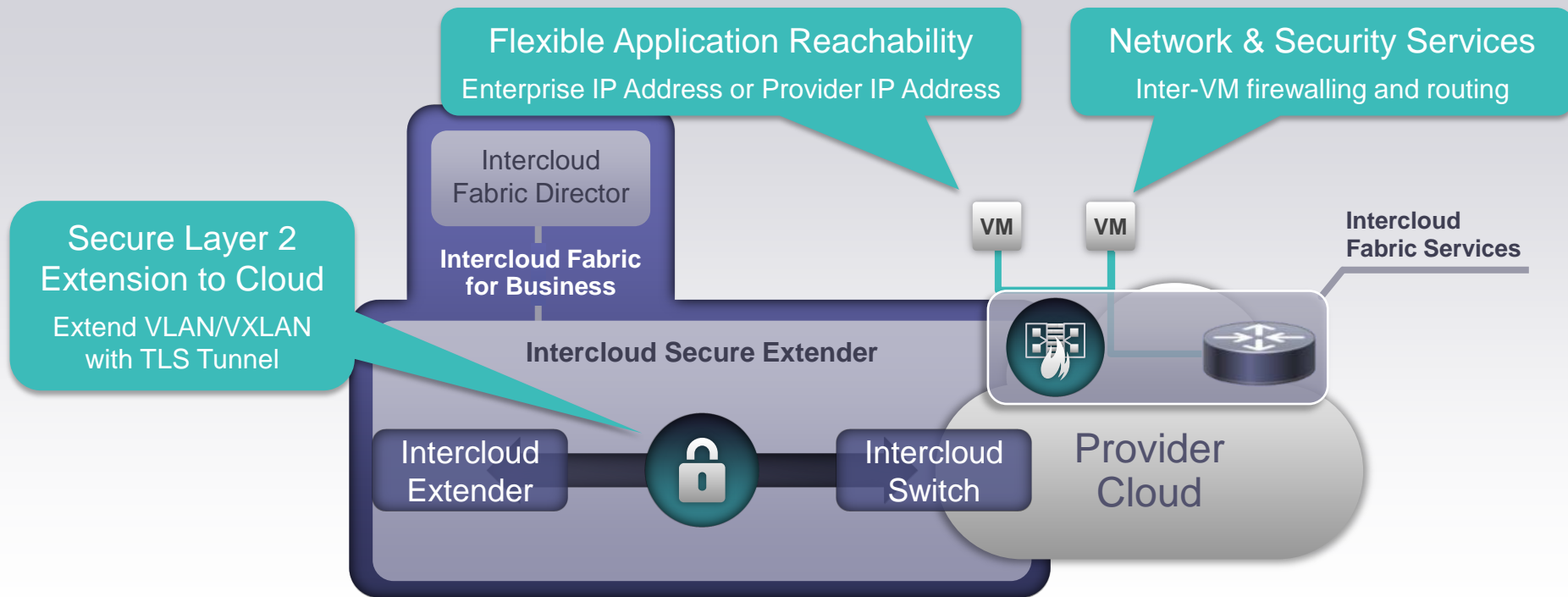
Cisco Intercloud Fabric Architectural Details



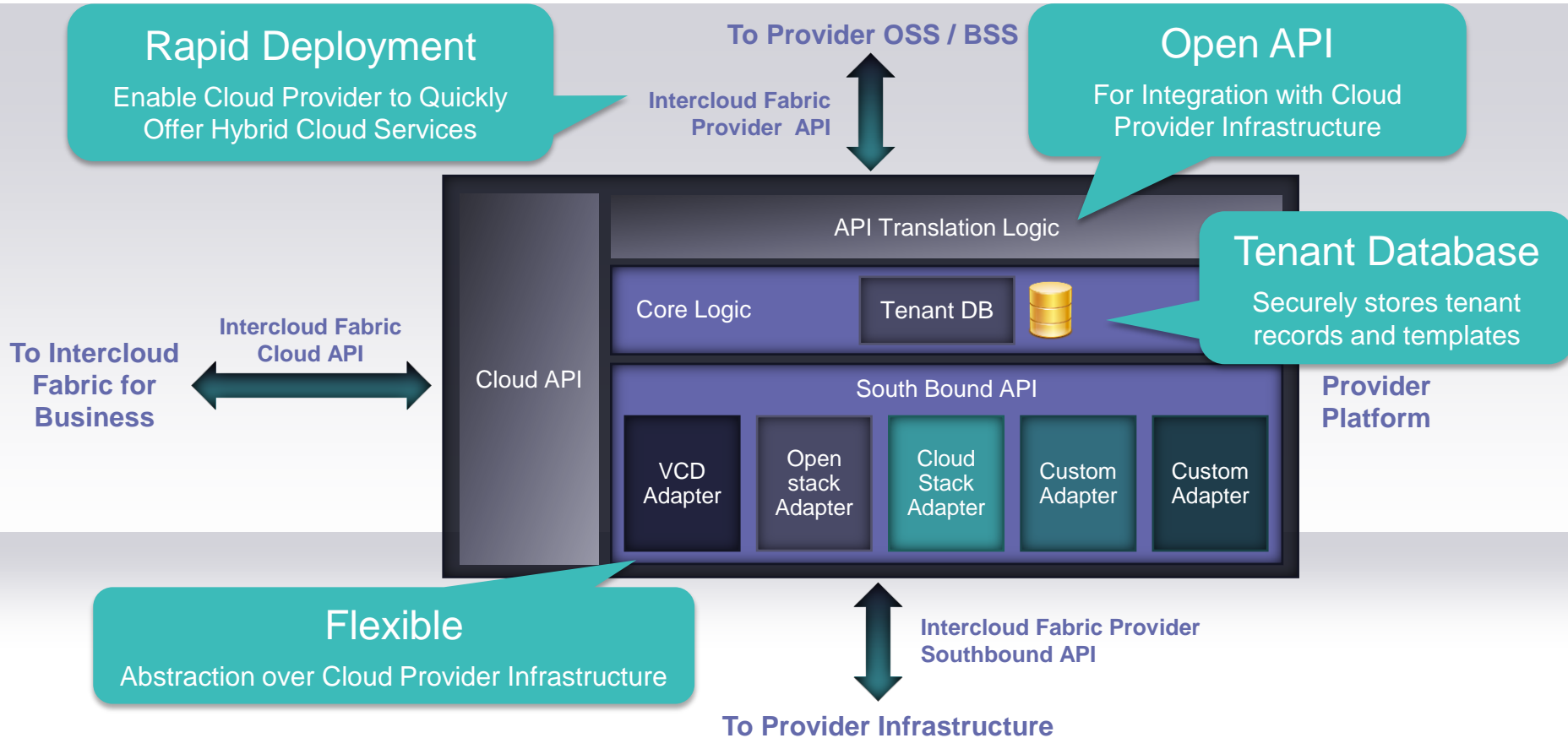
Cisco Intercloud Fabric Director Features



Cisco Intercloud Fabric Secure Extender Features



Intercloud Fabric Provider Platform Features



ICFPP Functionality – What is ICFPP?

- The Intercloud Fabric Provider Platform (ICFPP) is a virtual appliance that SP deploy on their provider network for providing SP with public cloud management API interface.
- ICFPP integrates with the SP cloud platform
- Provides Cloud Management API standardization for Cisco-powered SPs
- Enables Cloud API support for SPs who do not have public APIs available
- Abstracts the complexity of different public cloud APIs
- Service Providers can run multiple ICFPP instances to access resources programmatically, scale out and provide High Availability

Intercloud Fabric Services

ICF Core Services

ICF Core Services

*Fundamental Service Functions and Capabilities
Integrated Natively to ICF and its Operation*

Networking



Switching, routing and other advanced network-based capabilities

Security



VM to VM and App-to-App security controls

VM
Portability



VM format conversion and mobility

Management
and Visibility



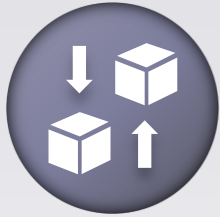
Private and hybrid cloud monitoring capabilities

Automation
and APIs



VM lifecycle capabilities, automated operations and Programmatic APIs

Core Services: VM Portability



VM portability is the process of converting an existing image from the source cloud format to the destination cloud format, and placing it on the destination cloud with its associated policy

Value: VMs can be placed on any cloud independently from the origin cloud and hypervisor flavor, yet conserving the application related policies

Key VM
Portability
Functions:

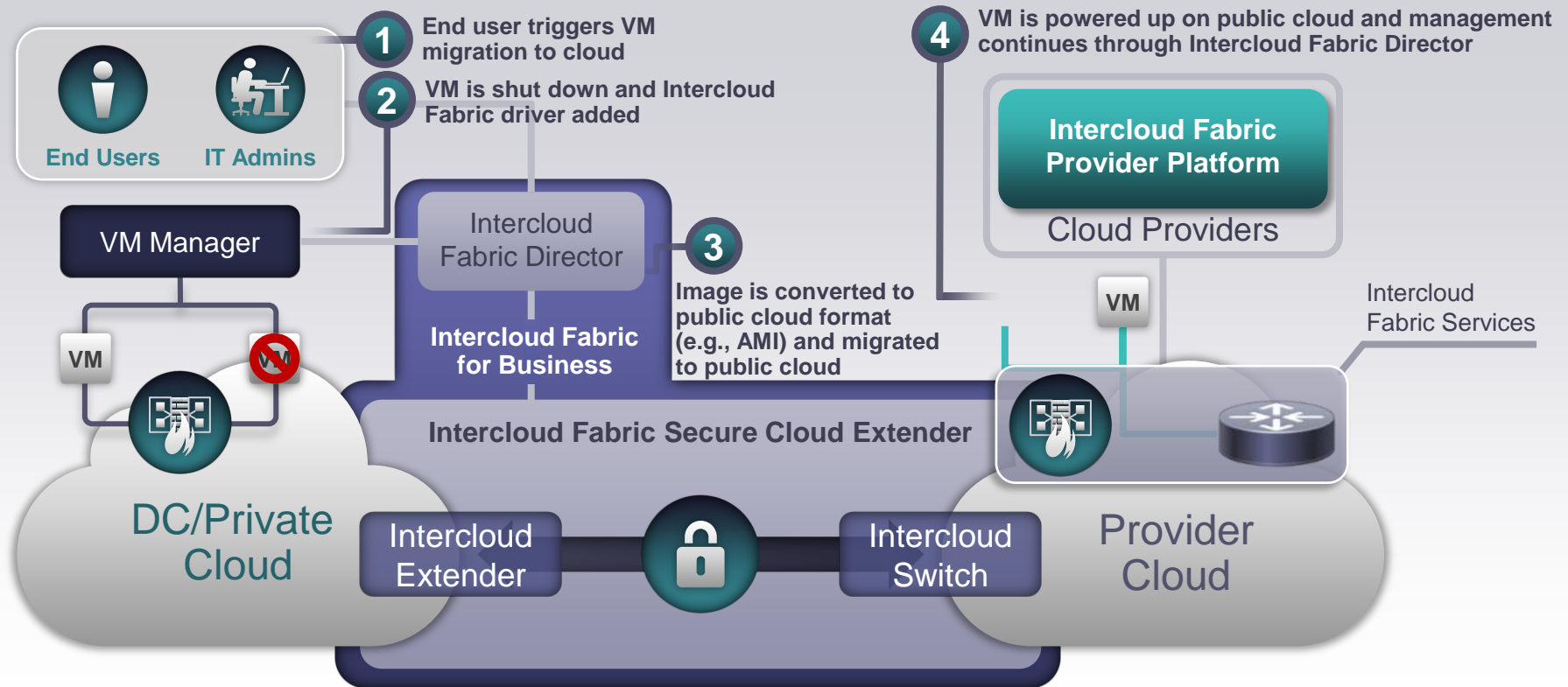
Format
Conversion

Policy
Portability
and Control

Driver
(Agent)
Application

Instantiation

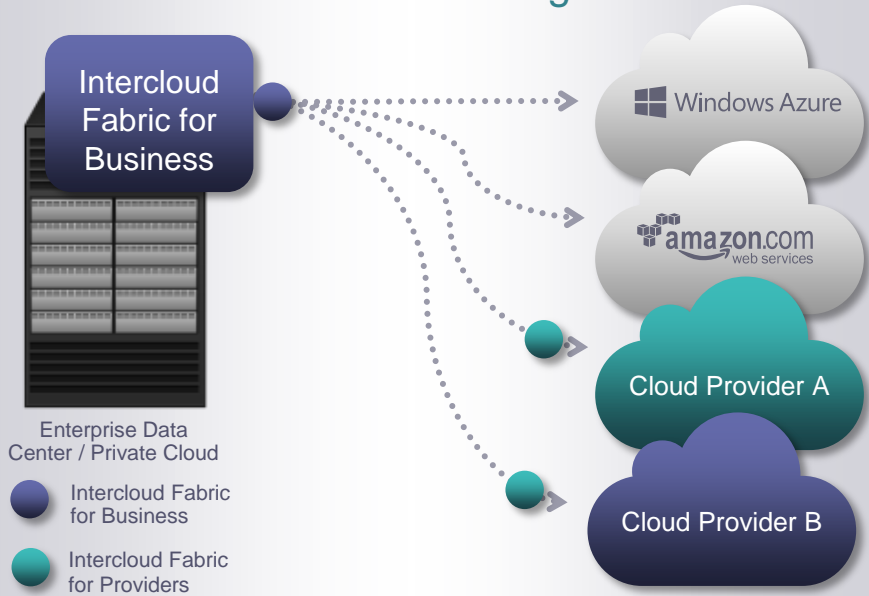
VM Portability: Migration Across Hybrid Cloud



Deployment Models & Offerings

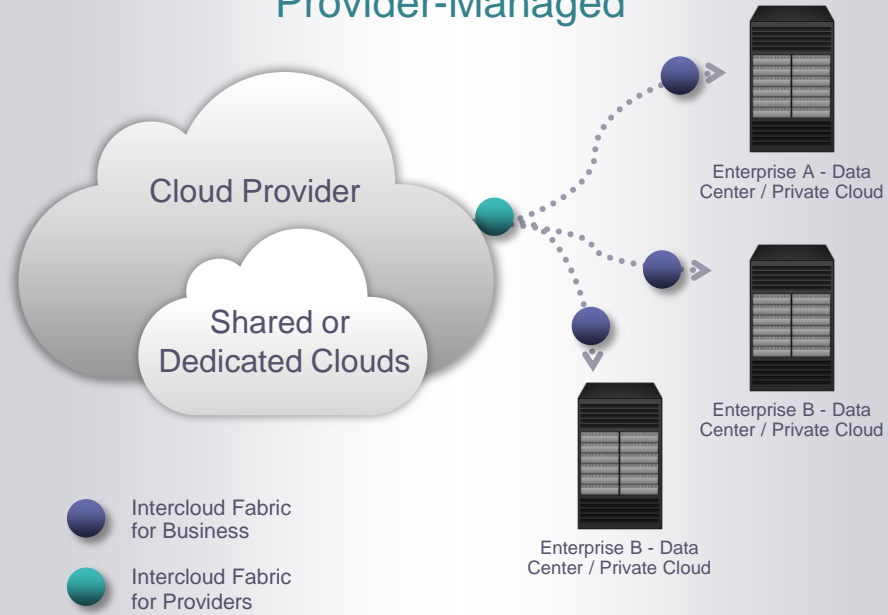
Intercloud Fabric Deployment Models

DC/Private-Managed



- Enterprise procures and deploys software on-premise
- Choice of Intercloud enabled provider clouds
- No extra provider charge for Intercloud Fabric service

Provider-Managed



- Provider procures and deploys software at enterprise
- Enterprise controls workload placement
- Enterprise pays provider for Intercloud service

Cisco Intercloud Fabric Offers

Cisco Intercloud Fabric

For DC/Private

Intercloud Fabric
for Business

For Providers

TO OFFER MANAGED
SERVICES

Intercloud Fabric
for Business

Intercloud Fabric
for Provider

AS A TARGET FOR
HYBRID WORKLOADS

Intercloud Fabric
for Provider

Cisco Intercloud Fabric Value Proposition: Secure Workload Mobility



Cisco Intercloud Fabric Call to Action

Learn



- Learn more about Intercloud Fabric at: <http://www.cisco.com/go/intercloudfabric>
- Cisco Internal Website: <http://iwe.cisco.com/web/cnsg/icf>
- Questions: ask-intercloudfabric@cisco.com

Engage



- Cisco Intercloud Fabric for Business is shipping now!
- Cisco Intercloud Fabric for Provider is now available for Provider integration
- Contact your cisco team to learn how you can be part of the Cisco Intercloud Fabric ecosystem

For Customer Engagements Contact: ask-intercloudfabric@cisco.com

Thank you.

