Accelerate and Simplify Your Journey to the Hybrid Cloud
With VMware Cloud Foundation

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Digitization

Source: https://techcrunch.com/2016/06/07/software-is-eating-the-world-5-years-later/

Digital Delivery
Mobile-Cloud Era Opportunities and Threats
Are Rising Expectations Unsustainable?

**IT Technology Eras**
- Mainframe
- Client-Server
- Mobile-Cloud

**Business Expectations**

**Ability of IT to Deliver**

**Steady IT Budgets***

Millions of Apps
Billions of Users

Empowering Digital Transformation

“It’s our recognition that if you go to bed as an industrial company, you’re going to wake up as a software company.”

Jeff Immelt
Chairman & CEO, GE
VMware Can Help Bridge the Gap

IT Technology Eras

- Mainframe
- Client-Server
- Mobile-Cloud

IT at the Speed of Business

Ability of IT to Deliver

Business Expectations

Steady IT Budgets*

Infrastructure can be complex and a roadblock to agility
Demand for technologies that simplify infrastructure is high

Datacenter Trends

But bringing them together can be hard:

- Deploying point solutions
- Time consuming and complex operations
- Vendor lock-in
- Cost
- Public cloud silos

You should not have to do these undifferentiating tasks
What are the main drivers in moving to the cloud?

- Agility/Speed: 66%
- Improve Quality of Service: 12%
- Business Alignment: 10%
- Defend IT: 7%
- Reduce Costs: 5%

Building the cloud is often a bottleneck
VMware Cross-Cloud Architecture™

Cloud Freedom and Control

VMware Cloud Foundation™

Cross-Cloud Services™
VMware Cloud Foundation™

A Fully Integrated Platform – Making Private Cloud Easy
Provision cloud infrastructure like you provision VMs

Easy to consume platform that delivers the entire SDDC

Server Virtualization

Integrated SDDC Platform

VMware vSphere

VMware Cloud Foundation
VMware Cross-Cloud Architecture™

Private Cloud
- Management and Automation
- Compute
- Network
- Storage

Automated Lifecycle Manager

Public Cloud
- Full Power of the Software-Defined Data Center
- Available as a Service

VMware Cloud Foundation™
VMware Cloud Foundation
Unified SDDC Platform For The Hybrid Cloud

- Delivers the next generation hyper-converged platform
- Combines vSphere, VSAN and NSX into a single unified platform
- Includes VMware SDDC Manager:
  - Natively integrates the cloud infrastructure stack
  - Automates deployment and lifecycle of the cloud infrastructure stack
- Provides the universal platform for any application – traditional and cloud native
- Available across private and public clouds
Build the best in class private cloud for any application

**Modernized**
Software-Defined Data Center
- Compute virtualization
- Storage virtualization
- Network virtualization

**Automated**
- Automated IT service delivery
- Advanced monitoring and troubleshooting
- Business reporting

**Innovation-Ready**
- Integrated OpenStack
- Integrated containers
- VMware Photon™ Platform
Extensible to the public cloud

Your Private Cloud

Your Infrastructure: Owned

VMware Cloud Foundation

Third-Party Public Clouds

Others’ Infrastructure: Operated

Same people. Same process. Same tools.
Next generation hyper-convergence for the private cloud

Adds the benefits of network virtualization

Natively integrated software-defined stack for compute, storage and network

Elastic scalability

High performance space efficient storage

Agile network management

Enhanced security thru micro-segmentation
Example: Horizon 6, NSX & VSAN Deployment

Use Case: Leverage NSX for micro-segmentation in the Horizon desktop pools
- Desktop-to-Desktop access based on policy

- Compute Cluster
  18 Hosts on VSAN

- Management Cluster
  4 Hosts on VSAN

- Desktop Cluster
  18 Hosts on VSAN
Use Case #2: Cross Site VSAN & NSX

VSAN Stretch Cluster
- Failure protection for: Site, local hosts & disk group failure
- Increased enterprise availability & data protection

NSX: Micro-segmentation
- Centralized firewall policy management
- Rules enforced regardless of VM location & VC
Automated lifecycle management and operations through VMware SDDC Manager

Automates Day 0 to Day 2 operations
VMware Cloud Foundation Use cases

- Virtual Infrastructure
- VDI
- Micro-Segmentation
- Dev Ops Ready
- IT Automating IT

vROps, Log Insight, Horizon, vRA, Log Insight, VIC, VIO, vRealize Suite

VMware Cloud Foundation
Further integration with VMware Horizon, vRealize, and Integrated OpenStack

VMware SDDC Manager extends lifecycle automation across entire VMware stack
## VMware Cloud Foundation in practice - Customer case study

VMware One Cloud significantly reduced the number of man-hours with Cloud Foundation

<table>
<thead>
<tr>
<th>Task</th>
<th>Traditional</th>
<th>Cloud Foundation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Architecture Assess, Design and Pilot</td>
<td>60+ Days</td>
<td>--</td>
</tr>
<tr>
<td>Data Center Operations Installation</td>
<td>14 Days</td>
<td>1 Day</td>
</tr>
<tr>
<td>Operational Configuration Pre-Planning</td>
<td>2 Days</td>
<td>4 Hours</td>
</tr>
<tr>
<td>Network Configuration</td>
<td>1 Day</td>
<td>--</td>
</tr>
<tr>
<td>Storage Configuration</td>
<td>2 Days</td>
<td>--</td>
</tr>
<tr>
<td>Automation Configuration</td>
<td>1.5 Days</td>
<td>--</td>
</tr>
<tr>
<td>SDDC Configuration</td>
<td>3 Days</td>
<td>4 Hours</td>
</tr>
<tr>
<td>Environment QA Validation</td>
<td>2.5 Days</td>
<td>2.5 Days</td>
</tr>
</tbody>
</table>

**Total Time**

<table>
<thead>
<tr>
<th></th>
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<th>Cloud Foundation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Time</strong></td>
<td>86+ Days</td>
<td>4.5 Days</td>
</tr>
</tbody>
</table>

1 day = 8 man-hours
Numbers provided by One Cloud early field trial deployment
VMware Cloud Foundation Outcomes

Benefits of VMware SDDC with simplicity of SDDC Manager

- 20:1 server consolidation ratio
- Maximize application uptime
- Up to 50% lower storage capex costs
- Elastic scalability
- Simpler storage operations
- Micro-segmentation
- Up to 60% reduction in networking costs
- Automated network operations
- IT delivery automation
- Capacity planning
- Automated troubleshooting
- Up to 80% time savings with automated build-up & config
- One-click life-cycle mgmt

Traditional DIY

Cloud Foundation

Up to 6–8x faster time to market
Up to 2x more productive
Up to 30–40% in TCO savings

Traditional: deployments with server virtualization only, DIY infrastructure
Data based off of early field customer deployments (i.e: One Cloud) and internal analysis and testing
VMware Cloud Foundation on Public Clouds
Consistent and compatible extension of your data center

- **Agility**
  - Quickly respond to business needs by adding capacity on demand
  - Scale up and scale down resources as needed

- **Compatibility**
  - Migrate virtual machines without any conversion or change
  - Maintain existing processes and reuse existing VM templates

- **Common Management**
  - Prevent operational silos while improving transparency
  - Reduce costs by leveraging existing tools and skillsets
Extend Cloud Foundation to the public cloud

Cloud Foundation as-a-service available from:

- IBM: Q3 2016
- VMware Cloud Air™ Network: Q4 2016

Your Infrastructure: Owned
Others’ Infrastructure: Operated

Flexibility of choice
Run Your Apps and Workloads Anywhere

Maintain and Expand
Run select apps and workloads in the public cloud

Consolidate and Migrate
Migrate more of your private cloud workloads to the public cloud

Reduce and Eliminate
Run all of your apps and workloads in the public cloud

VMware gives you ultimate cloud flexibility and freedom.
Common platform for the private and public cloud

Deployed on-premise
Qualified hardware & systems
VMs, apps, & infrastructure managed by you

Accessed through web portal
Consumed as subscription
VMs & apps managed by you
Infrastructure managed by 3rd party service providers (vCAN)

VMware Cloud Foundation
VMware Cloud Foundation with vCloud Air Network

Combining a common SDDC platform with advanced services for protecting and extending the data center

Data Center Extension
- Simplify integration and improve connectivity
- Reduce time, risk, and cost with scalable, 2-way app portability

Data Center Replacement
- Achieve an agile, scalable, consolidated infrastructure across locations
- Improve network manageability

Disaster Recovery
- Simplify and speed disaster recovery by mirroring on-premises architectures
- Eliminate costs associated with maintaining a secondary data center
Available VMware Cloud Foundation Consumption Options

Integrated Systems

Private Cloud

Ready Systems

Public Cloud

Qualified VSAN Ready Nodes from:

- Dell
- QCT
- Hewlett Packard Enterprise

Qualified Networking from:

- Cisco
- Arista

Software Deployment Options:
- Factory pre-loaded by VCE
- Customer self-deployed onsite
- VMware led onsite deployment
- Factory pre-loaded by Avnet

Cloud Service Providers

- IBM

Q3 2016 GA

Starting in Q4 2016

...more to come
Thank You

www.vmware.com/products/cloud-foundation