



# **Practical Guide to Cloud Computing Version 3.0**

*Webinar December 19, 2017*

# The Cloud Standards Customer Council

*THE Customer's Voice for Cloud Standards!*



- Provide customer-led guidance to multiple cloud standards-defining bodies
- Establishing criteria for open standards-based cloud computing

## 2017 Deliverables

- Cloud Customer Architecture for Hybrid Integration
- Impact of Cloud Computing on Healthcare v2.0
- Cloud Customer Architecture for API Management
- Data Residency Challenges
- Cloud Customer Architecture for Blockchain
- Cloud Customer Architecture for Big Data and Analytics v2.0
- Hybrid Cloud Considerations for Big Data and Analytics
- Practical Guide to Cloud Management Platforms
- Practical Guide to Cloud Computing v3.0
- Interoperability and Portability for Cloud Computing: A Guide v2.0
- Security for Cloud Computing: 10 Steps to Ensure Success v3.0

## 2018 Projects

- Migrating Apps to Public Cloud Services: Roadmap for Success v2.0
- Cloud Customer Architecture for Artificial Intelligence
- And more!

**700+** Organizations participating



<http://cloud-council.org>

# Speakers



**Tracie  
Berardi**

Program Manager  
Cloud Standards Customer Council  
Moderator



**William Van  
Order**

Lockheed Martin Fellow  
Cloud Standards Customer Council  
Steering Committee member



**Mike  
Edwards**

Mike Edwards  
Cloud Computing Standards expert  
IBM Cloud PaaS Evangelist



**Karolyn  
Schalk**

Cloud & Cognitive Solutions Technical Leader  
IBM Certified Cloud Solutions Architect v5  
Member IBM Academy of Technology

# Practical Guide to Cloud Computing, Version 3.0

Published December, 2017



*Practical reference to help apply cloud to business challenges*

- Aims to remedy confusion & uncertainty by providing comprehensive & actionable information
- Explains in non-technical language the key concepts of cloud computing & how to best adopt cloud to solve enterprise problems

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## **10 Steps to the Successful Adoption of Cloud**

- 1 Assemble your decision team for cloud adoption**
- 2 Develop business case and an enterprise cloud strategy**
- 3 Select cloud deployment model(s)**
- 4 Select cloud service model(s)**
- 5 Determine who will develop, test, deploy and maintain the cloud services**
- 6 Develop governance policies and service agreements**
- 7 Assess and resolve security, privacy and data residency issues**
- 8 Integrate (cloud solution(s)) with existing enterprise services**
- 9 Develop a proof-of-concept before moving to production**
- 10 Manage the Cloud Environment**

# Practical Guide to Cloud Computing, Version 3.0

## Revision Highlights

- **Essential Characteristics of Cloud Computing revised to reflect characteristics defined in ISO/IEC 17788.**
- **Select Cloud Deployment Model(s) step rewritten.**
- **Determine Who Will Develop, Test, Deploy and Maintain the Cloud Services step expanded to include considerations for maintaining cloud services.**
- **Assess and Resolve Security, Privacy and Data Residency Issues step expanded to include the treatment of data residency management.**
- **Develop a Proof-of-Concept before Moving to Production step revised to include defined success criteria.**
- **All other sections updated to reflect evolution and maturity of both business and technical aspects of cloud computing.**

## Contents

Acknowledgements

Revisions

Executive Overview

Rationale for Cloud Computing

Essential Characteristics of Cloud Computing

The Benefits of Cloud Computing

What is the Importance of Standards-Based Cloud Computing?

Roadmap for Cloud Computing

Step 1: Assemble your Team for cloud adoption

Step 2: Develop a Business Case and an Enterprise Cloud Strategy

Step 3: Select Cloud Deployment Model(s)

Step 4: Select Cloud Service Model(s)

Step 5: Determine Who Will Develop, Test, Deploy and Maintain the Cloud Services

Step 6: Develop Governance Policies and Service Agreements

Step 7: Assess and Resolve Security, Privacy and Data Residency Issues

Step 8: Integrate with Existing Enterprise Systems

Step 9: Develop a Proof-of-Concept before Moving to Production

Step 10: Manage the Cloud Environment

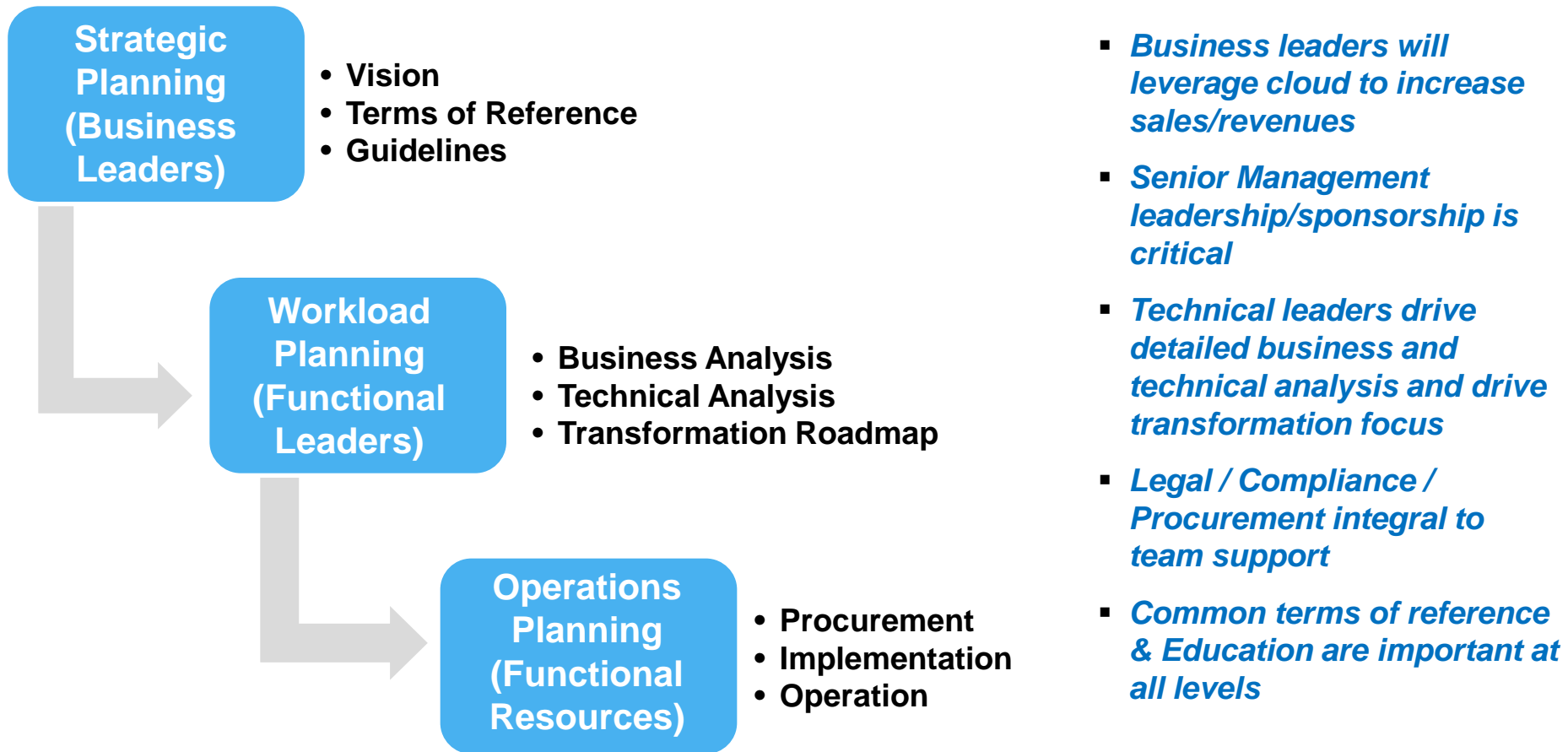
Summary of Keys to Success

Works Cited

Additional References

# Step 1: Assemble your team for cloud adoption

## *Bringing IT and Line of Business together to leverage the Cloud*



# Step 2: Develop business case & enterprise cloud strategy

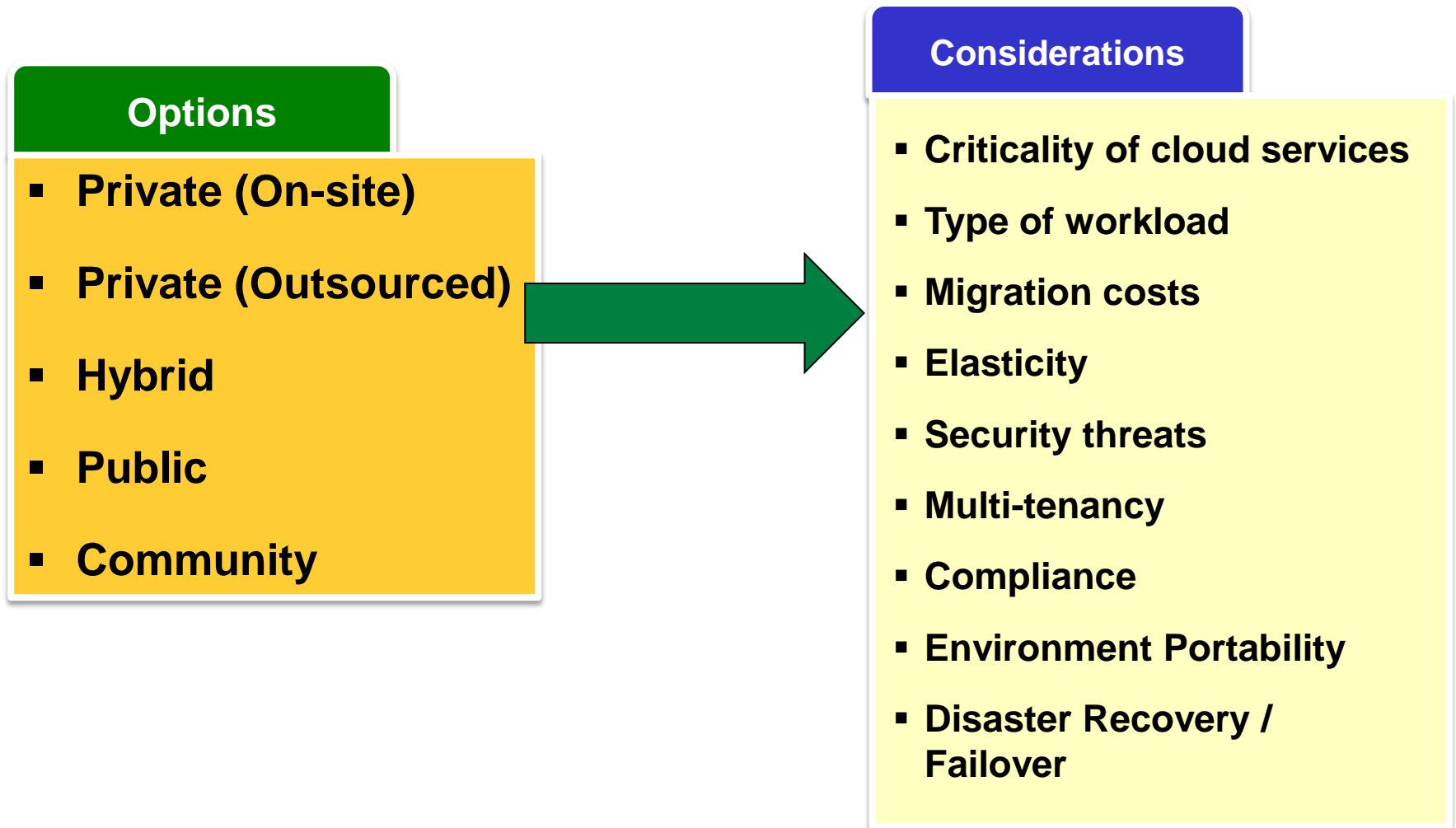
## ***Comprehensive Strategic Plan reduces potential impacts and facilitates future decisions***

### **Key Elements of Strategic Planning**

- *Educate the team*
- *Establish short & long term goals*
- *Understand required services and functionality*
- *Execute thorough cost analysis*
- *Assess impact to service levels*
- *Identify clear success goals and metrics to measure progress*
- *Consider existing IT environment*
- *Assess current operational support model*
- *Understand Legal/Regulatory Requirements*
- *Identify required skills*
- *Track results for extended time*
- *Understand exit process*

# Step 3: Select cloud deployment model(s)

*Establish criteria for selecting the right deployment model*

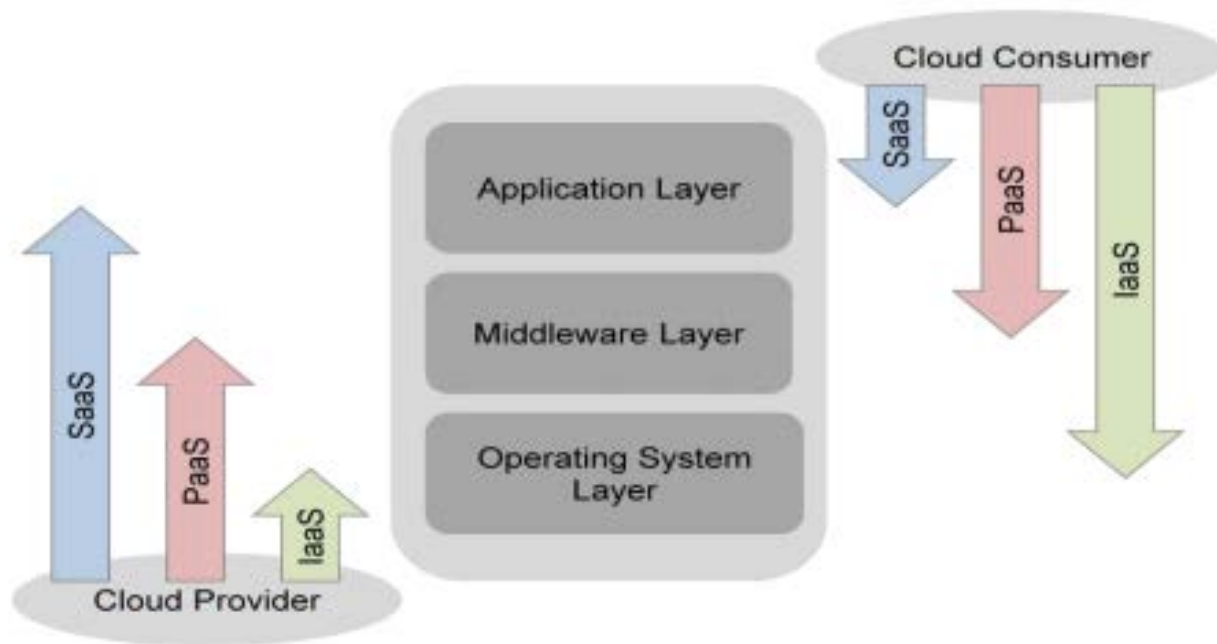


Additional Reference: <http://www.cloud-council.org/deliverables/practical-guide-to-hybrid-cloud-computing.htm>



# Step 4: Select cloud service model(s)

***Many organizations face the challenge of staging a gradual adoption of cloud capabilities, incrementally advancing their IT environment***



- ***A direct move to SaaS may be advisable for many SMBs***
- ***Analyze PaaS offerings in terms of TCO/ROI, availability of new cloud technologies and risks such as vendor lock-in, interoperability and existing IT infrastructure***
- ***IaaS reduces Capex and provides access to scalable IT capacity that otherwise not available***

Additional Reference: <http://www.cloud-council.org/deliverables/practical-guide-to-platform-as-a-service.htm>

# Step 5: Determine who will develop, test, deploy and maintain cloud services

## *Maximize resources to accelerate Cloud adoption*

### Options

- In-house development and deployment
- Cloud Provider development and deployment (if available)
- Independent cloud service development provider
- Off the shelf cloud service offerings

### Critical Factors

- Cost
- Responsiveness
- Flexibility
- Partnership

### Considerations

- Available skills
- Start up considerations
- Updates to existing services
- Testing / deployment / support

# Step 6: Develop governance policies & service agreements

***Cloud computing service agreements should be evaluated in conjunction with specific needs, expectations, governance processes and other cultural considerations***

Public Cloud Service Agreements:  
What to Expect & What to Negotiate

## CSCC Practical Guide to Cloud SLAs

*A reference to help enterprise IT analyze evaluate and compare SLAs from different cloud service providers*

### 10 Steps to Evaluate Cloud SLAs

- 1 Understand roles and responsibilities
- 2 Evaluate business level policies
- 3 Understand service and deployment model differences
- 4 Identify critical performance objectives
- 5 Evaluate security and privacy requirements
- 6 Identify service management requirements
- 7 Prepare for service failure management
- 8 Understand the disaster recovery plan
- 9 Define an effective management process
- 10 Understand the exit process

## Considerations

- *Policies*
- *Culture*
- *Governance*
- *Objectives*
- *Metrics / Measures*
- *T&C's / AUP*
- *SLAs*
- *Remediation & Compensation*



# Step 7: Assess and resolve security, privacy and data residency issues

## *Security, privacy and data residency management are risk management and governance issues*

Cloud Security Standards: What to Expect & What to Negotiate

### CSCC Security for Cloud Computing: 10 Steps to Ensure Success

A reference to help enterprise IT and business decision makers as they analyze and consider the security implications of cloud computing on their business.

#### 10 Steps to Manage Cloud Security

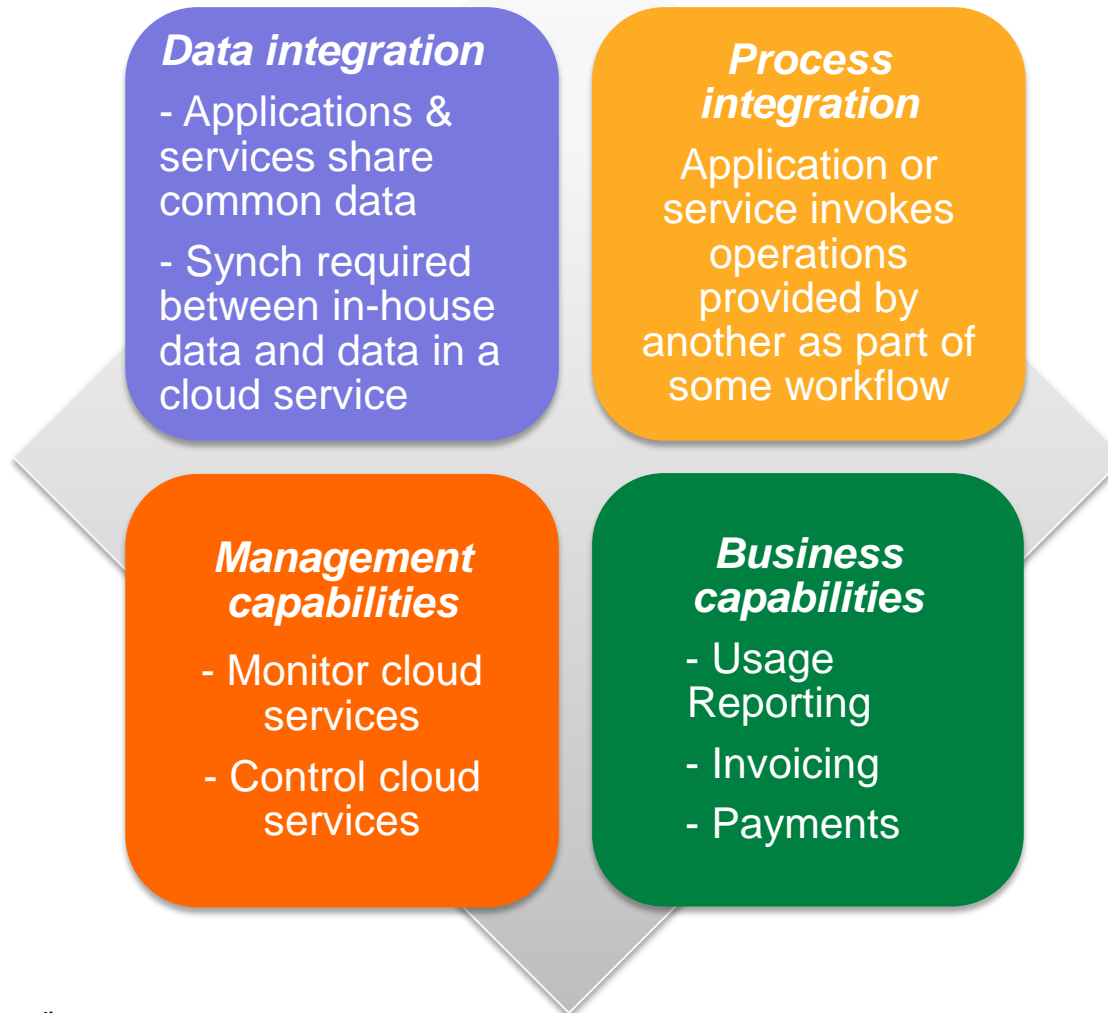
- 1 Ensure effective governance, risk & compliance
- 2 Audit operational & business processes
- 3 Manage people, roles & identities
- 4 Ensure proper protection of data & information
- 5 Enforce privacy policies
- 6 Assess the security provisions for cloud applications
- 7 Ensure cloud networks & connections are secure
- 8 Evaluate security controls on physical infrastructure & facilities
- 9 Manage security terms in the cloud SLA
- 10 Understand the security requirements of the exit process

### Cloud Security Risks

- Loss of governance
- Compliance and legal risk
- Responsibility ambiguity
- Isolation failure
- Data protection
- Insecure or incomplete data deletion
- Handling of security incidents
- Service unavailability
- Management interface vulnerability
- Vendor lock-in

# Step 8: Integrate with existing enterprise services

*Integration involves a number of different components, both within the organization and within the cloud service provider*

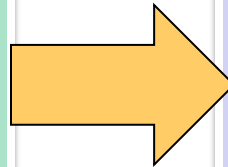


# Step 9: Develop PoC before moving to production

***Proof-of-Concept is critical to validating that proposed cloud services deliver required functionality and meets expected ROI***

## PoC Team

- **Information Technology**
  - Architects
  - Systems/DB administrators
  - Senior developers
  - Customer support
- **Functional representation**
  - Manage alignment of solution with business user and key stakeholder expectations during the POC



## Implementation Activities

- Verify cloud service delivers required functionality
- Verify that all processes work
- Verify data recovery activities, formatting, migration, etc.
- Verify integration with management & monitoring systems
- Ensure that help desk can address questions and problems quickly
- Develop back out plan should there be unexpected problems in early stages of production
- Verify identity & access management
- Verify admin staff have appropriate access

# Step 10: Manage the cloud environment

***Ensure that the right people understand that the Cloud Services are meeting expectations***

- ***Consider technical and customer support***
- ***Shared responsibility***
  - Enterprise (CIO and Customer Support)
  - Cloud Service Provider
- ***SLA will establish process for:***
  - Identifying problems
  - Establishing who is responsible
  - Defines resources responsible to resolve the incidents (from both consumer and provider) and escalation paths
- ***Metrics are important***
  - “People do what you inspect, not what you expect”
  - Define, monitor and track trends with existing services
    - Identify changes to improve ROI, customer satisfaction, cloud adoption
  - Establish baseline for future services

IaaS	PaaS	SaaS
Business Process	Business Process	Business Process
Applications	Applications	Applications
Data	Data	Data
Runtime	Runtime	Runtime
Middleware	Middleware	Middleware
O/S	O/S	O/S
Virtualization	Virtualization	Virtualization
Servers	Servers	Servers
Storage	Storage	Storage
Networking	Networking	Networking

SRL

Additional Reference: <http://www.cloud-council.org/deliverables/practical-guide-to-cloud-management-platforms.htm>

# Call to Action



## ■ *Join the CSCC Now!*

- To have an impact on customer use case based standards requirements
- To learn about all Cloud Standards within one organization
- To help define the CSCC's future roadmap
- Membership is free & easy: <http://www.cloud-council.org/become-a-member>

## ■ *Get Involved!*

- Join one or more of the CSCC Working Groups  
<http://www.cloud-council.org/workinggroups>

## ■ *Leverage CSCC Collateral*

- Visit <http://www.cloud-council.org/resource-hub>



# Additional CSCC Resources



- **Practical Guide to Cloud Computing v3.0**
  - <http://www.cloud-council.org/deliverables/practical-guide-to-cloud-computing.htm>
- **Migrating Applications to Public Cloud Services: Roadmap for Success**
  - <http://www.cloud-council.org/deliverables/migrating-applications-to-public-cloud-services-roadmap-for-success.htm>
- **Practical Guide to Cloud Service Agreements v2.0**
  - <http://www.cloud-council.org/deliverables/practical-guide-to-cloud-service-agreements.htm>
- **Public Cloud Service Agreements: What to Expect and What to Negotiate v2.0**
  - <http://www.cloud-council.org/deliverables/public-cloud-service-agreements-what-to-expect-and-what-to-negotiate.htm>
- **Practical Guide to Hybrid Cloud Computing**
  - <http://www.cloud-council.org/deliverables/practical-guide-to-hybrid-cloud-computing.htm>
- **Practical Guide to Platform-as-a-Service**
  - <http://www.cloud-council.org/deliverables/practical-guide-to-platform-as-a-service.htm>
- **Convergence of Social, Mobile and Cloud: 7 Steps to Ensure Success**
  - <http://www.cloud-council.org/deliverables/convergence-of-social-mobile-and-cloud-7-steps-to-ensure-success.htm>
- **Practical Guide to Cloud Management Platforms**
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- **Data Residency Challenges**
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- **Security for Cloud Computing: 10 Steps to Ensure Success v2.0**
  - <http://www.cloud-council.org/deliverables/security-for-cloud-computing-10-steps-to-ensure-success.htm>
- **Cloud Customer Architecture for Securing Workloads on Cloud Services**
  - <http://www.cloud-council.org/deliverables/cloud-customer-architecture-for-securing-workloads-on-cloud-services.htm>
- **Cloud Security Standards: What to Expect and What to Negotiate v2.0**
  - <http://www.cloud-council.org/deliverables/cloud-security-standards-what-to-expect-and-what-to-negotiate.htm>

# Thank You!

Join the conversation



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