Go further, faster®

Cloud Deployment Models

Kirk Kern

CTO Cloud Solutions

NetApp US Public Sector

Application Delivery Model Changing

Boundary-less IT

CDN, Gateway

Infrastructure as a Service

- Backup as a Service
- DR as a Service
- Compute

Software as a Service

- Mobile applications
- Collaboration applications
- CRM applications
- Core versus context

Platform as a Service

- Cloud Scalable Applications
- Dynamic Resource Apps
- Geo distributed Apps
- Rapid App Development

The New Normal for IT

FROM…

- Builder & Operator
- Complex technology
- Perimeter based Security
- Asset ownership
- Install/integrate/upgrade
- Static & permanent
- Central IT control
- Technology skills

TO…

- Broker of Services
- Simple products
- Encapsulated Security
- Business results
- Elasticity up *and* down
- Instant IT via credit card
- Business skills

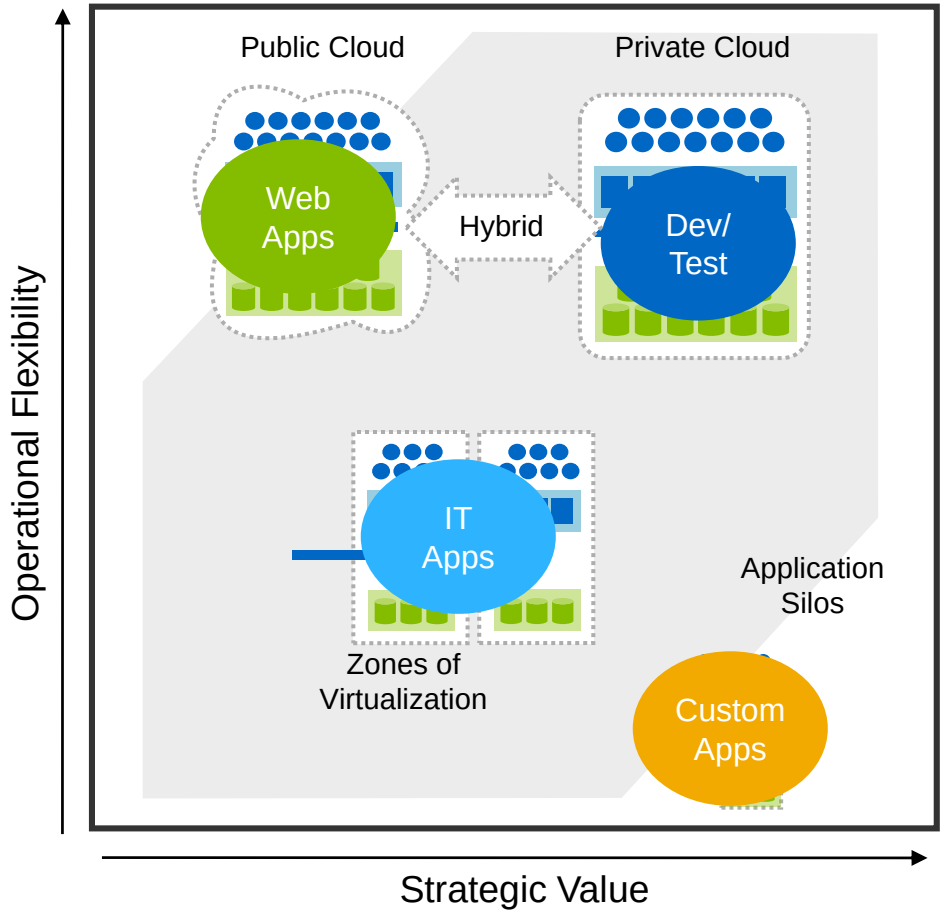
Everyone has to think like a service provider

Cloud Success Starts with Strategy

- What business pressures are you experiencing?
- What IT challenges are you facing?
- How do these align with and affect your financial strategy?
- What is your strategy for risk migration?
- What compliance or security requirements must be satisfied?
- What is your sourcing strategy for external cloud procurement?

Your Strategy Starts With Your Service Products

Categorize requirements based on business needs



Public Cloud

- Adapt to dynamic demands
- Self-service & pay-as-you-go
- Readily available cloud services

Private Cloud

- Core defined-services
- Highly dynamic
- Self-service & metering

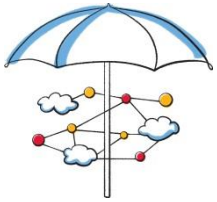
Zones of Virtualization

- Core IT application consolidation
- Moderately dynamic
- No self-service requirements

Application Silos

- App requirements unique to silo
- Dedicated & optimized hardware
- Static environment

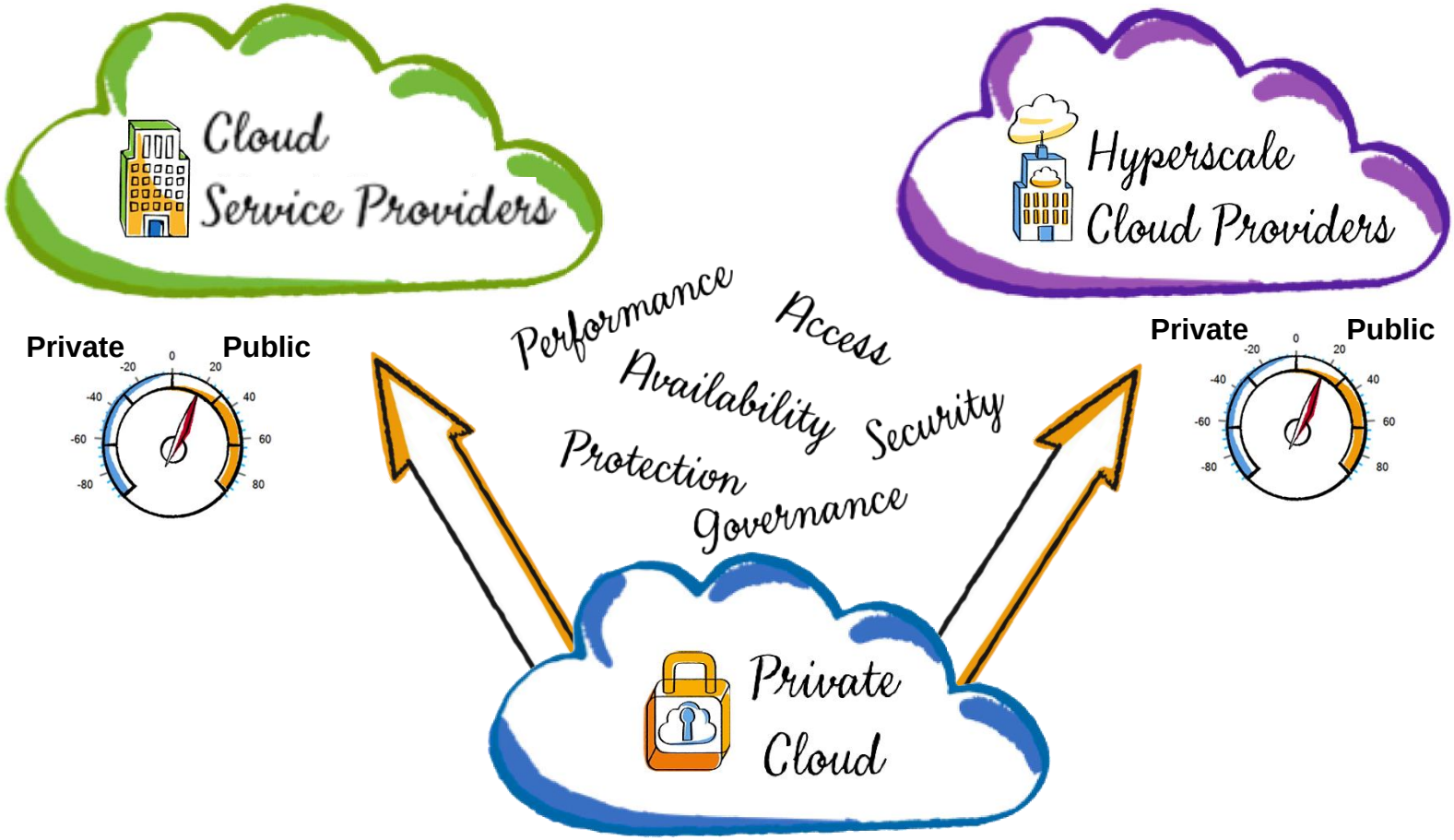
Data Considerations for Cloud



- Data Management Paradigms
- Disaster recovery
- Development and test
- Cloudburst for peak workloads
- Multiregion application continuity
- Data center migration and consolidation
- Performance bus apps/data analytics
- Security (Risk Tolerance) or Compliance

Data Stewardship

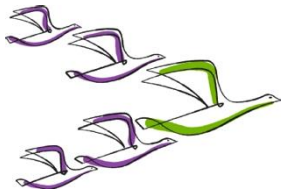
The Need for Seamless Cloud Services



Integrate public resources while retaining control

…And Data Doesn't Move Easily

Compute

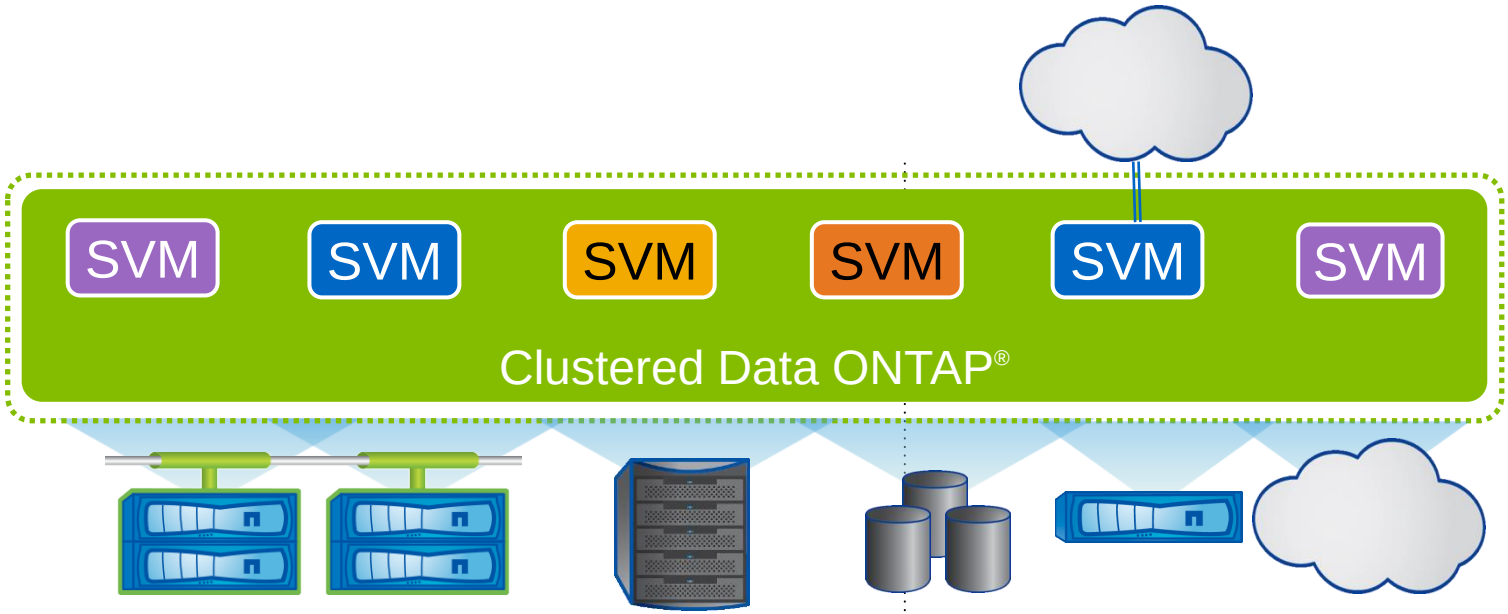


Data

Compute is agile; data is not

- Data needs to be close to compute for performance
- Moving data between clouds is difficult
  - Time consuming
  - Expensive bandwidth
  - Cloud formats are often incompatible
  - Data services are not consistent

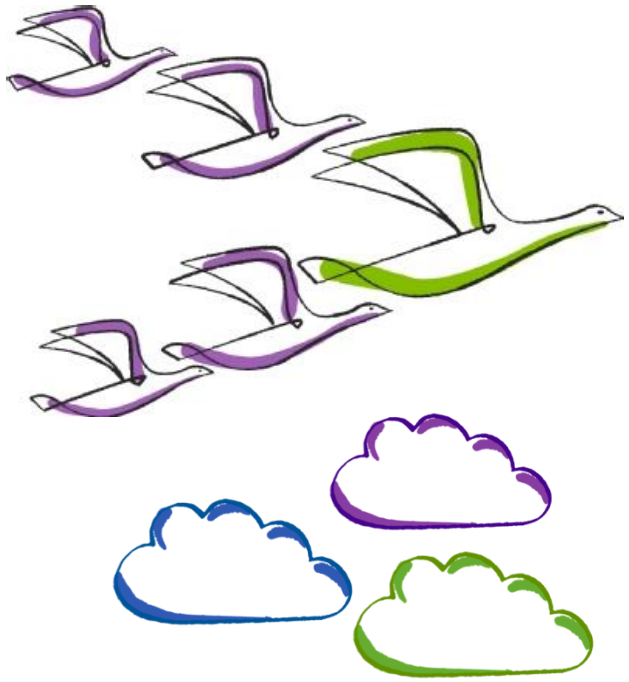
A Foundation Designed for Cloud



Key cloud features:

- Native Data containers
- Secure multi-tenancy
- Pooled virtual resources
- Efficient data transport
- Rich data management
- Standard Protocols

Foundation for Hybrid Data Centers



Only NetApp® delivers:

- Universal data platform
- Dynamic data portability
- Extensive customer choice

Your data, any cloud, endless possibilities

Thank you