

Pre-Conference Seminar

# From Proof of Concept to Full-Scale Production:

#### Continuous Rightsizing on OpenVMS Robert Gezelter, http://www.rlgsc.com



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• How many have over/under provisioned system(s)?



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- How many have had projects denied on prototype costs?



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- How many have over/under provisioned system(s)?
- How many have had projects denied on prototype costs?
- When was the last time you tested restart? Failures?



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# What is "rightsizing"?

- Fitting the environment to the need
- Reducing costs of development
- Reducing hazards of test/experiment
- Capital spending based on quantifiable data; not projections



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## Possibilities

- Systems
- Virtual systems
- Fractional virtual systems
- Timeshared environments



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#### Downsides of real and virtual systems

- The "PC" mindset
- Management
- Patching
- Balkanization



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# **Customized Environments**

- Think "GROUP" not "SYSTEM"
- Group logical name tables
- Group privileges
- Group-specific defaults (groupdevice:[000000]LOGIN.COM
- Product-specific name tables (inserted into LNM\$FILE\_DEV)



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# Customized environments (continued)

- Process quotas
- Paging quotas
- Disk quotas
- Logical disks (LD)



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# Test/Training

- Can all relevant individuals deal with restarts?
- When was the last time each person was checked?
- Deliberate failures
- Weird events
  - Testing
  - Training

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# Starting an OpenVMS project

- What is needed for development/prototyping?
  - Environment?
  - System?
  - Degree of resources
- Testing
  - Virtual machines as simulations
  - Vitual machines are expendable

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- Sizing is a continuous process.
- During development develop actual measurements
- Transition between environment<-> VM <-> systems



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# **Default OpenVMS Configuration**

- enable OpenVMS clusters
- Smallest VMScluster is a single node ("soloist cluster")
  - OpenVMS cluster
  - Volume Shadowing (single member shadow sets)
  - LD
- Can be transitioned seamlessly to larger provisioning



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# **OpenVMS Worker nodes**

- No votes no licensing costs
- Good for testing
- Good for training



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# Disk storage migration

- Properly configured shadow sets can be expanded as needed
- Shadow sets can be moved among different media realizations (e.g., logical disk, directly attached storage, external array) as operational requirements change

See "Migrating OpenVMS Storage Environments without Interruption or Disruption" http://www.rlgsc.com/hptechnologyforum/2005/1146.html



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# Costs of Prototyping

- Using emulators and/or fractional virtual machines essentially zero
- No project need be delayed because of capital needs
- Customized environments eliminate repetitive maintenance efforts



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#### **Questions?**



Slides and other materials:

http://www.rlgsc.com/openvms-bootcamp/2014/continuous-rightsizing-openvms.html



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