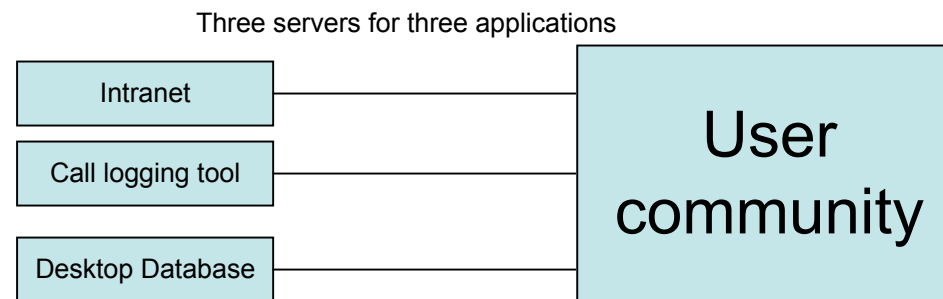


Introducing the virtualization and consolidation concepts

Getting IT right in your business

Virtualization

- There are several types of virtualization.
- We are going to look at hardware virtualization.
 - One physical host server running one or many virtual machines

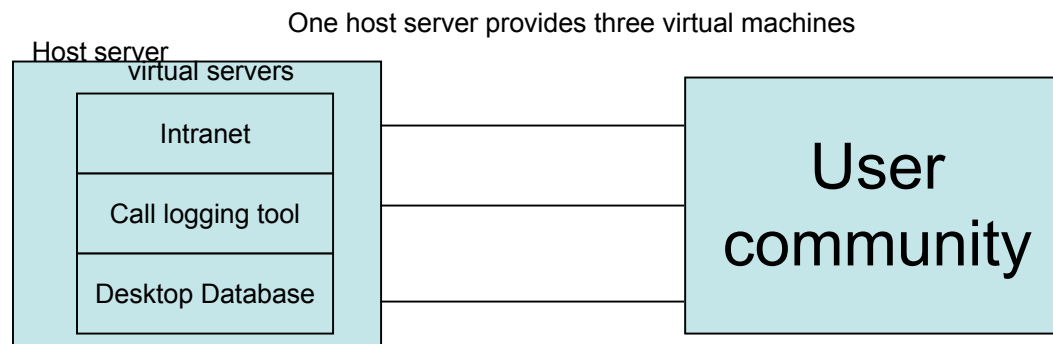


Why virtualization

- Need to achieve more with less
 - We can't keep buying more servers.
- Be more efficient in the data center
 - Constraints of power and space.
- Reclaim data center space
 - Reduce the number of 'idle' servers
 - Reduce the number of 'ghost servers' that might be on but not in use
 - Reduce the hardware support contract cost
 - Improve our power to revenue/ratio - what is the application cost per watt

Virtualization brings us

- A Shared infrastructure to can host your virtual machines:
 - Ability to scale the IT in line with business need.
 - I can allocate more disk, cpu or memory to a machine in line with the business need.
 - I can create a new virtual machine, for a new application.
 - In the example below, one server provides three applications or services.



Consolidation

- We need to achieve more with less
- Decommission and rationalize the services and applications we have:
 - Do we need so many applications, servers and server roles?
 - Fewer SQL/middleware/web/application servers per business unit/application.
- Move to a common shared infrastructure:
 - Fewer more powerful platforms to provide service
 - shared SQL clusters, a web or Citrix farm etc

Consolidation continued

- We consolidate to:
 - Reduce operational costs - licensing/support/carbon footprint of the data center
 - Reduce the hardware support costs and number of servers - fewer servers, similar platforms/configurations to reduce cost
 - Reduce the complexity of the IT service and operations - share feeds/workload where possible (technically and operationally)
 - Reduce the cost of IT

Virtualization key steps

- I use the following terms to describe the deliverables:
 - Tidy
 - Consolidation/evaluation/improvement stage
 - Test
 - Validate the concept, the strategy - be comfortable that it works within your constraints
 - Establish
 - Sell the concepts, understand the different stakeholder requirements, and establish/update processes
 - Deploy
 - Deploy the platform into production and ensure it's business ready, that ownership and processes are in place.

Tidy

- Analyze the server and application estate:
 - How many servers/applications and roles are there
 - What is in scope/what's not in scope
 - What legacy platforms can be easily virtualized
 - What environment to validate the platform on
 - What ghost servers can be virtualized - that server management/script server?
 - Finalize a list of servers in scope with their applications/requirements

Test

- Prove the concept internally (to IT) and to your customer/application teams.
- Validate:
 - Configurations - what's a small/medium/large virtual machine
 - Best practice - who build's, supports and owns what
 - Process - what happens if....
 - What can be virtual and what isn't:
 - The application server with vast disk space might be best left physical so I can virtualize more servers.
 - The batch server which is time and performance sensitive - is the trauma worth the cost saving?

Establish

- Establish the business dialogue:
- What is available now and later:
 - On demand provisioning vs High availability
- What service levels can we provide?
- Sort out the billing/process issues:
 - The ITIL/change/support work flows
 - How can I upgrade the configuration and what's the lead time
 - What's the cost of a virtual machine and it's components? An extra GB of RAM costs?
 - If it doesn't work who do I call - a unified platform support vehicle.
 - If we need a new ESX server/hypervisor who pays?

Deploy

- How do we deploy the platform?
 - Do we start virtualizing the estate by business, by platform or operating system?
- Can we tidy up/improve the server as we virtualize it:
 - Upgrade the layered components
 - Clear down old log/temporary files
- When is the platform live and what is a change in the virtual world?