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How to Fix 5 Common Virtualization Issues

A tech topic that is asked about nearly every day by customers is Virtualization. More specifically, issues asked about most often are Virtual Machine (VM) Sprawl, Resource Distribution, Incorrect Application Placement, Congested Networks, and Licensing Compliance. Here are some tips to help you solve those issues.

VM Sprawl

VM Sprawl is nothing new to the industry. As your company grows, network demands grow, sometimes to a point where management can get out of control. Problems come from a variety of issues. The repercussions of VM Sprawl include a lack of disk space and poor performance, depending on the distances of VMs to host.

To overcome VM Sprawl:

- Audit your VMs and implement good naming standards. Without a good naming structure, it can be challenging to track down an unused VM owner.
- Implement data policies using thin provisioning, including clean up and optimization.
- Use snapshots around retention times.
- Incorporate VM archiving, ensuring you can easily find the data.
- Use a VM lifecycle management tool.

Resource Distribution

Using the proper distribution of VMs across your hosts can improve performance. At the same time, it can limit the number of resources available to others, hindering overall performance. This usually happens when not spec'd out properly.

To avoid this from happening:

- Evaluate your servers. Not all are good choices for Virtualization.
- Size up your server by looking at the number of cores and RAM in your system. A server with more cores on its processor typically means more speed and stability across your virtual machine's network. A system with limited resources will quickly hit a performance wall depending on the number of VMs you're attempting to run. The goal is to ensure there are enough resources for everything you intend to run on it.

Incorrect Application Placement

Correct placement of applications in virtual networks is imperative to ensure that demands can reach the requested services. Putting too many data-intensive applications on virtual storage networks can cause problems. It's best to understand how each application works, and then distribute them across machines, physically and virtually, accordingly.

Congested Networks

Congestion is a common and well-known problem with VMs. Before Virtualization, one application on a single server would usually only use a fraction of the server's network bandwidth. But today, you have multiple VMs residing on a virtualized server with each demanding network bandwidth.

Most servers have only one NIC port that quickly becomes overwhelmed in the virtual environment. One way to resolve the congestion issue is by adding more NIC's to the VM server. Another is by utilizing a VMware DRS cluster of ESXi hosts to balance VMs across multiple servers.

Licensing Compliance

Software is expensive, but it is something that is a must for all networks. However, cloning VMs without buying licensing for the OS and applications can open the door to litigation and penalties. Therefore, it is essential to:

- Review and understand the licensing rules for each application you deploy.
- Check if terminal services licenses are needed and if so, get them.
- Keep track of how licensed software is being used and ensure compliance.
- Have a software licensing backup plan. Put alternatives in place if key software vendors refuse to budge on their software licenses for desktop virtualization.

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