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Server virtualization is becoming increasingly popular, and it seems that everyone is in a mad dash to virtualize their datacenter. While there's no disputing the benefits of server virtualization, there are some questions you should address before you begin to virtualize your servers.

## 1 Does my virtualization plan include a single point of failure?

I recently did a consulting job for an organization that had virtualized all of their servers. The problem was that they'd placed all of their virtualized domain controllers onto a single host server. If that host had died, it would have taken all the domain controllers with it. It's important to plan your virtual server deployment so that the failure of a single host server will not have catastrophic consequences.

## 2 Are all my applications supported in a virtual environment?

Believe it or not, some fairly common applications are not supported on virtual servers. For example, some versions of Exchange Server are supported only on physical servers. Others are supported only on specific virtualization platforms. Before you begin virtualizing your servers, make sure that your applications will be supported in a virtual environment.

## 3 Do I have any servers that are not good virtualization candidates?

Some servers simply do not make good virtualization candidates. This is especially true of servers that run resource-intensive applications or that require special hardware. For example, some enterprise applications enforce copy protection through the use of a dongle. Dongles are almost never supported in a virtual environment.

## 4 How will domain controller placement work?

Earlier, I mentioned that you shouldn't place all of your domain controllers on a single host, but there is more to domain controller planning than that. You have to consider whether you want to virtualize all your domain controllers. If you do virtualize all of them, you will have to decide whether the host servers will be domain members. Making the host servers domain members when all of the domain controllers have been virtualized leads to a "which came first, the chicken or the egg" paradox (although it can be done).

## 5 What is the most suitable virtualization platform?

Numerous server virtualization products are on the market, and each has its own strengths and weaknesses. Be sure to take some time and figure out which product will work best for your own situation.

## 6 What is the contingency plan if a host server dies?

While a server failure is never good, its effects are compounded in a virtual environment. A host server failure can take down several virtual servers and cripple your network. Because host server failures can be so disruptive, you need to have a plan that will help minimize the impact of an outage.

## 7 How many guest machines can each host accommodate?

Probably the single biggest mistake administrators make when virtualizing a datacenter is overloading the host servers. It is critical that you do some capacity planning ahead of time to determine how many guest machines each host server can realistically accommodate. Since every guest machine is different, you need to at least have an idea of where you would like to place each guest machine when you begin the capacity planning process.

## 8 What software licenses will be required?

Software licensing often works differently in a virtual environment. For example, if you are using Hyper-V, you may not be required to license the Windows operating systems that are running on your guest machines. Things aren't always so cut and dried, though, because the actual license requirements vary depending on the versions of Windows being used. Make sure that you understand the license requirements for the operating systems and applications that will be run on your guest machines.


## 9 How will the old server hardware be used?

The virtualization process often results in a number of leftover servers. You might be able to repurpose some of them as virtualization hosts, but you might end up having to retire them. In any case, you should have a plan for your old server hardware.

## 10 What is the plan for existing server clusters?

Although cluster nodes can sometimes be virtualized, you may find that the nodes perform better on physical hardware. If you do decide to virtualize your cluster nodes, just make sure that you don't put all of them on the same host server. Otherwise, you will defeat the purpose of having a cluster because the host will act as a single point of failure.

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## Version history

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