Dear [insert your boss' or /coworker's name]:

We should upgrade our VMware licenses to the top tier, vSphere Enterprise Plus. The extra expense is justifiable, because the additional features will improve our vSphere environment. The Enterprise Plus license has several features that simplify administration and provide better resource controls. In addition, it removes the physical server hardware restrictions that exist with our Enterprise licenses.

The Enterprise licenses lack these Enterprise Plus capabilities: Host Profiles, Distributed vSwitches and Storage and Network I/O Control. In addition, Enterprise Plus has no physical memory limits -- Enterprise servers are limited to 256 GB -- and supports up to 12 cores per CPU socket, compared to six cores on Enterprise servers.

Host Profiles makes configuring new hosts much easier, and it also ensures that hosts are compliant with our configuration standards, similar to how Group Policy in Active Directory guarantees that our Windows servers and desktops have consistent configurations. Building new hosts can be time consuming, and it can lead to misconfigurations from improper settings. Host Profiles can save us time, prevent mistakes and also ensure that our hosts are properly configured, which is especially important for security audits.

Distributed vSwitches also ease network configuration in vSphere. Today, we have to configure vSwitches individually on each host, which can be a tedious process. And if all configurations aren’t identical on each host, it can lead to vMotion-compatibility issues. A Distributed vSwitch spans multiple hosts, and it’s centrally managed in vCenter Server. Like Host Profiles, Distributed vSwitches will save us time and help eliminate configuration mistakes. They also have more features than standard vSwitches, such as support for private virtual local area networks, bi-directional traffic shaping and preservation of network state for virtual machines that are moved via vMotion.

Distributed vSwitches are compatible with the Cisco Systems Nexus 1000V, which adds more features to the standard vSwitch. The Nexus 1000V also provides better management, and it better integrates our virtual and physical networks. There is another bonus: You know how the network guys always complain that they can’t manage and control the virtual networking inside our hosts? Well, the Nexus 1000V gives full control of the virtual network back to them, and it eliminates the need for server administrators to act as network administrators. It also enables full visibility of all virtual network traffic, so network administrators can monitor and secure traffic on both physical and virtual networks.

Additionally, vSphere 4.1 added new resource controls that can help us better manage our storage and network resources. Storage I/O Control enforces storage resource controls at the data store level, so hosts accessing the data store are taken into account when prioritizing a VM’s storage resource amounts. Once a congestion threshold (which measures latency in the storage subsystem) is reached, storage priorities are enforced on each host accessing the data store to ensure that VMs with higher priority have the resources they need.

Network I/O Control prioritizes different host network traffic types on our vSwitches. This capability permits important traffic, such as host storage traffic, to have a higher priority than less critical traffic types. Both the Network and Storage I/O Control features will prevent disruptions from resource usage spikes, ensure that we meet our service-level agreements and keep our company running smoothly.

Finally, the increase in physical hardware limits will improve our vertical scalability and VM densities. Newer server models have eight- and 12-core CPUs, and our Enterprise licenses are limited to six-core CPUs. We need the Enterprise Plus license to take advantage of bigger CPUs. Otherwise, we need to disable cores or use two Enterprise licenses on one server, so we either waste resources or money.

The vSphere Enterprise Plus license provides great features, both today and in the future. While I realize that upgrading our licenses costs money, the additional features are worth it. Upgrading to Enterprise Plus costs less than $700 per CPU, plus a small amount for the difference in Support and Subscription (SnS) costs between Enterprise and Enterprise Plus. As an added bonus, we can bundle the license upgrade with the Nexus 1000V, which normally costs $700 per host. We can purchase both Enterprise Plus and the Nexus 1000V for less than $800, netting us roughly an 85% discount on the Nexus 1000V. We don’t have to upgrade all our VMware licenses at once, but I recommend that we do, to get the most out of the features that span the whole cluster.

We chose VMware as our virtualization platform for its features. To maximize our investment, we should upgrade to Enterprise Plus. I’d be happy to provide you a quote on the upgrade costs and arrange a demonstration on how the features work, so you can see the benefits up close.

Best regards,

[Insert your name]