Virtual Design Master - Challenge 1

We are now settled on Mars, and ready to build a more permanent infrastructure. Keep in mind that power, cooling, and space are extremely expensive resources on Mars. In order to save space, we have decided not to use a traditional Fibre Channel infrastructure, meaning there will be no dedicated Fibre Channel Switches. We do however have plenty of 10G Ethernet switches, with some 40G Ethernet switches. We have three data centers on the planet, in order to provide high availability for our most critical applications. Our most critical system is our Environmental system, which is responsible for production of water and oxygen, as well as reclamation of waste. Should the environmental systems fail, the pods we live in work in can be sustained for only 20 minutes with the existing oxygen in the pod. We rely on this environmental system to control these resources, as well as to warn us when mechanical components through out the system are failing or have failed. Our second most critical system is the system which controls our greenhouses. Any failure in this system will likely lead to major issues with our food supply. While we have the ability to communicate via radio if needed, many of the residents on Mars are used to e-mail and collaborative applications and prefer to use them when possible, since it makes them feel more at home. Your infrastructure should also be able to support the deployment of an unknown business critical application in the future.

Please design an infrastructure you think will meet these requirements. You will not have the opportunity to defend your design in front of the judges, as their expertise is needed to keep the existing systems running until a new architecture is decided upon. Your design should speak for itself.

Document submission is **due Monday July 6th at 11 AM Eastern Time**.

Email the final design to eric@discoposse.com for review. PDF is preferred.

Good luck everyone!