



Groupe Agricola Rises to Challenge of Data Centre Virtualisation



Groupe Agricola

HQ : Paris

Number of employees : 850

Project Name: Nexus Project

Project Manager : Julien Mousqueton, System and Network Architect

Servers : 200 virtual servers, 20 ESX hosts (physical servers)

Percent virtualized : 99%

Result : 50% Reduction in physical DMZ servers after implementing Nexus 1000V and vSphere Enterprise Plus.

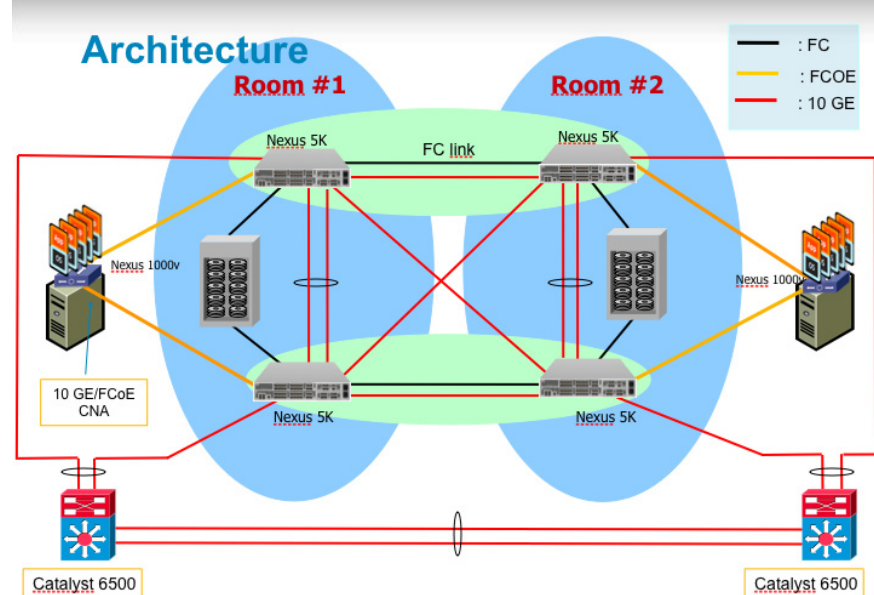
Groupe Agricola, the French insurance conglomerate, has deployed Cisco® Nexus 1000V and 5000 Series Switches to virtualise its infrastructure, and this change has been met with high business user satisfaction.

Virtualising the data centre with VMware brings many benefits, but it also brings new challenges involving how organizations design and manage their network and security teams. If not properly configured virtualisation can place strains on the network, even if server administrators see gains in server capacity optimisation. In the case of Groupe Agricola, the deployment of a suite of Cisco Nexus virtual switches, combined with VMware vSphere management tools, facilitated cooperation between server and networking teams and resolved challenges arising from this infrastructure consolidation project. Groupe Agricola manages retirement, injury, health care, and savings plans for employees in the agricultural sector. When the group decided to consolidate the IT infrastructure three years ago, VMware, the market leader, was the natural choice. Today 99 percent of the group's servers, critical and noncritical, are virtualised on the VMware vSphere platform. Two hundred virtual machines (200 VM servers running on 20 ESX version 4) support applications including Oracle, Business Objects, or Lotus Domino. But for the network engineers, the server infrastructure was just so many undifferentiated black boxes.

Roles and Responsibility Challenge, Not Technical Challenge

In a classical data centre, when a physical server is installed it is connected to a known physical port on a switch, and the network administrator configures the appropriate policies: VLAN membership, traffic shaping, I/O filtering, network addresses, etc. In a virtualised data centre, everything changes. Network switches cannot be configured with individual policies for each virtual machine; network administrators can only see to the underlying physical platform, the server. Also, for all the benefits that vMotion brings to the data centre, it complicates the job of the network engineer as applications migrate across physical ports. Server virtualisation is a serious challenge for the network administrator. According to Julien Mousqueton, network designer with Groupe Agricola, "It was worse than that. Certain network parameters were being configured on the server by system administrators, and were no longer under the control of the networking team." In designing Groupe Agricola's new virtualised data centre, the principal challenge was an operational and people challenge. Several cross-functional meetings were needed to define the roles and authority of each team, and to demonstrate the advantages of a new virtualised architecture. The time spent proved to be essential to the success of the project.

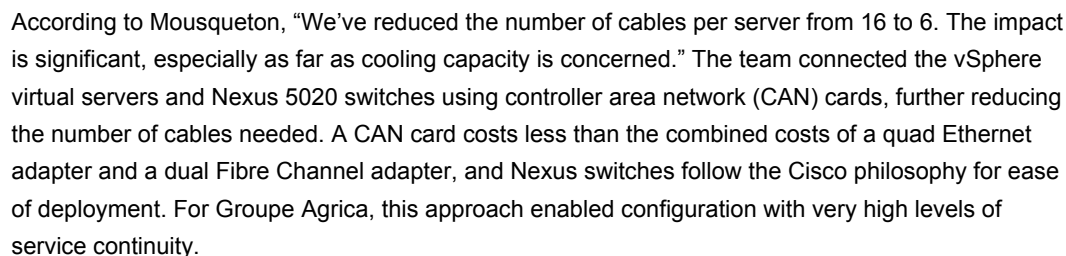
The Cisco Nexus 1000V Series Switch adds advanced networking and security to VMware vSphere 4. The switch can be installed in seven minutes using a GUI installer, and is deployed with no network downtime. Only with the Nexus 1000V can the virtual machine networking be managed and monitored using the same command-line interface (CLI) and network tools that the network team is used to. According to Mousqueton, “We connected the Nexus 1000V to our production virtual servers. We installed the supervisor module on a virtual machine. Now the network team has full control over the network.” Groupe Agricola can now deliver new customer services, which were previously impossible to deliver. For instance, with the Nexus 1000V, network quality of service (QoS) makes it easy to meet SLA commitments. “The Nexus 1000V allows us to define profiles for individual virtual machines,” says Mousqueton. “When we migrate a virtual machine using VMware VMotion, the network reconfigures automatically. That wasn’t the case in the past.”



Groupe Agricola realized network security benefits by deploying the Cisco Nexus 1000V Series Switch. Before deploying the Nexus 1000V, the lack of VM-level visibility by the network team meant virtualisation was not being applied in the DMZ, to avoid the risk of errors. The Nexus 1000V changes the situation. After deploying the Nexus 1000V, Groupe Agricola was able to virtualise the DMZ. The result was a quantifiable reduction in space requirements, power consumption, and management overhead. According to Mousqueton, “We were able reduce the number of dedicated servers in the DMZ by 50 percent”.

The successful deployment of the Nexus 1000V gave Groupe Agrica the incentive to go further. In December 2009, the team planned an extension of their storage infrastructure. One of the priorities was to reduce power consumption. To fulfil this mission, the team decided to deploy four Nexus 5020

Figure 2. Groupe Agricola have virtualized two DMZ



By selecting Cisco Nexus 1000V and 5000 Series Switches and VMware vSphere, Groupe Agricola overcame resistance to server virtualisation and deployed infrastructure at the forefront of today's technologies. According to Mousqueton, "The combination of these solutions allows our IT teams to discover new benefits to virtualised infrastructure, because we can now administer a network in a virtual environment the same way as we have done in the physical world, and it is simplified and intuitive."

The french company based in Paris Groupe Agricola manages state-mandated social security schemes (retirement, injury, health care and savings plans) for employees in the agricultural sector. Groupe Agricola has 850 employees in France, cover over 818 000 pensionners and 1.4 million active employees from 156 000 Entreprises

It's innovative architecture, codenamed "Nexus Project" combines VMware vSphere, Cisco Nexus 1000v and Nexus 5020. For its storage infrastructure, Groupe Agrica has 2 EMC CX3/20 with synchronous mirroring and 2 Pillar Data Systems Axiom 600 with FalconStor IpStor. Groupe Agrica is also well known, as it was one of the first company to roll out a VDI project with VMware View. Today, Groupe Agrica manage 200 Virtual Servers running on 20 ESX hosts, and 550 Virtual Desktops running on 8 ESX hosts. Almost 99% of servers are virtualized yet.



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