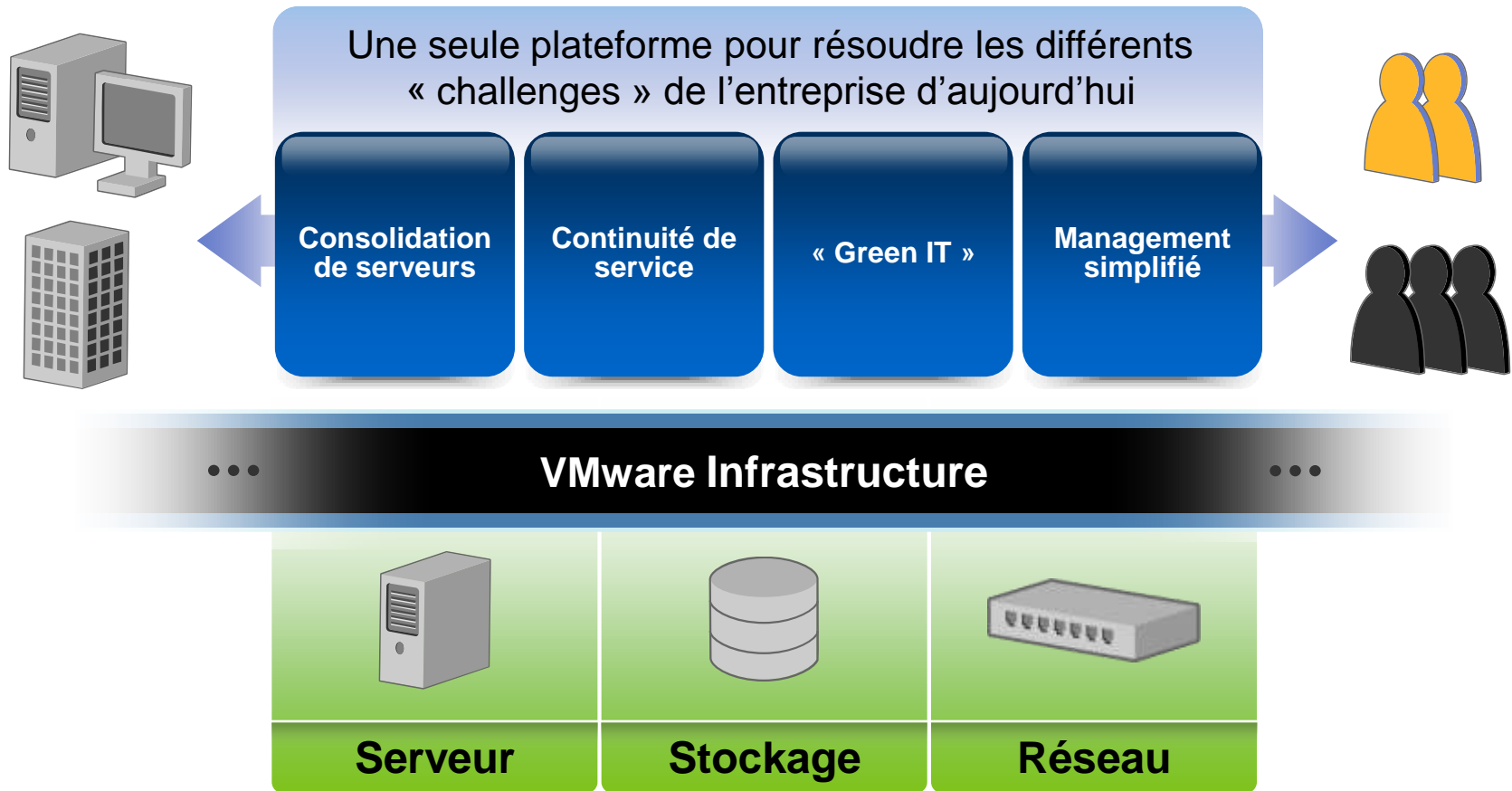




VMware Infrastructure The New Computing Platform

Stéphane CROIX
Systems Engineer

La nouvelle plateforme informatique



Leader mondial des solutions de virtualisation

- ← **Créé en 1998, IPO August 2007**
- ← **Plus de 100,000+ clients à travers le monde, de toutes tailles et toutes industries ; 100% des « Fortune 100 »**
- ← **Vision:** Transformer l'informatique grâce à la virtualisation
- ← **Produits:** Robuste, performant, largement utilisé
- ← **Siège social** a Palo Alto, CA, plus de 40 agences

VMware = Récompensé de nombreuses fois



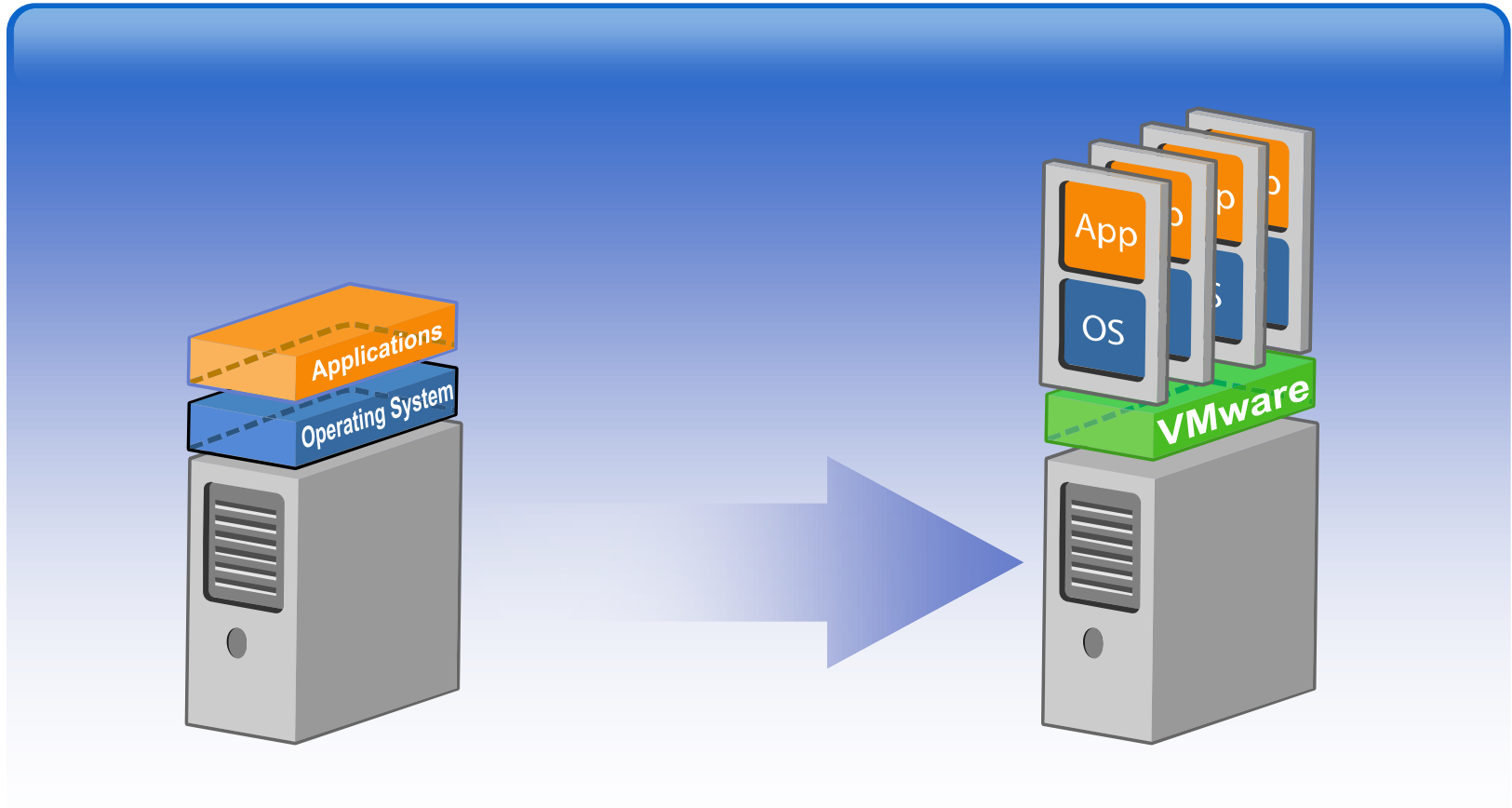
Most Reliable: VMware ESX
(#2: IBM Mainframe)

Best Breakout Technology:
VMware

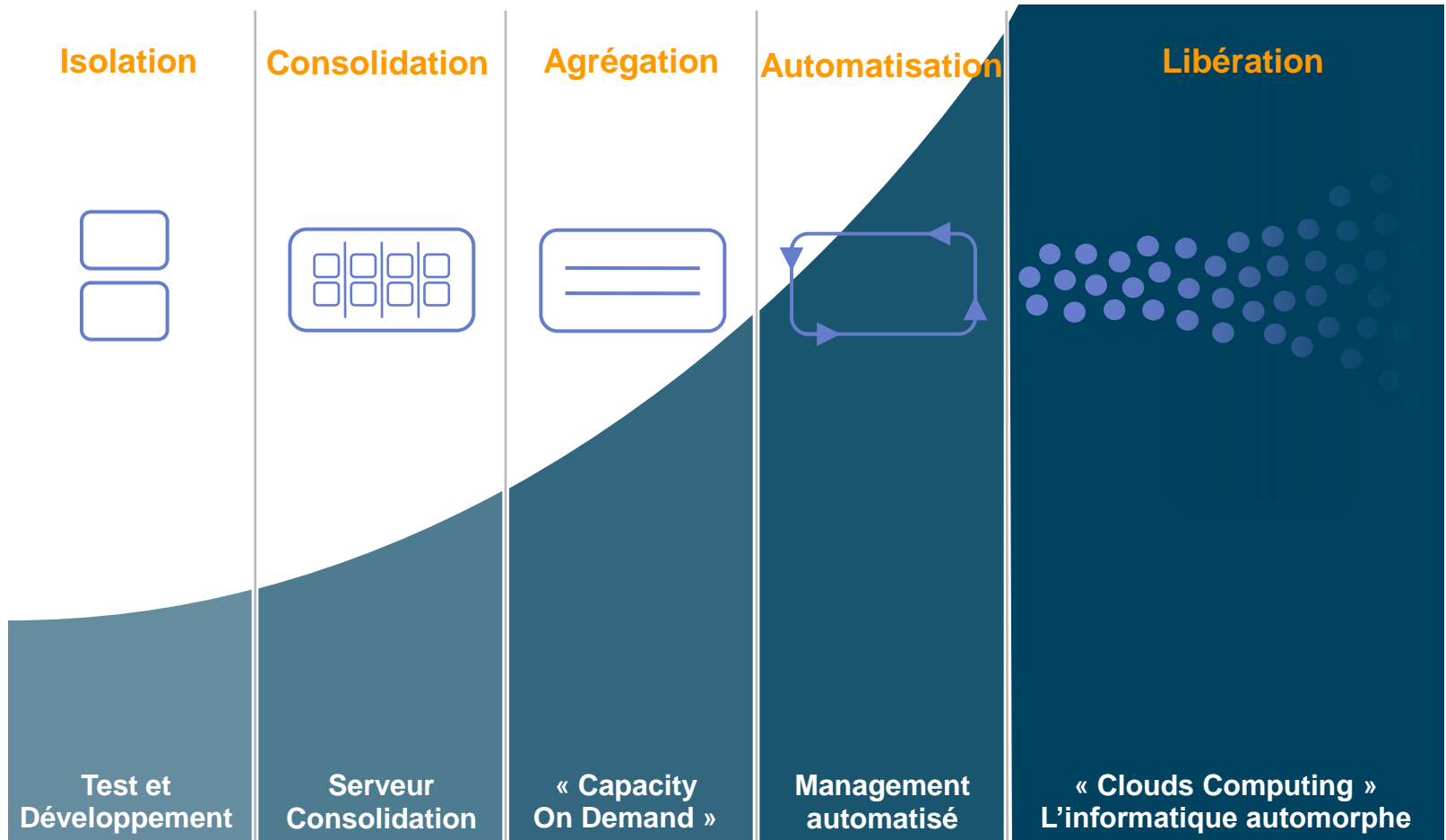
Easiest to Use/Manage:
VMware Workstation

Biggest "Wow" in an IT Product:
VMware Fusion

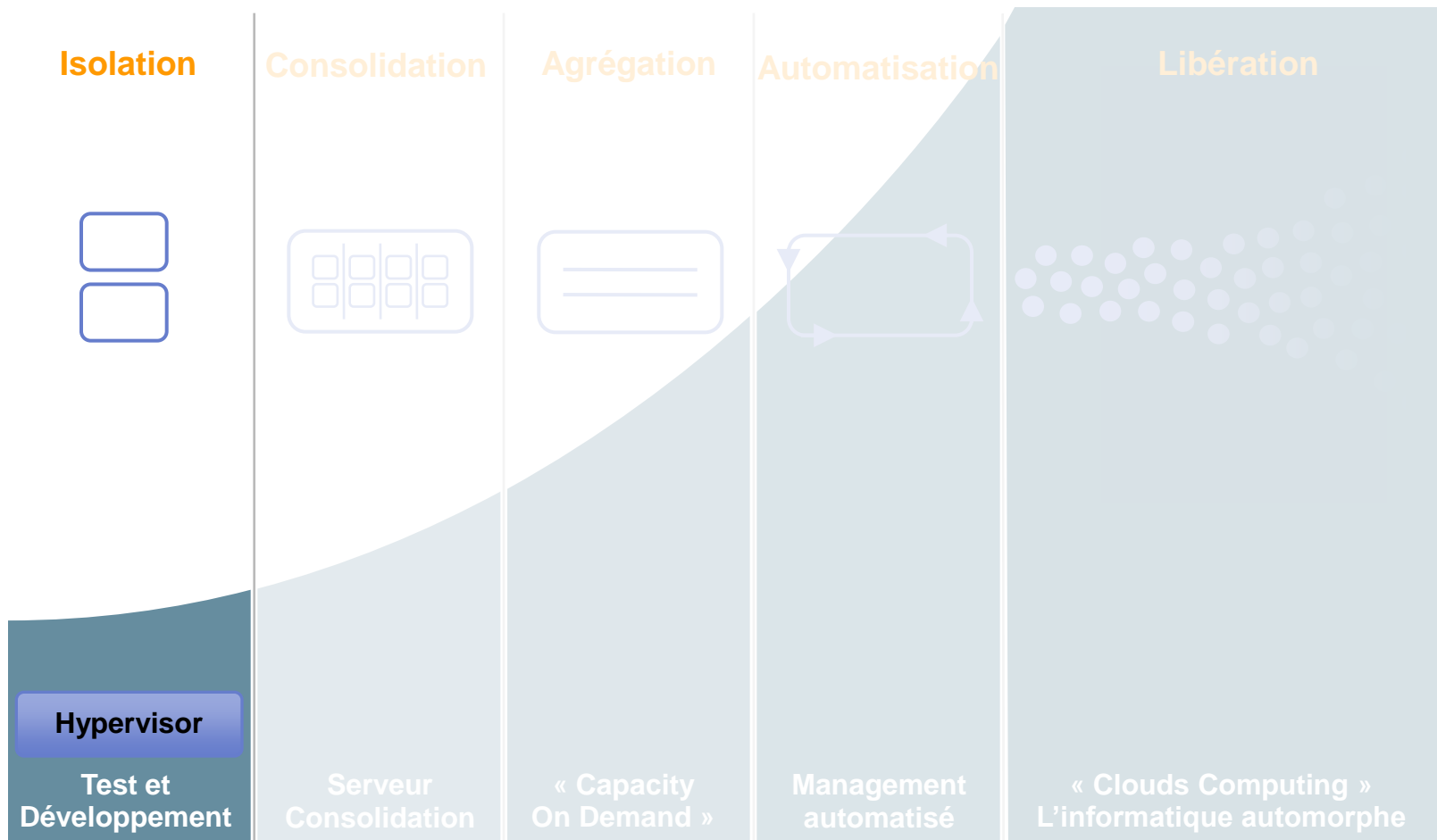
VMware Les bases de la virtualisation



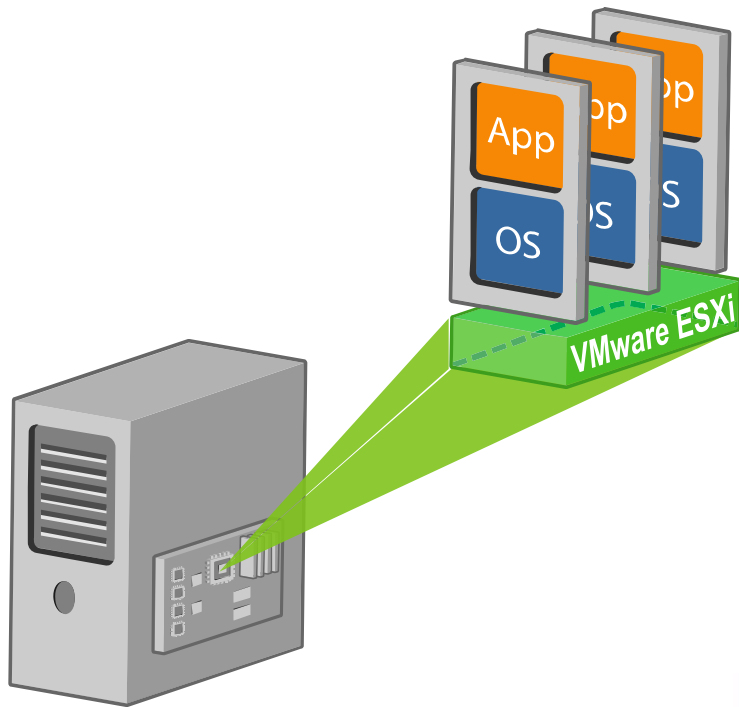
Evolution du Datacenter virtuel



Evolution du Datacenter virtuel



ESXi: Léger, intégré dans le matériel



- ← Image de 32Mo :
Meilleure sécurité et fiabilité
- ← Pas d'installation:
Des VMs fonctionnelles quelques minutes après le démarrage du serveur

DELL

NEC

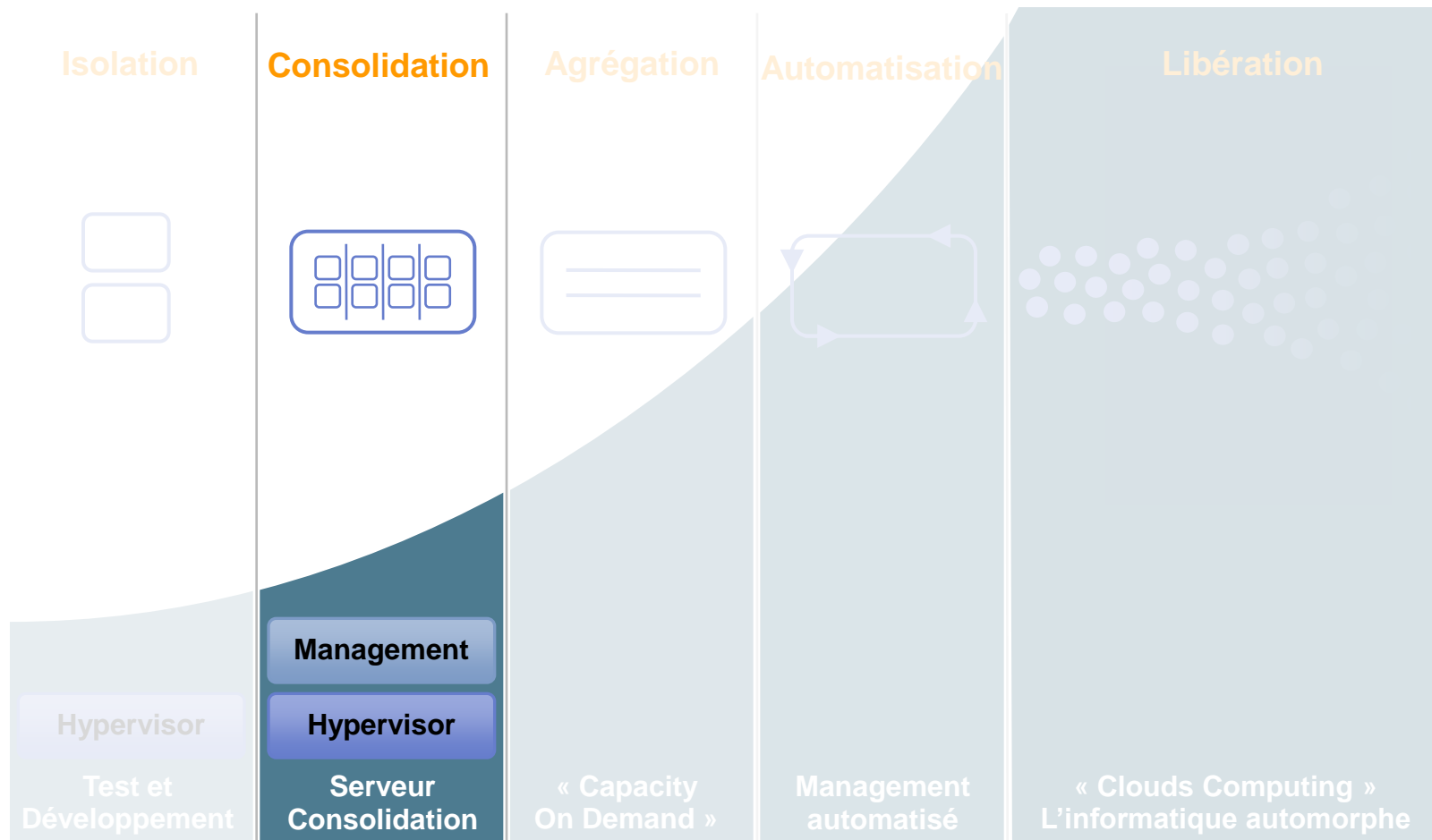
hp
invent

IBM

FUJITSU

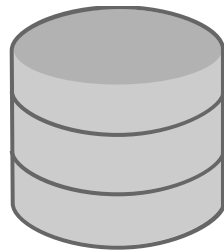
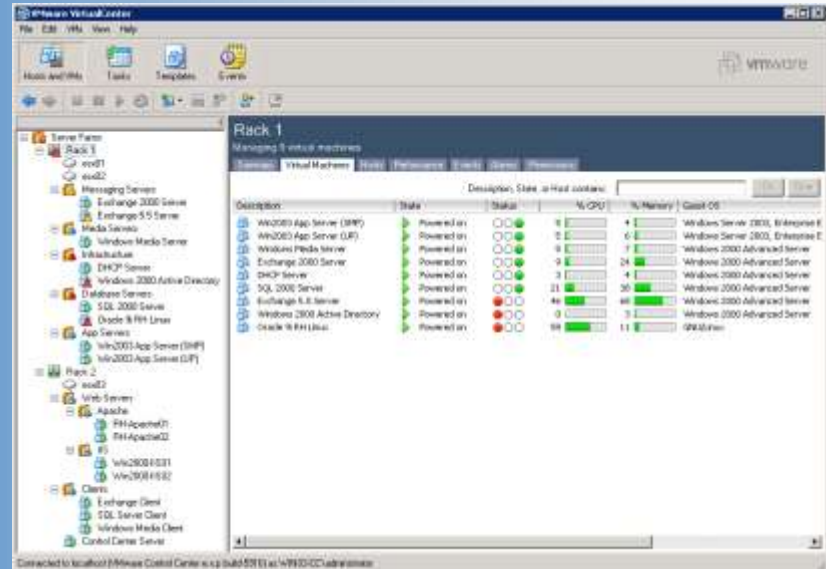
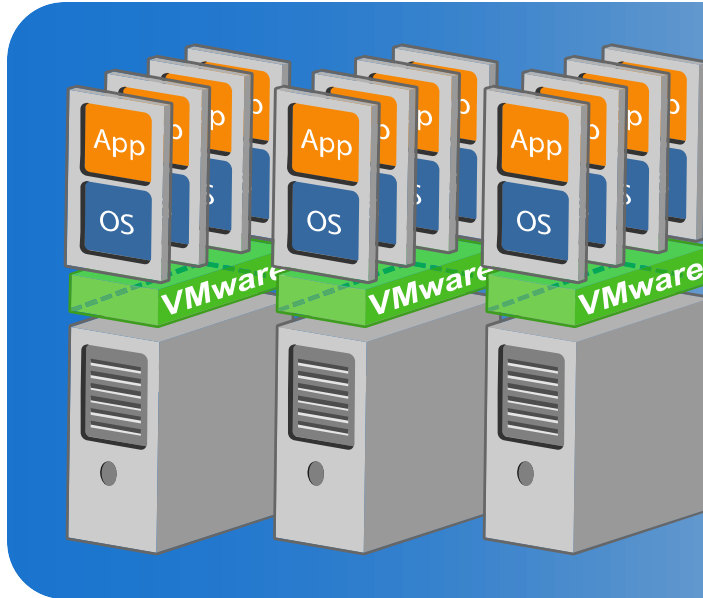
FUJITSU COMPUTERS
SIEMENS

Evolution du Datacenter virtuel



Management centralisé

VMware VirtualCenter

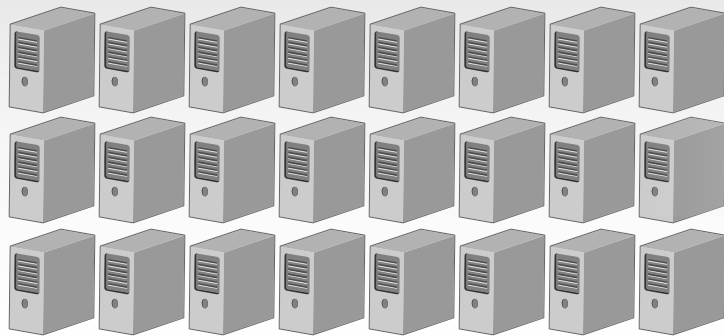


Stockage
partagé

Consolidation de serveurs : Quelques chiffres

AVANT VMware

Serveurs **1,000**
Stockage **Attachement direct**
Réseau **3000 câbles / ports**
Infra. **200 racks**
400 onduleurs



APRES VMware

Serveurs **80**
Stockage **SAN / NAS partagés**
Réseau **400 câbles / ports**
Infra. **10 racks**
20 onduleurs




VMware « Green Calculator »

http://www.vmware.com - Green Calculator - VMware - Mozilla Firefox

GREEN CALCULATOR




Reduce Energy Cost & Environmental Impact with Virtualization


How many servers* do you plan to virtualize? servers 

*Calculations are based on the power consumption of a standard 2 CPU server

	Physical	Virtualized	Savings
Energy Savings:			
Annual Server & Cooling Energy Usage (kWh)	807,015	145,116	661,899
Cost Reduction:			
Physical Hardware ¹	\$ 650,000.00	\$ 125,000.00	\$ 525,000.00
Annual Energy Cost ²	\$ 80,701.50	\$ 14,511.60	\$ 66,189.90
Environmental Impact:	Planting Trees	Cars off the highway ³	Annual CO2 Emission(lbs) ⁴
These savings are equivalent to	2,000	150	887,607

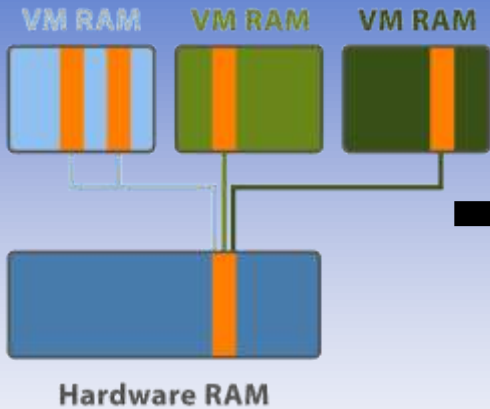
¹ Assumes \$6,500 per 2 CPU server
² Assumes \$0.10/kWh, and 550 Watts per 2 CPU server
³ Assumes 12,000 miles per year and 20 mpg.
⁴ Assumes 1.341 lbs CO2 emission per kWh.

Terminé  0.782s

Une meilleure densité de VM...

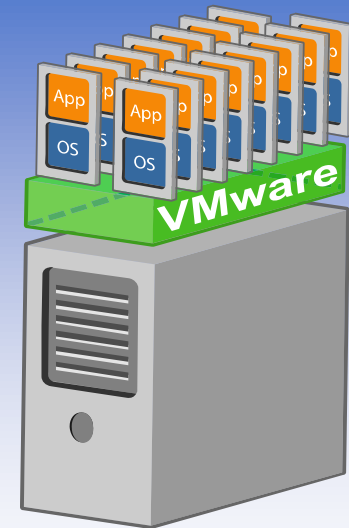
Optimisation mémoire



Load balancing dynamique



Une plus forte concentration de VMs



...Une robustesse éprouvée...

Plus de 4 ans sans interruption...

Uptime

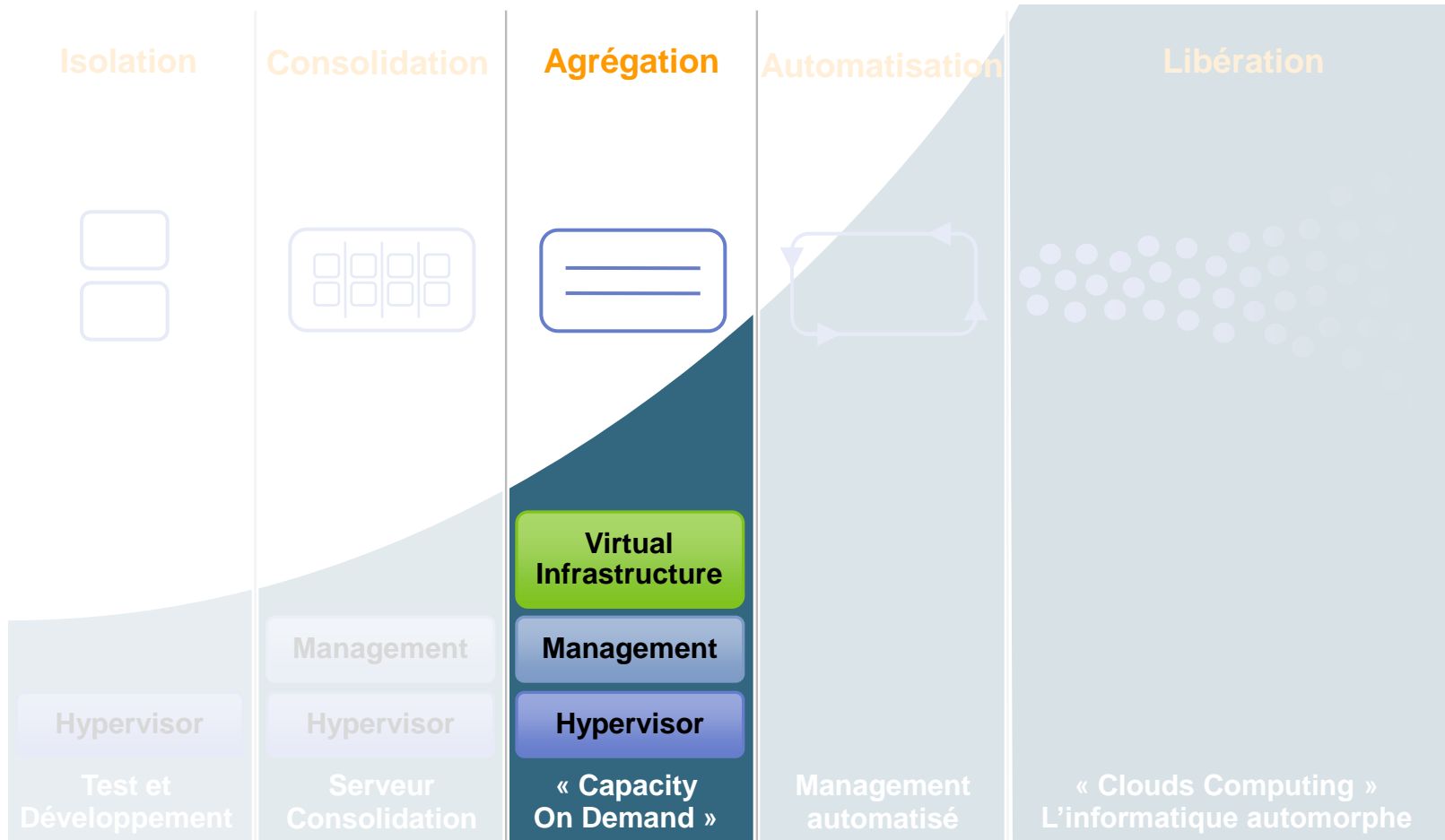
1461 days

The screenshot shows the VMware vSphere interface for a host named 'Temp'. The 'Hosts' tab is selected, displaying a table with the following data:

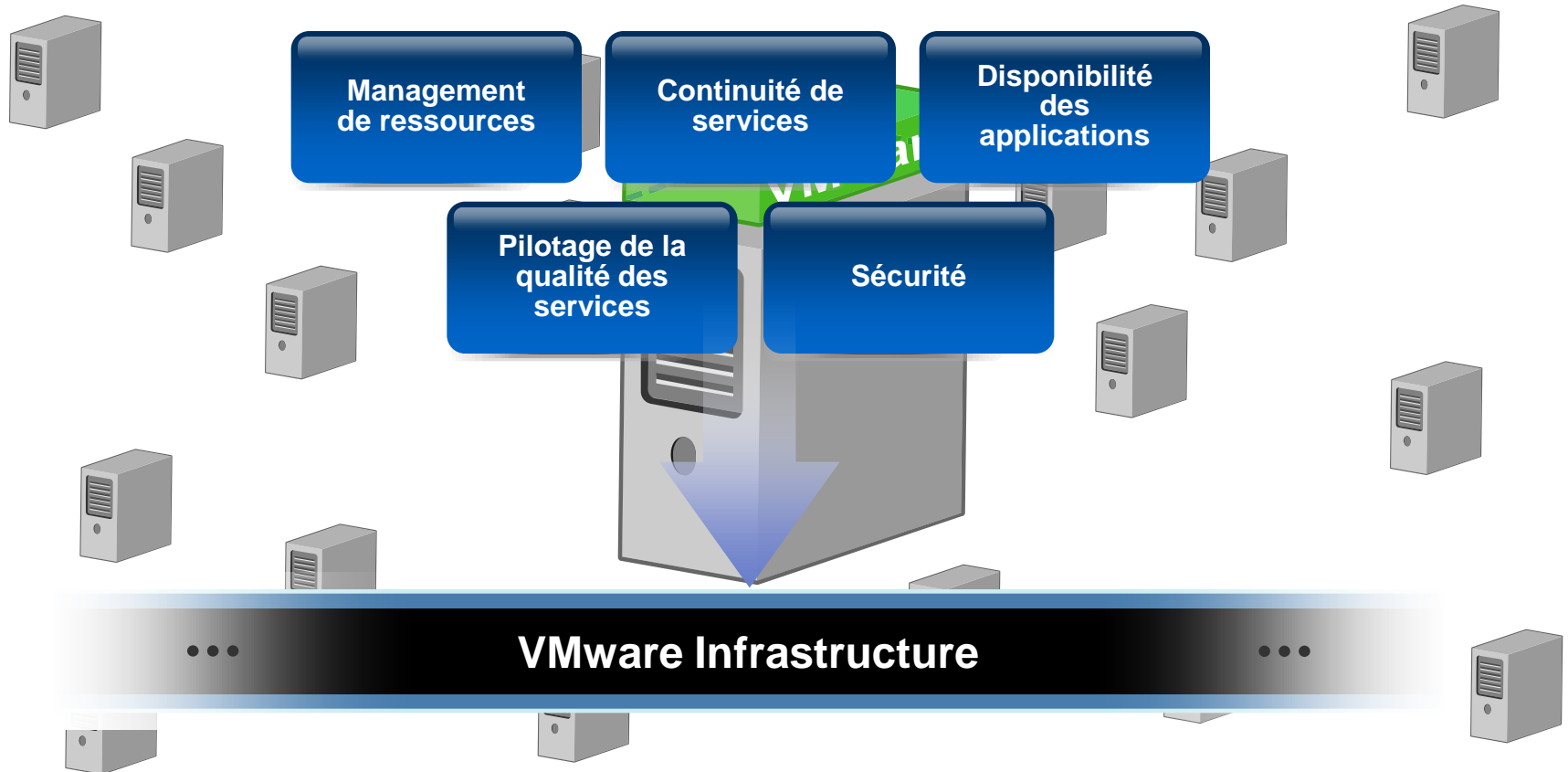
Name	State	Status	Uptime	Memory Size - MB	CPU Count	NIC Count
hpwesxp08.net.bms.com	Connected	○○●	1461 days	7886	4	3

The interface also includes a menu bar (File, Edit, VM, View, Help), a toolbar with icons for Inventory, Scheduled Tasks, Templates, and Events, and a navigation pane on the left.

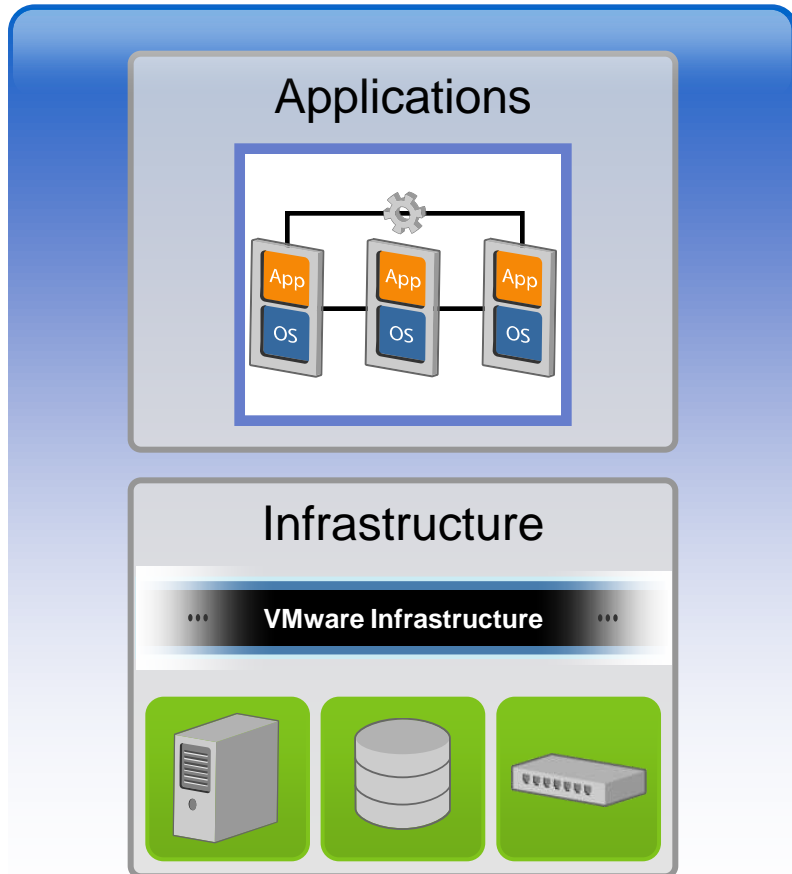
Evolution du Datacenter virtuel



VMware: L'émergence d'une plateforme de production stratégique



La solution idéale pour vos applications



← La meilleure plateforme pour vos applications

Performances « garanties »

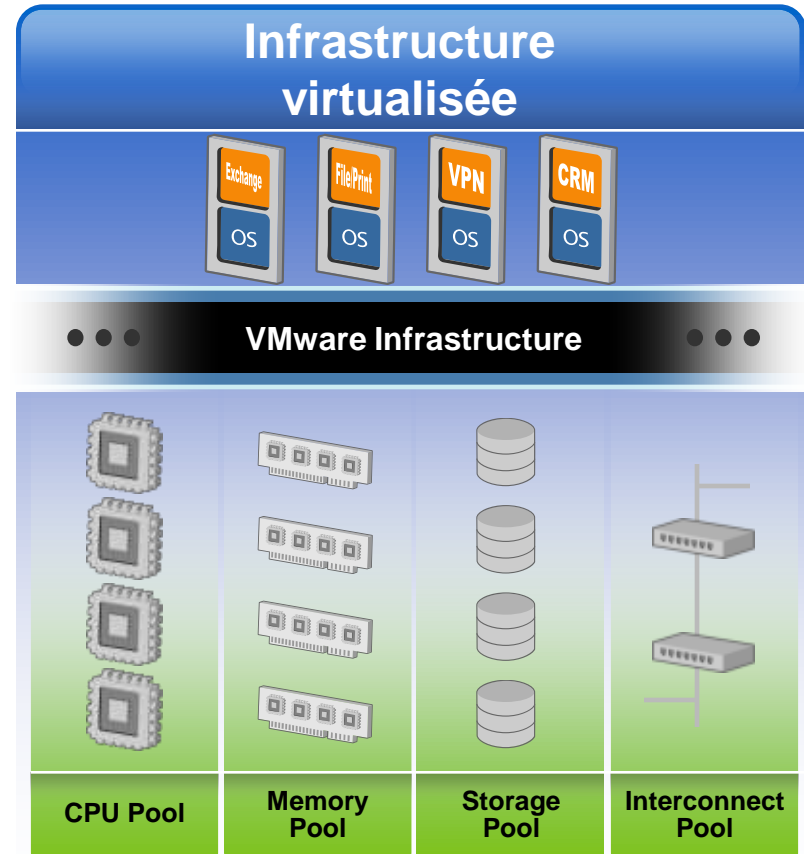
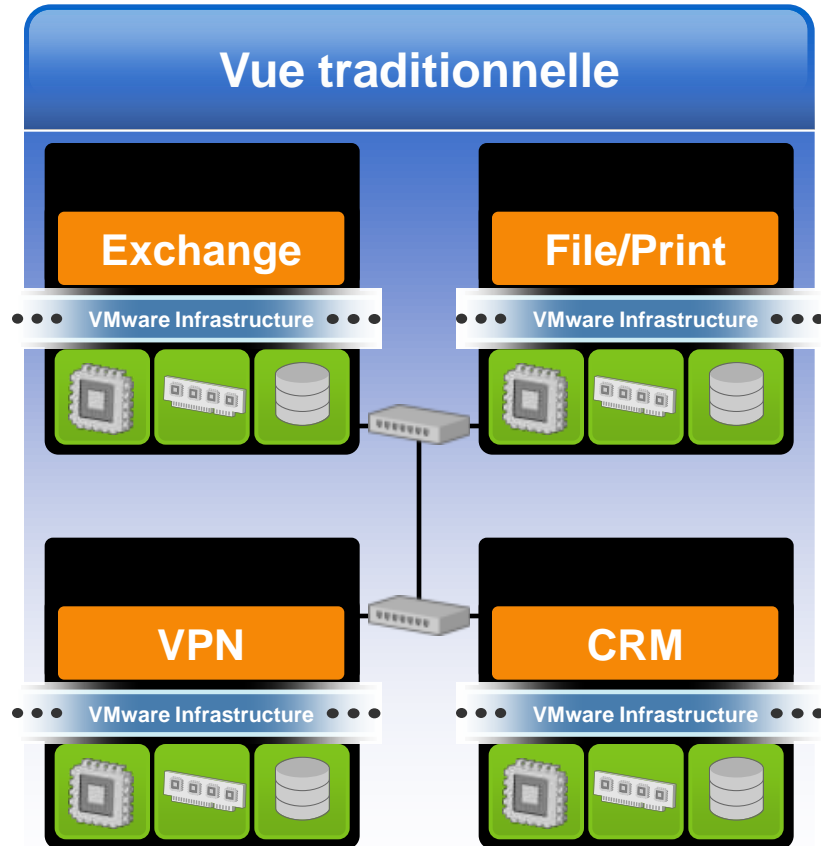
Redémarrage rapide suite à une panne matérielle ou logicielle

Sécurité accrue

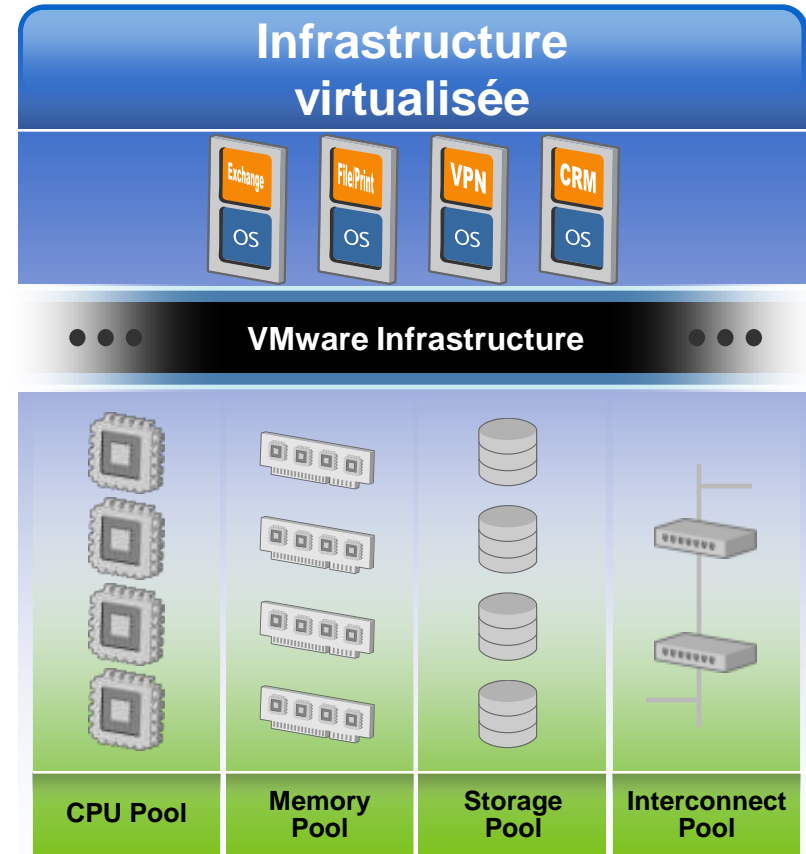
Déploiement automatisé

- VMware transforme votre informatique en « pool » de ressources partagées

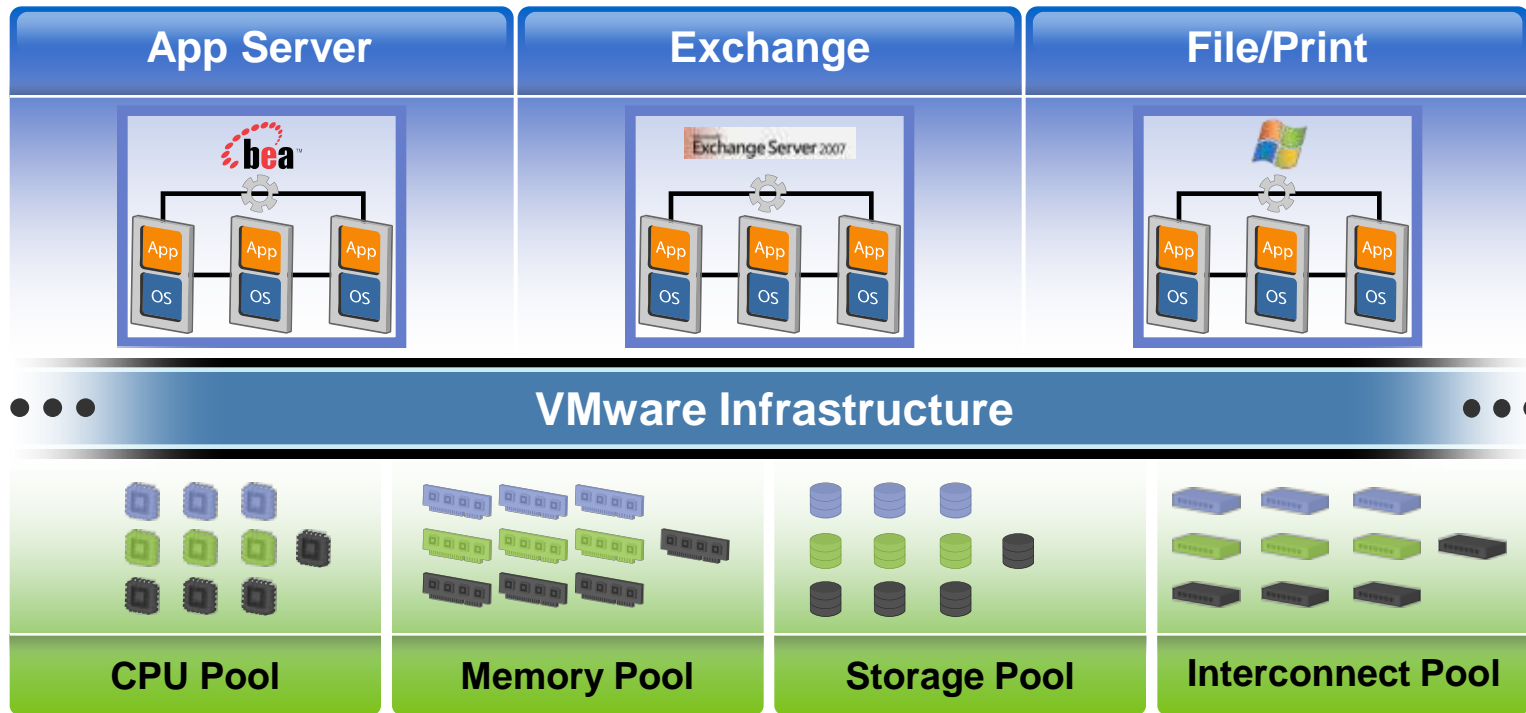
Pools de ressources partagées



Pools de ressources partagées



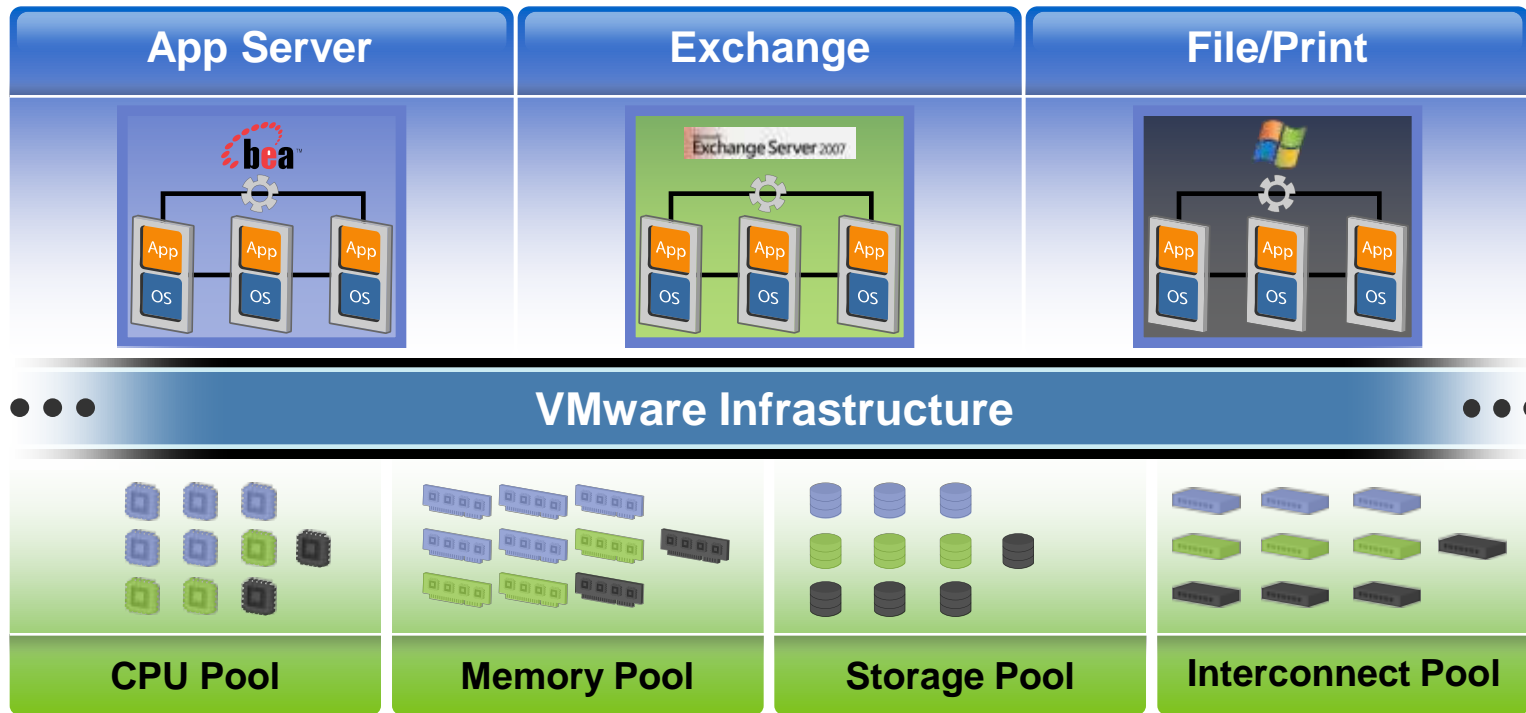
Les ressources sont distribuées en temps réel quand les applications les réclament



VMware Products

- DRS—Distributed Resource Scheduler
- DPM—Distributed Power Management

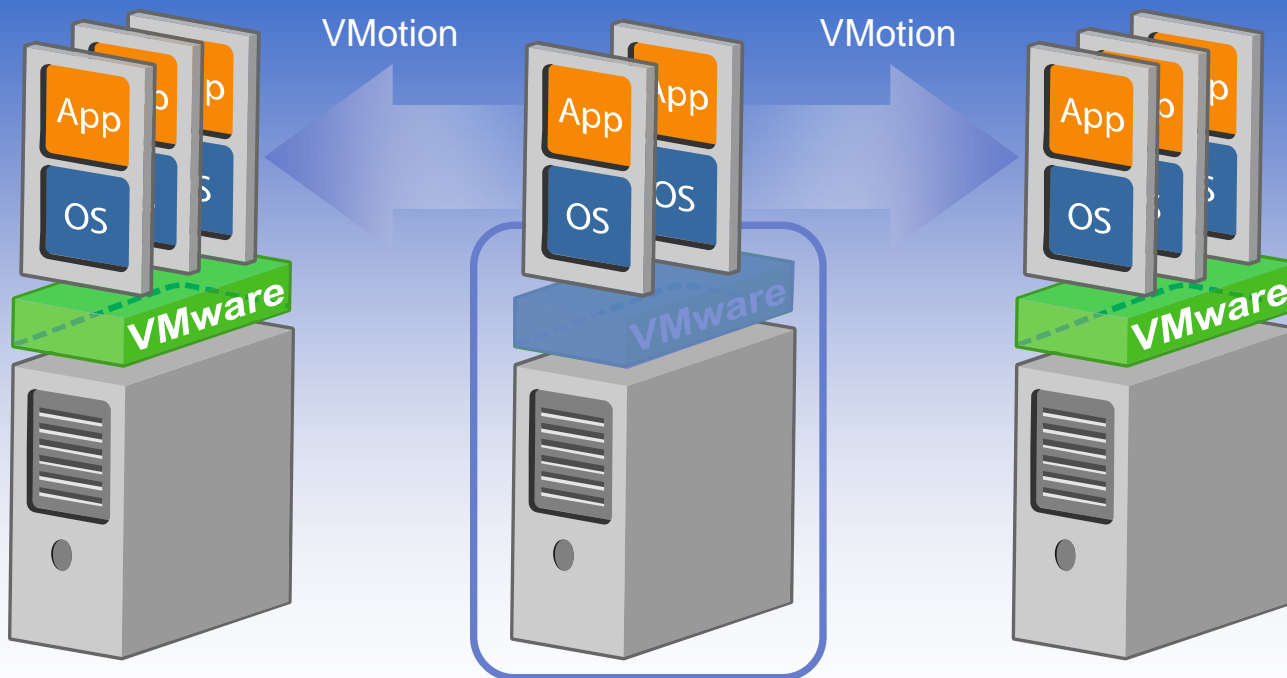
Redémarrage rapide suite à une panne matérielle ou logicielle



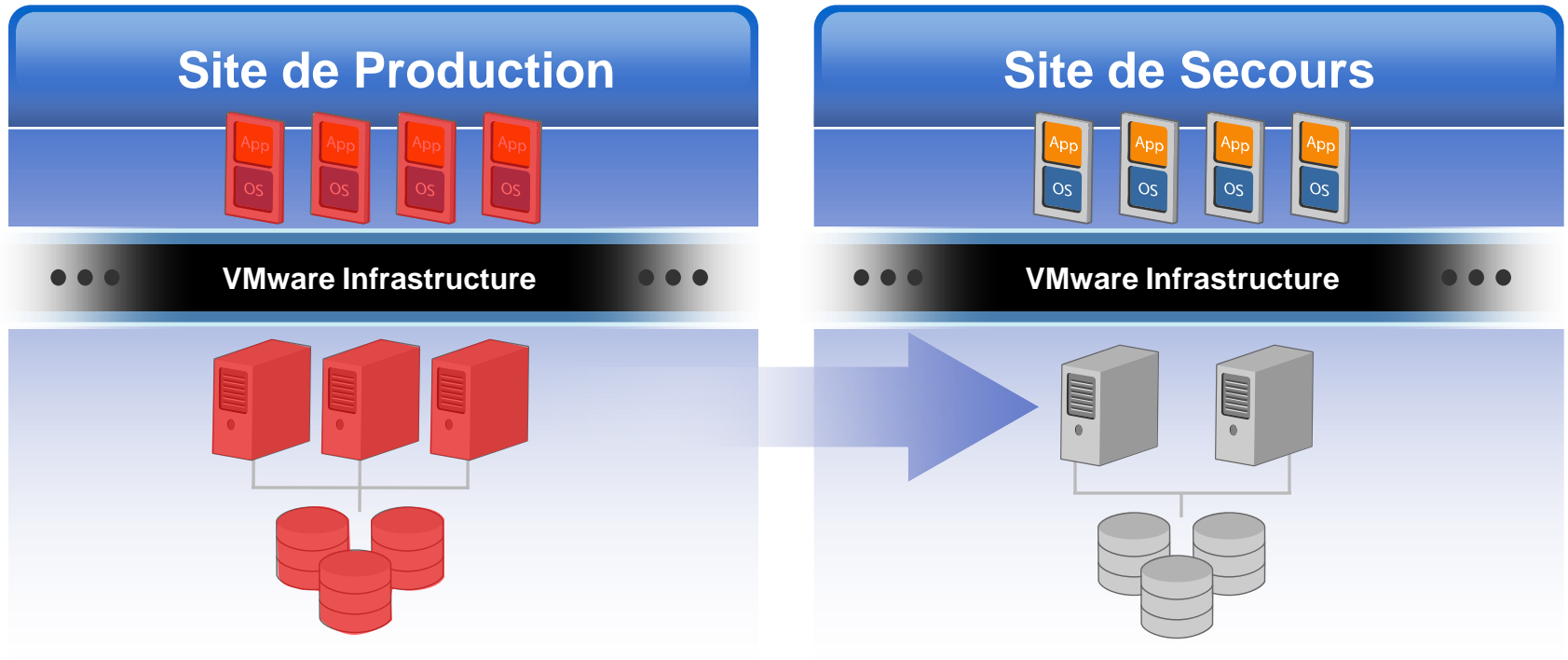
VMware Products

- VMotion, Storage VMotion
- Update Manager
- HA—High Availability
- Site Recovery Manager

... Pas d'arrêt de production pour une intervention planifiée

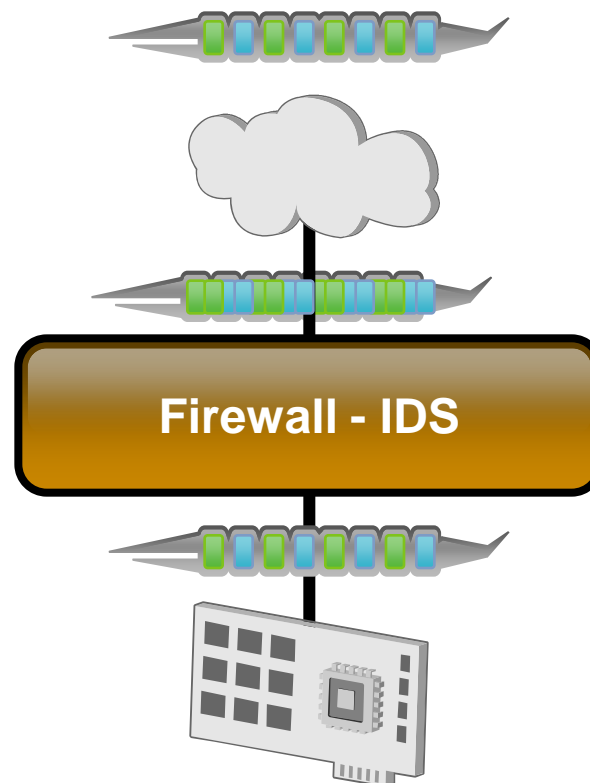
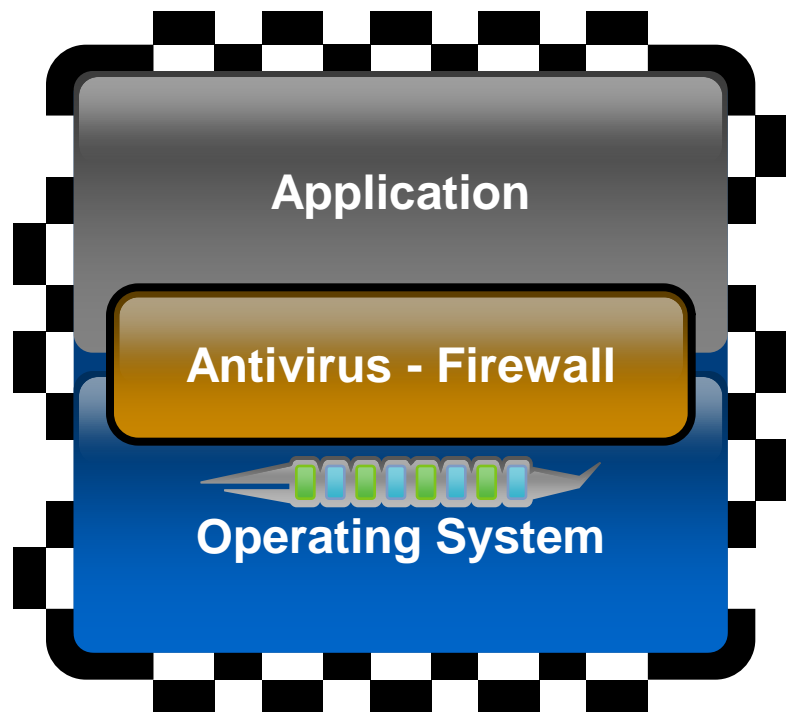


Solution de “disaster recovery” – PRA simplifié

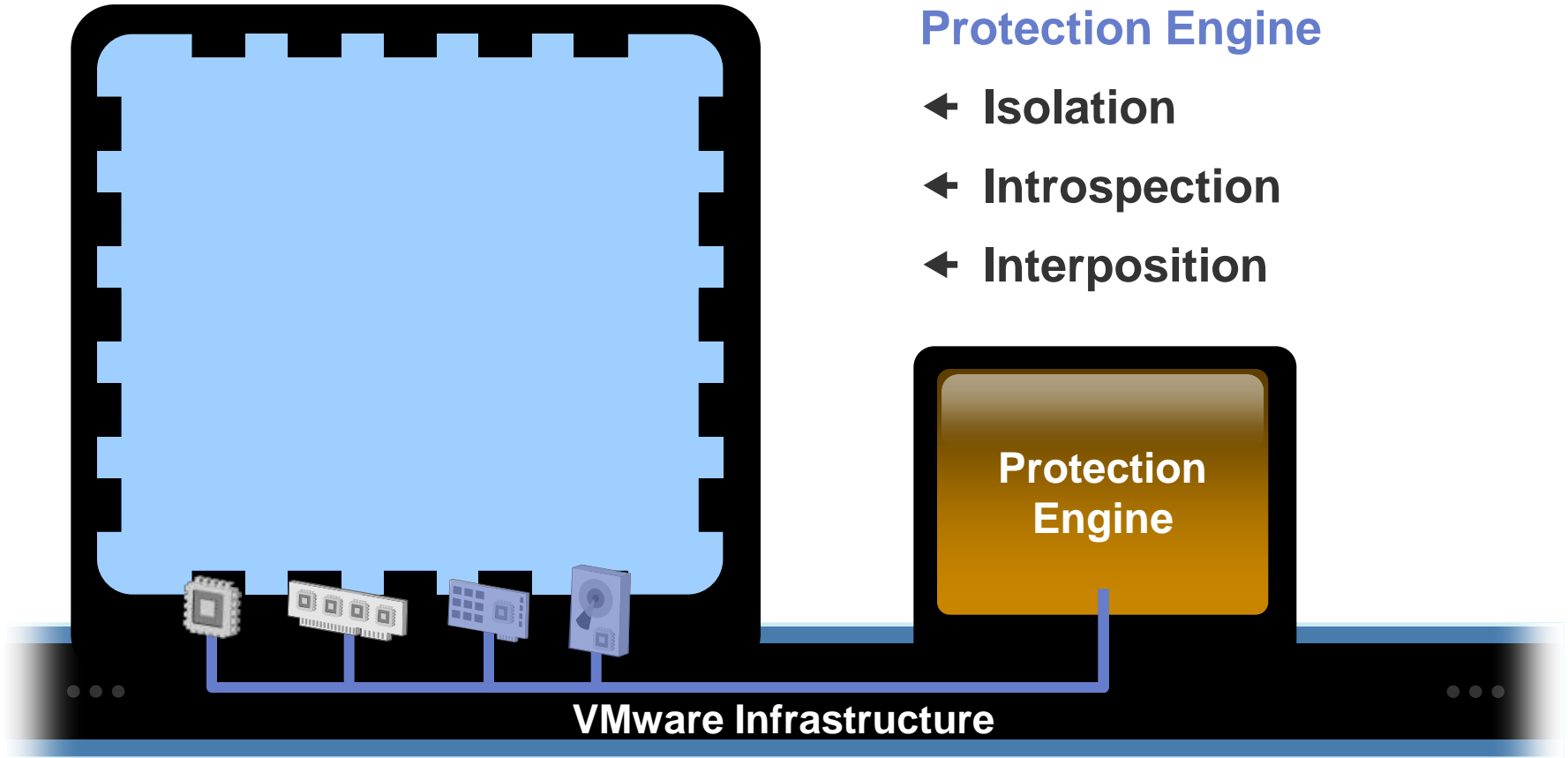


« Site Recovery Manager » simplifie le retour à la normale

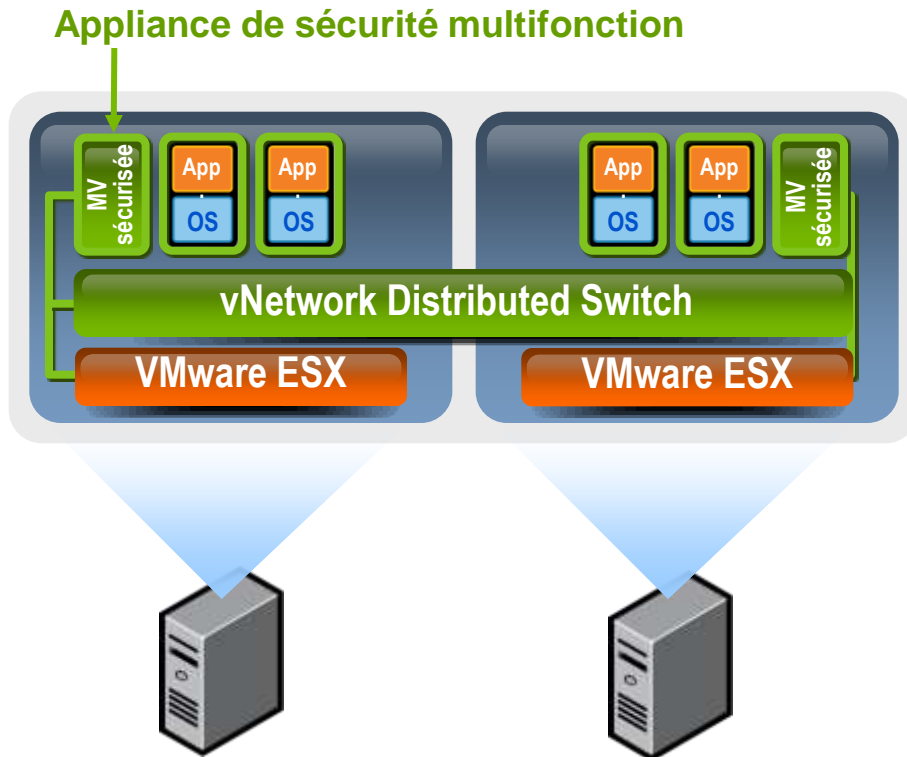
Sécurité — Solution locale ou réseau



VMware VMsafe



Création d'un écosystème avec VMware VMsafe



- Déploiement sans agent des services de sécurité de partenaires
- VM sécurisée unique pour plusieurs services antivirus, de pare-feu et de prévention des intrusions
- Les règles et l'état de sécurisation « suivent » la machine virtuelle

- De nouvelles solutions de sécurité complètes, plus efficaces et intégrées à l'infrastructure virtuelle
- Sécurité renforcée par rapport aux serveurs physiques

Les partenaires VMsafe

Apani

STONESOFT

MONTEGO NETWORKS

McAfee®

FORTINET

THIRD BRIGADE
deep security solutions

Configuresoft

Shavlik

REFLEX SECURITY

tripwire

secure

TREND MICRO

CENZIC
Securing Enterprise Applications

RSA
The Security Division of EMC

fortisphere™

ALTOR networks

IBM

BlueLane

solidcore

symantec.

SOPHOS

Check Point
SOFTWARE TECHNOLOGIES LTD.

KASPERSKY lab

iMPERVA

BIGFIX
Realtime visibility and control

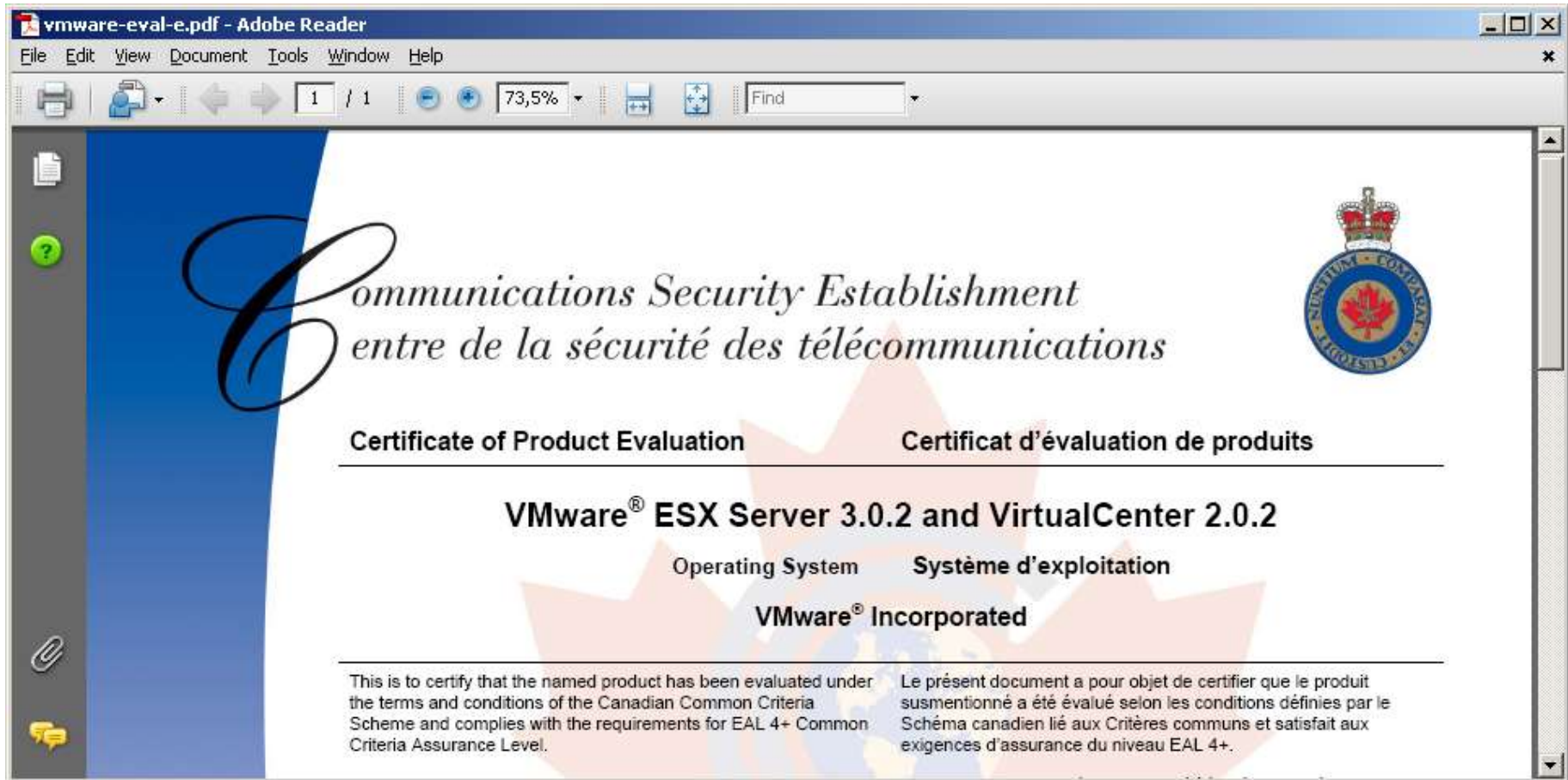
f5

catbird

VMware Security Portal

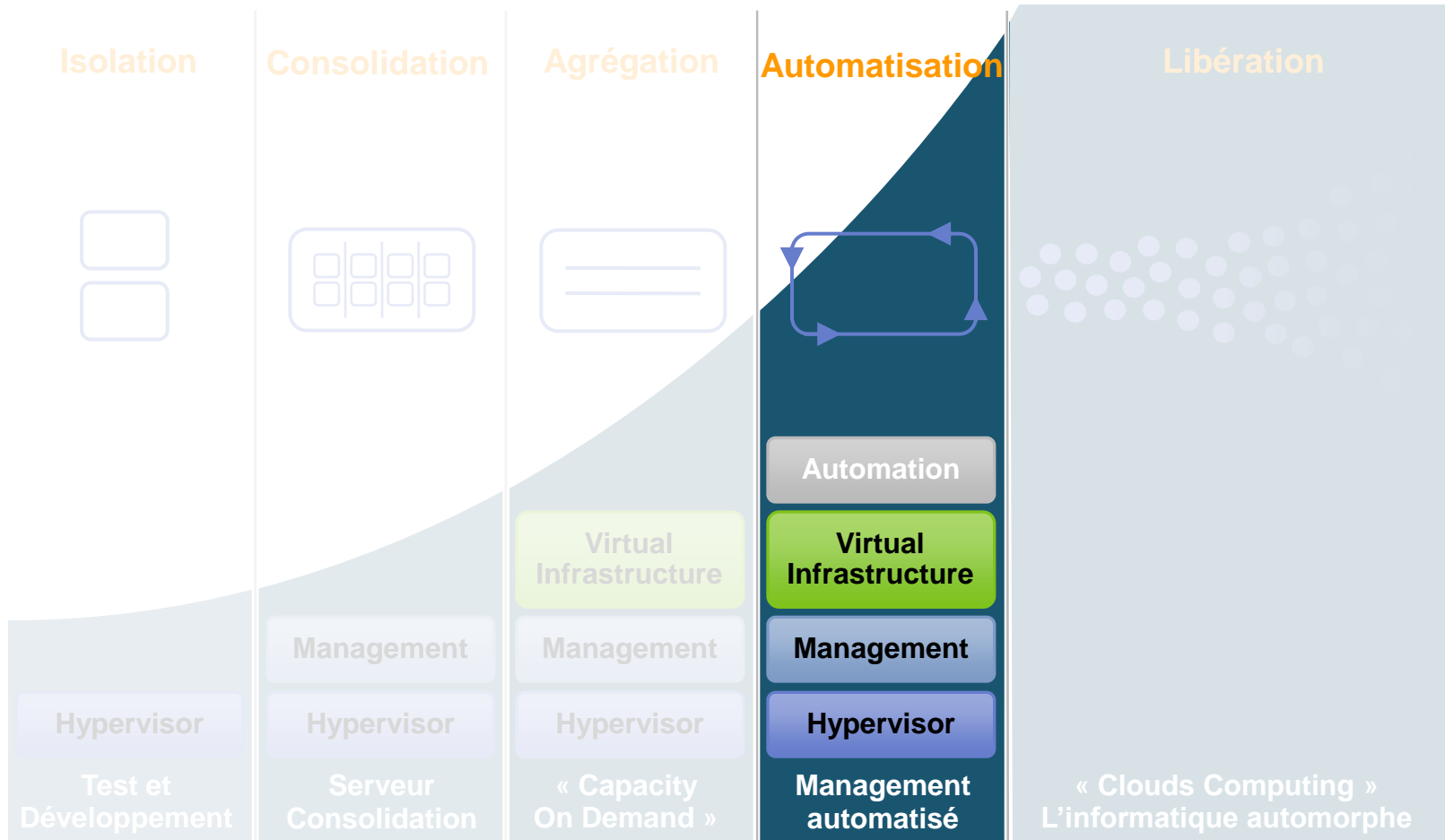
The screenshot shows a Microsoft Internet Explorer browser window displaying the VMware Security Portal. The browser's address bar shows the URL <http://www.vmware.com/security/>. The page features a navigation menu with links for [Communities](#), [Virtual Appliances](#), [Store](#), and [Support](#). The [Support](#) menu is expanded, showing sub-links for [Support Resources](#), [Contact Options](#), [Support Offerings](#), and [Support Policies](#). The main content area is titled "VMware Security Center" and includes a description: "The Security Center is a one-stop shop for security related issues involving VMware products. Check this resource center to stay up-to-date on all current security issues, and to understand considerations related to securing your virtual infrastructure." Below this, there are tabs for [Security Center Home](#), [Security Advisories](#), [Security Alerts](#), and [Security Certifications](#). A "Security Blog" section lists three articles, including "New and Updated VMware Security Advisories for VirtualCenter, ESXi, ESX, VCB and VMware Hosted Products" and "VMware Security Advisory on critical openwsman issue". A prominent advertisement for "Assess Your VMware Infrastructure Configuration" features the "tripwire Config Check™" logo and text describing it as a free utility for assessing VMware ESX host configurations. On the right side, a sidebar contains a "Support Resources" menu with links to Knowledge Base, Support Tools, Security Center (with sub-links for Advisories, Alerts, and Security Certifications), Documentation, Communities, and Product Licensing. Below this is a "Sign-up for Security Notifications" form with an email input field and a "Subscribe" button. The footer of the page contains the text "Contains commands for working with the selected items."

Certified EAL4+

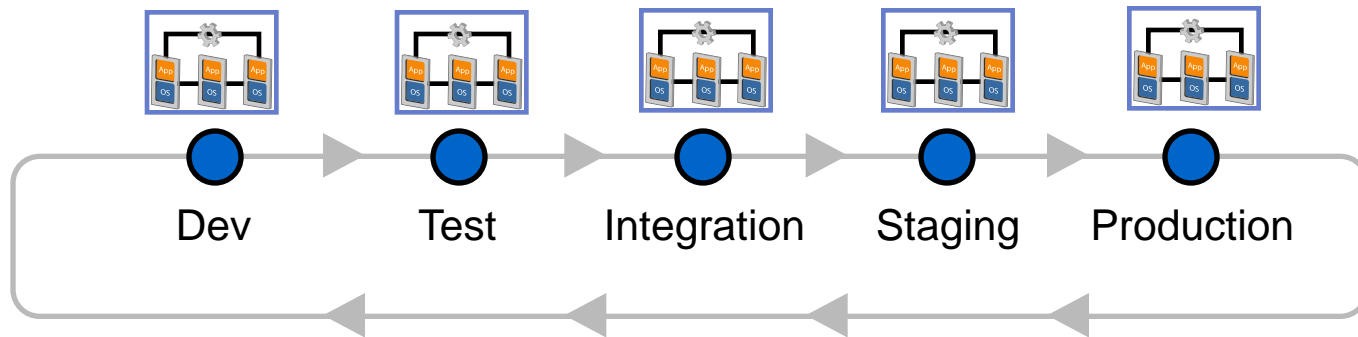


<http://www.cse-cst.gc.ca/services/ccs/vmware-e.html>

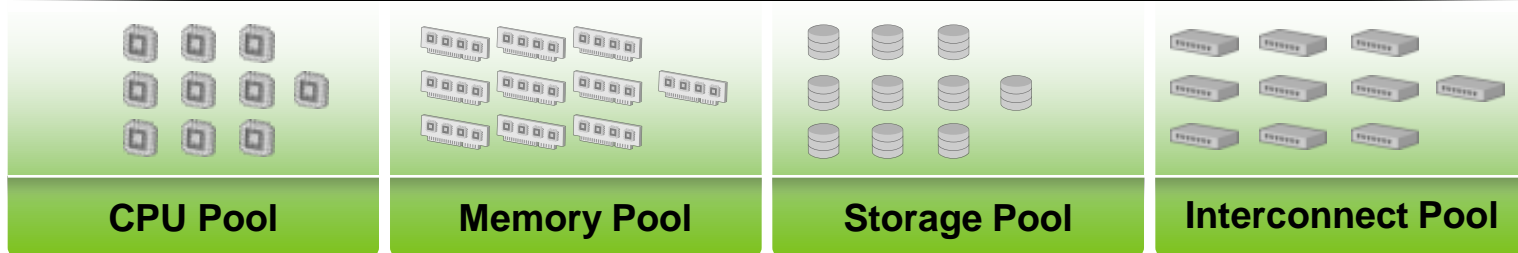
Evolution du Datacenter virtuel



Gestion de la "vie" des applications



VMware Infrastructure



VMware Products

- Lifecycle Manager
- Stage Manager
- Lab Manager

Déploiement rapide

Cas réel d'un client :

Avant

De 20 à 40 heures pour installer un serveur et déployer l'application...

- ← Installer et configurer le matériel
- ← Installer le système d'exploitation
- ← Installer les outils de base (Sauvegarde, administration distante, remontée d'info...)
- ← Assigner 2 adresses IP
- ← Connecter 3 réseaux physiques (cuivre ou fibre)
- ← Donner la main à l'équipe applicative pour installer et configurer l'application à déployer
- ← Tester l'application
- ← Gérer le transfert de donnée et la bascule de serveur

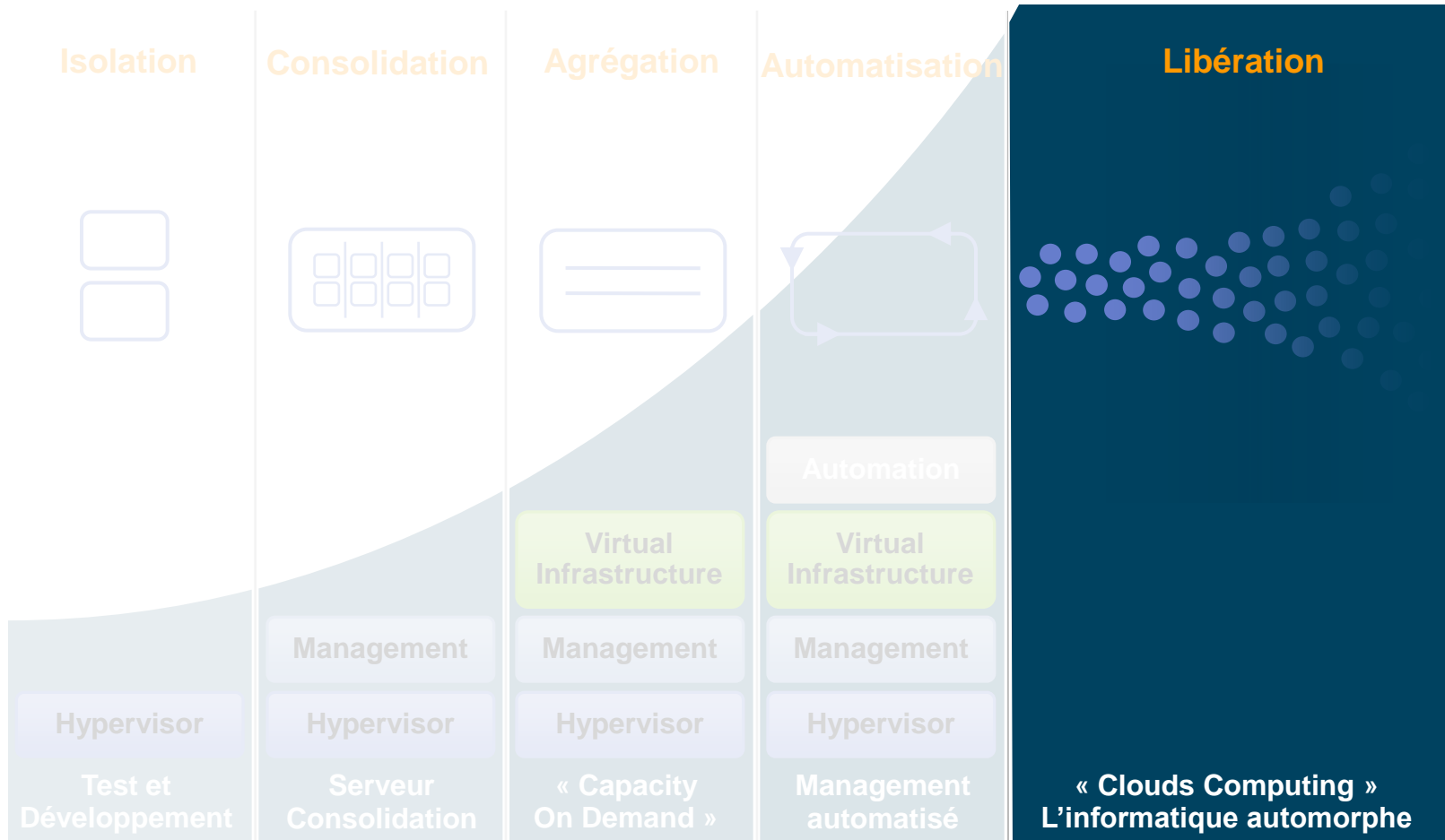
Après

...De 15 à 30 minutes pour copier une machine virtuelle et pour la démarrer



**333 serveurs
remplacés par an = ~
10,000 heures/homme
économisées**

Evolution du Datacenter virtuel



Merci

Des questions ?

