

making the Data Center work

How interAct can support you in building
Data Centers for SMBs & Enterprises



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Today's challenge

We see a real shift in the way IT managers approach their infrastructure. The number of business applications and data an IT organization has to manage doubles every few years. The type of devices used by the employees is also getting more diverse: laptops, thin clients, pda's, smart phones, etc., causing an explosion in the quantity and complexity of IT infrastructure: networks, software, servers and storage. This has also led to an increase of disconnected organizational units

– resulting in slow response time, miscommunication and downtime.

IT operations are a crucial aspect of most organizational operations. One of the main concerns is business continuity. Companies rely on their information systems to run their operations. If a system, the data or applications become inaccessible, company operations may be impaired or stopped completely.

Currently used, conventional IT

solutions and tools are reactive and address the symptoms rather than the root cause. In the years to come IT managers will face shortage of floor space and power failures and the quest for 'Green IT' will accompany the demand to reduce the use of electricity.

It is clear that we need a new approach.



Why a Data Center?

It is necessary to provide a reliable infrastructure for IT operations, in order to minimize any chance of disruption. Information security is also a concern, and for this reason a data center needs to offer a secure environment which minimizes the chances of a security breach. A data center must therefore keep high standards in order to assure the integrity and functionality of its hosted computer environment.

By building a Data Center, companies can transform their current set of

servers and applications from a standalone collection, of mostly physical assets, into a virtual and adaptive infrastructure designed to rapidly meet changing business needs.

A company can derive a lot of benefits when IT moves from its existing data center infrastructure to a state-of-the-art model addressing the demands of today's global competitive business environment. Almost immediately, the IT department can save costs, based on

an increased administrative efficiency, simply by eliminating systems that are underutilized and require high levels of management overhead, as well as an increased operational efficiency based on a more effective use of limited facilities.



Cornerstones of a Data Center

To give a clear overview of the Data Center solutions we offer, we provide you with an outline (see below). This outline explains our solution in a very simple way.

Building a good Data Center starts with centralizing and virtualizing your applications, desktops, servers and data.

Centralization

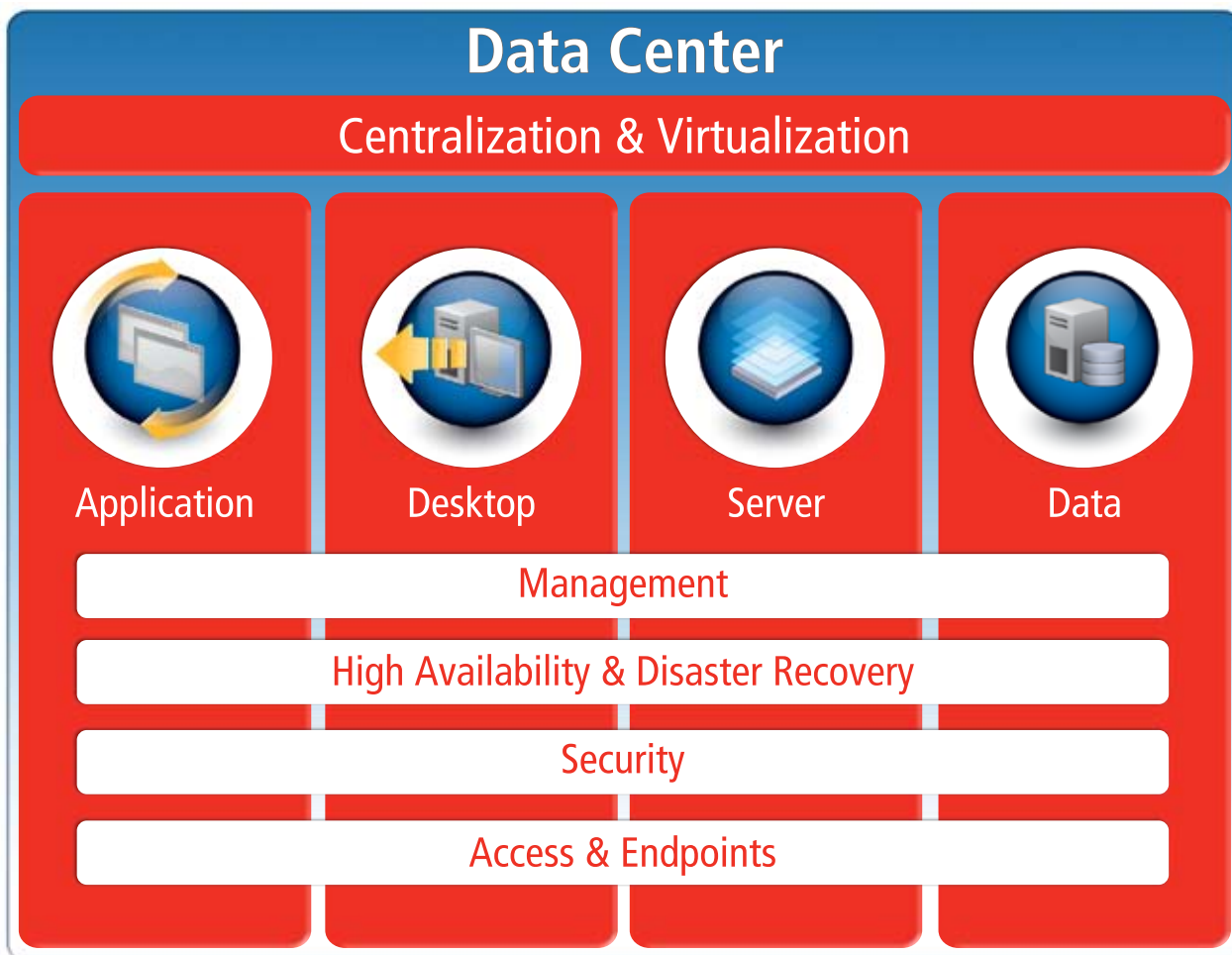
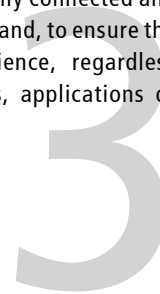
By centralizing your applications, desktops, servers and data in the

Data Center, you can significantly reduce costs and at the same time seek ways to improve IT systems and infrastructure management. In doing so you can deliver even higher service levels to your organization.

Virtualization

By freeing computing resources from being hard-coded to each other, virtualization allows desktops, servers and applications to be assembled and managed in the most efficient way possible. Virtualization enables the


components of computing to become dynamic building blocks. An end-to-end virtualization strategy allows the components of your Data Center (applications, desktops, servers and data) to be dynamically connected and reassembled, on demand, to ensure the best delivery experience, regardless of the type of users, applications or locations.



making the Data Center work

In order to make critical decisions, users rely on their PCs, laptops, thin clients or pda's that provide them with a **desktop** and a local **application** (e.g. ERP client) which interacts with a centralized **server** and the available **data**. Imagine what would happen when one of these falls out? This happens more than you think as your users become more and more flexible and mobile. In order to guarantee the access to systems and data, a number of solutions are available. So the next step is to look at your data, the server, the desktop and the different applications.

Application



Applications that reside on the user's device are hard to manage and are a security risk. By placing the user applications in the data center you can manage them more efficiently. When making these applications available on **Citrix XenApp** the user has access to an application that always operates on high performance systems. The user is connected with his applications by a low bandwidth protocol using a simple web browser. If an application requires an upgrade, this upgrade has to be applied only once for the whole XenApp server farm. You can even guarantee uptime when rolling out application virtualization within a virtualized server environment. When more users are connected, the virtualized server can automatically create a new virtual server with XenApp, using **Citrix Provisioning Server**. In this way you can dynamically anticipate changes in business.

Desktop


A lot of companies are confronted with an enormous cost when it comes to maintaining 'operating systems'. Not only is there a great diversity in operating systems, the users are also very mobile and direct access to

the operating system is not always possible.



Furthermore certain applications running on these OSs are not always 'application virtualization ready' due to restrictions in the code of this application. Desktop virtualization with **XenDesktop** offers the possibility to deliver a full virtualized desktop to the user, providing him with all the necessary power, memory, RAM, ... When rolling out XenDesktop, a full OS (such as Windows) is installed on a virtualized system (server or blade PC) and is accessible for the user from anywhere using a low-bandwidth protocol that delivers real-life experience. As multiple users connect to their desktop, you would assume that multiple OS images are necessary, yet this is not the case when using Citrix.

Server




When looking at the server applications interacting with data, you are often confronted with a sprawl of applications running on different hardware, but above all the hardware is underused, hard to manage and expensive in maintenance. In order to guarantee uptime, reduce the TCO and maximize usability, server virtualization offers an ideal solution from SMBs up to larger enterprises. By implementing your applications (such as ERP, CRM, database, mail, ...) on a server virtualization solution, your server is easier to manage and you have the possibility to provide automatic high availability (**Citrix XenServer**, **Platform Computing**) or even component level fault tolerance (**Marathon technologies**). Each of these virtual machines running a server application, requires an operating system. Instead of managing each

virtual machine separately and roll-out an OS per virtual machine, Citrix Provisioning Server ensures that these roll-outs are done from one image which resides on your (virtualized) storage. Server virtualization with XenServer, Platform Computing, Marathon Technologies and **Citrix Provisioning Server** maximizes the usage of your servers and increases the manageability resulting in an increased uptime.

Data

Your data is available on different storage systems from different vendors (NetApp, HP, IBM, DELL, EMC, ...). By applying storage virtualization such as **DataCore SANsymphony** or **SANmelody**, you create one big virtualized hard disk.



The location, at which speed, how and when data is written to this big virtualized hard disk is managed by the storage virtualization solution. This results in permanent uptime, high performance, increased disk utilization, planned and unplanned downtime and efficient capacity allocation. By implementing storage virtualization your data is always available! Furthermore storage virtualization is storage vendor independent; you can keep on working with your current storage cabinets from different vendors.

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Keeping the Data Center work

Once you have built a Data Center with all your critical applications, desktops, servers and data centralized and virtualized, you need to tackle issues such as the management of the data center. You also have to handle the way people have access to the data center, watch security issues very closely and make sure that 'business continuity' in case of power failures, accidents etc. is guaranteed and that a disaster recovery process is available.

Management

As all the information and applications are moved into the data center, it becomes the virtual Fort Knox of the company. This means that 'managing' the data center in the right way is crucial. We know that the administrative work of managing data centers is often underestimated. Administrative tasks typically include OS and application updates, patches, backups, installations, adding new users, adding new devices etc. Management tools are available for each task. We provide tools such as **Citrix Profile Manager**, **RES Software PowerFuse** or **AppSense Environment Manager**. These software solutions basically let IT managers make alterations or changes, where needed, without users being aware that anything has occurred, enabling them to produce timely and accurate management reports.

Access & Endpoints

How does a user have access to the data center? "Through a myriad of devices" is the answer. The number of 'connected' devices has grown in the past years: laptops, pda's, Mobile

Internet devices, a desktop PC, a thin client, a PC somewhere in the reception area of a hotel, etc. Also the type of connectivity that can be made with the data center can vary: a direct network connection, a cellular connection, a connection via a VPN, etc. Sometimes the user only needs to have access to information from within the data center, but other times an application needs to be downloaded from the data center to a device – commonly called 'application streaming'. Managing this complex process is important and involves not only software but also hardware. An example: when setting up a **Citrix Access Gateway SSL-VPN** infrastructure with smart-access, the SSL-VPN appliance will decide what is the most efficient way to work with the desired applications depending on the type of device, such as a desktop PC, a laptop or an **IGEL** thin client.

Security

In a recent European, multi sector research study of IT decision makers, security has been ranked as the biggest IT issue. This is no big surprise. The virtualized data center paradigm shift comes together with an entire new set of security issues that IT managers should be aware of and be prepared for. The data center has to offer a secure environment which minimizes the chances of a security breach at any level, for both hardware as well as software. A data center must therefore keep high standards in order to ensure the integrity and functionality of its hosted computer environment. One way to achieve this is identifying every user who wants to have access to data or applications. When combining a

username and password with a security token from **Vasco**, the access security is increased.

High Availability & Disaster Recovery

Now that there is a number of servers in your data center and terabytes of data, the IT staff has to make sure that, whatever happens, 'business continuity' is guaranteed at all times. Making everything available at all times, also called 'high availability' and making sure that there is a solution to recover everything in case of a disaster are absolute musts. And we have the tools to equip the data centers with just that type of solutions. Products such as **ScriptLogic Active Administrator** and **Security Explorer** help you when it comes to maintaining server, folder and data security. **RES Software Wisdom** provides the necessary tools for workbook automation and **AppSense** offers you the possibility to throttle those servers. **Marathon everRun** delivers reliable protection for critical virtual workloads by providing redundant virtual machines and synchronized mirroring of your network, storage and data that prevents application downtime and data loss. **Platform VMO** offers a unique solution of integrated deterministic Disaster Recovery Management, power-aware load balancing, Self-Service portal, and web-based administration not available in competitive products, and at up to 60% lower cost.

Conclusion

making the Data Center work is a strategy that needs thoughtful consideration and a structured approach. The end goal of that strategy is to deliver to the end-user one interface via which he/she can do whatever is required while the IT infrastructure has become cost efficient, scalable, manageable and secure. **interAct** has the knowledge, products and services available to support you in developing and implementing such a strategy either as a one-time implementation or in a modular way.

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Furthermore you will find information on technical trainings and workshops. Under the News & Events tab you will find the latest updates on the interAct events and campaigns, an archive of the interaction magazine and a latest news section.

About interAct

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Founded in 1996, interAct is the value add distributor specialized in Data Center solutions. The company is the main distributor in the BeLux for Citrix, AppSense, DataCore, IGEL, Marathon, Platform Computing, RES, ScriptLogic, ThinPrint, VASCO and visionapp.

InterAct's services include pre- and post-sales support, technical consultancy, marketing support and training. InterAct has a network of more than 400 qualified partners.

Training facilities

Whether you are just starting to learn about Data Centers or you are a technical person with a lot of experience, interAct offers a complete schedule of trainings and workshops. You can download our training and workshop calendar from our website.

Contact

If you have a specific question about our Data Center solutions, do not hesitate to contact us via phone (+32(0)3 870 60 20) or via mail:

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