

CASE STUDY

3rd Generation Intel® Core™ vPro™ Processors

Services and Software
Remote Manageability



Mapping future goals

Dynamic client infrastructure framework, supported by 3rd Generation Intel® Core™ vPro™ processors, boosts Computacenter's consulting services



CHALLENGES

- **Keeping pace.** Meet customers' changing needs – for example, offering advice on managing trends for hotdesking, home and mobile working, and the integration of consumer computing devices into the corporate IT infrastructure
- **Credible advice.** Computacenter needed to be able to understand virtualized desktop in depth and be able to speak credibly to customers about the latest hardware and software to support these environments

SOLUTIONS

- **Compelling framework.** Launched a dynamic client infrastructure (DCI) framework which offered customers a comprehensive consulting approach to an end-device virtualization infrastructure
- **Best practice.** Computacenter now recommends to customers devices based on the 3rd generation Intel® Core™ vPro™ processors as one of the best hardware platforms to run their virtualized client infrastructure, with Ultrabooks™ the most versatile device

IMPACT

- **Closer to customers.** Computacenter can now have better conversations with customers and provide more comprehensive advice on virtualized desktop
- **Increased revenue.** 80 percent of all customers looking for a client solution implement a complete DCI solution or at least parts of it

Framing consultancy

Computacenter is Europe's leading provider of IT infrastructure services. It advises corporate and government organizations on their IT strategies, implements the most appropriate technology from a wide range of leading vendors and, if required, manages their technology infrastructures on their behalf.

Its business is split across three main areas: Manage & Transform, providing maintenance, support and transformation management; Consult & Change, providing guidance on improving IT infrastructures and business outcomes; and Source & Deploy, implementing technology and full lifecycle management.

Consult & Change – in particular, Computacenter's Flexible Workplace* services – offers customers advice on how to establish an end-user device infrastructure that boosts efficiency, reduces cost and increases flexibility. Desktop virtualization is a key component of Flexible Workplace services. Using its DCI framework, Computacenter's consulting services advise organizations on their virtual desktop strategies, recommending an appropriate mix of technologies and solutions to meet their end-users' needs and business goals.

"We developed the DCI framework to meet the changing needs of our customers," explains Joerg Tewes, solution manager, Flexible Workplace at Computacenter. "Increasingly, we found that our customers needed to accommodate a wider variety of working styles – from hotdesking to mobile and home working. In addition, employees were starting to use different sorts of computing devices – such as tablets, smartphones and, increasingly, Ultrabooks, which then needed to be integrated securely into the corporate IT infrastructure.

"3rd generation Intel® Core™ vPro™ processors offer the best in terms of remote manageability and a comprehensive suite of security solutions that enable customers to better protect their valuable corporate data."

Joerg Tewes,
Solution Manager,
Consulting Services – Flexible Workplace,
Computacenter



Intel has helped Computacenter fine-tune its DCI offering with Intel® vPro™ technology and Ultrabooks™

“Traditional desktop environments and computing devices were no longer flexible enough to cope with such changes,” Tewes continued. “We had to be able to talk credibly and consult on client virtualization – hence, the introduction of the DCI framework.”

Tailored virtualization

The DCI framework offers organizations five levels of virtualization:

- **Local client virtualization** – Achieved through a local hypervisor on the client, making it much simpler for organizations to incorporate personal devices into the corporate environment, since they can create separate virtual environments for corporate and personal use
- **Remote client virtualization** – Virtual machines are hosted on one or more servers in the data center, making it much easier to manage and secure data, since this is only required once centrally rather than multiple times locally
- **Application virtualization** – Applications are isolated from the underlying operating systems, making them more easily transferrable between desktops since they don’t have to be installed in the traditional sense
- **Profile management virtualization** – The user’s profile is stored centrally and can be streamed to any computing device, making it much easier to manage mobile workers and the explosion of computing devices
- **Presentation services virtualization** – Applications are streamed to servers stored in the data center, allowing multiple users to connect to one server to access any available application. This simplifies management, since tasks are only required once centrally rather than multiple times locally

Intel at the heart

Computacenter Consulting Services works with the customer, using the framework, to suggest which approach best suits their end-user and business goals. In most instances, Computacenter recommends to customers devices based on 3rd generation Intel Core vPro processors as one of the best hardware platforms to run their virtualized client infrastructures. Intel® vPro™ technology-enabled Ultrabooks are recommended as the device most suited to each of the key tasks employees face today. In addition, they are ranked the top devices for manageability, security and mobility (figure 1).

	Smartphone	Tablet	Ultrabook*	Notebook	Desktop
Management					
Central, integrated device management	+	+	++	++	++
Usage					
Email and social networks	++	++	++	++	++
Presenting multimedia content	-	+	++	++	++
Word processing, presentations and spreadsheets	-	-	++	++	++
Security					
Encryption, virus protection, unauthorized access, and hardware support	+	+	++	++	++
Mobile Working					
Performance, manageability, battery life	+	+	++	+	-

++ Very suitable + suitable - Not suitable

* Business models



Growth:
DCI increases agility and flexibility, as users can access data quickly and securely while on the move.



Risk Avoidance:
DCI Technologies protects users in business-critical situations by providing a reliable, central backup of all user data.



Innovation:
DCI delivers state-of-the-art technologies and provides important impetus for innovation on the basis of customized solution packages for user infrastructure optimization.



Joerg Tewes explains: "3rd generation Intel Core vPro processors offer the best in terms of remote manageability and a comprehensive suite of security solutions that enable customers to better protect their valuable corporate data. Not only this, Intel also offers the best in terms of computing power at the server end thanks to its latest generation of Intel® Xeon® processors. Over the years, we have worked closely with Intel to help us develop and fine-tune our DCI offering. Their support and guidance have been invaluable."

Intel® Active Management Technology (Intel® AMT)¹, one of the key features of Intel vPro technology, enables in-house IT teams or managed service providers like Computacenter to query, restore, upgrade and protect devices remotely, even when the main operating system has crashed or they are powered off or experiencing software failures.

Hardware-based feature Intel® Keyboard-Video-Mouse Remote Control Technology (Intel® KVM Technology)² offers IT administrators full support and access to users' computers, along with the ability to see what is on the monitor – even if the operating system crashes. It significantly reduces the time spent solving common PC issues and helps boost employee productivity.

Secure benefits

On the security side, Intel® Anti-Theft Technology (Intel® AT)³, built right into laptop hardware, helps the IT administrator lock down lost or stolen laptops – automatically or by remote command. Once locked down, the laptop does not boot up and the operating system and is not functional. If the laptop is recovered, a reactivation code can quickly return it to normal operation.

Intel® Trusted Execution Technology (Intel® TXT)⁴ protects IT infrastructures against software-based attacks by validating the behavior of key components within a PC at

startup. Meanwhile, Intel® Identity Protection Technology (Intel® IPT)⁵ helps prevent unauthorized access and provides a simple way for organizations to confirm that a user is logging in from a trusted PC. It does this in one of two ways – either a one-time password (OTP) or via a public key infrastructure (PKI).

DCI in action

Computacenter's Consulting Services have been using the DCI framework for over five years. Its next-generation approach will focus strongly on Intel vPro technology-enabled Ultrabooks to support all kinds of mobile and office worker profiles.

The DCI framework, recommending Intel technology, has enabled Computacenter to have better conversations with customers and provide more comprehensive advice when it comes to virtualized desktop infrastructures. Computacenter feels closer to the market segment and revenues have increased, since 80 percent of all customers looking for a client solution implement a complete DCI solution, or at least parts of it.

Over the years many customers have been able to increase the flexibility of their client computing environments with the support of the DCI framework. Tewes explains: "An organization in the defense sector rolled out a VDI solution to home workers. It had closed one of its offices and needed a secure and easy-to-manage infrastructure to support home offices. Another customer wanted to accelerate its rollout of Microsoft Windows* 7 using Microsoft AppV* as an application virtualization solution to reduce software complexity."

Customers of Computacenter's DCI framework benefit from a huge combined knowledge of the client virtualization market segment as well as direct hands-on experience garnered from around 100 client virtualization projects carried out with customers across Europe. Computacenter is able to offer support in

Spotlight on Computacenter

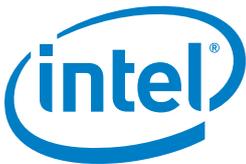
Computacenter is Europe's leading independent provider of IT infrastructure services. It advises customers on their IT strategy, implements the most appropriate technology from a wide range of leading vendors and manages their technology infrastructures on their behalf.

It delivers on-site services in nearly 60 countries and supplies IT hardware and software to customers in more than 100 countries. In Germany, Computacenter has a staff of approximately 5,000 and generated a turnover of EUR 1.4 billion (USD 1.8 billion) in 2011.

all the different technologies required to bring together a virtual client environment, as well as professional services across all project stages – from strategy conception through to full delivery of a managed services solution.

Visit Intel's Technology Provider website at www.inteltechnologyprovider.com

Find the solution that's right for your organization. Contact your Intel representative, visit Intel's Business Success Stories for IT Managers (www.intel.co.uk/itcasestudies) or explore the Intel.co.uk IT Center (www.intel.co.uk/itcenter).



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¹ **Intel® AMT** Security features enabled by Intel® AMT require an enabled chipset, network hardware and software, and a corporate network connection. Intel AMT may not be available or certain capabilities may be limited over a host OS-based VPN or when connecting wirelessly, on battery power, sleeping, hibernating, or powered off. Setup requires configuration and may require scripting with the management console or further integration into existing security frameworks, and modifications or implementation of new business processes. For more information, see <http://www.intel.com/technology/platform-technology/intel-amt>.

² **Intel® KVM** KVM Remote Control (Keyboard, Video, Mouse) is only available with Intel® Core™ i5 vPro™ and Core™ i7 vPro™ processors with Intel® Active Management technology activated and configured and with integrated graphics active. Discrete graphics are not supported.

³ **Intel® Anti-Theft Technology** No system can provide absolute security under all conditions. Requires an enabled chipset, BIOS, firmware, and software, and a subscription with a capable service provider. Consult your system manufacturer and service provider for availability and functionality. Intel assumes no liability for lost or stolen data and/or systems or any other damages resulting thereof. For more information, visit <http://www.intel.com/go/anti-theft>.

⁴ **Intel® Trusted Execution Technology (Intel® TXT)** No computer system can provide absolute security under all conditions. Intel® Trusted Execution Technology (Intel® TXT) requires a computer with Intel® Virtualization Technology, an Intel TXT-enabled processor, chipset, BIOS, Authenticated Code Modules and an Intel TXT-compatible measured launched environment (MLE). Intel TXT also requires the system to contain a TPM v1.s. For more information, visit <http://www.intel.com/technology/security>.

⁵ **Intel® Identity Protection Technology (Intel® IPT)** No system can provide absolute security under all conditions. Requires an Intel® Identity Protection Technology-enabled system, including a 2nd generation Intel® Core™ processor-enabled chipset, firmware, and software, and participating website. Consult your system manufacturer. Intel assumes no liability for lost or stolen data and/or systems or any resulting damages. For more information, visit <http://ipt.intel.com>.

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