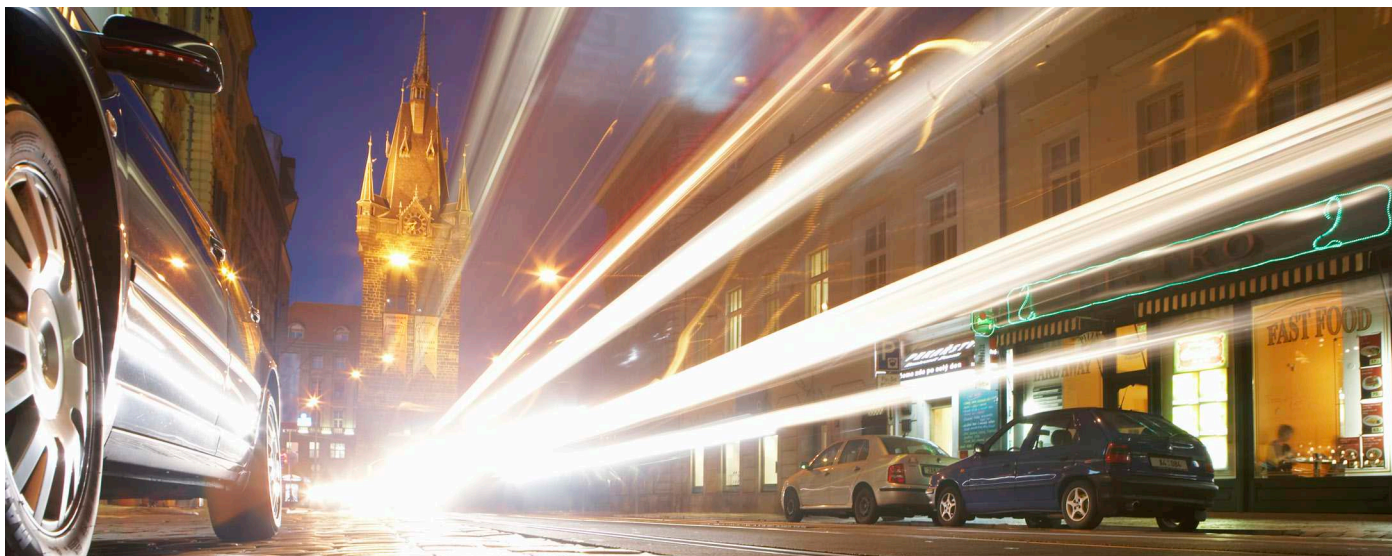


# Server and Desktop Virtualization Helps Rental Giant



## Hertz improves efficiency of operations and reduces support costs with Cisco Desktop Virtualization Solution

### EXECUTIVE SUMMARY

**Customer Name:** Hertz

**Industry:** Car rental and leasing

**Location:** Ireland

**Number of Employees:** 25,000

#### Challenge

- Rationalize, replace, and consolidate aging legacy IT and network infrastructure across Europe
- Decrease total cost of IT ownership and variabilize IT costs
- Simplify IT operations and increase employee efficiency

#### Solution

- Data center consolidation and virtualization using Cisco Unified Computing System (UCS) platform
- VMware Horizon View
- SSD storage

#### Results

- 4000 users moved to VDI on Cisco UCS
- Reduced physical servers from 170 to 60, and desktop client power consumption by ten percent
- Raised network bandwidth fourfold, while cutting desktop IT support costs by one-third

### Challenge

Hertz, the car rental brand, had completed a server virtualization project in its new Dublin-based data center using VMware ESX and Cisco® Unified Computing System™ (UCS®) B250 M1 and B200 M1 and M2 Series Blade Servers. The second company in the United Kingdom and Ireland to adopt UCS, it made sense to use this data center technology as a foundation when Hertz decided to embark on a virtual desktop infrastructure (VDI) project.

Paul Bermingham, Vice President Global Infrastructure Services & IT Business Partner Hertz International at Hertz, says: “We had a diverse array of PCs, running different operating systems and subject to local variations, which were difficult and expensive to maintain.” VDI promised to help simplify desktop operations, decrease costs, and improve employee productivity. The issue was how to deploy it as smoothly and successfully as possible.

### Solution

The Hertz data center team in Dublin had already begun to standardize on UCS B230 Series Blade Servers with Intel® Xeon® E7-4870 processors for server virtualization, owing to the model’s superior computing density of 20 cores per half-width blade. These servers supported a number of non-mission-critical applications.

However, when it came to VDI, Hertz realized that the data center did not have enough storage capacity to cope with thousands of virtual machines booting up at once. This situation required adding local storage to the servers, but neither the UCS B230 nor any other blade server on the market could accommodate this requirement.

Cisco was able to provide a solution in the shape of the UCS C460 M2 Series Rack Server, the only Intel Xeon processor E7-4800 product family-based rack system with an entry point to unified computing. The rack-mount technology allowed Hertz to fit solid-state drives (SSDs) to its servers while still managing the computing resources through a single Cisco UCS interface. This approach enabled Hertz to launch VDI across its Dublin center, using VMware Horizon View Version 5.2 as the desktop virtualization software platform deployed on Cisco UCS.



**“We have simplified the footprint in our rental locations, with several thousand desktops removed and replaced with thin clients. Service desk management and work throughput has decreased dramatically as a direct result.”**

Paul J Bermingham  
Vice President Global Infrastructure Services &  
IT Business Partner Hertz International

While the VDI project was in progress, Hertz decided to reinforce its European infrastructure before implementing VDI across the rest of the continent. For its European WAN upgrade, Hertz chose a mix of Cisco Integrated Services Router (ISR) G1 and devices for WAN edge routing, Cisco Wide Area Application Services Software, and Cisco 1000 Series Aggregations Services Routers in Dublin for high LAN-speed throughput. This arrangement complements the company’s Dublin data center switching fabric, which includes Cisco Nexus® 7000, 5000, and 2000 Series Switches for UCS connectivity. Hertz uses dual Nexus 1110 Series Virtual Services Appliances for control of the logical network and hypervisor.

With the Cisco ISR-based solution, network bandwidth was increased fourfold. The new network supports not only VDI but also a host of upgraded applications, including Windows 7 in place of Windows XP.

Hertz is currently hosting 256 virtual desktops on each of its UCS C460 servers. The VDI service delivers standard desktop applications such as email and communications applications including Cisco Jabber™ to Dell Wyse thin-client endpoints.

Cisco Services was engaged by Hertz to provide assurance against outages for the duration of the VDI project. “We had that extra resource available to us in Europe and the United States, not least to help us with Cisco architecture and upgrade decisions,” says Bermingham.

Hertz benefitted from the Advanced Services UCS Startup Accelerator Service, which provided configuration support, guidance with regards to UCS software and feature sets, installation of the UCS hardware, and software and knowledge transfer.

Cisco Mission Critical Services for Unified Communications provided the expertise and personal case management required by Hertz, while design was carried out by the partner under direction of the local Cisco systems engineer.

## Results

The speed at which new users can be added to the platform was vividly illustrated in Oklahoma, more than 4000 miles away from Dublin. When a thin-client endpoint was set up there, logging in via Active Directory took the same time as connecting the machine to the monitor. Bermingham says: “Within just 30 seconds, one was able to send emails. Previously the process could have taken at least 15 minutes, assuming there was a connection in the first place.”

The move from PCs to VDI is estimated to have reduced power usage for Hertz Europe by around ten percent, with immediate sustainability benefits. Also, the company has been able to change its desktop maintenance model from round-the-clock attention to break-replace, saving about one-third on support costs. For the IT team, the system is simpler to maintain and less prone to failures. Says Bermingham: “It streamlines deploying new software patches and versions, or even whole operating systems.”

If problems do occur, they are easily solved with help from the Cisco Technical Assistance Center. A technical account manager is the focal point for ownership of complex or system-wide issues. Plus, virtualization has greatly simplified data center operations by reducing the number of devices that need managing. Hertz has consolidated its data center server estate from 170 to just 60 physical machines.

Says Bermingham: “We have simplified the footprint in our rental locations, with several thousand desktops removed and replaced with thin clients. Service desk management and work throughput has decreased dramatically as a direct result.”



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This experience is echoed in staff surveys, where feedback on VDI application performance has been overwhelmingly positive. In addition to being faster and more robust than traditional desktops, VDI has provided a further, unforeseen advantage in that employees can move freely from one screen to another in the course of their work, improving mobility.

Hertz is enjoying similar benefits with its network equipment. Previously the company had always maintained two devices for each part of its switching infrastructure so that connections would not be compromised if a device needed patching or updating. Now, however, in many instances, the company has been able to move to just one device per link, thanks to the In-Service Software Upgrade feature of its Cisco platforms.

Hertz currently has 4000 VDI users across seven core European markets. The company is also currently piloting UCS-based VDI in the United States.

#### For More Information

To learn more about the Cisco architectures and solutions featured in this case study go to:

[www.cisco.com/go/vdi](http://www.cisco.com/go/vdi)

[www.cisco.com/go/ucs](http://www.cisco.com/go/ucs)

[www.cisco.com/go/nexus](http://www.cisco.com/go/nexus)

[www.cisco.com/go/services](http://www.cisco.com/go/services)



## Product List

### Data Center Solutions

- Cisco Unified Computing System (UCS)
  - Cisco UCS B200 M1 Series Blade Servers
  - Cisco UCS B200 M2 Series Blade Servers
  - Cisco UCS B250 M1 Series Blade Servers
  - Cisco UCS B230 M2 Series Blade Servers
  - Cisco UCS C460 M2 Series Rack Servers

### Desktop Virtualization Software

- VMware Horizon View

### Routing and Switching

- Cisco Nexus 7000 Series Switches
- Cisco Nexus 5000 Series Switches
- Cisco Nexus 2000 Series Switches
- Cisco Nexus 1110 Series Virtual Services Appliances
- Cisco ISR G1 Series Integrated Services Routers
- Cisco ISR G1 Series Integrated Services Routers
- Cisco ASR 1000 Series Aggregation Services Routers
- Cisco Wide Area Application Services Software

### Processors

- Intel Xeon E7-4870 processors

### Applications

- Cisco Unified Communications
- Cisco Jabber
- VMware ESX
- Windows 7

### Storage

- SSDs

### Services

- Unified Communications Mission Critical Support



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