

# GREENER SCREENINGS

Cinépolis saves 2,000 USD with green IT practices using server and storage virtualization from Dell



- SOLUTIONS**
- BACKUP/RECOVERY/ARCHIVING
  - CONSOLIDATION
  - GREEN COMPUTING
  - POWER & COOLING
  - VIRTUALIZATION



**CUSTOMER PROFILE**

**COUNTRY:** Mexico  
**INDUSTRY:** Arts, Entertainment and Media  
**FOUNDED:** 1971  
**NUMBER OF EMPLOYEES:** 13,226  
**WEB ADDRESS:**  
[www.cinepolis.com.mx](http://www.cinepolis.com.mx)

**CHALLENGE**

Cinépolis needed to reduce server sprawl to decrease its data center footprint and lower the cost of power and cooling. It also had to improve the availability of databases and shorten backup times that were so lengthy that some servers were not backed up at all.

**SOLUTION**

The company consolidated 14 database servers on Dell™ PowerEdge™ blade servers and virtualized them with VMware. The company is virtualizing 35 more servers before the data center moves to a new building. The company also centralized its storage with a Dell/EMC SAN and Dell PowerVault™ tape library.

**BENEFITS**

**RUN IT BETTER**

- No database crashes since servers were virtualized
- New virtual servers deployed in 1 hour (vs. 8 hours for physical server)
- Virtual test/dev servers enable faster, better application development
- 8 hours per week saved in storage administration time
- Ability to expand storage without downtime (vs. 1 hour planned downtime previously)

**GROW IT SMARTER**

- 2,000 USD saved in power and cooling costs and another 10,000 USD projected
- 4.5 square meters of space saved in data center



On a hill overlooking Morelia, Mexico—a bustling city approximately 100 miles west of Mexico City—stands the new corporate headquarters of Cinépolis, the fifth largest cinema chain in the world and the leading theater operator in Mexico.

# “WITH VIRTUALIZATION ON DELL POWEREDGE M600 BLADE SERVERS, WE’LL SAVE ABOUT 10,000 USD PER YEAR ON POWER AND COOLING.”

Luis Cruz, infrastructure manager, Cinépolis

The headquarters building itself is one of the largest green buildings in Mexico and is designed to conform to LEED standards and guidance for sustainability from the U.S. Green Building Council. These include features such as natural lighting and ventilation which reduce the carbon footprint. The architecture is also designed to enhance productivity with spaces and environments that improve the well-being of employees.

However, before the move into the building, the data center was struggling with server sprawl that was eating up floor space and consuming excess power and cooling. Frequent outages of the IBM DB2® databases on 14 servers kept decision-makers from accessing critical data and statistics, negatively impacting productivity. And backing up individual servers to internal storage using scripts was a manual task that took too long and frequently resulted in servers not being backed up.

“We had to get servers off the floor and reduce our power consumption,” says Luis Cruz, infrastructure manager, Cinépolis. “We also had to improve the availability of our databases and streamline backup processes.”

## GREENING THE DATA CENTER

The company issued an RFP to consolidate its servers. Dell responded and recommended consolidating the

servers running the company’s Balanced Scorecard application and various business intelligence applications. Dell also recommended consolidating storage on a Dell/EMC CX300 SAN to alleviate the lengthy backups. The disk-to-disk-to-tape architecture uses the Dell PowerVault TL2000 tape library to run tapes off the SAN.

Dell recommended a Dell PowerEdge blade server system with Intel Xeon processors in 10 blade servers. The following year, Dell performed a virtualization assessment in the Cinépolis data center and recommended virtualizing the 14 DB2 database servers that were running on IBM hardware onto a Dell PowerEdge M1000e enclosure using 3 of 12 Dell PowerEdge M600 servers with Intel Xeon 5450 series processors. The purpose was to have fewer individual databases and fewer physical servers running, and reduce the data center footprint and the consumption of power. Dell provided the SUSE Linux Enterprise operating system and VMware Infrastructure 3.

“Since we’ve virtualized the database servers, we haven’t had any crashes,” says Cruz. “Downtime used to happen approximately once a month, lasting 25 minutes to one-half hour.”

Cinépolis is using VMware High Availability (HA) with VMotion enabled

## HOW IT WORKS

### HARDWARE

- Dell™ PowerEdge™ M600 blade servers with Intel® Xeon® E5450 processors
- Dell PowerEdge M1000e modular blade enclosure
- Dell PowerEdge 2950 servers with Intel Xeon X5355 processors
- Dell Latitude™ D530, D520, D430, D420 laptops with Intel Core™ processors
- Dell OptiPlex™ 760, 755 and 745 desktops with Intel Pentium® M and Core 2 Duo processors
- Dell/EMC CX4-240 SAN
- Dell/EMC CX300 SAN
- Dell PowerVault™ TL2000 tape library

### SOFTWARE

- VMware Infrastructure 3
- SUSE Linux Enterprise
- Microsoft® Windows® NT
- Microsoft Windows Server® 2000
- Microsoft Windows Server 2003
- IBM DB2® database
- Vizioncore vRanger Pro

### SERVICES

- Dell ProConsult
  - Virtualization Assessment Services
- Dell ProSupport Services

**“WITH ALL THE ACTIVITY GOING ON AT CINÉPOLIS, WE KNOW WE CAN TRUST DELL TO PROVIDE US WITH DEPENDABLE PRODUCTS THAT REQUIRE A MINIMUM OF MANAGEMENT TIME.”**

Luis Cruz, infrastructure manager, Cinépolis

by Dell/EMC SAN, so if a physical server needs to be taken down for maintenance, the virtual machines on that server can be moved to another blade to avoid any downtime.

#### **10,000 USD SAVED IN POWER AND COOLING**

Among its many benefits, virtualization has had a positive impact on the company's testing and development environment. Cinépolis has six virtual servers for production, two for development and five for testing.

“Having all these resources for development and testing results in applications that reach the target market faster and work better,” says Cruz.

If Cruz needs another virtual server, he can create and implement it in one hour, versus the full day it takes to stand up a physical server. “The ability to add servers practically on the fly gives our organization unprecedented flexibility,” he says.

The virtualization of database servers has also helped to streamline the IT organization. “By virtualizing the servers, we've been able to make positive changes that help us be more efficient,” says Cruz. “Before virtualization, the staff had to deal with a complete physical system. They had to know everything—the operating system, the hardware and the database. Now we have database administrators

who focus only on the database, operating system administrators who are specialists on the operating system, and hardware specialists. The staff works better by focusing on the area that they know best.”

Power and cooling costs are another part of the success story. “With virtualization on Dell PowerEdge M600 blade servers with Intel Xeon processors, we'll save about 10,000 USD per year on power and cooling,” says Cruz.

#### **SAVING 8 HOURS PER WEEK**

Backing up and restoring files is much faster with the Dell/EMC SAN. The company is using Vizioncore vRanger Pro, purchased through Dell, as backup software for its virtual machines. All the virtual machine files reside on the SAN so that backups take place on one machine. “Centralized storage is one of the most successful parts of the Dell solution,” says Cruz. “Compared to backing up each individual server, we're saving eight hours per week with the Dell/EMC SAN. And now we know for sure that the files are being backed up.”

Adding new disks to the SAN is also a breeze. “It used to be a problem to add new disks to storage,” says Cruz. “It took one hour of downtime to scale up every time we needed more capacity. But now we can expand without downtime with the Dell/EMC SAN.”

Data is growing at Cinépolis at the rate of 150 gigabytes per year, so scalability is a constant concern. Pleased with the performance of the Dell/EMC CX300, the company has decided to upgrade to the Dell/EMC CX4-240 SAN with Fibre Channel (FC) and iSCSI in one array to flexibly meet the company's growing needs.

#### **VIRTUALIZING 35 MORE SERVERS**

To increase its power and cooling savings and further reduce its data center footprint, Cinépolis will virtualize another 35 physical servers onto 5 PowerEdge M600 blade servers in the same M1000e enclosure. The virtualization will be complete by the time the data center moves into the new green building this year.

The 35 servers currently host a wide variety of corporate applications such as a customer loyalty system, employee time cards, help desk applications, sales of cinema tickets and an internal accounting system. They run a mix of operating systems, including SUSE Linux Enterprise and Microsoft Windows NT, Windows 2000 and Windows 2003. The projected space savings is 4.5 square meters and power savings are projected to be 10,000 USD per year.

The company is also consolidating some of its servers that run a number of back office applications for

corporate and the theaters. Cruz's team has ported these servers, without virtualizing them, to Dell PowerEdge 2950 rack-mount servers with Intel Xeon E5450 processors.

The responsibility of configuring the servers for virtualization and consolidation rests with a local consulting firm. "The consultants are always available to explain what they are doing so we know what is going on," says Cruz. "I find that very valuable."

#### **STANDARDIZED ON DELL**

Cinépolis has standardized on Dell OptiPlex 760, 755 and 745 desktops with Intel Pentium M and Core 2 Duo processors and Dell Latitude D530, D520, D430 and D420 laptops with Intel Core 2 processors running Microsoft Windows XP. Dell ProSupport

for End Users responds to any problems that might occur with efficient and prompt technical support.

"With all the activity going on at Cinépolis, we know we can trust Dell to provide us with dependable products that require a minimum of management time," says Cruz. "In the near future we may be migrating from IBM Lotus Notes to Microsoft Exchange Server for email. If that is approved, Dell will have a bigger role to play."

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