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## Running DataFax servers on a SUN LDOM virtualization environment

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## AGENDA

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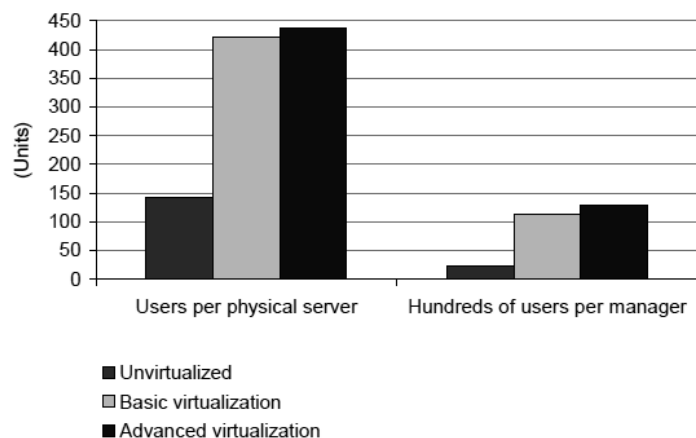
- Background
- LDOM Virtualization Technology
- LDOM VS Zone
- Experiences sharing (based on DF383)
  - Migration to LDOM
- Conclusion
- Online technology resources

## Background

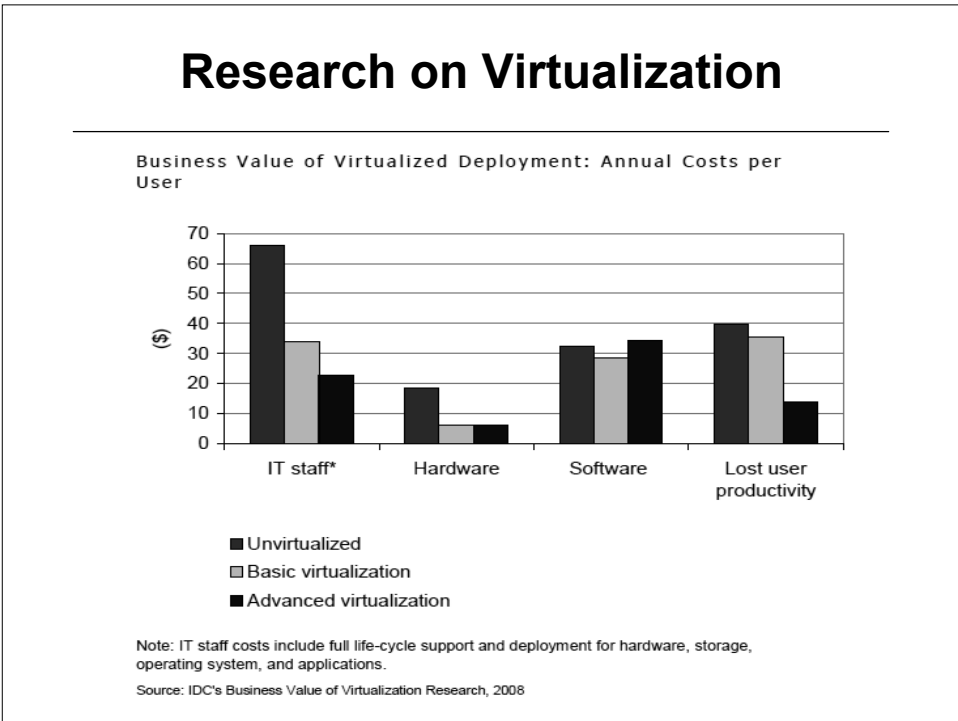
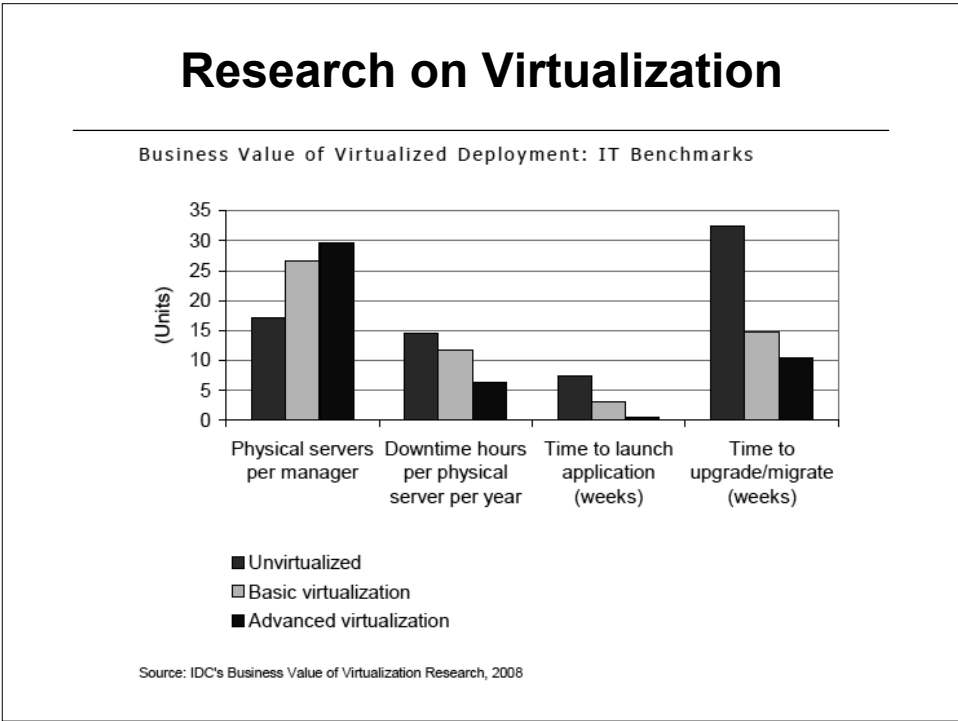
- In the past, a critical application deployed in its own machine
  - heavy price
  - over population of hardware, power, space and bandwidth problem management
  - cooling system
- The system resources utilization is low while cost of maintenance and management is still high

## Research on Virtualization

Business Value of Virtualized Deployment: IT Benchmarks



Source: IDC's Business Value of Virtualization Research, 2008



## **LDOM Virtualization Technology**

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A technology that allocates resources such as processors, memory, disks or network devices to logical containers and manages them as logical domains within the physical host. The resulting LDOM has its own operating system and manages resources independently in its realm.

## **LDOM Virtualization Technology**

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### **Benefits of using DATAFAX with LDOMs**

The LDOM technology provides a very cost-effective alternative architecture for deploying DATAFAX. The same physical server can be used for multiple DATAFAX servers within various logical domains with optimal resource utilization.

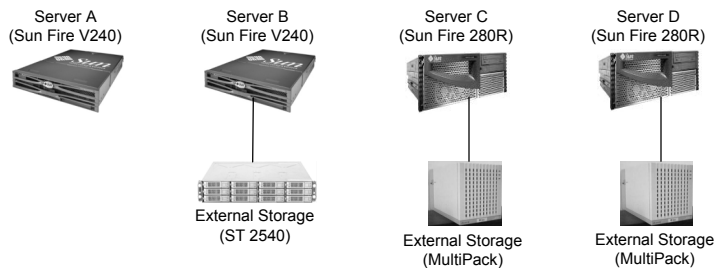
## LDOM vs Zone

In DFUG 2009, Darryl presented “DataFax and Solaris Zones”

Solaris Containers(Zone)	LDOM
<ul style="list-style-type: none"><li>• No special hardware required</li><li>• Single OS</li><li>• Shared Kernel, memory, file systems</li><li>• Solaris only</li><li>• CPUs can be shared</li><li>• Works on all systems</li></ul>	<ul style="list-style-type: none"><li>• Sun4v systems only</li><li>• Multiple OS</li><li>• Dedicated kernel, memory, file systems</li><li>• Can support other Oses</li><li>• CPUs cannot be shared</li><li>• Currently available on SPARC T Series</li></ul>

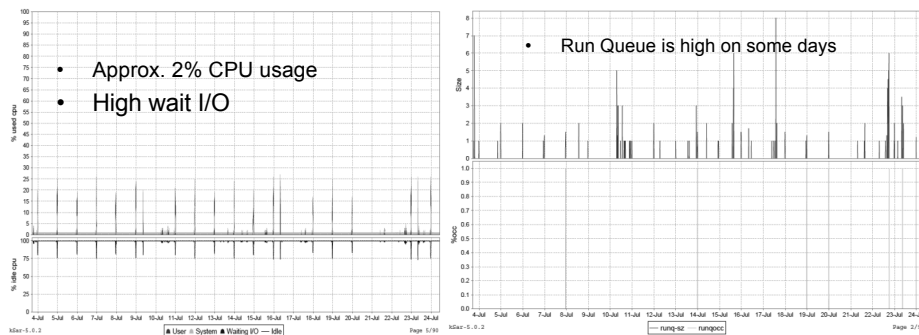
## Before going to LDOM

All physical servers were completely separated



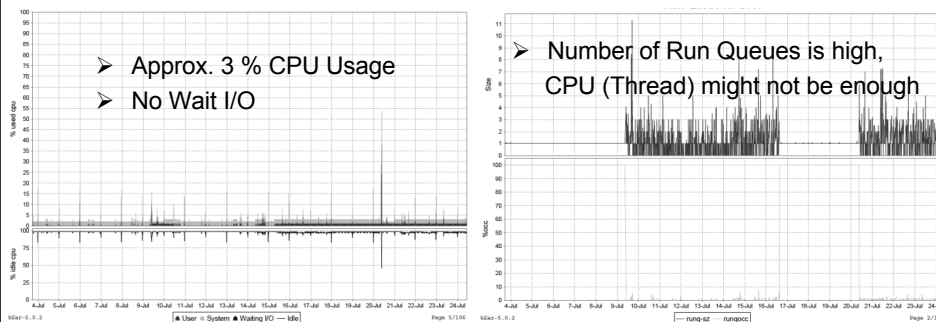
# Performance Assessment

## Server A



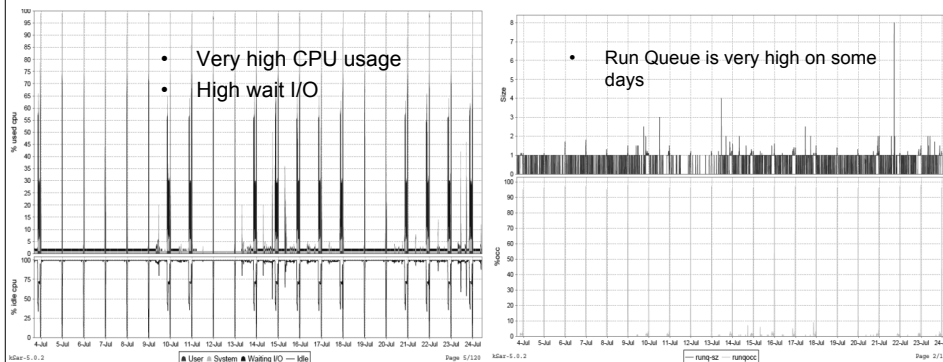
# Performance Assessment

## Server B

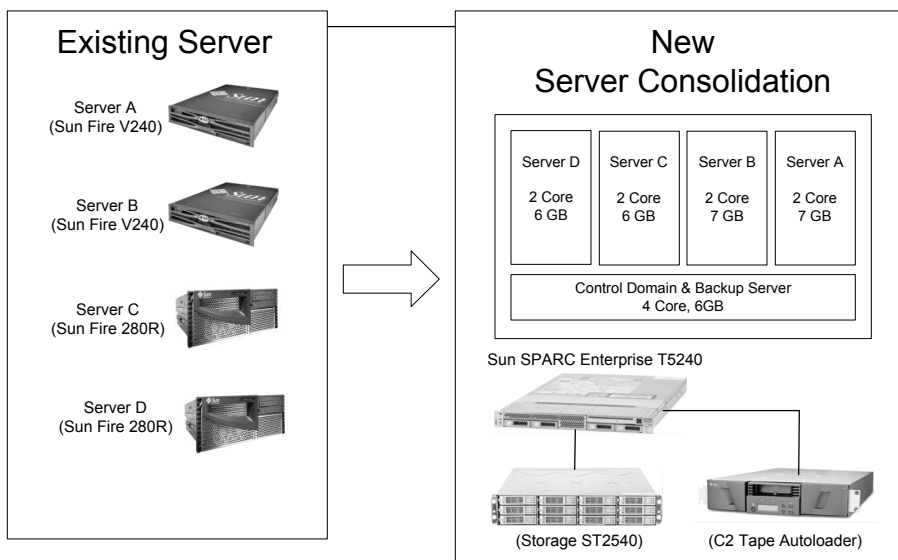


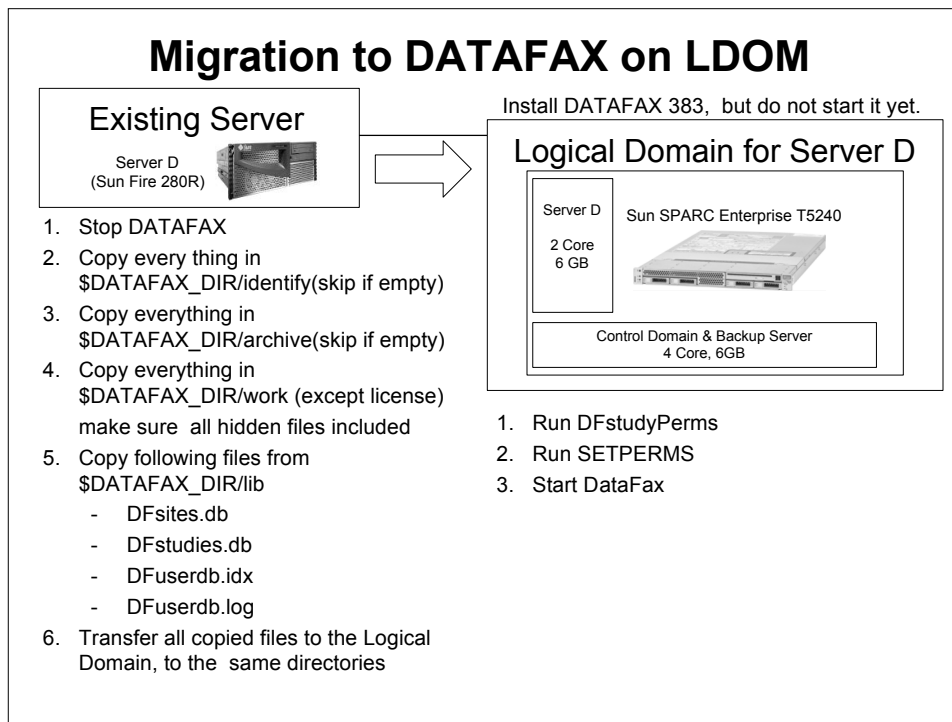
# Performance Assessment

## Server C



## Current System with Logical Domain





## Conclusion

Virtualization is a technique that enables an organization to get the most performance and utilization of servers. The obvious benefits of virtualization are cost reduction, easier IT system management and certainly nowadays, people are more likely to consider global warming and green technology, and virtualization is a way to be responsible.



## Online technology resources

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### More information

- BigAdmin Portal for **Oracle VM Server for SPARC (Logical Domains)**  
*last updated on 2010-05-13*  
➤ <http://www.oracle.com/technetwork/systems/logical-domains>
- Sun Blueprint: Beginners Guide to LDOMS: Understanding and Deploying Logical Domains  
➤ <http://www.sun.com/blueprints/0207/820-0832.pdf>
- Open Solaris  
➤ <http://hub.opensolaris.org/bin/view/Community+Group+ldoms/>

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# Thank you