



IBM Global Services

# Desk Top Virtualization

**The IBM Solution for Flexible Workplaces**

Oliver Mark  
Principal Enterprise Linux Services CR

## Challenges with traditional Client / Server environments are technical, financial and environmental

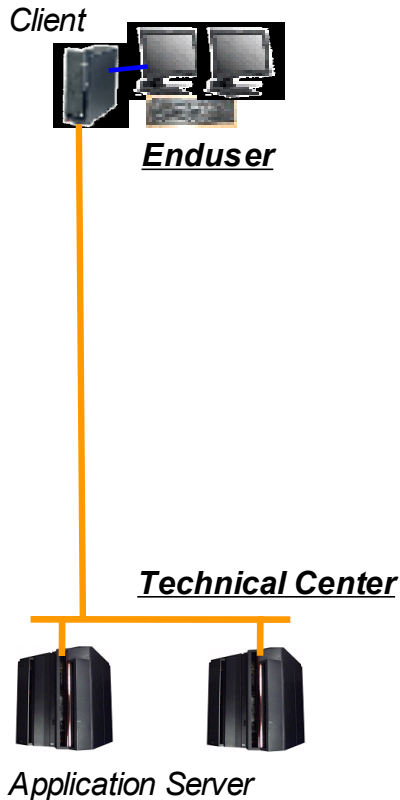
- ◆ Desktop machines using various versions of more or less current legacy Operation Systems.
- ◆ Multiple operating systems on a single machine require reboots and multiple partitions
- ◆ Use of different Operating Systems may require a variety of supported (different!) hardware configuration.
- ◆ Desktops in traditional environment - assigned to single user – tend to be significantly underutilized.
- ◆ Underutilized equipment tend to include unused software licenses.
- ◆ Software-distribution and SW maintenance can be extremely time consuming.
- ◆ The repair time often is above acceptable service levels.
- ◆ Environmental issues, such as noise level in open installation, can inhibit user productivity.

## A future solution needs to address several key requirements and goals derived from the current situation

- ◆ Centralized, standardized, secure Desktop infrastructure
- ◆ Optimized use of resources, improved utilization
- ◆ Simplified Desktop SW-distribution and administration
- ◆ Optimized usage of Software licenses
- ◆ Load balancing for dynamic number of users
- ◆ High level of environmental support
- ◆ Financial relief for maintenance
- ◆ Increased availability of system with maximized usage of resources
- ◆ Dynamic load-balancing for “unlimited” number of users
- ◆ No proprietary solutions, based on Open Standards
- ◆ Available on Linux
- ◆ Single Source solution integrating HW, SW, Service and Support.
- ◆ Dynamic availability of workspaces supporting Roaming Desktops / Users

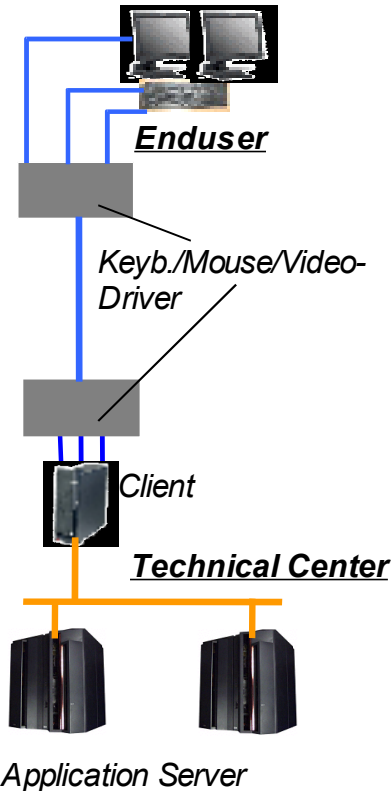
# Current Desktop Application Technology Concepts

## Client / Server



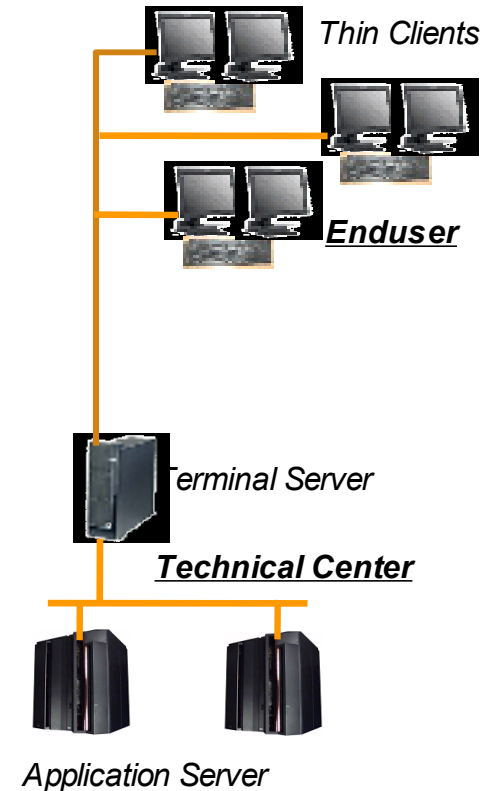
- Inflexible
- Expensive to maintain

## Remote Desk Top



- Expensive technology
- Restricted line length

## Terminal Server (TS)



- TS-ability of appl. mandatory
- Performance lacks

# Virtual Desktop Concept: Step by Step to Virtualization

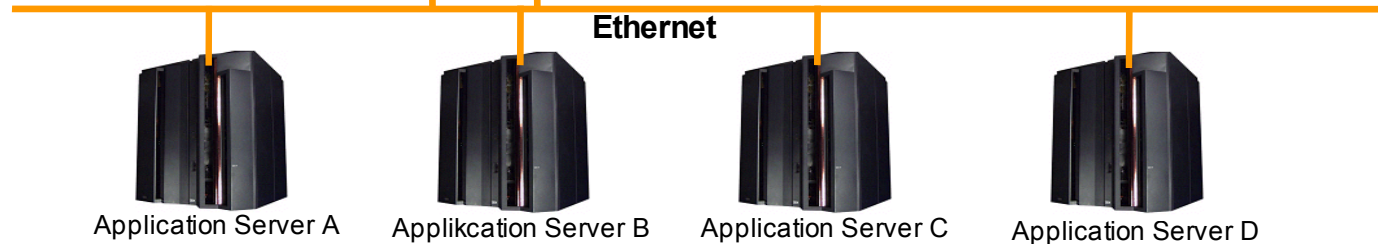
## Enduser



## Fat Clients

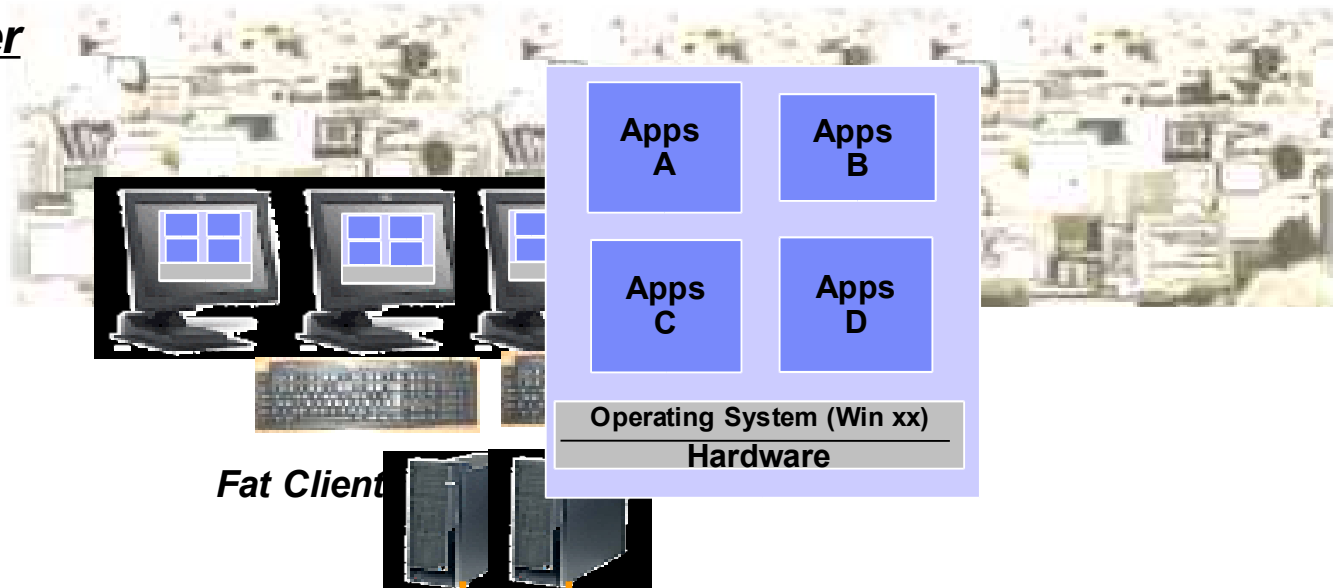


## Technical Center

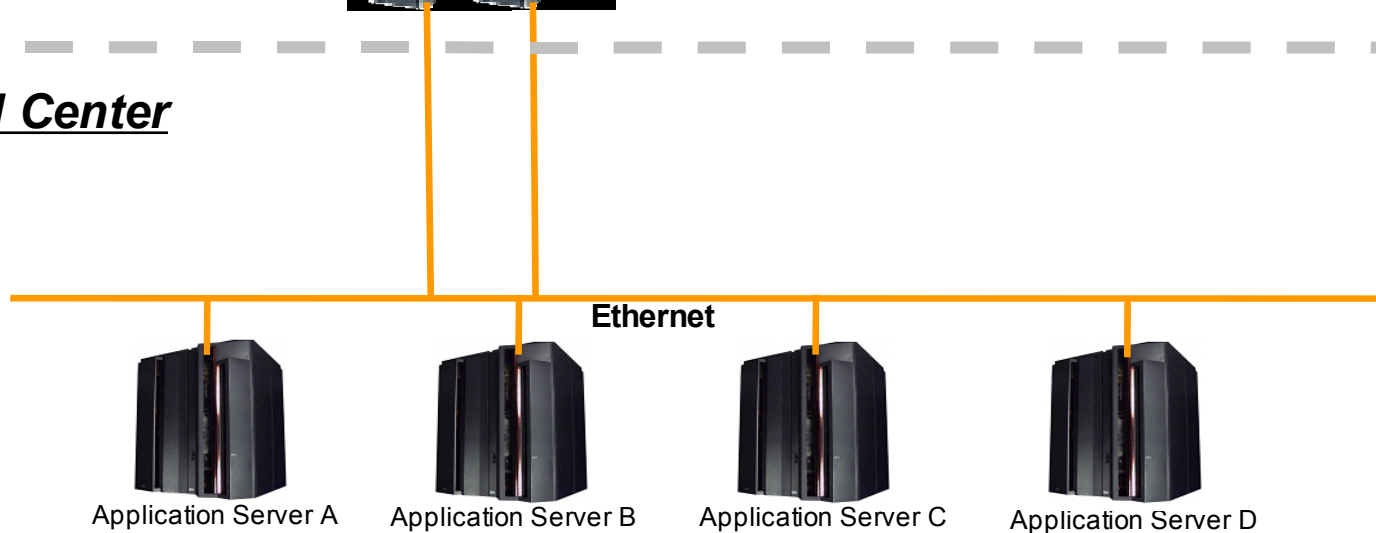


# Virtual Desktop Concept: Step by Step to Virtualization

## Enduser

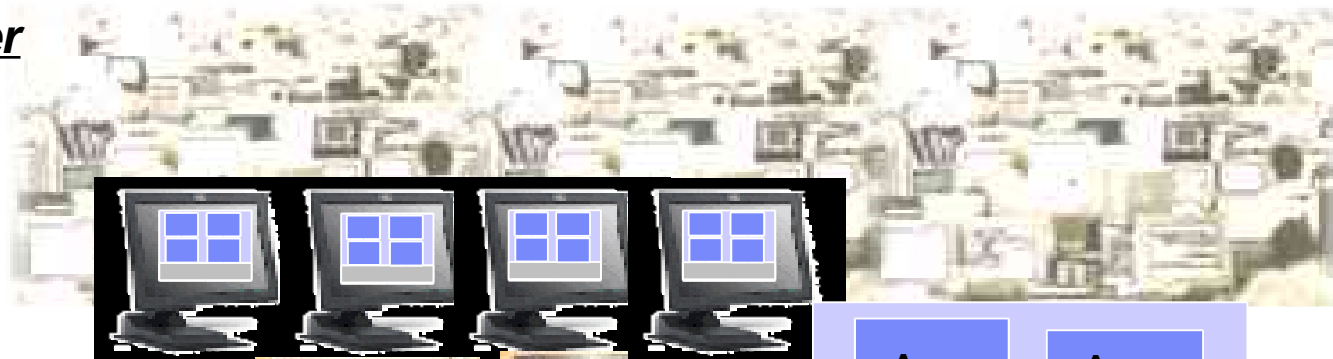


## Technical Center



# Virtual Desktop Concept: Step by Step to Virtualization

## Enduser



*Fat Client*



Apps  
A

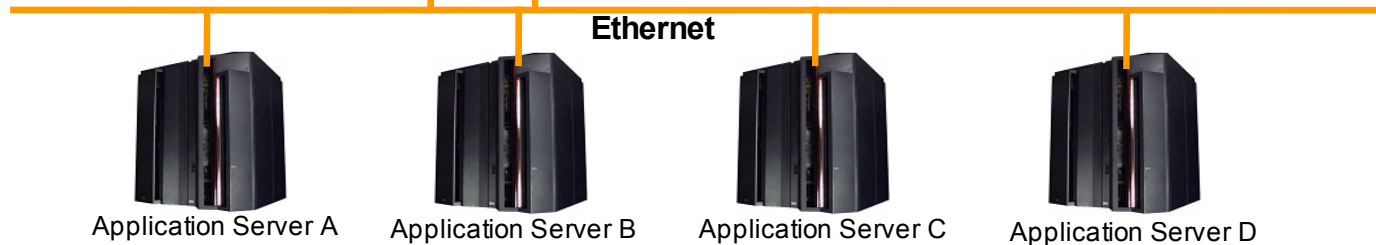
Apps  
B

Apps  
C

Apps  
D

Operating System (Win xx)  
Hardware

## Technical Center

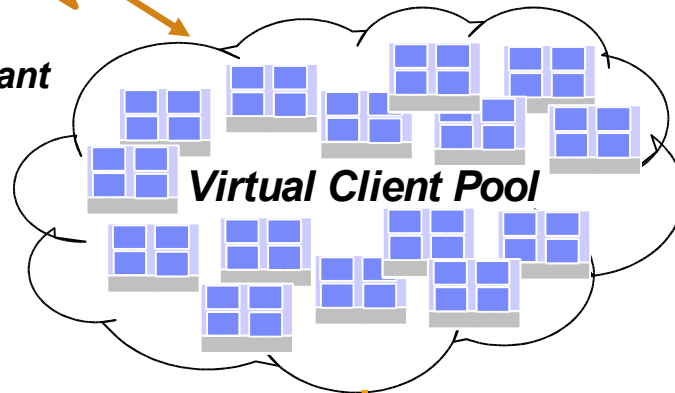


## IBMs Virtual Desktop Concept!

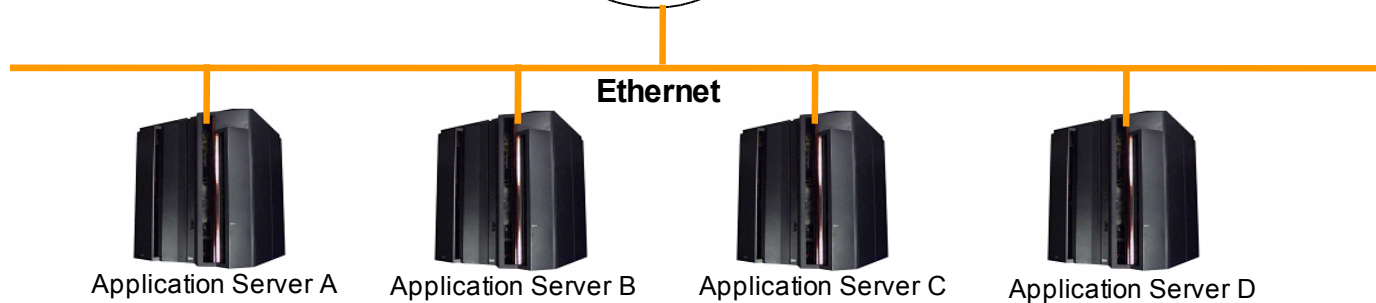
### Enduser



*Dynamic Allocation*  
*Load Balanced*  
*Scalable*  
*Redundant*



### Technical Center





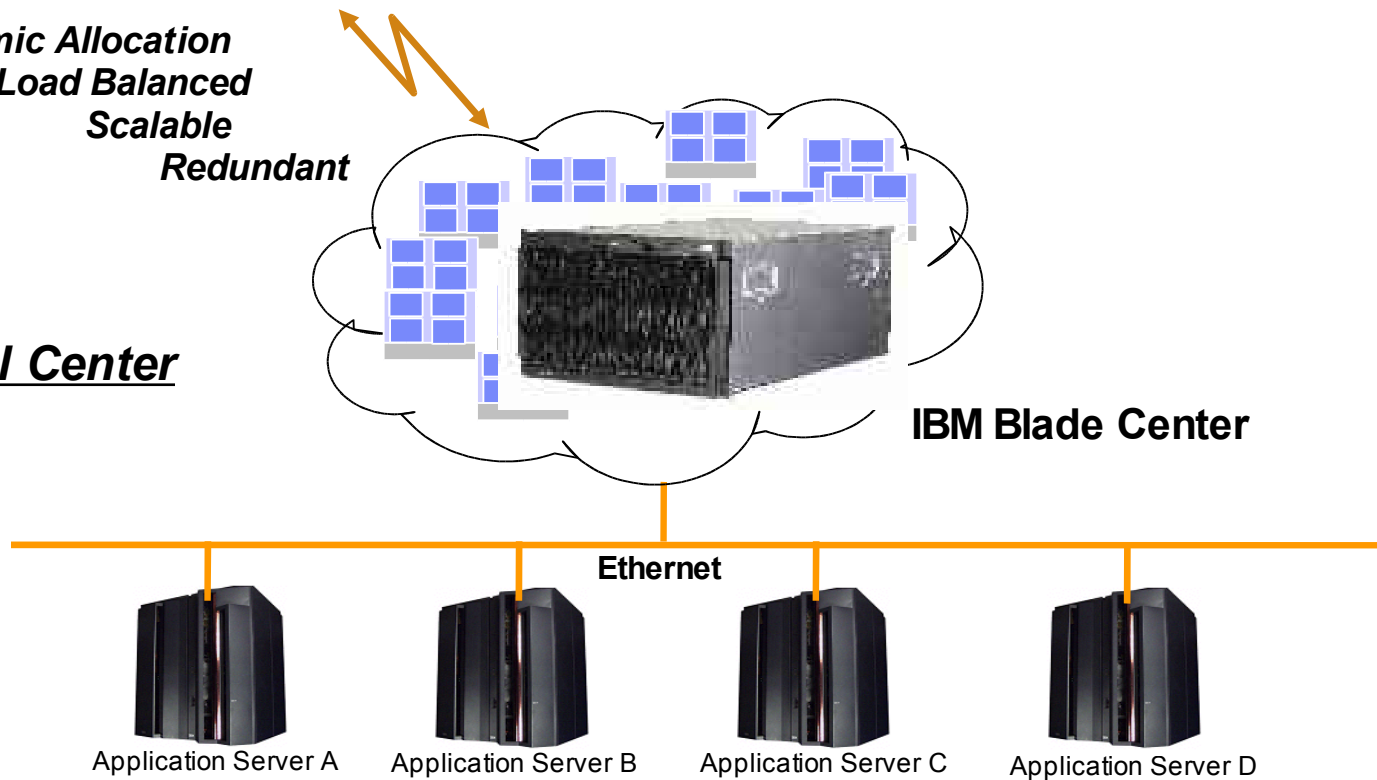
## IBMs Virtual Desktop Concept!

Enduser

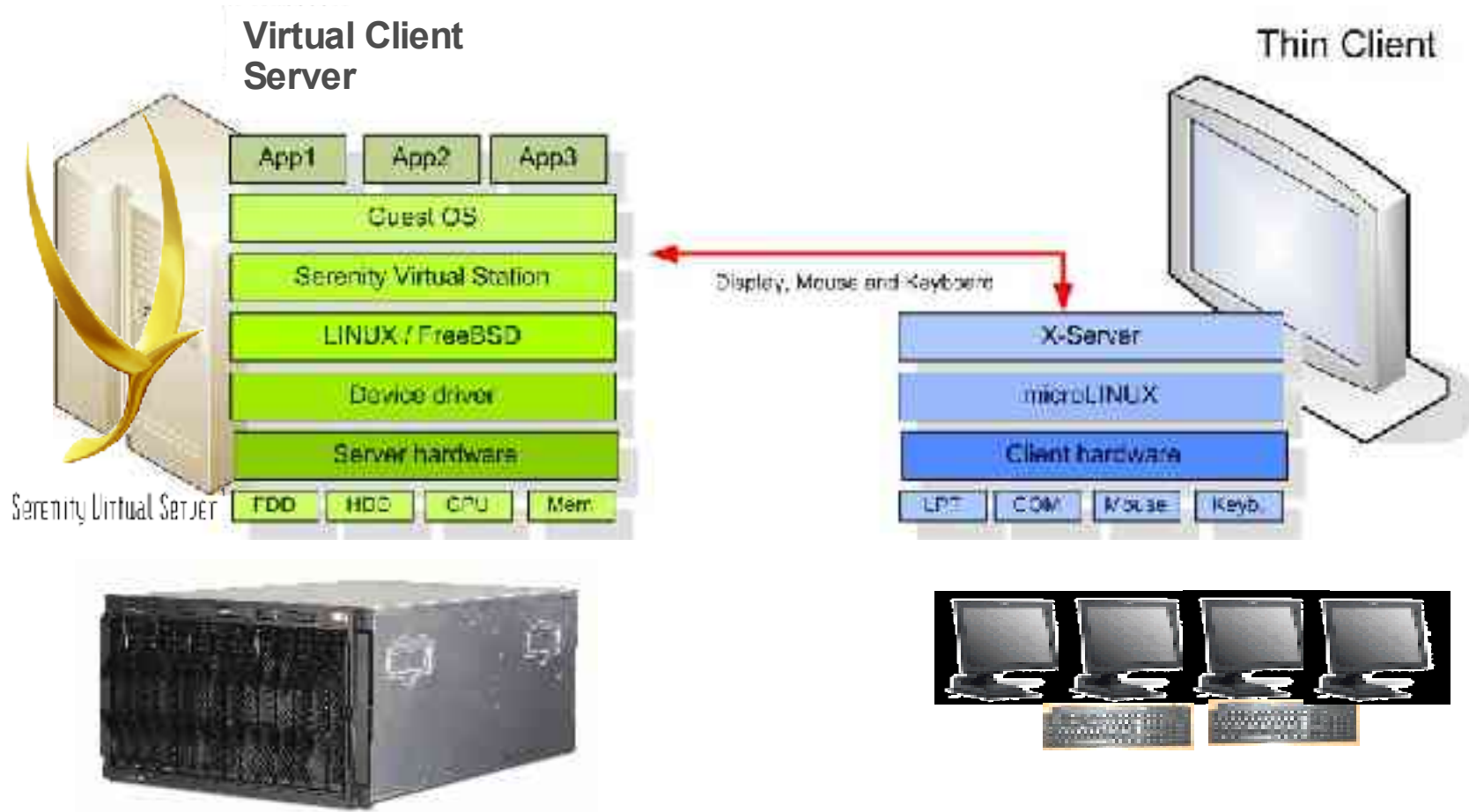


*Dynamic Allocation*  
*Load Balanced*  
*Scalable*  
*Redundant*

Technical Center



# Virtua Desktop Architecture Overview



## Serenity Virtual Server Features

### ◆ Supported Host Operating Systems

- Windows NT4, 2000, XP, (Windows Server 2003)
- Linux (Kernel 2.4 and higher)
- FreeBSD
- (OS/2)



### ◆ Supported Guest Operating Systems

- OS/2 Warp 3 or higher
- Windows 3.1, 95, 98, NT, 2000, XP
- DOS
- Linux 2.2, 2.4



### ◆ „virtual Hardware“

- Full Pentium compatible PC
- VESA graphics card (optional more than one screen)
- NE2000plus or RTL8029 Ethernet network card / Token Ring network cards
- IDE hard drive / IDE CD-ROM drive / floppy drive
- Serial and parallel ports
- USB and Audio



Serenity Virtual Server™

## General Usage of Virtual Desktop Architecture

- Focus on customers with need for change or migrate
  - ➔ outdated Desktop OS
  - ➔ Requirement for increased security, load-balancing
  - ➔ Reduce TCO for Desktops
- Smooth migration
  - ➔ From OS/2, Windows NT, Novell Netware
  - ➔ To Windows 2000, Windows 2003, LINUX
  - ➔ Clients and servers
  - ➔ Step by step or comprehensive
  - ➔ Virtualization for legacy applications
    - Server consolidation
    - Workstations with Citrix or as Fat client

## IBM Contact Partner

### **Hellmuth Goertz**

**Solution Sales & Business Development FSS**

**Segment Leader Linux Strategy Financial Markets CR**

**Phone: ++49 - (0)69 - 6645 - 4935**

**Mobile: ++49 - (0)170 5625 738**

**E-mail: [hellmuth.goertz@de.ibm.com](mailto:hellmuth.goertz@de.ibm.com)**

### **Oliver Mark**

**Senior IT Architect, Principal Enterprise Services for Linux**

**Phone: ++49-(0)621-469 -420**

**Mobile: 49-172-2931376**

**E-mail: [o.mark@de.ibm.com](mailto:o.mark@de.ibm.com)**