

Serenity Virtual Station (SVISTA™) for Desktop and Server

Overview and product summary

Version 2.1



Serenity Virtual Station



Serenity Virtual Server™

What is SVISTA™?

Today's computers are extremely powerful, utilizing fast processors and large amounts of memory. Today's applications utilize only a part of this power. And despite this underutilization, many users have need of more than one PC.

These employees may require access to legacy applications using a different Operating System (OS). They may run test or support environments, or development systems requiring many software compiles.

In the server area, more and more organizations are moving towards "server farms", configurations which centralize desktops to lower support and management costs.

A software solution which can resolve these issues should have the ability to run several operating systems on a single machine. This means creating several virtual computers to run inside one real computer.

This is the solution provided by Serenity Virtual Station (SVISTA™).



Serenity Virtual Station

How does it work?

SVISTA™ is a virtualization technology for PCs, allowing a user to install multiple Operating Systems (OSs) on a single computer, running these Operating Systems simultaneously, without the need for the user to shut down and reboot. SVISTA™ is launched as an application under the "host" operating system and it creates a set of "virtual computers" or virtual machines (VMs). Each virtual computer can run a "guest" Operating System. Each virtual computer has its own virtual processor, set of virtual devices, and full network support.

The "desktop" of a virtual computer can appear in a separate window, or it can occupy the entire display (full screen). In the full screen mode, users can "hot key" between the different virtual computers, or desktops.

SVISTA™ employs emulation technology which enables the execution of a guest Operating System in an isolated program environment, under the full control of the virtual machine monitor. At the same time, most of the guest code instructions are executed directly by the processor, without emulation. This insures high performance and responsiveness of applications running on the guest operating system, in the virtual computer.



Serenity Virtual Station

Benefits

- Legacy applications may not be supported on new hardware or on the current operating system. SVISTA™ allows the user to run a "legacy environment" on the same system as the current environment protecting the investment in software, skills, and training.
- SVISTA™ may be used to consolidate workloads of underutilized systems, desktops and servers. This can reduce hard dollar expenses in equipment, utilities, and so forth. It can also reduce the management and support activities required.
- SVISTA™ allows a support organization to recreate a user's failing environment on their own equipment which can improve response times. It also allows support to create save, isolated environments to test applications and carry out other support activities. Allowing support groups to implement SVISTA™ can result in a more reliable, secure computing environment for the entire organization.



Serenity Virtual Station

Benefits

- SVISTA™ can allow an organization to create a standard virtual hardware footprint which can be deployed throughout an organization, simplifying support activities.
- Easy to create specialized standard desktops for activities such as training or sales demonstrations.
- For programmers, SVISTA™ provides an isolated environment for compiling, debugging, and monitoring software, providing a set of controls which allow programmers to study the execution of software. This can result in significant overall improvement of programmer productivity.
- Typical software migration involves a great deal of testing, which can be supported by SVISTA™. Perhaps more important, such migrations involve a linear schedule of activities. SVISTA™ provides users with the ability to create a more flexible environment, running the "from" and "to" environments in parallel on the same systems. This affords the organization a great many options in determining a "cut over" date and procedure.



Serenity Virtual Station



6PAC Consulting AG
THE HUMAN TECHNOLOGY PARTNER

06.07.2004
Overview SVISTA
Page: 5

Benefits

- Server based support with SVISTA™ can facilitate the archiving of user data and programs, improving security and data integrity.
- Server based systems can deploy virtual desktops to remote boot clients throughout a network, providing all the benefits of server managed clients to users of multiple operating systems with one set of tools.
- Remote workstations can access SVISTA™ desktops running on the server, providing users of a variety of workstations with access to standard desktops and applications, or a variety of support desktops and operating systems.



Serenity Virtual Station

SVISTA™ can provide an organization with a powerful, cost effective tool which provides solutions to a wide range of support challenges and computing requirements while simplifying many of the complex tasks associated with running and supporting the computing environment and the network.



6PAC Consulting AG
THE HUMAN TECHNOLOGY PARTNER

06.07.2004
Overview SVISTA
Page: 6

Features of Virtual Machine

- Processor Intel Pentium 2 with MMX support
- Memory up to 256 MB
- Graphics VGA and SVGA support
- Floppy Drives One 1.44 MB floppy device
- Serial Devices Up to four serial (COM) ports
- USB Ports In plan 2Q2004
- Parallel Devices Up to two bidirectional parallel (LPT) ports
- Keyboard 104-key Windows enhanced keyboard
- Mouse PS/2 mouse
- Network Card Ethernet network card compatible with NE2000, NE2000plus and Realtek 8029. Token-Ring network card.
- Sound In plan 1Q2004
- BIOS Phoenix BIOS 1.0



Serenity Virtual Station



6PAC Consulting AG
THE HUMAN TECHNOLOGY PARTNER

06.07.2004
Overview SVISTA
Page: 7

Requirements

Desktop VM

Software

- Windows NT 4 Service Pack 6
- Windows 2000 Professional Service Pack 2
- Windows XP
- LINUX for i386 (Kernel 2.4.x or higher, QT3 installed) like SuSE, RedHat Mandrake
- IBM OS/2 Warp or Serenity eComStation
- FreeBSD

Hardware:

- Pentium 3 with 700 MHz
- 128 MB for host OS plus memory for each running Guest-OS
- Hard disk 2 MB for program files plus container files for each installed guest VM (20 GB recommended)
- Any SVGA, XGA graphics card with minimum of 256 colors supported by host OS (Windows GUI, Linux X-Server or OS/2 presentation manager)

Optional components:

- Ethernet or Token Ring network card that provides promiscuous mode to support network for guest VM:
- Serial or parallel port (serial ports not yet supported in the Linux Host version)
- Any 3,5" disk drive, any CD-ROM or DVD-ROM drive

Server based VM

Software

- Windows 2000 Server Service Pack 2
- Windows Server 2003
- LINUX for i386 (Kernel 2.4.x or higher, QT3 installed) like SuSE, RedHat Mandrake
- IBM OS/2 Warp, Warp Server for eBusiness or Serenity eComStation
- FreeBSD

Hardware:

- Pentium 4 or Xeon with at least 1.0GHz
- 256 MB for host OS plus memory for each concurrently running Guest-OS
- Hard disk 2 MB for program files plus container files for each installed guest VM (100 GB RAID 1 recommended)
- Any SVGA, XGA graphics card with minimum of 256 colors supported by host OS (Windows GUI, Linux X-Server or OS/2 presentation manager)

Optional components:

- Ethernet or Token Ring network card that provides promiscuous mode to support network for guest VM:
- Serial or parallel port (serial ports not yet supported in the Linux Host version) Support of Serial over IP possible but not included



Serenity Virtual Station



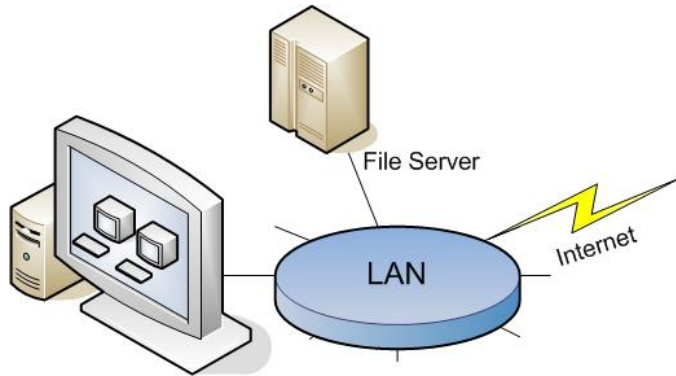
6PAC Consulting AG
THE HUMAN TECHNOLOGY PARTNER

06.07.2004
Overview SVISTA
Page: 8

One technology - many environments

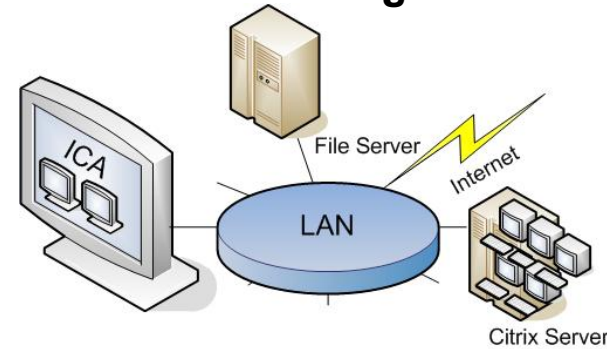
Desktop

- All components locally installed



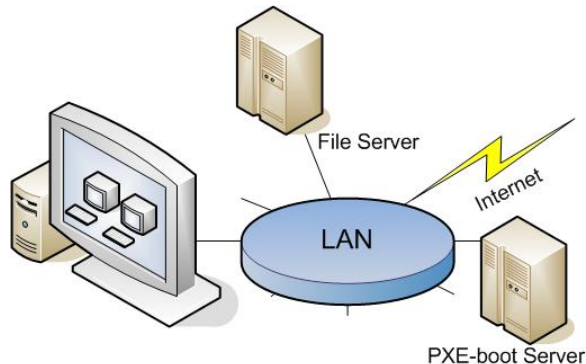
Terminal services for Windows

- VM running in Server farm
- Terminal access through ICA



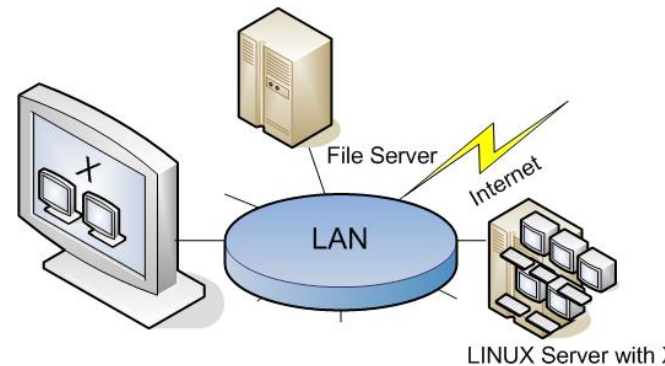
onDemand Services for LINUX

- PXE-Client boots via NFS
- All components running locally



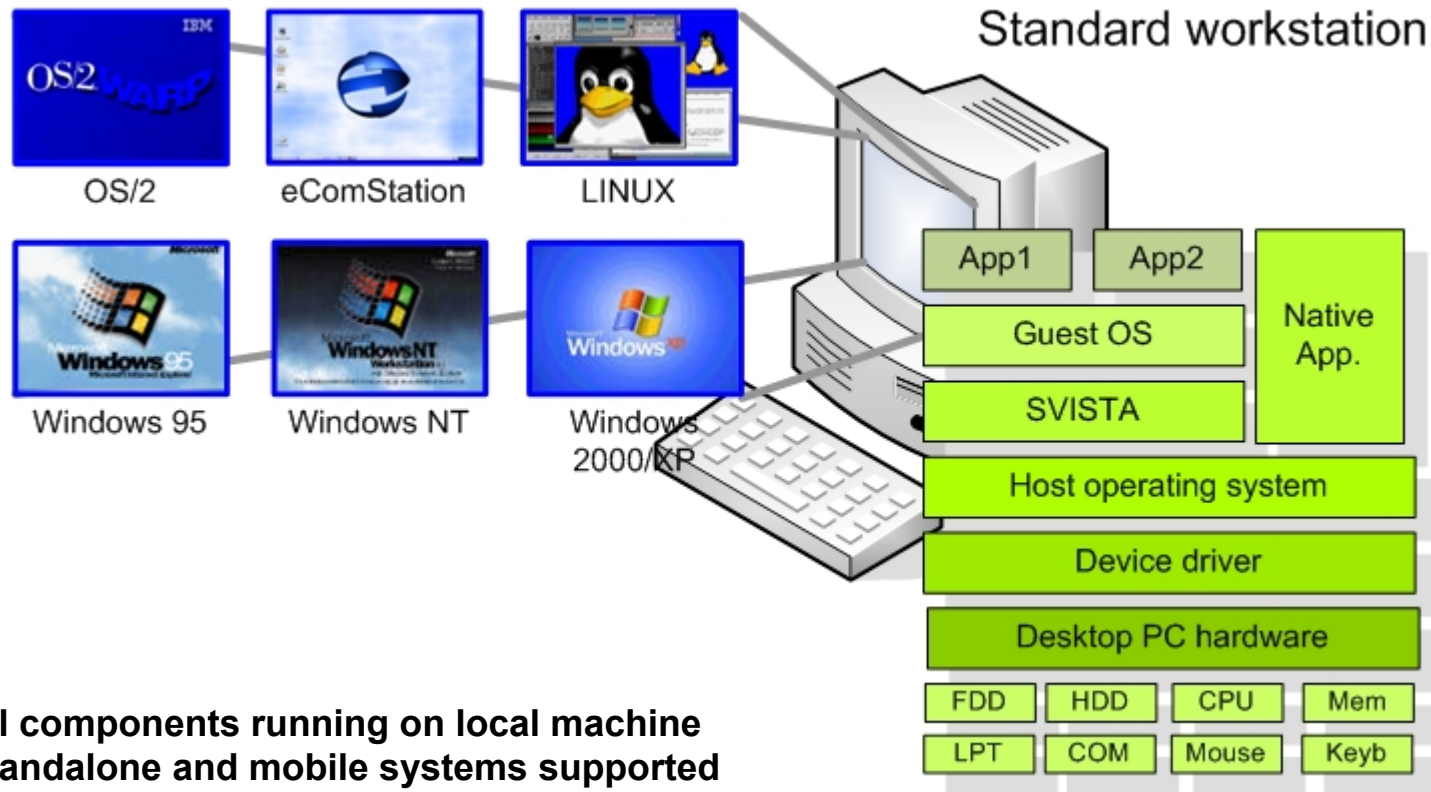
Terminal services for LINUX

- VM running in Server farm
- Terminal access through X



Serenity Virtual Station

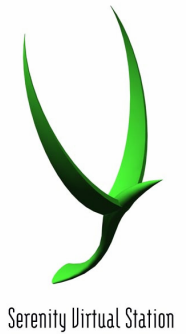
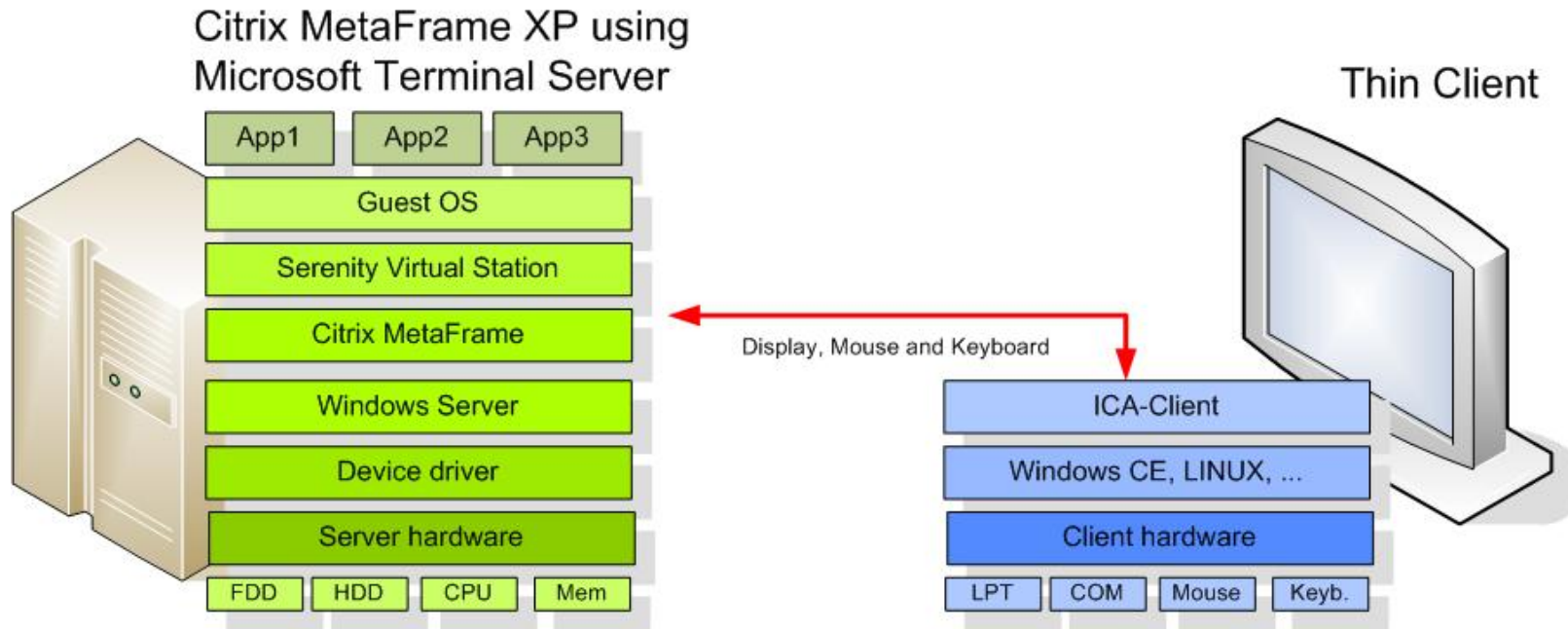
SVISTA™ – Desktop environment



- All components running on local machine
- Standalone and mobile systems supported
- Legacy OS protected by a modern OS frame

- Host operating system can be the following Intel based systems:
Windows 2000, Windows XP, IBM OS/2 Warp, LINUX, FreeBSD, Serenity eComStation

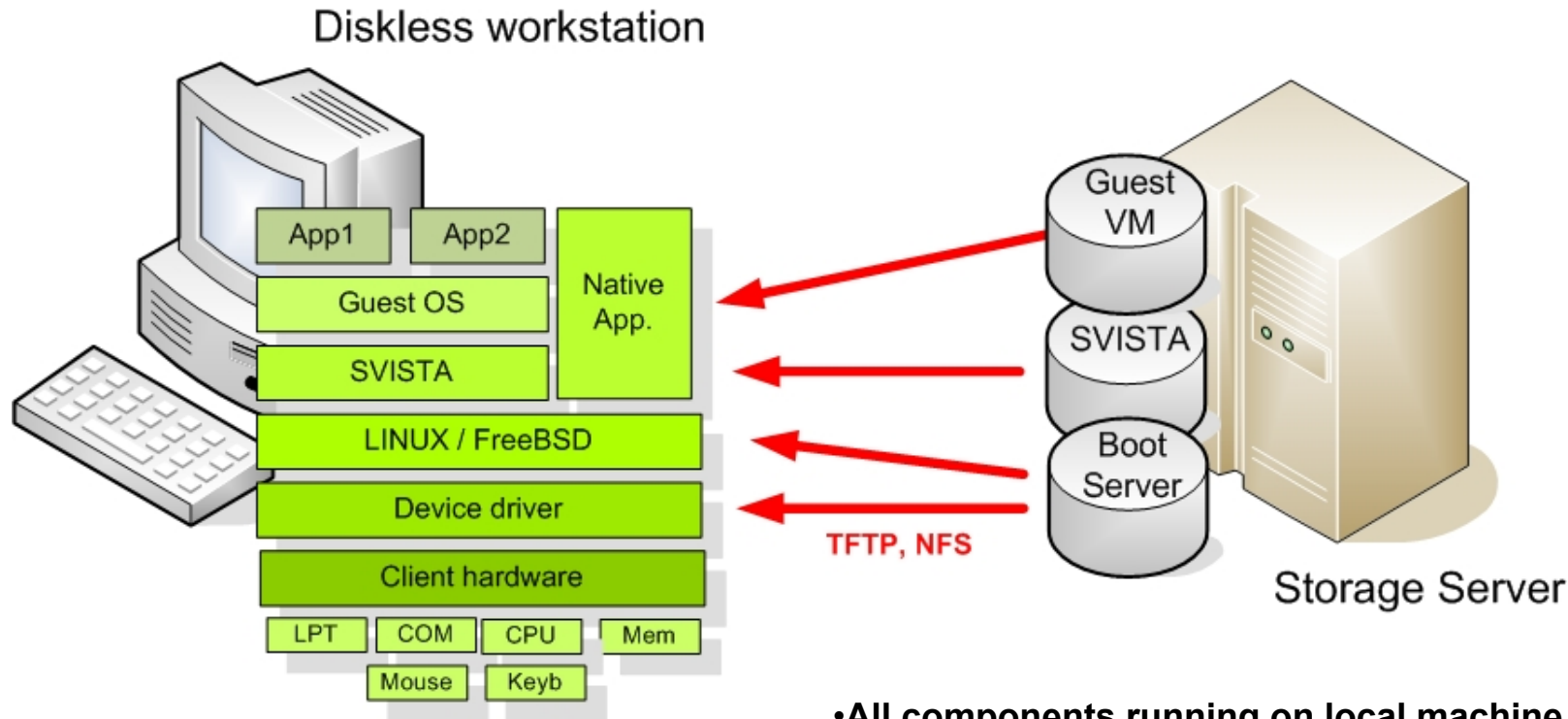
SVISTA™ Terminal Services for Windows



- Legacy applications with ICA protocol
- Server farm configured to publish SVISTA™
- Client connects via ICA load-balancing
- Session and applications run on server
- display forwarded by ICA protocol

1. Client automatically starts ICA session
2. Loads configuration from Server Farm
3. Program neighborhood or configured application is started on remote server
4. Display and keyboard redirected by ICA protocol

SVISTA™ onDemand Services



1. Client searches for Boot server
2. Loads host OS files
3. User logs on
4. Appropriate image is selected
5. SVISTA™ starts personally configured

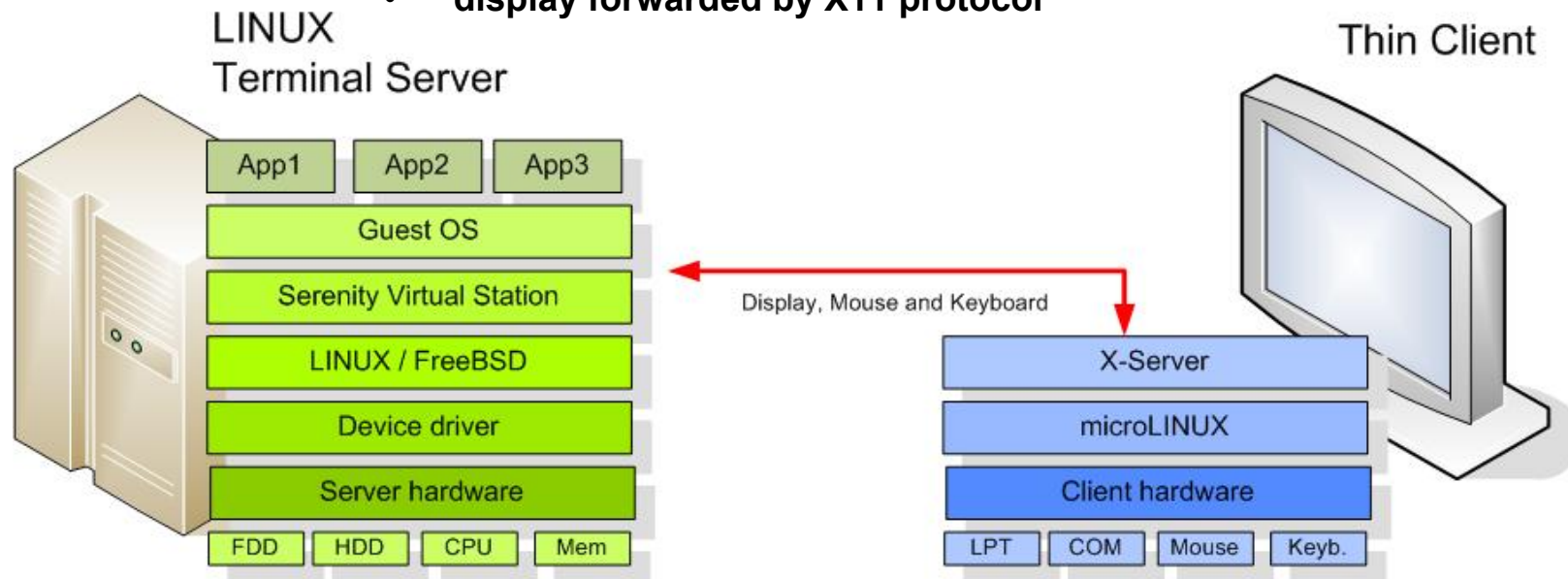
- All components running on local machine
- System attached to LAN
- Operating system boot with PXE or Micro LINUX



Serenity Virtual Station

SVISTA™ Terminal Services for Linux

- Legacy applications with X protocol
- Server farm configured to use remote X11
- Client connects via DNS lookup (round robin)
- Session and applications run on server
- display forwarded by X11 protocol



1. User logs on with local X
2. Loads configuration from Logon-Server
3. Terminal reports local X-Server address to start SVISTA™ on remote server
4. Display and keyboard redirected by X11-protocol



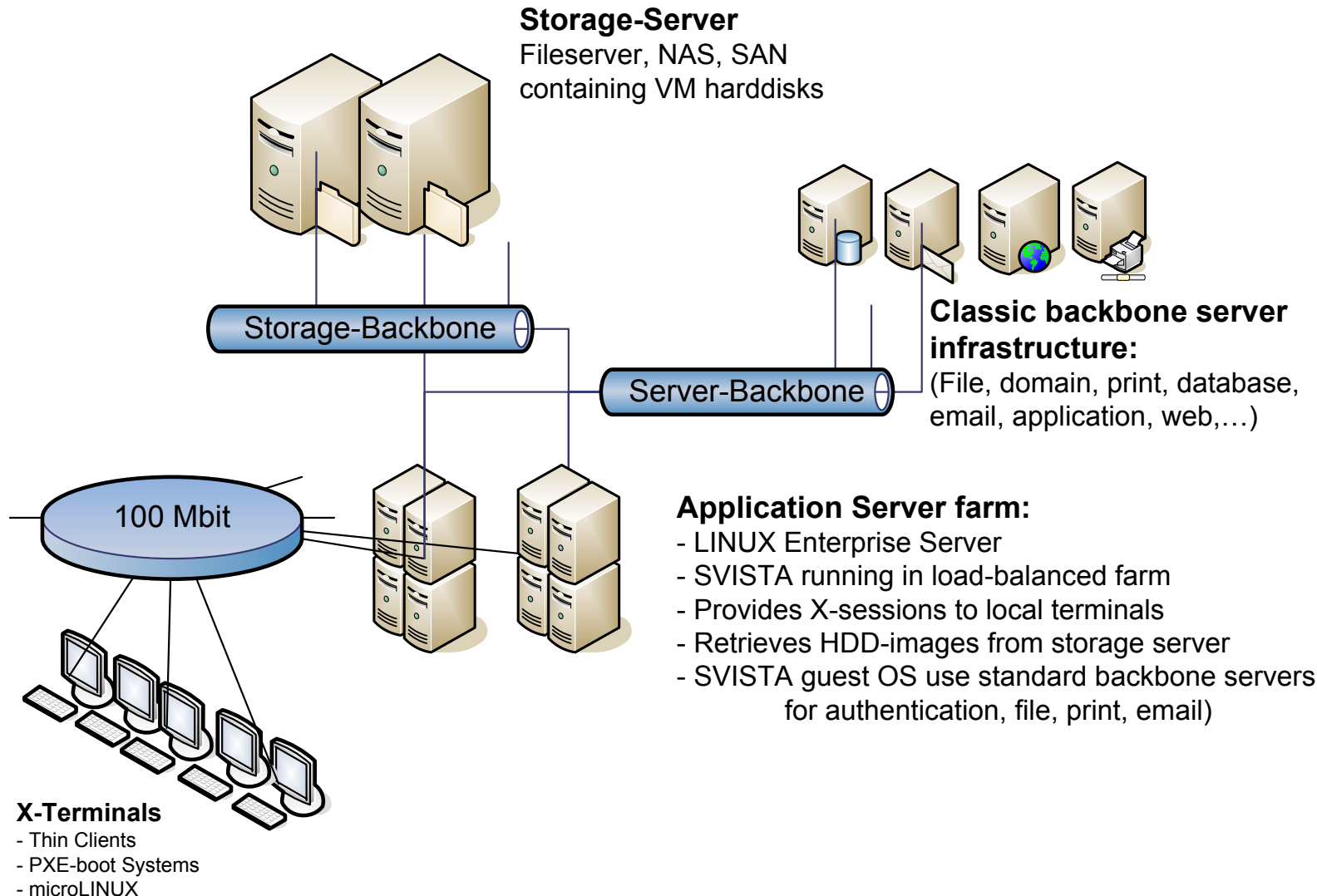
Serenity Virtual Station



6PAC Consulting AG
THE HUMAN TECHNOLOGY PARTNER

06.07.2004
Overview SVISTA
Page: 13

SVISTA™ Terminal Services for Linux - Network Architecture



Serenity Virtual Station