

Generic WorkStation

Idea and Concept

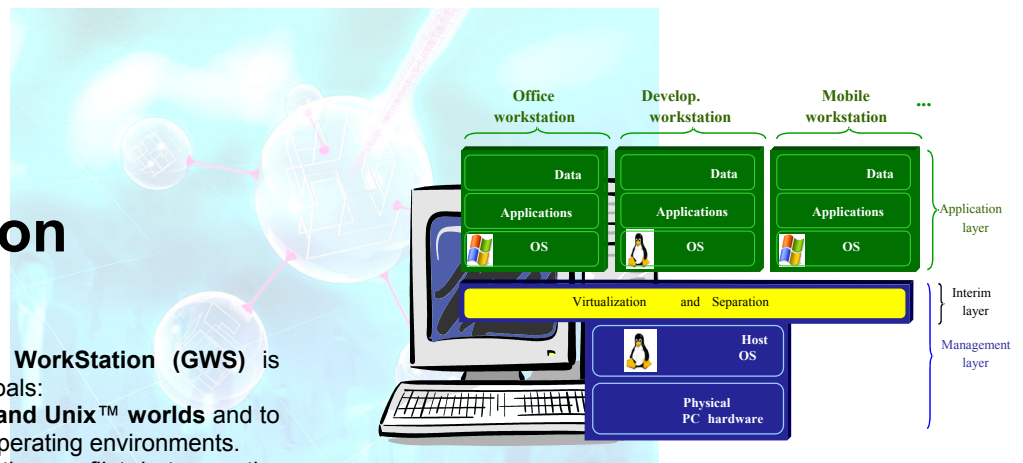
The idea of a **Generic WorkStation (GWS)** is bound up with two main goals:

To unite the **Windows™** and **Unix™** worlds and to **consolidate** associated operating environments.

This method eliminates the conflict between the user's interests and the administrator's interests. Thanks to a new approach, **flexibility** of use and the **standardization** of computer workstations are no longer mutually exclusive goals.

The GWS concept includes a complete operating environment consisting of a GWS client and a GWS server.

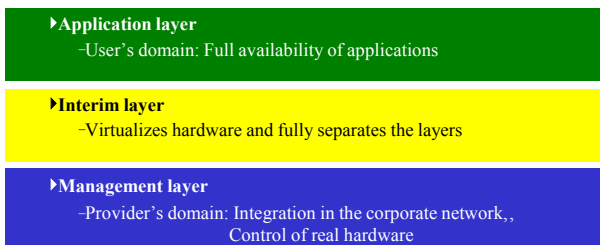
The GWS client and server are based on the same identical underlying concept with three functional layers.



and the associated service-specific configurations. Services consist of network and GWS services.

The GWS server has a structure that is entirely symmetrical with that of the GWS client.

Application and service systems can be permanently assigned to different **network categories**.



The applications can be freely configured by the user and are separated from the management layer by an interim layer. This ensures that both functional areas can be utilized to the fullest scope of their capabilities.

The **GWS Client** allows several different application systems to be used simultaneously on one single workstation.

In this context, an application system is understood to be the combination of an operating system, the applications running on the OS and the associated application-specific configurations. In conventional systems, application systems generally have to be run on a physical computer. Applications may be based on Linux™ or Windows™.

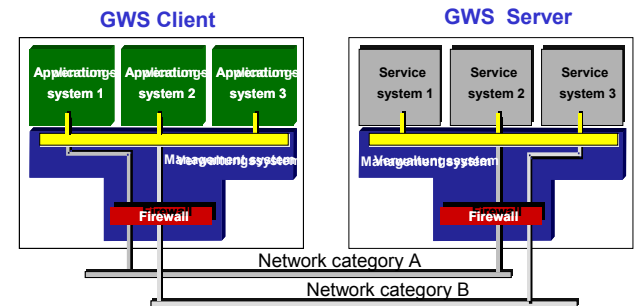
Application systems are encapsulated and are universally available in the corporate network. The **encapsulation** allows any of a variety of exchanges to take place between physical computers: **"Copying instead of installing"**.

Making all this possible is the interim layer based on VMware™ for hardware virtualization, and a specially developed client configurator. The client configurator provides users with controlled access to services in the management layer.

Management systems are provided as highly optimized Linux™ distributions.

The **GWS service** provides service systems.

A service system is understood to mean an operating system, the services running on the OS



The following image shows the principle behind a complete **GWS environment**. Virtualizing the computers and incorporating the management systems in a classic network creates a working environment with higher-order organization for both users and administrators. In this "generic" network, universal application and service systems can be provided in an encapsulated form as files. The files are stored on central archive servers and are distributed by simply copying them to GWS clients via intermediate local GWS servers.

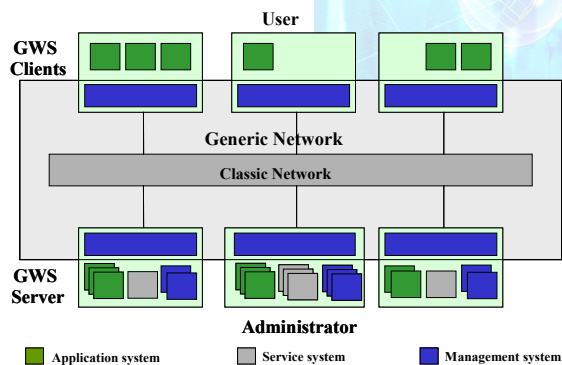
The Many Advantages of GWS Environments

User Advantages

The default application system is immediately pulled up when the users boot up. If necessary, they can download additional application systems from a server at the click of a mouse. They can modify them on their own and run them in parallel if needed. Tried and tested application systems can be shared with other users by simply **copying** them.

Users can also create complete or incremental **backups** of application systems at the click of a mouse. This simple method is also how **system recoveries** are done, including all the user-specific configurations.

The data created by users on stationary workstations is generally stored on central **file servers**. Local data created in mobile applications can be synchronized with central databases. GWS clients in GWS operating environments also provide users with their standard working environment.



Administrator Advantages

All the application, service and management systems can be administered centrally. A special server provides the automatic **installation service** for these systems and also allows them to be managed. All the standard application systems are provided in an **archive**. There is also an automatic **update service** for these systems.

Although application systems are fully controlled by the users, operator errors do not affect system administration whatsoever.

Like the application systems for the GWS clients, the service systems on the GWS servers are stored with their own specific configurations. After system failures, service availability can be restored quickly and without any time-consuming installation procedures.

Service systems are monitored from a browser, making it possible to administer them **remotely**. This allows administrators to respond quickly to problems with server services.

With homogeneous **IT security structures** and management mechanisms, **administering** the GWS operating environment is a convenient and efficient affair.

Company Advantages

The GWS system offers even more benefits for companies:

Economy

Introducing the Generic WorkStation in a company will do away with computers that have different application systems or removable drives that constantly have to be reconfigured to meet new requirements.

The **universality** of the application systems means that there is no need for redundant purchases. One single GWS workstation will generally suffice for each user.

The **homogenization and automation** make for leaner operations and reduce the time and costs of administration.

Separating the application and management layers also allow **maintenance and servicing** to be separated: application systems, service systems and management systems are fully separated and can be managed in a distributed manner.

Efficiency

GWS clients can be used universally as **office workstations, tele-workstations or mobile workstations**.

Since application systems can be freely **expanded** for specific users without undermining their ability to be centrally administered and restored, they meet key user criteria and offer increased **availability**.

Application and service systems can be simply and completely **backed up** so that, even if the system were to crash, the working environment could be quickly restored.

As entire development, testing and operating environments can be quickly and completely **replicated**, it is a quick, simple matter to deploy an existing GWS system in other areas.

IT Security

Since all workstation types are consistently connected to the corporate network, the **IT security mechanisms** are uniform and effective.

The network remains secure thanks to the **encapsulation** of application and service systems and their permanent assignments to different **network categories**. Certain network areas and services could be provided solely to duly authorized user groups.

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