

“My desk, my line, anywhere, anytime”



## Virtual PC Center

A Virtual PC Center with integrated telephone system

NEC presents the Virtual PC Center, the first combined hardware and software solution featuring integrated IT and VoIP technology.

- The VPCC design brings together telephony and data, making management of work stations easier, reducing administration costs, and guarantees enterprise data protection.
- The VPCC allows authentic user mobility: each user has access to their own work environment wherever they are.
- With the introduction of the New Generation Thin Client, the user can benefit from unprecedented multimedia quality.





## NEC - innovatively bringing together IT and VoIP technologies

With the Virtual PC Center, NEC has brought out a solution that overcomes the challenges of today's IT.

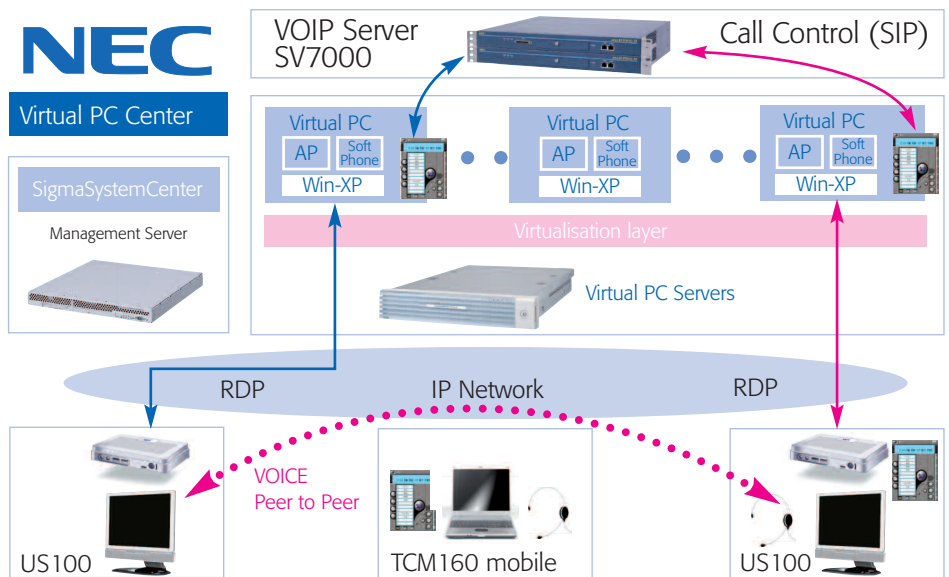
Public and private businesses are finding themselves having to face up to many more constraints:

- With regards to security, information needs to be protected, notably against internal threats, which represent around 65% of attacks. Data protection and information system access are priorities.
- From a financial point of view, if Virtual PC and server acquisition costs are relatively well managed, then operating and running costs should be reduced with regards to maintenance, recycling, installation and running.
- Organisations are looking to increase productivity from their fixed IT assets, whilst also incorporating new communication opportunities such as VoIP.

After considering all of the above challenges, NEC have designed the Virtual PC Center - an innovative solution to Virtual PCs which brings together, in one single environment, the user's typical IT environment and their telephone. The Virtual PC Center combines a new generation of thin client architecture with VoIP.

In developing this product NEC drew upon its expertise in three separate fields: Our electronic component division put in place a new high-performance microprocessor for thin clients; our networks and telecoms team provided IP telephony knowledge and our Business IT group integrated server solutions with the latest administrative software and hardware to create an added value solution for today's forward thinking organisation.

## The Virtual PC Center - the design of a global solution



The user can choose between the U-Station US100 for a fixed post, and the TCM160, an ultra performance "mobile" thin client for video and audio. The US100 contains a new generation video microprocessor developed by NEC Electronics, the electronic component division of NEC.

The US100s connect to NEC Express5800 120/Ri2 servers. The servers house Virtual PCs with XP Pro and all regular applications of each user under a virtualised VMWare layer, as well as VoIP software, with each user's unique number. User details are available either on server disks, NAS or SAN.

When the user connects to a U-Station within their environment, and works on their applications, all executions on their Virtual PC is carried out on the corresponding server.

The overall management of the Virtual PC Center is maintained by a single console which allows applications to be launched and resource allocation to be updated. For the telephones, the handset is connected directly to the US100. In the event of intra-business telephony, the connection becomes P2P, and therefore does not pass through the server. The Virtual PC Center servers therefore do not carry out this task, with the VoIP NEC SV7000 server taking control of this function. For an external call, the SV7000 acts as a classic IP-BX.



This solution is especially suited to administrative users within large organisations, call centres, banks, insurance companies and the health and education sectors - in particular hospitals.



The Virtual PC Centre has advantages for...

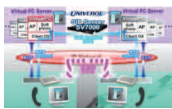
...business

Security



Business demands reinforced security for all information. The thin client design greatly reduces the risk of malware infections (viruses, spyware etc) and loss of data by storing all files and applications on the server rather than on the workstation. Data access security for users is reinforced by a card reader for user authentication.

TCO and return on investment



On top of heightened security, the Virtual PC Center offers an attractive return on investment. The maintenance and support costs are significantly reduced. The US100s have a life of around 5 or 6 years compared to 3 or 4 for PCs. Without moving mechanical parts (fan or hard drive), the US100 is reliable, and does not require repeated on-site interventions for part replacements. Therefore, the maintenance costs of the workstation are almost non-existent. In addition, centralising the administration to one single post allows a substantial increase in productivity. As opposed to regular PCs, TCO can be reduced by around 25% in 3 years.

An ecological solution



The Virtual PC Center also contributes to durable development. Each U-Station consumes less than 13W, 8 to 10 times less than a PC.

The overall energy consumption, including the servers, is reduced by 50% compared to regular PCs. With less noise, and a longer life, the Virtual PC Center is a more eco friendly IT solution.

...IT administrators

Centralisation and simplification of the PC suite



With the Sigma System Center, The administrator uses an administration console from which he or she manages the virtualised server and the client configuration. Centralising this function reinforces control of the user environment and the suite of applications. It also allows the user environment to be rationalised. From a practical point of view, updating the software and security patches across the suite are carried out from the administration console, with the virtual environment allowing regression tests, notably for the deployment of application patches.

Optimisation of resources and convergence of telecoms and IT



The Sigma System Center allows the servers to be used to their full potential, by dynamically reallocating resources. According to pre-defined rules, a particular event such as a server overload would result in a Virtual PC moving to a less busy server, completely automatically. In addition, the integration of the VoIP design guarantees a managed convergence, and simplification of the business infrastructure.

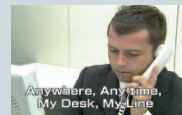
Today – IT evolution and integration



The migration from a classic PC environment to the VPCC can be progressive, whilst remaining effective. Applications require to be transferred to the new Virtual PC Center environment. Integration with the phone directory of the organisation is available as is complete compatibility with today's backup tools, clustering and NAS or SAN for improved storage.

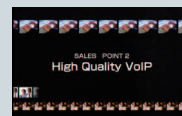
...the user

Real mobility – “My desk, my line, anywhere, anytime...”



With the Virtual PC Center, the end user sees their work IT and telephone environment completely virtualised. They can access their applications, data, messages etc, and also their telephone line, address book, voicemail, etc, irrespective of which US100 they are working from. They can also stop working, disconnect, reconnect later on another station in the workplace, or even outside thanks to the TCM160 Mobile, and pick up where they left off with all their data saved.

A thin client with top level multimedia performance



Thanks to its integrated video microprocessor, the U-Station has multimedia qualities surpassing regular thin clients. This assures a work environment of the same quality that a PC would provide.

Comfort and smooth migration



With a smooth migration between the two systems, the user will still be able to operate within their normal working environment. Furthermore, without a fan or hard drive, the U-Station is silent. And the dimensions of the US100 (153mm x 100mm x 25mm, and a weight of 500g) mean that the space taken up by the workstation is minimal.





## The Virtual PC Center components

- **U-Server virtualised server** comprises of 2 way NEC Express5800/120Ri-2 servers (each a 2U dual-processor rack server), housing the virtualisation middleware VMWare (EMC) and Virtual PC environments (Windows XP Pro, applications, data and Softphone software). The server can support up to 20 virtual clients on Windows XP.
- **Sigma System Center administration console** (1 way NEC Express5800 server with Windows XP), manages the virtualised server and guards the Virtual PC templates.
- **An optional IP telephony server** (NEC SV7000) for VoIP support. It comes with the Softone SP30 for client stations.
- **The US100 and TCM160 Mobile stations** with the capacity to process integrated video (supported formats: MPEG1, MPEG2, WMV), and ICA and RDP redirection formats. Individual card readers are an optional extra

## Installation, migration and services

Assistance and support with planning and migration to this exciting new working environment is available. NEC and its Certified Partners offer audit, pre-

sales support, deployment, configuration and installation services to ensure a smooth migration.

## An Innovative solution for today's tech-savvy organisation

The advantages of the Virtual PC Center make it ideal for deployment within large Private or Public Sector organisations who are investigating both a thin client architecture and VoIP communications.

Due to its nature, this solution is very well suited to call centres in all sectors, as well as administrative posts and other support functions (accounts,

sales administration, human resources...) of large organisations.

The Virtual PC Center also addresses the requirements of education, healthcare, and external IT support service providers (such as facilities management).

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