

Specifications for Client Supplied Computer Equipment

Overview

This document serves to outline Northwind's minimum specifications for hardware and operating platforms in the Windows environment.

- These specifications may change from time to time to accommodate releases and advances in technology. A current copy of these specifications is available upon request.
- It should be expected that, over time, Client's data volume and end-user performance requirements will change thereby resulting in the need for possible hardware, operating system and/or connectivity changes.
- Northwind recognizes that less powerful components may, in some circumstances, provide adequate performance.
- Components designated as 'dedicated' devices in this document shall only be used to operate software applications approved by Northwind. Client shall provide Northwind with an 'Administrator' level login account on each 'dedicated' device that contains a Northwind application for use in performing Support Services.
- Client shall be responsible for performance of all Client Supplied Products installation and configuration tasks. Client may elect to perform such activities using fully qualified internal staff members or by contracting such services from a qualified third party vendor.
- Client shall be responsible for all ongoing administration, maintenance, virus protection, data backup and accessibility/security for all hardware, operating systems and network connectivity. Client may elect to perform such activities using fully qualified internal staff members or by contracting such services from a qualified third party vendor.
- Client shall ensure adequate performance of all Client Supplied Products including all troubleshooting and error correction necessary to ensure such performance.
- Please ensure that the hardware system is installed professionally; specifically, the Windows Operating System and SQL Server software should be installed by a Microsoft Certified Professional. Northwind's support department will be dialing into the Customer's PMS hardware network (to be setup in a training room that simulates the live environment) at least one week prior to the scheduled training date in order to verify the hardware and configuration requirements.
- Northwind sets guidelines for the use of its software only. Due to the nearly limitless number of variables within any personal computer or network configuration, Northwind is in no event liable to any perceived speed or performance issues which may arise on any given system. Due to differences in network environments, Northwind makes no guarantee regarding any specific configuration.

This configuration is designed to support 20 concurrent Maestro Users and 7 Interfaces based on the following:

- ***Maestro Server to be installed at the Hotel Property***
- ***All Client Workstations are connected to the Maestro Server via LAN***

1 x Dedicated Maestro Server Minimum Specifications

Processor Type	Intel X5560 Xeon Quad Core Processor (additional processor optional)
Processor Speed	2.8 GHz/8MB Cache
Memory	8GB Main Memory or more
Operating System	Microsoft Windows 2008 Server SP2 STD x64: - 20 User CAL Microsoft SQL Server 2008 STD x64: - 30 User CAL
Hard Disk Storage Subsystem	8 x 146GB (15K RPM) SCSI HDDs: - For Windows OS and MS SQL Trans Log: 2 x HDDs with Hardware RAID Level 1 Configuration - For Applications: 2 x HDDs with Hardware RAID Level 1 Configuration - For the Maestro Database: 4 x HDDs with Hardware RAID Level 10 Configuration
Removable Storage Devices	DVD-ROM
Display	15" Monitor (1280x1024 is optimum)
Network Connectivity	10/100 or 10/100/1000 Network Card
Tape Backup Subsystem	400GB Tape Backup Device with Back-up Software with Scheduler and Open File Manager
Uninterruptible Power Supply	Sufficient capacity, based on devices to be attached to the UPS, to allow enough time during a power interruption to perform a normal shutdown of the dedicated file server
Anti-Virus	Industry standard virus scanner using scheduled daily scans of server hard disks during low-utilization periods (No Real Time Scanning). 'Auto-Monitoring' real-time virus scanning services shall be disabled on all Northwind Servers.
Remote Support Capability	Telephone with long distance direct dialing capability within reach of file server for voice support Symantec pcAnywhere™ v10.0 or above, Terminal Services, VPN with TCP/IP external IP address connection via the internet (preferred)

Client Workstation Minimum Specifications:

Processor Type:	Intel Dual Core Processor
Processor Speed:	2.0GHz
Memory:	2 - 4GB Main Memory RAM
Operating System:	Windows XP Pro or Windows 7 Pro x64
Hard Disk Storage Subsystem:	1 GB for Maestro
Removable Storage Devices:	DVD-ROM
I/O Ports:	USB port
Peripheral Devices:	Keyboard & Mouse
Optional Peripheral Devices:	credit card swipe readers (MX53 USB at www.poshmfg.ca)
Display:	15" SVGA Monitor
Network Connectivity:	10/100/1000 Network Card
Anti-Virus:	Industry standard virus scanner using scheduled daily scans of local hard disks during low-utilization periods. 'Auto-Monitoring' real-time virus scanning services may be used on PC workstations to scan local workstation drives but must not be allowed to scan mapped network drive connections

1 x Interface Workstations Minimum Specifications:

Processor Type:	Intel Dual-Core Processor
Processor Speed:	2.6GHz
Memory: (64 Bit)	4GB Main Memory RAM
Operating System:	Windows XP Pro or Windows 7 Pro x64
Hard Disk Storage Subsystem:	1 GB for Maestro
Removable Storage Devices:	CD DVD-ROM
I/O Ports:	Digi 8 Port (Classic or Neo) RS232 serial board with 1 serial port per RS232 interface (www.digi.com)
Peripheral Devices:	Keyboard & Mouse
Display:	15" SVGA Monitor
Network Connectivity:	10/100/1000 Network Card
Anti-Virus:	Industry standard virus scanner using scheduled daily scans of local hard disks during low-utilization periods. 'Auto-Monitoring' real-time virus scanning services may be used on PC workstations to scan local workstation drives but must not be allowed to scan mapped network drive connections
Remote Support Capability	Telephone with long distance direct dialing capability within reach of file server for voice support Symantec pcAnywhere™ v10.0 or above, Terminal Services, VPN with TCP/IP external IP address connection via the internet (preferred)

Dedicated GDS (2-way) Interface Workstation Minimum Specifications:

Processor Type:	Intel Dual Core Processor
Processor Speed:	2.6GHz
Memory: (Windows XP Pro)	4 GB Main Memory RAM
Operating System:	Windows Server 2003 or Windows XP Pro
Hard Disk Storage Subsystem:	1 GB for Maestro
Removable Storage Devices:	32x CD-ROM
Peripheral Devices:	Keyboard & Mouse
Display:	15" SVGA Monitor
Network Connectivity:	100/1000 Network Card
Anti-Virus:	Industry standard virus scanner using scheduled daily scans of local hard disks during low-utilization periods. 'Auto-Monitoring' real-time virus scanning services may be used on PC workstations to scan local workstation drives but must not be allowed to scan mapped network drive connections
Remote Support Capability:	Telephone with long distance direct dialing capability within reach of file server for voice support Symantec pcAnywhere™ v10.0 or above, Terminal Services, VPN with TCP/IP external IP address connection via the internet (preferred)

Miscellaneous Specifications:

Printers

- All Windows Supported Laserjet Printers
- InkJet Style & Color Printers Supported (HP Compatible) (not recommended for report printing)

Cabling

Cabling and wiring work to be provided by client chosen cable contractor, Northwind will assist in providing specifications.

- Interfaces - RS232 serial (4 pair, 24 gauge, braid and foil, plenum)
- PC Workstations – 10/100baseT Category 5 twisted pair for PC LAN or Fiber Optics

Credit Card Readers (keyboard interface required)

- A two-track reader with keyboard emulation (PS/2 or USB) is required.
- The reader configuration should adhere to the following:
 - Track 1:
Start Sentinel (header) of “%”
End Sentinel (terminator) of “?” with <carriage return>
 - Track 2:
Start Sentinel (header) of “;”
End Sentinel (terminator) of “?” with <carriage return>
 - Track 3 Disabled if available
- Please consult your credit card reader vendor/manufacturer for setup instructions or manuals.
- The brand of the card reader is not important as long as it is programmable to conform to the above requirements.

Hardware Maintenance

The client is responsible for arranging hardware maintenance coverage with hardware manufacturer, vendor, or system integrator. Northwind recommends client arrange for 7x24 4 hour response on-site coverage for the server.