

Network Hardware and Operating System

Recommended Standards for the Implementation of the HCN Blue Chip Specialist Suite – Revision August 2002



SINGLE USER - Single Computer Running Blue Chip with MS-Word for Correspondence			
Item	Description	Recommended Brands	Notes
Computer	Pentium Class Computer (above 1ghz Processor speed) – Pentium III, Pentium IV preferred, 256 MB SD RAM, 40gb Hard Disk Drive, CD-Rom, 15” (or 17”) SVGA Colour Screen, 1.44 Floppy Disk Drive, 2 x Parallel Ports (Lpt1 & Lpt2), 100mbit NIC, 2 x USB Ports, Keyboard and Wheel Mouse	Tier One Quality Windows Compliant Hardware Eg. Compaq or Quality Clones	If you have limited space then we recommend a system with a small “footprint” known as small form factor and an LCD Flat Screen (depends on budget).
Main Printer	Hewlett Packard 2200 Laser Printer (can also use Hewlett Packard 1200 for lower volume) – Including Parallel Printer Cable	Hewlett Packard	If you have high volume output for both reports and invoices we would recommend the HP2200
Label Printer	SEIKO SP200 or SP240 Thermal Label Printer *use either SLP2RL or SLP2RLE labels	Seiko	Labels available from http://www.labelcity.com.au
Backup System	IOMEGA ZIP Drive Minimum 250mb or Quality CD-Burner with appropriate software	IOMEGA or Quality Brand CD-Burner	Recommend at least 11 x ZIP Media for Daily Backup
Modem	Netcomm V.92 , 56k or Better	Netcomm	Can use existing FAX line may need to install switch
Operating System	Windows 2000 Professional or Windows XP Professional with up-to-date service packs	Microsoft	If Windows 2000 Pro not available then Windows XP Pro would be acceptable
Other Software	Must Have - PC Anywhere (Host / Remote) for support	Symantec	Allows our support team to assist you remotely
Other Software	Microsoft OFFICE 2000 – (Must have copy of MS-Word 97 or better)	Microsoft	You can purchase MS-Word separately, however it is often more economical to purchase Microsoft Office

* Recommend UPS for all systems with surge protector



BASIC NETWORK (2 Screens) - Running Blue Chip with MS-Word for Correspondence			
Item	Description	Recommended Brands	Notes
Main Computer	Pentium Class Computer (above 1ghz Processor speed) – Pentium III, Pentium IV preferred, 256 MB SD RAM, 40gb Hard Disk Drive, CD-Rom, 15” (or 17”) SVGA Colour Screen, 1.44 Floppy Disk Drive, 2 x Parallel Ports (Lpt1 & Lpt2), 100mbit NIC, 2 x USB Ports, Keyboard and Wheel Mouse	Tier One Quality Windows Compliant Hardware Eg. Compaq or Quality Clones	If you have limited space then we recommend a system with a small “footprint” known as small form factor and an LCD Flat Screen (depends on budget).
2 nd Computer	Pentium Class Computer (above 1ghz Processor speed) – Pentium III, Pentium IV preferred, 256 MB SD RAM, 20gb Hard Disk Drive, CD-Rom, 15” (or 17”) SVGA Colour Screen, 1.44 Floppy Disk Drive, Parallel Port, 100mbit NIC, 2 x USB Ports, Keyboard and Wheel Mouse	Tier One Quality Windows Compliant Hardware Eg. Compaq or Quality Clones	If you have limited space then we recommend a system with a small “footprint” known as small form factor and an LCD Flat Screen (depends on budget).
SWITCH	Basic 4 Port 100mbit SWITCH or Crossover CAT5 between NIC’s	Netgear	Better performance than crossover CAT5 cable
Cabling	Category 5 Cable (Peer to Peer)	Quality	Keep cables tidy (not on floor)
Main Printer	Hewlett Packard 2200 Laser Printer or Equivalent Including Parallel Printer Cable	Hewlett Packard	If you have high volume output for both reports and invoices we would recommend the HP2200
Label Printer	SEIKO SP200 or SP240 Thermal Label Printer *use either SLP2RL or SLP2RLE labels	Seiko	Labels available from http://www.labelcity.com.au
Backup System	IOMEGA ZIP Drive Minimum 250mb	IOMEGA	Recommend at least 11 x ZIP Media for Daily Backup
Modem	Netcomm V.92 , 56k or Better	Netcomm	Can use existing FAX line may need to install switch
Operating System	Windows 2000 Professional Preferred (XP Still under evaluation)	Microsoft	Windows XP still a little buggy
Other Software	PC Anywhere (Host / Remote) for support	Symantec	Allows our support team to assist you remotely
Other Software	2 x Microsoft OFFICE 2000 – (Must have copy of MS-Word on each workstation)	Microsoft	You can purchase MS-Word separately, however it is often more economical to purchase Microsoft Office



BASIC NETWORK (3 Screens) - Running Blue Chip with MS-Word for Correspondence & MD in Consulting Rooms			
Item	Description	Recommended Brands	Notes
Main Computer (Non-Dedicated Server)	Pentium Class Computer (above 1ghz Processor speed) – Pentium III, Pentium IV preferred, 512 MB SD RAM, 40gb Hard Disk Drive, CD-Rom, 15” (or 17”) SVGA Colour Screen, 1.44 Floppy Disk Drive, 2 x Parallel Ports (Lpt1 & Lpt2), 100mbit NIC, 2 x USB Ports, Keyboard and Wheel Mouse	Tier One Quality Windows Compliant Hardware Eg. Compaq or Quality Clones	The main computer will act as a “Non-Dedicated” server. Higher specified CPU, Hard Drive and More RAM (if affordable) would ensure more robust network performance.
2 nd Computer	Pentium Class Computer (above 1ghz Processor speed) – Pentium III, Pentium IV preferred, 256 MB SD RAM, 20gb Hard Disk Drive, CD-Rom, 15” (or 17”) SVGA Colour Screen, 1.44 Floppy Disk Drive, Parallel Port, 100mbit NIC, 2 x USB Ports, Keyboard and Wheel Mouse	Tier One Quality Windows Compliant Hardware Eg. Compaq or Quality Clones	If you have limited space then we recommend a system with a small “footprint” known as small form factor and an LCD Flat Screen (depends on budget).
3 rd Computer for Consulting Room	Pentium Class Computer (above 1ghz Processor speed) – Pentium III, Pentium IV preferred, 256 MB SD RAM, 20gb Hard Disk Drive, CD-Rom, 15” (or 17”) SVGA Colour Screen, 1.44 Floppy Disk Drive, Parallel Port, 100mbit NIC, 2 x USB Ports, Keyboard and Wheel Mouse Or Pentium Class Laptop (including inbuilt Network Card and Modem) large TFT Screen, 256mb RAM etc.	Tier One Quality Windows Compliant Hardware Eg. Compaq or Quality Clones	Can also use flat screen in consulting rooms or simply plug in Laptop to category 5 network connection
Cabling	Category 5 Cable (terminated at HUB location)	Quality	All rooms should be cabled to allow for future expansion
Switch	Netgear 4/8 Port 100mbit Switch	Netgear or 3com	Cables can be terminated at HUB location (Cupboard)
Main Printer	Hewlett Packard 2200 Laser Printer or Equivalent – Including Parallel Printer Cable	Hewlett Packard	If you have high volume output for both reports and invoices we would recommend the HP2200
Label Printer	SEIKO SP200 or SP240 Thermal Label Printer *use either SLP2RL or SLP2RLE labels	Seiko	Labels available from http://www.labelcity.com.au
Consulting Room Printer	HP Inkjet Printer or Epson Inkjet Printer	HP or Epson	For printing scripts, forms and correspondence
Backup System	IOMEGA ZIP Drive Minimum 250mb	IOMEGA	Recommend at least 11 x ZIP Media for Daily Backup
Modem	Netcomm V.92 , 56k or Better	Netcomm	Can use existing FAX line may need to install switch
Operating System	Windows 2000 Professional Preferred (XP Still under evaluation)	Microsoft	Windows XP still a little buggy
Other Software	PC Anywhere (Host / Remote) for support	Symantec	Allows our support team to assist you remotely
Other Software	3 x Microsoft OFFICE 2000 – (Must have copy of MS-Word on each workstation)	Microsoft	You can purchase MS-Word separately, however it is often more economical to purchase Microsoft Office



CLIENT SERVER NETWORK (4 Screens or More) - Running Blue Chip with MS-Word for Correspondence & MD in Consulting Rooms			
Item	Description	Recommended Brands	Notes
Dedicated Server	Pentium Class Computer (above 1ghz Processor speed) – Pentium IV, 512 MB SD RAM or more, 40gb SCSI / EIDE Hard Disk Drive (RAID option), CD-Rom, 15” SVGA Colour Screen, 1.44 Floppy Disk Drive, Parallel Port, 100mbit NIC, 2 x USB Ports, Keyboard and Wheel Mouse	Tier One Quality Windows Compliant Hardware Eg. Compaq or Quality Clones	In a network of 4 computers and above HCN recommend a “dedicated” server.
1 to 4 Computers	Pentium Class Computer (above 1ghz Processor speed) – Pentium III, Pentium IV preferred, 256 MB SD RAM, 20gb Hard Disk Drive, CD-Rom, 15” (or 17”) SVGA Colour Screen, 1.44 Floppy Disk Drive, Parallel Port, 100mbit NIC, 2 x USB Ports, Keyboard and Wheel Mouse	Tier One Quality Windows Compliant Hardware Eg. Compaq or Quality Clones	If you have limited space then we recommend a system with a small “footprint” known as small form factor and an LCD Flat Screen (depends on budget).
Computer(s) for Consulting Room	Pentium Class Computer (above 1ghz Processor speed) – Pentium III, Pentium IV preferred, 256 MB SD RAM, 20gb Hard Disk Drive, CD-Rom, 15” (or 17”) SVGA Colour Screen, 1.44 Floppy Disk Drive, Parallel Port, 100mbit NIC, 2 x USB Ports, Keyboard and Wheel Mouse Or Pentium Class Laptop (including inbuilt Network Card and Modem) large TFT Screen, 256mb RAM etc.	Tier One Quality Windows Compliant Hardware Eg. Compaq or Quality Clones	Can also use flat screen in consulting rooms or simply plug in Laptop to category 5 network connection
Cabling	Category 5 Cable (terminated at SWITCH location)	Quality	All rooms should be cabled to allow for future expansion
Switch	Netgear SWITCH 8 or 16 port	Netgear or 3com	Can terminate at Server End
Main Printer	Hewlett Packard 2200 Laser Printer or HP2200DN (Network capable printer – or Equivalent)	Hewlett Packard	Most medium networks would have reasonably high volume would recommend HP2200DN or faster
2 nd Printer Label Printer	Hewlett Packard 2200D Laser Printer or HP2200DN (Network capable printer – or Equivalent) SEIKO SP200 or SP240 Thermal Label Printer *use either SLP2RL or SLP2RLE labels	Hewlett Packard Seiko	2 nd Printer optional depends on volume Labels available from http://www.labelcity.com.au
Consulting Room Printer	HP Inkjet Printer or Epson Inkjet Printer	HP or Epson	For printing scripts, forms and correspondence
Backup System	20GB (or 40GB) DAT Drive with 7 x Media SCSI Interface	SONY	Recommend at least 11 x Media
Modem	Netcomm V.92 , 56k or Better	Netcomm	Can use existing FAX line may need to install switch
Operating System	Windows 2000 Server with 5 CALS (up to 5 screens no need for SQL)	Microsoft	Up to 5 Screens BLUE CHIP would be installed with MSDE – Above 5 Screens SQL License(s) will be Required
Other Software	PC Anywhere (Host / Remote) for support	Symantec	Allows our support team to assist you remotely
Other Software	Microsoft OFFICE 2000 – (Must have copy of MS-Word on each workstation)	Microsoft	You can purchase MS-Word separately, however it is often more economical to purchase Microsoft Office

5 x  or more....

THIN CLIENT NETWORK (Larger Networks and Legacy Windows PC's) - Running Blue Chip with MS-Word for Correspondence & MD in Consulting Rooms			
Item	Description	Recommended Brands	Notes
Dedicated Server	Pentium Class Computer DUAL Processor option (above 1ghz Processor speed) – Pentium IV, 1GB SD RAM (or ECC RAM) or More depending on USERS , 40-80gb SCSI Fast Hard Disk Drive (RAID recommended), CD-Rom, 15" SVGA Colour Screen, 1.44 Floppy Disk Drive, Parallel Port, 100mbit NIC, 2 x USB Ports, Keyboard and Wheel Mouse (optional)	Tier One Quality Windows Compliant Hardware Eg. Compaq or Quality Clones	Most larger networks would support RAID and at least TWO mirrored drives – amount of RAM is important depending on number of "Thin" users
UPS	Recommend integrated "Online" UPS – with Auto Failsafe routines	APC	Other quality brands
Thin Clients (as many as is needed depends on switch, server speed and RAM)	Can be dedicated thin clients such as Compaq T1010 or existing Windows PC's running Windows 95 o/s or above (each machine will need a 100mbit network card and at least 32megabytes of RAM) <i>* In networks supporting Imagemate CD-Burner & Scanner should be connected to Workstation not Server</i>	Tier One Quality Windows Compliant Hardware Eg. Compaq or Quality Clones	We do not recommend slaving printers off thin clients. HCN recommend print servers for multiple printer connectivity
Computer(s) for Consulting Room	Thin Client such as Compaq T1010 or Standard Windows PC (100mbit NIC) Or Pentium Class Laptop (including inbuilt Network Card and Modem) large TFT Screen, 256mb RAM etc.	Tier One Quality Windows Compliant Hardware Eg. Compaq or Quality Clones	Can also use flat screen in consulting rooms or simply plug in Laptop to category 5 network connection
Cabling	Category 5 Cable (terminated at HUB/SWITCH location) – May need Patch Panel/Rack/Cabinet	Quality	All room should be cabled to allow for future expansion
Hub	Netgear SWITCH 16 port or above Managed	Netgear 3com dlink	Can terminate at Server End
Main Printer	Hewlett Packard 4100N Laser Printer or Equivalent (Network capable printer and may require extra tray)	Hewlett Packard	Most larger networks would have reasonably high volume – therefore recommend HP4100
2 nd & 3 rd Printers	Hewlett Packard 2200 Laser Printer or HP2200DN (recommend network capable option or Equivalent)	Hewlett Packard	Good medium volume printer for multiple locations
Label Printer(s)	SEIKO SP200 or SP240 Thermal Label Printer (may require more than one label printer) *use either SLP2RL or SLP2RLE labels	Seiko	Labels available from http://www.labelcity.com.au
Consulting Room Printer	HP Inkjet Printer or Epson Inkjet Printer	HP or Epson	For printing scripts, forms and correspondence
Print Server	HP Print Server for multiple printer deployments	HP	Where more than one printer at one location is required
Backup System	40GB DAT Drive with SCSI I/F – Autobackup option required for overnight backup	SONY	Recommend at least 11 x DAT Media
Modem	Netcomm V.92 , 56k or Better (option for ADSL connection)	Netcomm	Can use existing FAX line may need to install switch
Operating System	Windows 2000 Server with required CALS Windows 2000 Terminal Services with Required CALS – Windows 2000 SQL for networks above 5 SCREENS	Microsoft	Up to 5 Screens BLUE CHIP would be installed with MSDE – Above 5 Screens SQL License(s) will be Required
Other Software	Microsoft OFFICE 2000 – MOLP License(s) on Server	Microsoft	Dependent on Number of users

Optional Extras

Using Imagemate – Document Scanning and Archiving System

Recommended for medium to
Low Volume

Fujitsu M3091DC
The M3091DC (SCSI-2 interface),
with high speed color duplex scanning



Recommended for medium to
High Volume

Fujitsu 620C
ScanPartner 620C Document Scanner.
20ppm, Max A4, 50 page ADF, Flatbed,
Simplex, Colour, SCSI Interface,
Twain & ISIS



Both scanners require a SCSI-II adapter. The adapter is normally installed in a workstation on the network (not on the server).

Remote Site Connectivity / Internet Connectivity / Wide Area Networks and VPN's

1. **Remote Site Connectivity using PC-Anywhere.** Most sites can be connected to a remote site utilizing a modem at the host end and a modem at the remote site. Using standard off the shelf packages such as PC-Anywhere it is possible to connect to the host computer and operate the system. Using PC-Anywhere the remote site “takes” over the host computer. This means that the host computer cannot be used while a remote site is connected. HCN Support provides on-line support to the majority of users using this methodology. The site only requires a standard data/fax line to achieve this. To enable printing is difficult and is not recommended.
2. **Remote Site Connectivity using Windows Terminal Services.** If the host site is using Windows 2000 with Windows Terminal Services. Then the remote site can connect to the server and operate the software as a “thin client”. This means that all software can be used at the same time as the other users on the network from a remote location. Printing can be enabled and depending on bandwidth and volume the speed would be acceptable.
3. **Remote Site Connectivity using Windows Terminal Services over an ADSL network.** The host site must be connected to the Internet using an ADSL Modem and account. Remote must also be connected to the Internet via an ADSL Modem and account. The remote site can connect to the host IP to IP – or be configured as a VPN. Firewall security may have to be implemented if the users on the network also want full Internet facilities. (speeds from 250/500k up to 3gb) Printing is reasonably fast.
4. **Remote Site Connectivity using Windows Terminal Services over an ISDN network.** Remote sites connect to the host via Routers (typically CISCO). Depending on the On-Ramp plan the costs will be a combination of bandwidth and usage. Most sites can connect using a 64k line and upgrade to 128k if volume dictates. ISDN is the most secure and reliable means of connecting remote sites to host computers. But can be quite costly. Printing is reasonably fast and reliable.