



System Requirements

CORT HRMS Applications

Notice

The information in this document is subject to change without notice. Always refer to the web site address shown below for the most current copy of this document.

This document contains confidential and proprietary information protected by copyright. All rights are reserved. NuView Systems grants permission to customers who have a current and valid license agreement to make copies of this document solely for use by their employees. Except for the purpose stated above, no part of this document may be reproduced or used in any form or by any means without prior written permission from NuView Systems. Customers shall not alter or remove any NuView Systems, or other copyright notice from this document and each authorized reproduced copy shall include, be subject to, and shall be covered by, the NuView Systems copyright on the original document.

NuView Systems shall not be liable for any technical or editorial errors contained herein or for incidental or consequential damages resulting from the performance, furnishing, or use of this material.

Copyright © 1999 - 2009 by NuView Systems, Inc. All rights reserved. NuView Systems, Inc. acquired CORT Software, Inc., and all the associated intellectual property, in October 2007.

Trademarks or trade names referenced are the service marks, trademarks, or registered trademarks of the respective manufacturer.

Latest Edition: September 30, 2009, available at

<http://www.nuviewinc.com/PayrollSystemRequirements.pdf>

CORT HRMS for Microsoft® Windows® Release 8.1, CORT WebHRMS Release 2.7, & CORT Self Service Release 2.7.

NOTE: These specifications apply to both HRMS and Payroll Only software products.

System Requirements for HRMS, WebHRMS, & Self Service

With the CORT HRMS for Windows System, we've taken the latest in Microsoft and SQL Server technology and combined it with the power and flexibility of our proven, integrated Payroll and Human Resources system. The CORT HRMS System was designed specifically to run in a Microsoft Windows environment, and it utilizes one of the most powerful databases created—Microsoft SQL Server.

The CORT WebHRMS & Self Service applications, which are optional, add-on applications which are web-deployed and that are designed to work with the CORT HRMS data. This is accomplished through a series of web pages that provides access to the CORT HRMS functionality through a Microsoft Internet Explorer browser.

CORT WebHRMS & CORT Self Service may be deployed:

- In-house over an existing corporate local or wide-area network
- Over the Internet
- As a centrally-managed ASP solution over the Internet, as a subscription service to many customers

The right hardware environment is a key element in the installation, setup and success of the CORT software application(s). The following guidelines ensure that your hardware creates the best environment for optimal performance of the CORT HRMS, WebHRMS, & Self Service applications.

There are a number of ways that you can configure and implement the CORT software application(s). If you choose to deploy a Less+ or Most+ distributed environment, or if you are going to utilize a distributed Wide Area Network (WAN), or if you are processing over 2500 employees, please call CORT Technical Support for specific hardware & software requirements.

Recommended Minimum System Requirements

For Processing Payrolls With Less Than 1000 Employees

HRMS Client Configuration

- Microsoft Windows XP Professional with service pack 3
- 300 MHz Pentium II compatible or higher processor
- 256 MB RAM
- 500 MB of available hard disk space
- Microsoft Internet Explorer v7.0
- Microsoft Data Access Components (MDAC) 2.8 with service pack 1
- Adobe Acrobat Reader v9.1
- Local Hewlett-Packard laser printer
- Virtual Memory that equals two times the physical memory on this workstation (ex: two GB of virtual memory for every one GB of RAM)

HRMS Database Server Configuration

- Microsoft Windows Server 2008 Standard x32 Edition with service pack 1, or Microsoft Windows Server 2003 R2 Standard x32 Edition with service pack 2
- 1 GHz Pentium 4 compatible or higher processor
- 1 GB RAM
- 10 GB of available hard disk space (*depending on database size and the amount of history to be retained*)
- Microsoft SQL Server 2008 Standard x32 Edition with service pack 1, or Microsoft SQL Server 2005 Standard x32 Edition with service pack 3
- Installed as a Member server if it is a part of a Windows Domain or Windows Active Directory. Installed as a standalone server if in a Windows Workgroup
- Virtual Memory that equals two times the physical memory on this server machine (ex: two GB of virtual memory for every one GB of RAM)

For Processing Payrolls With 1000 to 2500 Employees

For processing over 2500 employees, please call us for specific hardware requirements.

HRMS Client Configuration

- Microsoft Windows XP Professional with service pack 3
- 500 MHz Pentium III compatible or higher processor
- 512 MB RAM
- 1 GB of available hard disk space
- Microsoft Internet Explorer v7.0
- Microsoft Data Access Components (MDAC) 2.8 with service pack 1
- Adobe Acrobat Reader v9.1
- Local Hewlett-Packard laser printer
- Virtual Memory that equals two times the physical memory on this workstation (ex: two GB of virtual memory for every one GB of RAM)

HRMS Database Server Configuration

- Microsoft Windows Server 2008 Standard x32 Edition with service pack 1, or Microsoft Windows Server 2003 R2 Standard x32 Edition with service pack 2
- 2 GHz Xeon compatible or higher processor
- 2 GB RAM
- 20 GB of available hard disk space (*depending on database size and the amount of history to be retained*)
- Microsoft SQL Server 2008 Standard x32 Edition with service pack 1, or Microsoft SQL Server 2005 Standard x32 Edition with service pack 3
- Installed as a Member server if it is a part of a Windows Domain or Windows Active Directory. Installed as a standalone server if in a Windows Workgroup
- Virtual Memory that equals two times the physical memory on this server machine (ex: two GB of virtual memory for every one GB of RAM)

WebHRMS or WebHRMS & Self Service Additional Minimum System Requirements

If the optional, add-on WebHRMS application is, or if the WebHRMS & Self Service applications are, going to be deployed, the following requirements would be applicable:

WebHRMS or WebHRMS & Self Service Client Configuration

- Microsoft Windows XP Professional with service pack 3
- Microsoft Internet Explorer v7.0, with frames enabled and an Internet Options Security setting of “medium” or lower
- Adobe Acrobat Reader v9.1

WebHRMS or WebHRMS & Self Service Web Server

Depending on how the WebHRMS application is deployed (i.e. intranet or Internet), it is possible to use the HRMS database server as the web server used for the WebHRMS or the WebHRMS & Self Service applications. Refer to the preferred server options section and the environment diagrams that follow later in this document for additional information.

- 500 MHz Pentium III compatible or higher processor
- 512 MB RAM
- Microsoft Windows Server 2003 R2 (Standard x32 Edition or Web Server x32 Edition) with service pack 2 and Microsoft Internet Information Services 6.0
- Microsoft .NET Framework v1.1
- Microsoft Internet Explorer Web Controls
- Microsoft Data Access Components (MDAC) 2.8 with service pack 1
- Microsoft Internet Explorer v7.0, with frames enabled and with an Internet Options Security setting of “medium” or lower
- Server must be able to access a CORT WebHRMS release 2.6 SP3 database
- Installed as a Member server if it is a part of a Windows Domain or Windows Active Directory. Installed as a standalone server if in a Windows Workgroup
- Server must be able to communicate with the database server with at least a local area network (LAN) type of speed (i.e. no wide area network (WAN) connection between the servers)

Preferred Options

These preferred options provide guidelines to help ensure that the CORT HRMS, WebHRMS, & Self Service software runs at peak performance.

Preferred Client Options

- Microsoft Windows XP Professional with service pack 3
- At least 512 MB RAM for the client that processes the compute, or any large, complex reports
- 1.5 GB of available hard disk space
- 100Mbps switched network connection
- Run all client workstations with at least a 1024 x 768 display resolution setting

Preferred Server Options

- A dedicated server on the network that runs Microsoft Windows Server 2008 Standard x32 Edition with service pack 1 and Microsoft SQL Server 2008 Standard x32 Edition with service pack 1
- A disk system on this server with fault tolerance (see the attached graphic showing various options) that has regular backups made to an off-server media (i.e. tape, disk, etc.)
- At least a 100Mbps switched network connection on all servers
- Implement the CORT payroll engine technology if the software is installed in a Windows Active Directory, Windows Workgroup, or a Windows Domain security environment. Note: the CORT payroll engine technology is required if WebHRMS is going to be installed in your environment.
- If using the electronic mail distribution or workflow capabilities within the CORT software application(s), install and configure Database Mail.
- Implement the WebHRMS Web Server on a separate computer that is on the same local area network (LAN) as the HRMS Database Server it accesses
- If the CORT WebHRMS application is, or the WebHRMS & Self Service applications are used, implement the CORT HRMS application in either a Most Distributed or Most Distributed+ Environment configuration.
- If the CORT WebHRMS application is deployed and the data on demand feature is going to be used, implement Microsoft Excel (included in Microsoft Office) on the computer that has the payroll engine processing configured

- If the CORT WebHRMS application is used and it is exposed so it can be accessed via the Internet, implement SSL and certificate services for additional application and data security
- If the CORT WebHRMS application is, or the WebHRMS & Self Service applications are used, and it is exposed so it can be accessed via the Internet, take into consideration security and firewall ports for the following features of the software to work correctly: external input file processing & user designed report processing.

Technology Overview

The CORT HRMS application uses the following technology:

- Microsoft Visual Basic v6.0
- Microsoft T-SQL
- Extensible Markup Language (XML)
- Open Database Connectivity (ODBC)
- Microsoft ActiveX Data Objects (ADO)
- ComponentOne LLC's VSView 7.0

The CORT WebHRMS & Self Service applications use the following technology:

- Microsoft .NET
- Microsoft T-SQL
- Extensible Markup Language (XML)
- Open Database Connectivity (ODBC)
- Microsoft ActiveX Data Objects (ADO)
- Active Server Pages
- HTML
- VBScript
- Javascript

Microsoft® SQL Server™ Settings

The following settings are specific to the CORT software application(s) and are the default SQL settings on a standard install. These settings can be viewed by running sp_helpsort from within Microsoft SQL Management Studio.

Server default collation:
Latin1-General, case-insensitive, accent-sensitive, kanatype-insensitive, width-insensitive for Unicode Data, SQL Server Sort Order 52 on Code Page 1252 for non-Unicode Data

In addition, the security settings for the Microsoft SQL Server need to be configured so that both SQL Server and Windows authentication are possible.

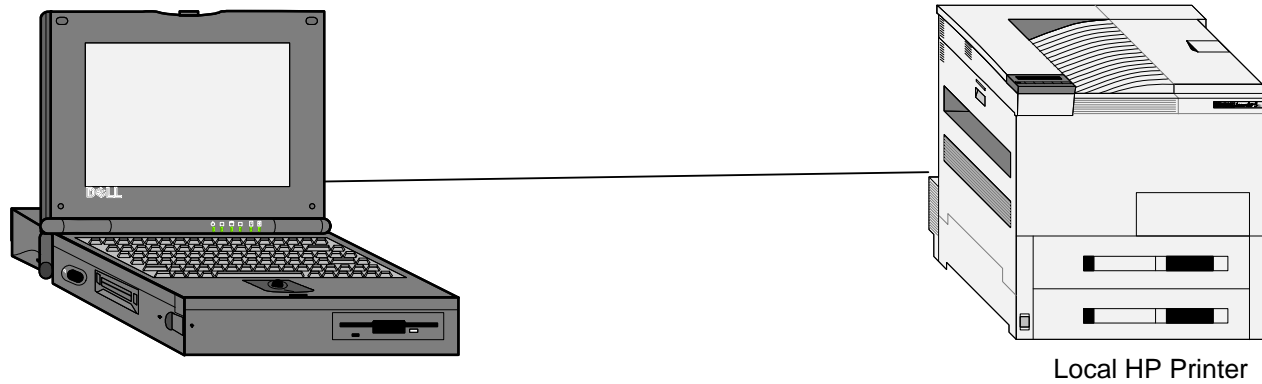
Flexibility

The CORT HRMS application setup can accommodate your specific business needs. The system also provides the following options for configuring and implementing your network environment to optimize performance:

- Not Distributed Environment
- Less Distributed Environment
- Less Distributed+ Environment
- Most Distributed Environment
- Most Distributed+ Environment

Note: These sample configurations (shown on the following pages) use the Preferred Client and Server Options.

Not Distributed (1 tier) Environment

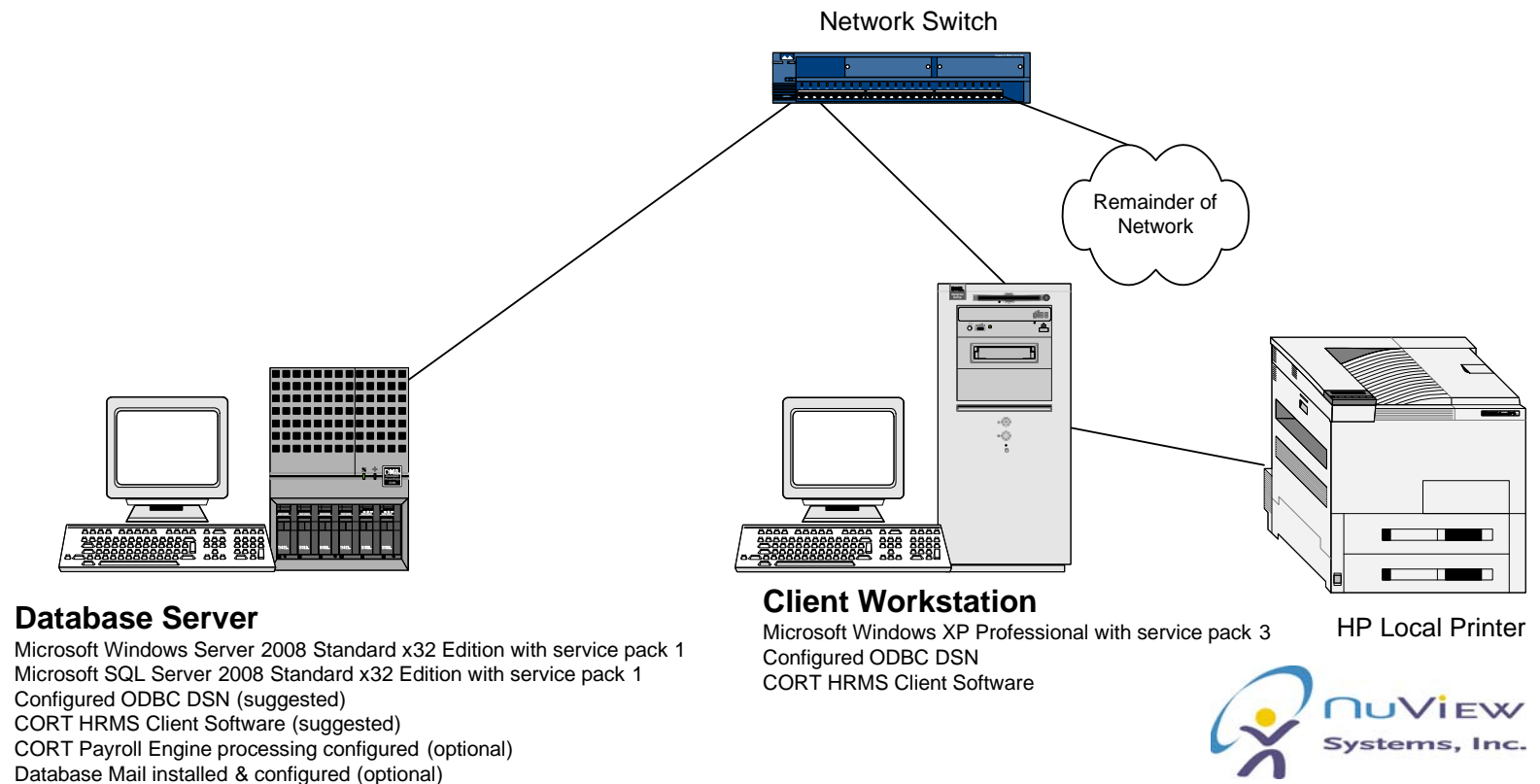


Computer Acting as Database Server and Client Workstation

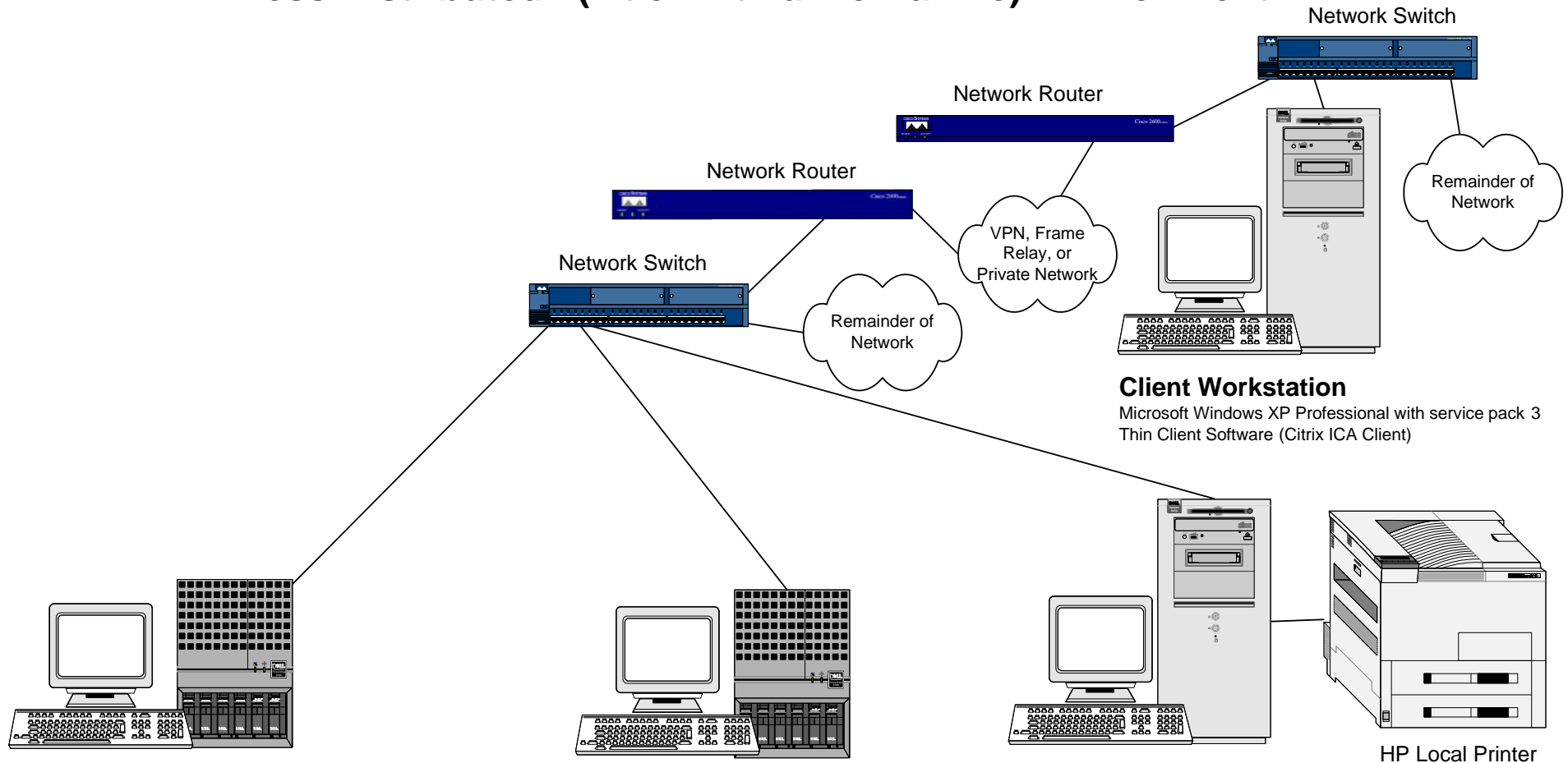
Microsoft Windows Server 2008 Standard x32 Edition with service pack 1
Microsoft SQL Server 2008 Standard x32 Edition with service pack 1
Configured ODBC DSN
CORT HRMS Client Software
Database Mail installed & configured (optional)



Less Distributed (2 tier) Environment



Less Distributed+ (2 tier with a mezzanine) Environment



Database Server

Microsoft Windows Server 2003 R2 Standard x32 Edition with service pack 2
 Microsoft SQL Server 2008 Standard x32 Edition with service pack 1
 Configured ODBC DSN (suggested)
 CORT HRMS Client Software (suggested)
 CORT Payroll Engine processing configured (optional)
 Database Mail installed & configured (optional)

Thin Client Application Server

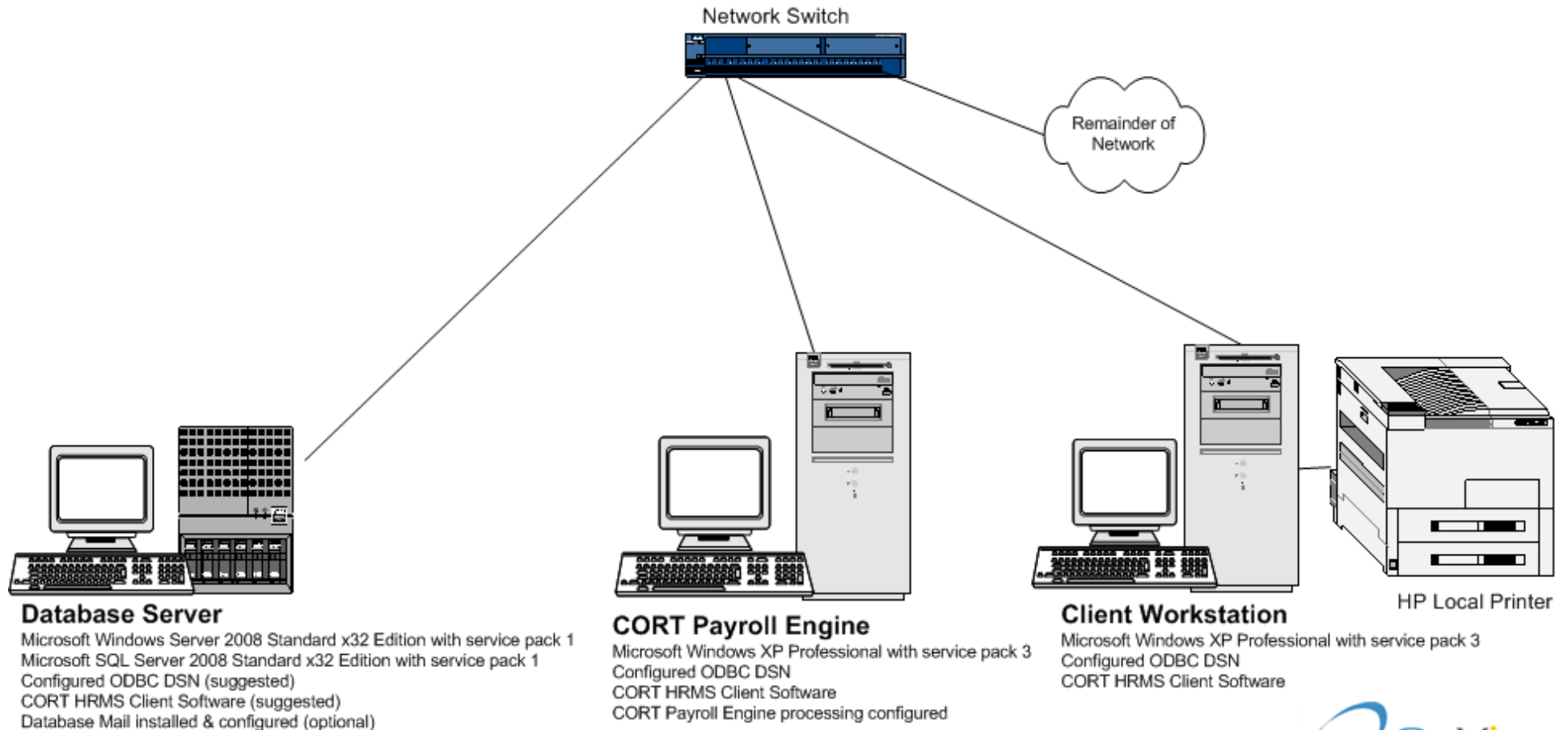
Microsoft Windows Server 2003 R2 Standard x32 Edition with service pack 2 & Terminal Services feature enabled
 Citrix MetaFrame Presentation Server v4.5
 Configured ODBC DSN
 CORT HRMS Client Software

Client Workstation

Microsoft Windows XP Professional with service pack 3
 Thin Client Software (Citrix ICA Client)



Most Distributed (3 tier) Environment



Database Server

Microsoft Windows Server 2008 Standard x32 Edition with service pack 1
 Microsoft SQL Server 2008 Standard x32 Edition with service pack 1
 Configured ODBC DSN (suggested)
 CORT HRMS Client Software (suggested)
 Database Mail installed & configured (optional)

CORT Payroll Engine

Microsoft Windows XP Professional with service pack 3
 Configured ODBC DSN
 CORT HRMS Client Software
 CORT Payroll Engine processing configured

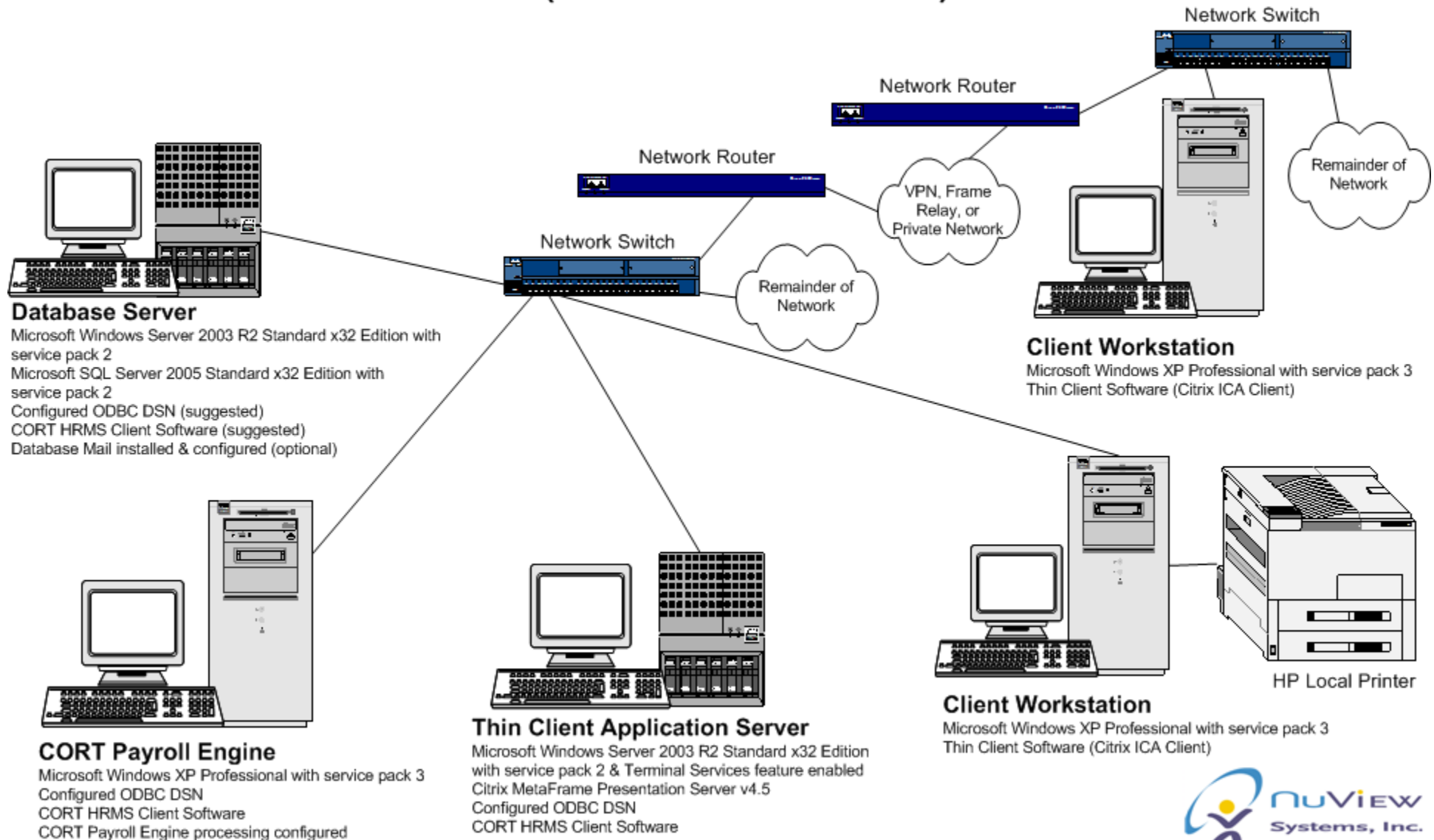
Client Workstation

Microsoft Windows XP Professional with service pack 3
 Configured ODBC DSN
 CORT HRMS Client Software

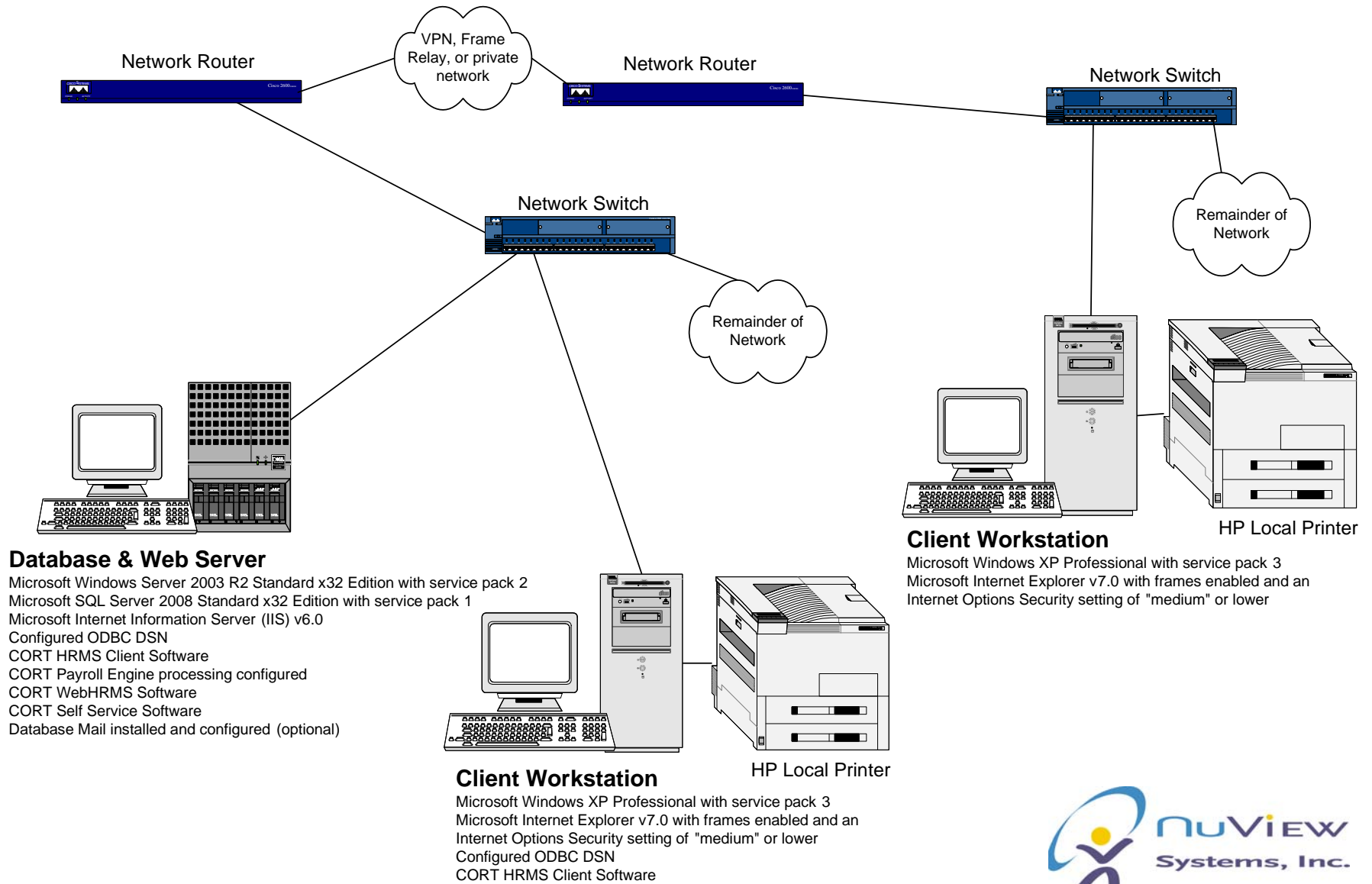
HP Local Printer



Most Distributed+ (3 tier with a mezzanine) Environment



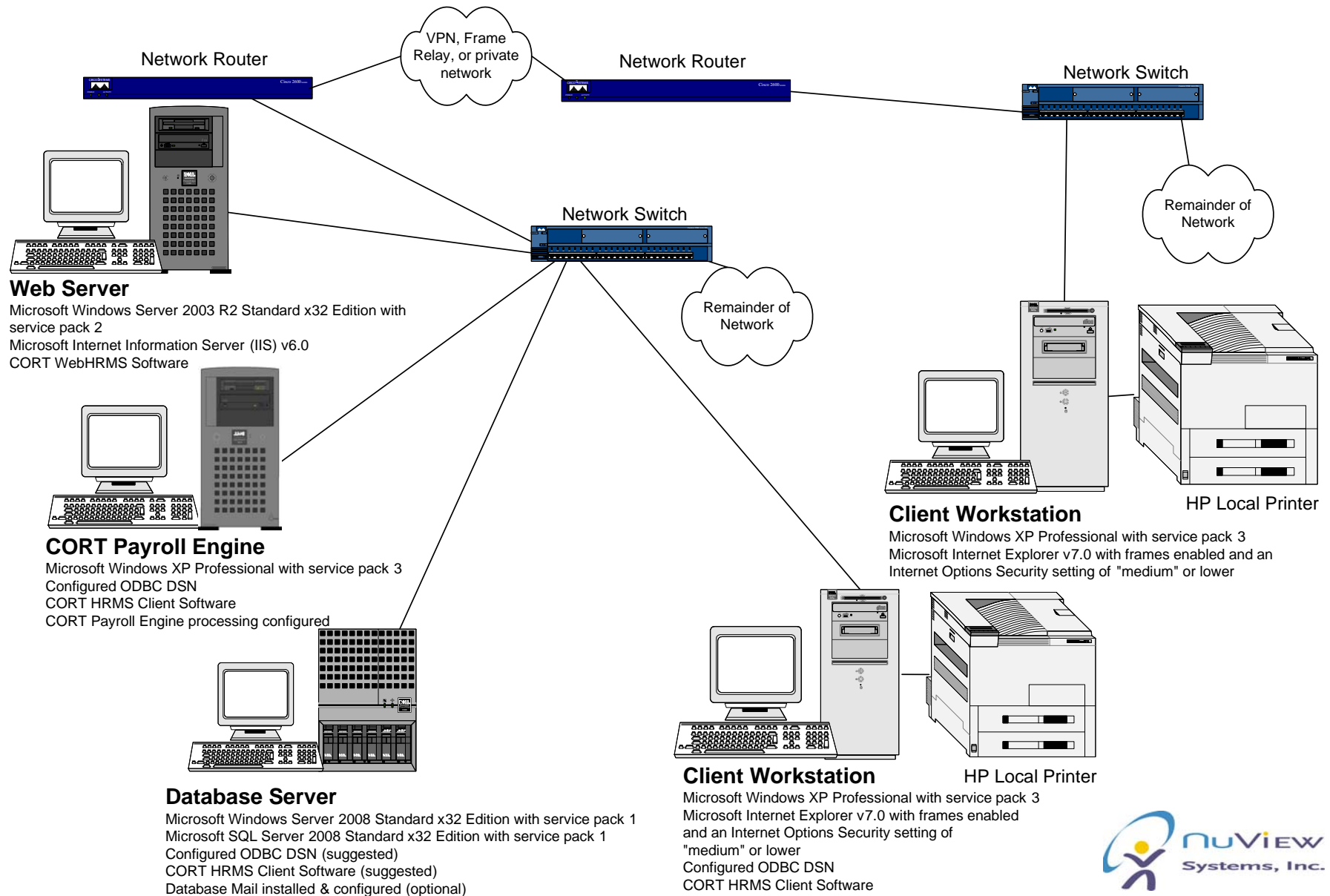
HRMS & WebHRMS Environment Configuration



Note: Client machines can connect to WebHRMS from your intranet. Consult Microsoft's SQL Server web site: <http://www.microsoft.com/sql/howtobuy/default.aspx> for licensing information.

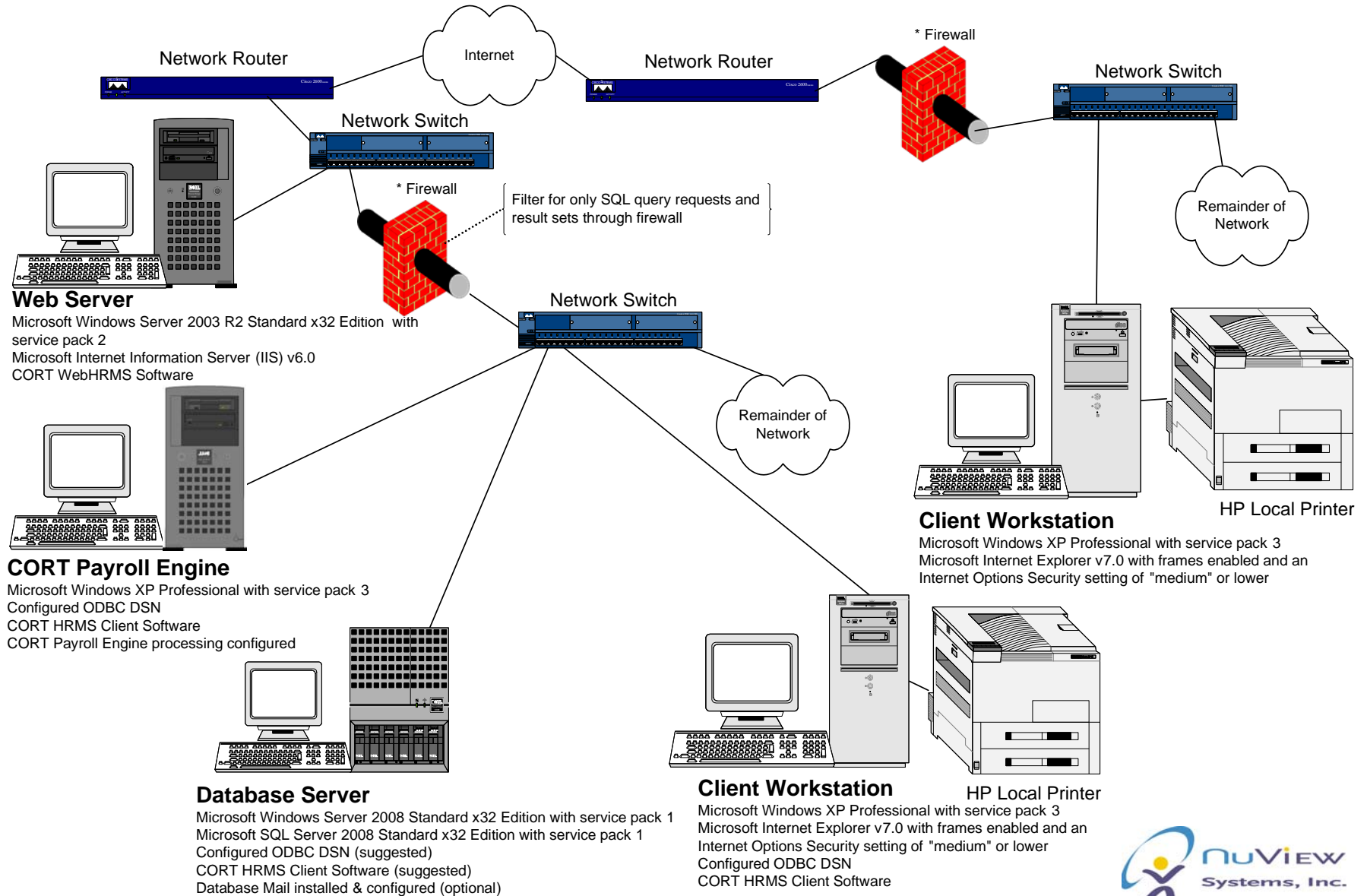


HRMS & WebHRMS Environment Configuration



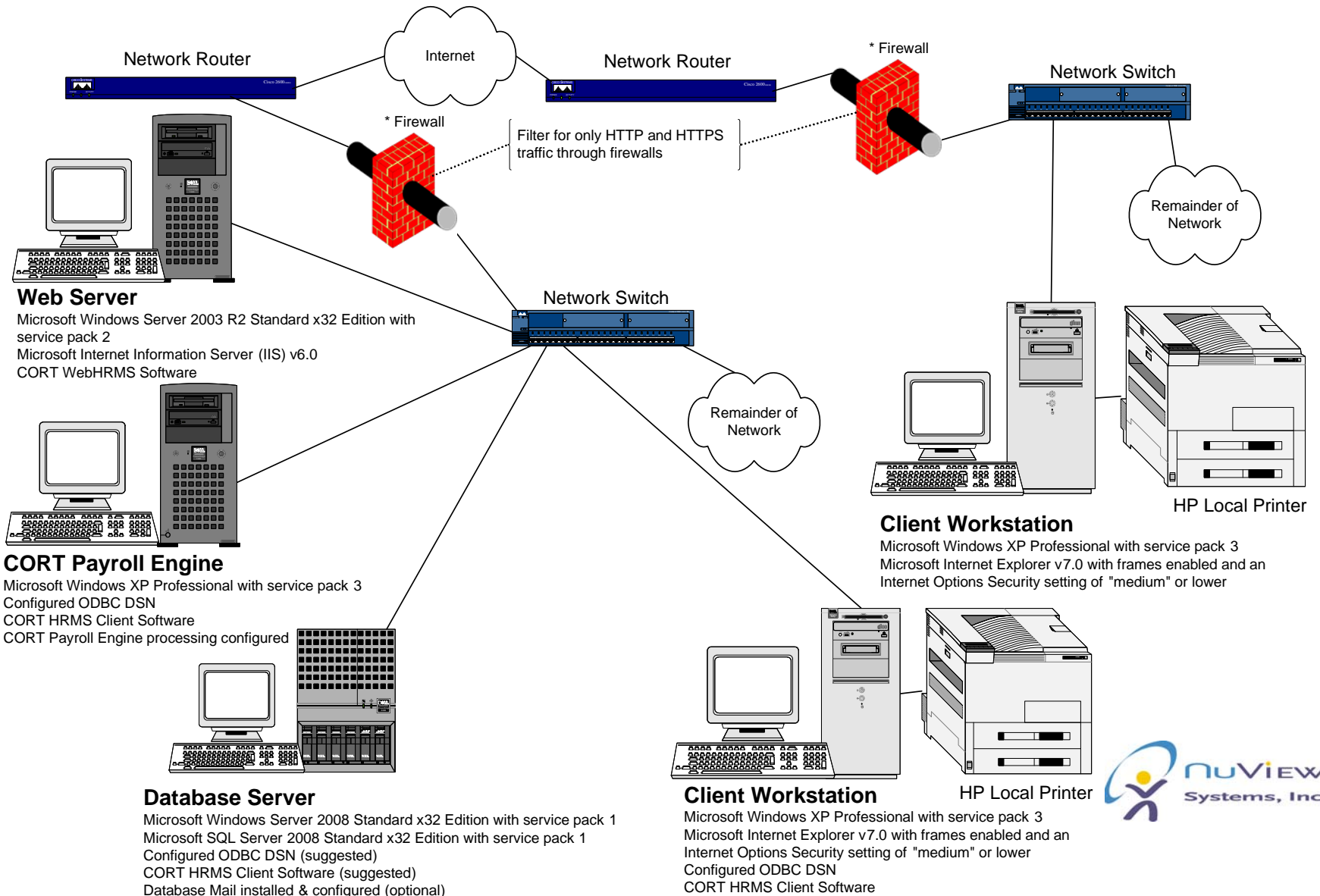
Note: Client machines can connect to WebHRMS from your intranet. Consult Microsoft's SQL Server web site: <http://www.microsoft.com/sql/howtobuy/default.aspx> for licensing information.

HRMS & WebHRMS Environment Configuration



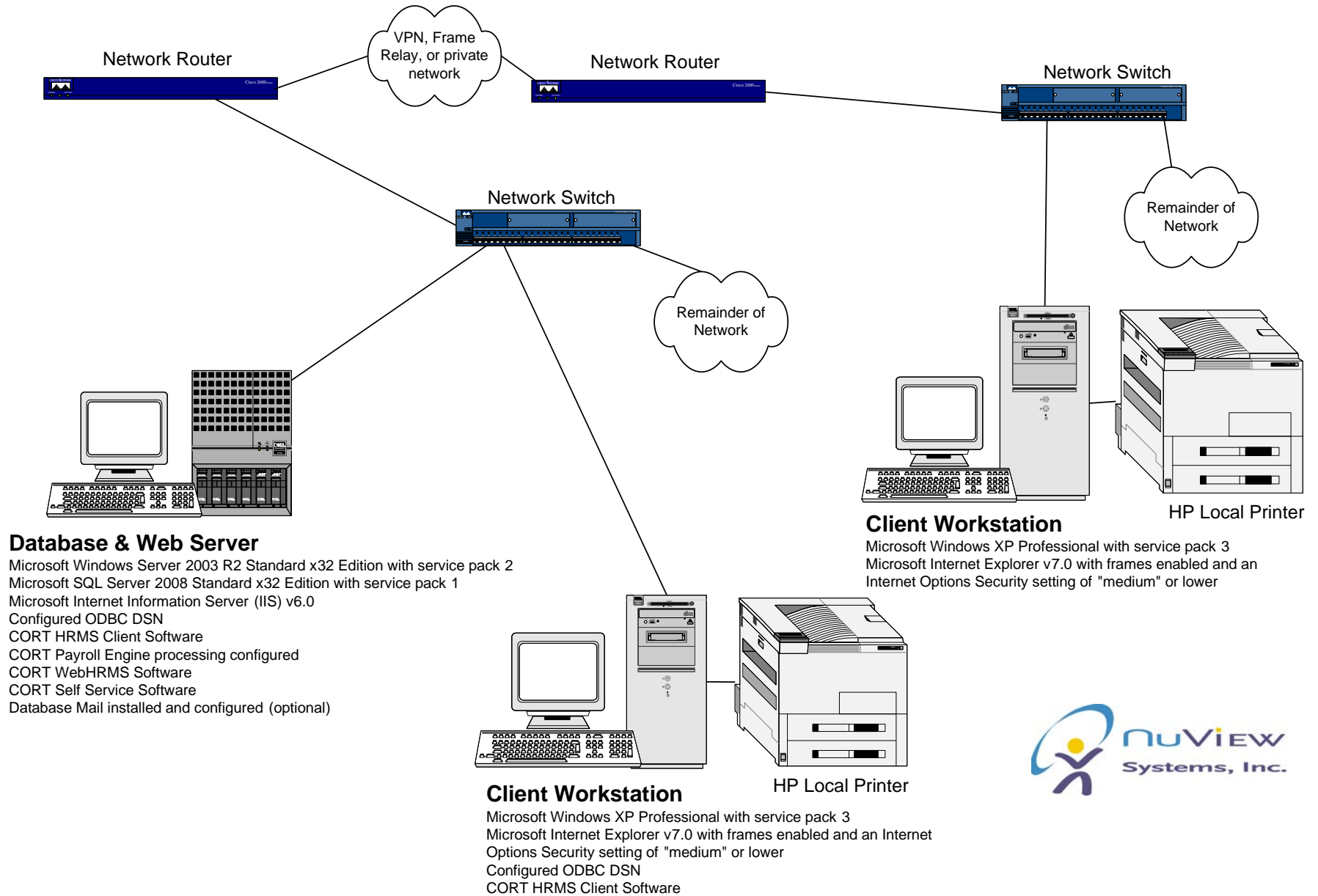
Note: Client machines can connect to WebHRMS from either the Internet or your intranet . Consult Microsoft's SQL Server web site: <http://www.microsoft.com/sql/howtobuy/default.mspx> for licensing information.
 * Refer to the Preferred Server Options Section of the HRMS System Requirements document for additional information on firewall s and security.

HRMS & WebHRMS Environment Configuration



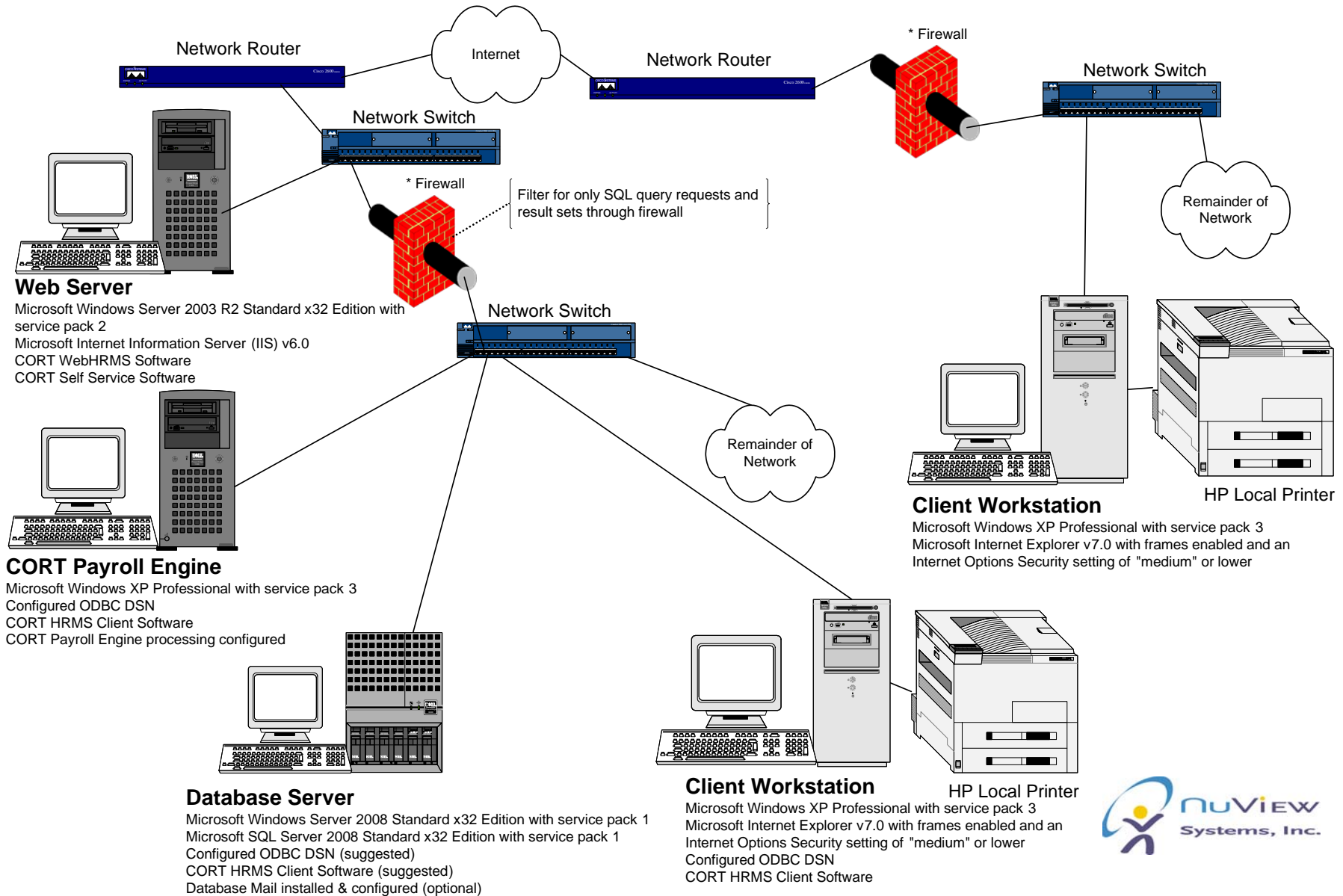
Note: Client machines can connect to WebHRMS from either the Internet or your intranet. Consult Microsoft's SQL Server web site: <http://www.microsoft.com/sql/howtobuy/default.aspx> for licensing information.
 * Refer to the Preferred Server Options Section of the HRMS System Requirements document for additional information on firewalls and security.

HRMS, WebHRMS, & Self Service Environment Configuration



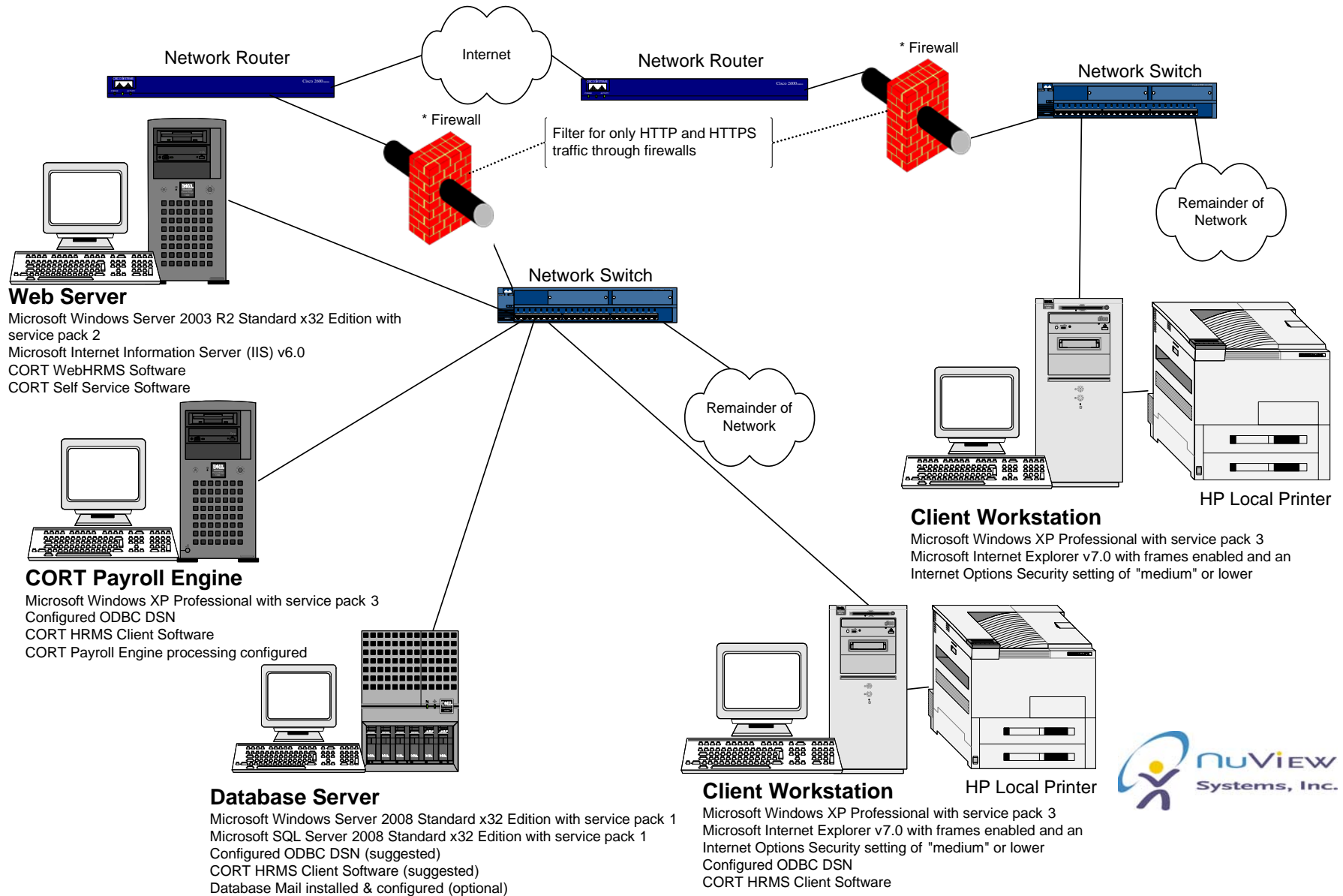
Note: Client machines can connect to WebHRMS from your intranet. Consult Microsoft's SQL Server web site: <http://www.microsoft.com/sql/howtobuy/default.mspx> for licensing information.

HRMS, WebHRMS, Self Service Environment Configuration



Note: Client machines can connect to WebHRMS from either the Internet or your intranet. Consult Microsoft's SQL Server web site: <http://www.microsoft.com/sql/howtobuy/default.mspx> for licensing information.
 * Refer to the Preferred Server Options Section of the HRMS System Requirements document for additional information on firewall s and security.

HRMS, WebHRMS, & Self Service Environment Configuration



Note: Client machines can connect to WebHRMS from either the Internet or your intranet. Consult Microsoft's SQL Server web site: <http://www.microsoft.com/sql/howtobuy/default.aspx> for licensing information.

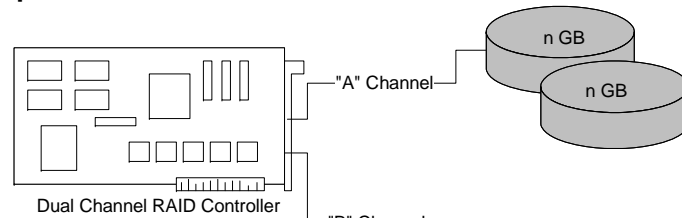
* Refer to the Preferred Server Options Section of the HRMS System Requirements document for additional information on firewalls and security.



SQL Server HDD Configuration Options

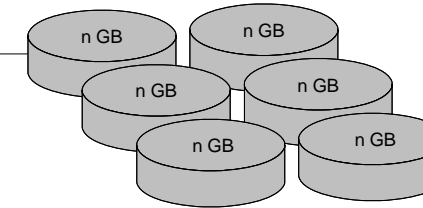
Note: Options 1, 2, & 3 can also be done with two separate RAID Controllers for better performance.

Option 1: Best



RAID 1

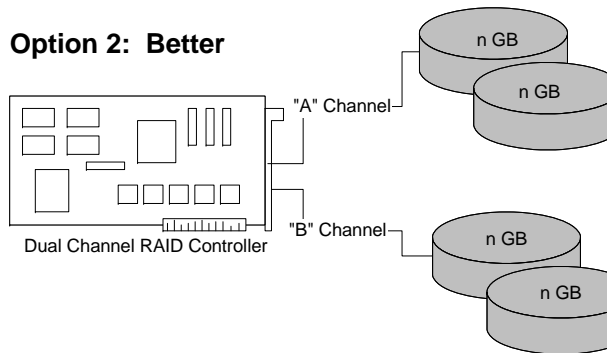
C: 15 GB or greater (Windows OS Files). Disk space depends on physical drive size (i.e. n = 18, 36, 72, or 146) and amount of space allocated to the D drive.
D: Remainder of disk space from physical disk (SQL Log Files, CORT Apps, CORTShare, and CORTDocs).



RAID 0/1

E: 27, 54, 108, 216, or 438 GB (SQL data and Pagefile.sys) depending on physical drive size (i.e. n = 9, 18, 36, 72, or 146)

Option 2: Better



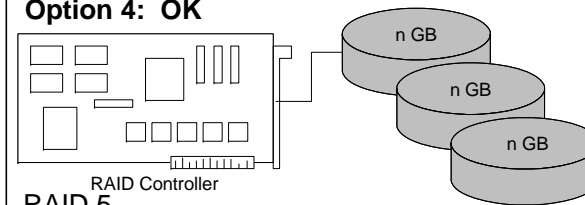
RAID 1

C: 15 GB or greater (Windows OS files). Disk space depends on physical drive size (i.e. n = 18, 36, 72, or 146) and amount of space allocated to the D drive.
D: Remainder of disk space from physical disk (SQL Log Files, CORT Apps, CORTShare, and CORTDocs).

RAID 1

E: 9, 18, 36, 72, or 146 GB (SQL data and Pagefile.sys) depending on physical drive size (i.e. n = 9, 18, 36, 72, or 146)

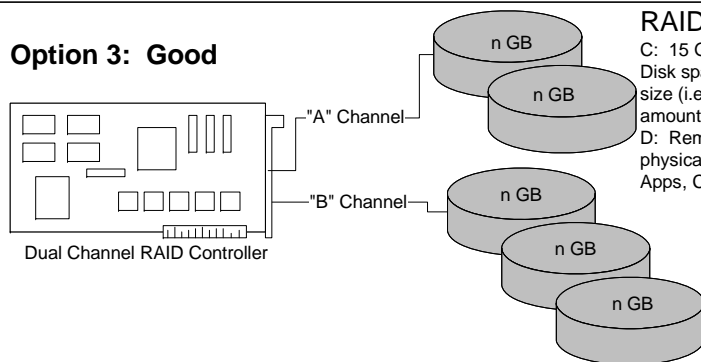
Option 4: OK



RAID 5

C: 15 GB or greater (Windows OS files & Pagefile.sys). Disk space depends on physical drive size (i.e. n = 18, 36, 72, or 146) and amount of space allocated to the D drive.
D: Remainder of disk space from physical disk (SQL Data & Log Files, CORT Apps, CORTShare, and CORTDocs).
Also, additional physical drives possible (4, 5, or 6 usually).

Option 3: Good



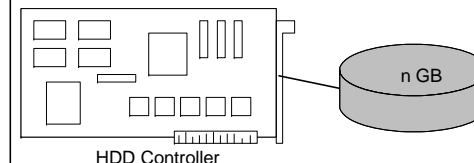
RAID 1

C: 15 GB or greater (Windows OS files). Disk space depends on physical drive size (i.e. n = 18, 36, 72, or 146) and amount of space allocated to the D drive.
D: Remainder of disk space from physical disk (SQL Log Files, CORT Apps, CORTShare, and CORTDocs).

RAID 5

E: 18, 36, 72, 144, or 292 GB (SQL data and Pagefile.sys) depending on physical drive size (i.e. n = 9, 18, 36, 72, or 146). Also, additional physical drives possible (4, 5, or 6 usually).

Option 5: Will work



Regular HDD

C: 15 GB or greater (Windows OS files & Pagefile.sys). Disk space depends on physical drive size (i.e. n = 18, 36, 72, or 146) and amount of space allocated to the D drive.
D: Remainder of disk space from physical disk (SQL Data & Log Files, CORT Apps, CORTShare, and CORTDocs).



855 SW Yates Drive, Suite 201
Bend, OR 97702-3217

(877) 365-8080 Support
(800) 618-3880 Sales
(541) 617-5100 Main
(541) 617-5160 Fax

www.NuViewSystemsInc.com