Infor CloudSuite Industrial Guide to Technology

Contents

Use of this Document – Must Read

This document is intended for readers who understand basic network and infrastructure design models. The document leaves out some detail in order to provide a generalized technical document. Please read this document in its entirety.

This document is intended to provide information on the infrastructure deployment of Infor solutions. This document does not take into account all scenarios, infrastructure challenges, and solution options. It is recommended that if the reader's intent is to purchase hardware or infrastructure to support or modify an Infor Solution, they should contact their sales representative. The Infor sales representative can then reach out to the appropriate resource to review the technical and infrastructure recommendation and possibly provide a specific configuration recommendation. This document is confidential and property of Infor Global Solutions, Inc. Unauthorized use of this document is strictly prohibited.

Infor CloudSuite Technology

Executive Overview

Every hybrid discrete manufacturer has a critical need to keep IT operations as lean as possible without sacrificing the ability to easily adapt business applications to keep pace with changing requirements.

The starting point, of course, is the implementation of an enterprise resource planning (ERP) solution that delivers core capabilities to help improve productivity, shorten time to market, and reduce operational costs. But because business is never static, manufacturers need to frequently extend and adapt their enterprise applications without wasting a lot of time and incurring a lot of cost.

The problem with most ERP solutions is that truly tailoring them to your business, beyond making cosmetic changes and adding user-defined fields, involves expensive and non-upgradeable programming. As a result, you are forced to choose between incurring a significant cost or running your business with software that is ill-equipped to effectively support your business.

By contrast, Infor CloudSuite features a unique software architecture that provides a cost-effective and efficient way to extend and adapt the solution to fit your changing business requirements. With Infor CloudSuite, your IT resource needs are minimized because Infor Mongoose is based on the standard Microsoft® .NET platform. At the same time, the business value of your IT infrastructure is maximized because of Infor CloudSuite's adaptability. If your responsibilities lie on the business side of your company, this means Mongoose can help your efforts to lower costs and increase revenue.

This document explains the goals and business benefits of Mongoose, including the following:

- Microsoft .NET and Native Microsoft server technologies throughout
- The ability to extend and adapt the Infor CloudSuite application to a virtually unlimited extent with no or minimal programming and with automatic upgrades of your changes
- Easy and powerful integration to your other software
- A rich user experience that maximizes employee productivity and extends to key customers and suppliers
- The ability to access any screen as a web page, including on mobile devices
- Simple and flexible installation and configuration
- Outstanding diagnostics and monitoring capabilities
- Agile Cloud deployments

With Mongoose, your ERP solution allows you to keep your focus on your business and its growth, not on keeping your enterprise software up-to-date.

Infor Mongoose Overview

The central defining goal of Mongoose is to minimize the amount of program coding required by Infor developers, partners, and customers, in order to maximize your ability to adapt quickly and cost-effectively to emerging business requirements.

By minimizing the need for program coding in adapting the Infor CloudSuite solution, changes to your solution are automatically upgradeable, development is accelerated, quality is increased through extreme code re-use, and your implementation is insulated from underlying technology changes. Since creating some new code is inevitable, Mongoose streamlines the process by enabling your team to use familiar and standard Microsoft .NET technologies and tools.

To meet these objectives, Mongoose uses a model defined by metadata (data defining the application behavior, stored in rows and columns in databases); the user interface (forms); the Smart Business Layer, which consists of the mid-tier business objects (IDOs, or Intelligent Data Objects); and business processes (Application Event Handlers). In the metadata approach, changes can be kept separate from the base application and your changes automatically upgrade using tools like FormSync.

Major Business Benefits of Mongoose

Mongoose provides major benefits that contribute directly to your bottom line by keeping the cost of ownership low, improving overall business performance, and allowing you to remain competitive by quickly responding to business changes.

Leverage Microsoft .NET and Native Microsoft Server Technologies

Before going deeper into Mongoose's capabilities, it is worth emphasizing that it is an Infor layer built with, and directly onto, native Microsoft standard technologies. Mongoose is written entirely in .NET "managed code", and the database and application server/web server layers are implemented natively in core Microsoft server technologies such as SQL Server and IIS.

Because these technologies are industry standards, the clear implication for your business is that you are maximizing your IT investment in terms of software, hardware, and personnel.

Extend and Adapt the Infor CloudSuite Application: Beyond User-Defined Fields

Mongoose makes it possible to adapt the Infor CloudSuite application to new business requirements without incurring the high cost and delays involved in modifying or writing new code. This, in turn, makes it feasible to rapidly adapt the system to your business, while continuing to receive new features and fixes.

In most ERP applications, adaptability is provided as a separate layer over the base application, so your ability to extend and build new functionality is limited. The changes you need to make will inevitably involve modifying the base application logic, and that means modifying code. But the base Infor CloudSuite application is built with the same metadata-driven approach provided to customers, so your capabilities to extend and adapt the application are virtually unlimited.

Mongoose allows you to access key locations in the base application and add extensions that are marked so that when an upgrade occurs, the changes are automatically migrated forward. For example, if you want additional processing to occur when a user pushes a button on a screen or modifies data on a screen, you can insert your own event handlers, which can execute a wide variety of tasks without requiring coding and which automatically upgrade.

Mongoose makes it possible to perform these changes without programming:

- Extend any portion of any screen: Using the same tools as those used to build the base application, you can extend any portion of any screen, including new tabs, new fields, validation logic, and enabling logic. You can even embed controls you write in technologies like Silverlight in any Infor CloudSuite form.

- Extend any business process: Using the Application Event System (AES), you can define rules that execute whenever an insert or update occurs to any business object (order, item, etc.) in the application or when trigger conditions you define become true. These event actions include updating any data in the application, automating any process provided by the application, prompting a user or group of users to approve the change, integrating to an external application, or simply notifying users of the change. Defining these types of actions is all done without writing code.

- Extend any business object: You can extend any of the Intelligent Data Objects (IDOs) to create new relationships to other IDOs in the base application, add new calculated fields, add new tables and publish their properties on the IDO. You also can create your own IDOs over your tables. All of these are done without writing code, although if you want you can write your own .NET classes and have that logic incorporated in the IDO processing as well.

- Add completely new functionality: You can build new functionality, such as new tables, IDOs, and forms as required by processes unique to your business. These are automatically deployed with the base application and automatically take advantage of other Mongoose functions, such as translations, Web Service access, and the Application Event System.

- Extend and add to the application without being locked into a version or a difficult upgrade path. Mongoose is designed to encourage these activities and allow for a fast and simple upgrade to new releases.

This ability to extend and tailor the application helps you to lower the cost of your IT ownership and increase productivity for your business.

Easily Integrate with Other Business Applications

Mongoose makes it possible to integrate the solution with external applications without expensive re-coding. There is a wide-range of integration capabilities, including the following:

- **Allowing external applications to query or update data, and to automate processing**: Because Mongoose provides a simple, consistent interface to all IDOs and makes that interface available in a wide range of technologies (Web Service, XML, .NET, COM), you can easily give your other applications full access to the data and processes in Infor CloudSuite.

- **Initiating integration from within the Infor CloudSuite application**: Mongoose provides several mechanisms by which you can set policy inside the Infor CloudSuite application to initiate interactions with other systems. For example, Mongoose's replication system provides a simple subscription mechanism so that when certain changes occur or processes execute, Infor CloudSuite will dispatch an XML message to the external system. There are additional capabilities, like the AES, which allow you to add interactions with your other applications.

- **Integrating other software directly into the Infor CloudSuite screens**: Because the forms provided by Mongoose can be easily tailored to embed other applications inside them, you can tightly integrate external applications at the user interface layer to maximize end-user productivity. For example, you can easily embed your customers' web sites into the Infor CloudSuite customer screen.

- **Allowing Infor ION connections**: Mongoose automatically maps Infor CloudSuite IDOs to ION BODs (Business Object Documents).

Increase User Productivity and Access for Customers and Suppliers

Mongoose's SmartClient component is WinStudio. It uses Microsoft's Click Once deployment technology, so that WinStudio functions as a self-installing, self-updating, and internet-enabled user interface that delivers a wide range of business benefits, including the ability to:

- **Lower training costs and increase productivity**: The WinStudio SmartClient provides a genuine, rich interface because it is a Windows® application that looks, feels, and operates like other Windows applications. Because it has a similar look and feel to Microsoft Office and other Windows applications, user training time is reduced and productivity is enhanced.

- **Maximize productivity in the tailoring and designing of screens**: Separate tools are not needed to perform tailoring of screens, which ranges from simple data entry personal optimizations (personalization) to full development. You can grant your users permission to make only simple changes, or to do full development, and if they have such permissions, users simply toggle to design mode, make their changes, save, and toggle back to run mode.

- **Facilitating customer and supplier coordination**: Because WinStudio communicates to the server via XML over internet HTTP or HTTPS, no virtual private network (VPN) is required to give customers and suppliers access to their data. Instead, it is only necessary to give them log-in information and set appropriate security rules. And since any form is also available as a web page (see below), all your users, as well as your customers and suppliers, can access screens you authorize them for via the web, including from mobile devices.
- **Reduce disk space usage**: SmartClients read from the server at runtime and, as a result, consume minimal disk space and don't need to be updated when the application changes.
- **Reduce network bandwidth usage**: SmartClients can make efficient use of network bandwidth by doing as much client-side processing as possible and giving form designers explicit control over when network round trips occur.

Access Any Screen as a Web Page, Including On Mobile Devices

Mongoose provides unparalleled efficiency for users, providing the internet-enabled SmartClient rich user experience both for running the Infor CloudSuite application, as well as for tailoring and designing forms.

Some users will want to access Infor CloudSuite from web browsers, perhaps from non-Windows machines, from a hotel computer, or from mobile devices. They can do this because any Infor CloudSuite form, and any tailoring you make to standard forms or to forms that you create, is immediately available as a Web page.

This illustrates the power of Mongoose for quickly providing, for example, tailored screens for your mobile users.

Simplify Software Installation and Configuration

Mongoose provides simple and straightforward installation and configuration that is typically found in much smaller, less robust software packages. In addition, Mongoose provides an extremely flexible model for international enterprises, which allows you to respond rapidly and effectively to new business acquisitions or relocations.

The Mongoose architecture maximizes simplicity because of the extraordinary concentration of application elements in its databases, outstanding tooling provided over remaining configuration information, and its self-installing, self-updating client component.

Mongoose's configuration flexibility comes from the structure of sites and intranets, and the range of options built into Mongoose's replication system. For example, if a business unit needs to be moved from a data center in Europe to one in Asia, Mongoose makes that a straightforward process that simply involves moving the database, updating some screens to alter the location of the business, and updating the replication policy as appropriate for your cross-data center connectivity.

By streamlining the installation and configuration process, you can keep costs low for events like the move of a business unit from one region to another, the creation of a new test system, the addition or removal of hardware resources from production, or the upgrade of the system to a new version.

These same factors enable unparalleled flexibility in cloud deployments (see below).

Enhance Diagnostics and Monitoring

Mongoose provides users with the same set of tools used by Infor during development of the base application. For example, the SmartClient WinStudio provides a highly-configurable diagnostics display. On your application servers, Mongoose's Log Monitor tool provides a consolidated view of all the Mongoose elements running there. Mongoose provides a basis for excellent diagnostics and monitoring tools.

Enable Agile Cloud Deployments

All functionality built in Mongoose is fully cloud-enabled. This includes the base Infor CloudSuite application itself, additions from partners, and functionality you add yourself. This means:

- All integration points and client access are internet-enabled.
- The server-side configuration and components are multi-tenant and highly scalable.
- Because even new development is internet-enabled, all the tools you need to extend and tailor the Infor CloudSuite application are available to you in cloud scenarios, just as they would be with on-premise deployment.

The cloud support is extremely agile. Due to Mongoose's complete encapsulation in its databases, moving your Infor CloudSuite installations from the cloud to on-premise or vice versa is very simple.

Because Mongoose is fully cloud-enabled, you have many future deployment options as your business continues to grow and change.

Conclusion

Because of Mongoose's architecture, Infor CloudSuite can significantly enhance your competitive positioning in the manufacturing marketplace. Mongoose adapts and extends the software to fit your business, with no or limited coding and automatic upgrades, and delivers a rich end-user experience, as well as the ability to tie into your other enterprise software, easy and flexible configuration, and outstanding monitoring capabilities.

Because Mongoose is based on the standard Microsoft .NET platform, your IT resource overhead requirements are minimized. At the same time, your IT resources deliverables are maximized because of the dynamic, flexible capabilities of Mongoose.

In overview, Mongoose allows and provides:

- Zero-maintenance client
- Simple mid-tier deployment and configuration
- Extended current Infor CloudSuite customization capabilities
- Increased power of Infor CloudSuite in BOD-enabled scenarios
- Important UI look-and-feel improvements
- Reduced number of servers required
- Utility/Web Server pooling and load balance
- No painful or risky upgrades; no loss of existing functionality
- Significant productivity improvements for developers

Mongoose Architecture Example
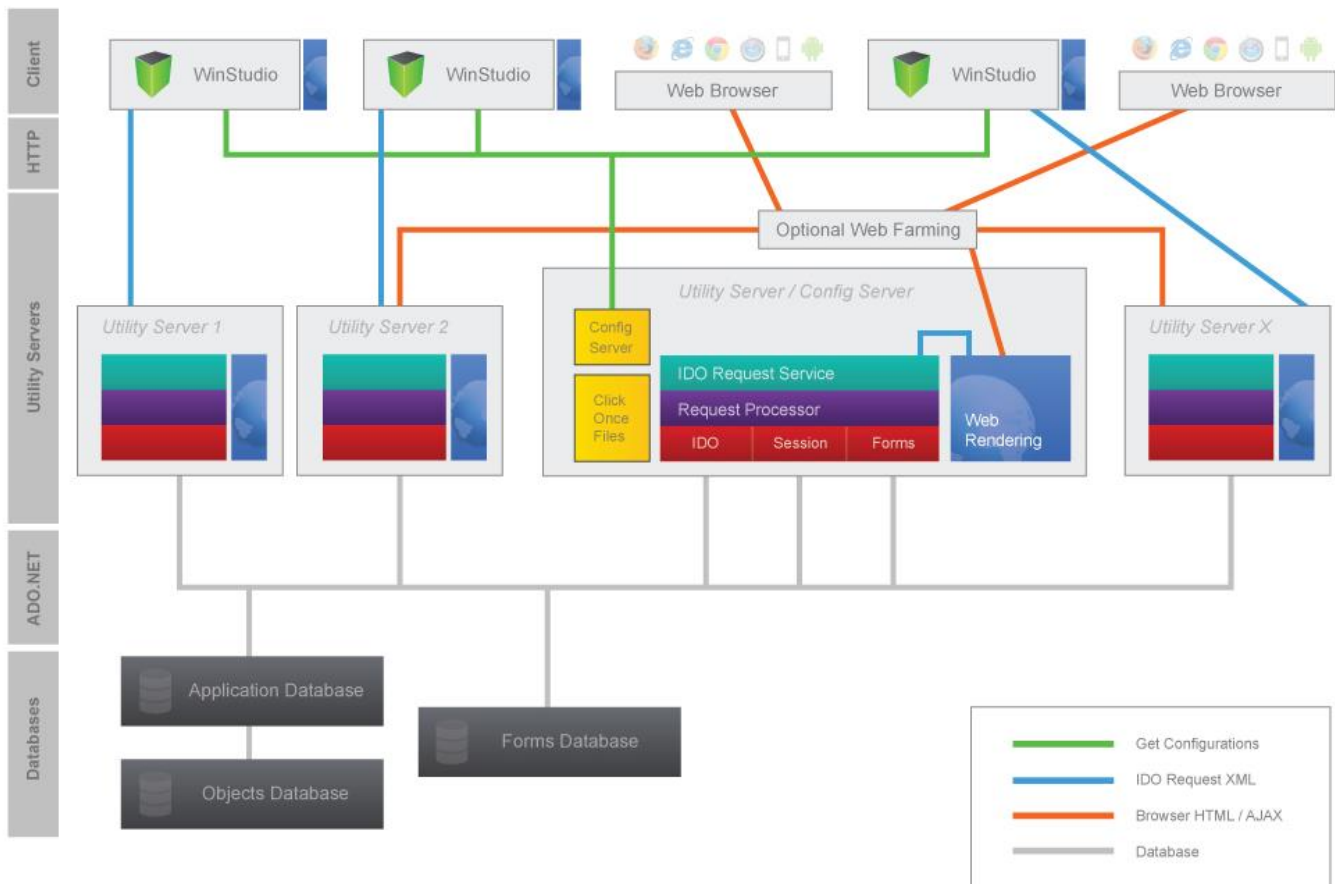
Supporting Technology

Operating Systems - Servers

- Microsoft Windows Server 2008 R2 / 2012 / 2012 R2
  - Standard / Enterprise / Data Center Edition – 64 bit

It is important to understand the differences in editions as features in Standard, Enterprise and Data Center editions vary and certain features may be desirable. For instance, there are limitations in the Standard versions of that are not present in Enterprise and Data Center releases. As of Windows 2012 R2 – the Enterprise edition no longer exists and Data Center is the advanced version of Windows Server 2012 R2. When references are made to 2012 R2 the supported editions are Standard and Data Center. (Data Center is still, out of habit referred to at times as Enterprise Edition).

Database Technology

- Microsoft SQL Server 2008 R2 / 2012 / 2014
  - Standard or Enterprise Edition –64 bit
  - SQL Server Reporting Services Installed

It is important to understand the differences in editions as features in Standard and Enterprise editions vary and certain features may be desirable. For instance, there are limitations in the Standard versions of that are not present in Enterprise releases. These include the ability to have a single application database for Infor CloudSuite supporting multiple sites. This single database with multiple sites structure requires Enterprise Edition of SQL Server. The single application database per site option is still supported in Infor CloudSuite and does not require Enterprise Edition of SQL Server. Please refer to the Multisite Planning Guide for Infor CloudSuite for additional information concerning this back end deployment option.

Infor is a reseller of Microsoft SQL Server. Infor is an ISVR (Independent Software Vendor Royalty) partner and can sell SQL Server under those rules of engagement and licensing. Contact your sales representative if you need to purchase SQL server for your deployment and would like to know more about Infor's ability to sell Microsoft SQL Server.

Infor CloudSuite Clients

It is important to understand the type of clients that are available with Infor CloudSuite 9.00.30. Client types for Infor CloudSuite are as follows:

- Smart Client: Windows client that includes the ability to run Design Mode
    - Requires a supported Windows Operating System with .Net Framework
    - Deployment method:
        - Installed via Click-once and automatically
        - Installed via media/download – requires manual updates on Windows O/S
    - Commonly used across LAN, WAN and Internet connections
- Smart Client via Brower: Client that includes the ability to run Design Mode and runs within Internet Explorer
    - Requires a supported Windows Operating System with .Net Framework
    - Deployment method:
        - Installed via Click-once and automatically updates
    - Commonly used across LAN, WAN and Internet connections
- Web Client: HTML5 client that can run in common browsers on popular devices
    - Commonly used across LAN, WAN and Internet connections

Infor CloudSuite Smart Clients supported platforms

- Microsoft Windows 10 Professional
- Microsoft Windows 8 Professional
- Microsoft Windows 7 Professional
- Microsoft Server 2012 / 2012 R2
- Microsoft Server 2008 R2
- Browser for Infor CloudSuite Click Once Web Client – Internet Explorer 10 and 11

Infor CloudSuite Web Client supported platforms

- Device agnostic – Internet Explorer, Edge, Firefox, Chrome and Safari
- Mobile – Android, iPhone

Infor CloudSuite Microsoft Office – Plug-Ins

- Microsoft Office Components – Outlook, Excel, Word, etc. – Office 2010 / 2013
- Microsoft Projects 2010 / 2013
    - Note: For Business Intelligence for Infor CloudSuite Office Plus – please see the Business Intelligence section for clarification on Business Intelligence Office Plus components.

Deployment

DMZ – The Demilitarized Zone

There are several deployment options available for Infor CloudSuite and Infor CloudSuite's supporting components. These include certain scenarios where Infor CloudSuite components may be exposed to a public network (the Internet in most cases) for access to users or other systems. This perimeter network is usually a physical or logical sub-network that contains and exposes external services to the public network. Access between this DMZ sub-network and the Internet for example are usually limited to only certain ports and methods of access. Additionally there are rules for the server or services that are residing in the DMZ to access systems that are on the organization's private network. This limits the amount of exposure of systems to public attacks.

Examples of Infor CloudSuite use cases or applications that might be accessed via the DMZ are not limited to but include the following:

- Windows Server with Internet Information Services
    - Infor CloudSuite Smart Client Users
    - Infor CloudSuite Web Client Users
    - Infor CloudSuite Mobile Users
    - Infor CloudSuite Web Services requests
- SharePoint Server
    - Infor CloudSuite Portals

A feature included in Infor CloudSuite is the DMZ server installation option. A server that is installed in the DMZ could be used for this functionality. The installation of the Infor CloudSuite DMZ server installs the IDO Request Service and needed virtual directories for web applications and smart client communication without the inclusion of the full utility server components. Choose this option if you do not want to expose your utility server with all the utility server components in your DMZ.

SharePoint Servers that are exposed to the internet and have Infor CloudSuite Portal components installed will, in most cases, also reside in the DMZ.

In all scenarios verify that the Microsoft Server, Microsoft SQL Server, and Microsoft SharePoint licenses are correct for the type of user and data you are planning to expose.

Infor CloudSuite DMZ Server

Below is an example of a DMZ server specification. This specification generally should support 150 concurrent Web-rendered or mobile Infor CloudSuite users. The count is for this server and the concurrent count still needs to be considered for the utility server with the IDO runtime service on the private network.

DMZ Server Specification Example	
Operating System	Windows Server 2008 R2 / 2012 / 2012 R2
Processor Type, Speed, Number of Cores	Xeon 2.0 Ghz (or better), 4-8 Cores
Memory Size	12 GB
Disk I/O Config	(2) 72 GB SCSI / SAS Drives RAID 1
Other	Internet Information Server (IIS) Infor CloudSuite DMZ Code
Network Interface	1 Gb Ethernet Adaptor

Virtualization

For release 9.00.00 or higher, Infor supports customers running a production Infor CloudSuite solution suite in a Microsoft Hyper-V or VMware virtual environment. It is expected that the customer is running the guest virtual machines and components using the supported technologies defined for the specific release of the Infor CloudSuite solution. The Infor CloudSuite solution functions in a virtual environment (also known as "hypervisor") as if running on physical native hardware. If Infor CloudSuite Support suspects that the virtualization layer is the root cause of an error or issue; the customer is required to contact the virtualization solution provider to resolve the virtualization issue.

Virtualization Sizing

With the support of virtual environments for the Infor CloudSuite solution, it is the responsibility of the customer to work directly with hypervisor provider of choice to ensure that the sizing of the host server hardware, versions, configuration, setup and device mappings are correct. Hardware sizing for virtualization environments is not provided by Infor due to the number of variables that can be introduced into such an environment. You should work closely with your hypervisor provider to ensure that the correct hardware sizes and configuration are selected to match your requirements.

Other Virtualization Solutions

Virtualization is a growing segment of the technology market. Microsoft Hyper-V and VMware are the only virtualization solutions that are officially supported for Infor CloudSuite. There are many other virtualization solutions in the market from providers like Citrix and Red Hat. Using other virtualization solutions will still allow you to receive support for the Infor CloudSuite solution, but you must read and understand the non-standard hardware and software deployment support policy below concerning Infor CloudSuite.

Support Policy for Infor CloudSuite Software Running in Non-Standard Software Deployments

Summary

Infor CloudSuite is designed, developed, tested, and documented to run in a multi-tier / multi-server deployment using various software components at specific versions and service pack levels. These components include such things as the operating system (OS), database, and other components as listed in the technical documentation provided with each Infor CloudSuite release. This document addresses support provided by INFOR for its software running in configurations that do not conform to the standard documented software deployment.

INFOR does not test or maintain any support environments of Infor CloudSuite software running in non-standard software deployments. Therefore, INFOR will require any support issue reported to be reproduced in a standard software deployment system, before an APAR (software defect) will be logged. Where the issue is confirmed to be unrelated to the non-standard software deployment, INFOR will support its software in a manner that is consistent with support provided when that software is running on a standard software deployment.

INFOR will provide code corrections, per the Infor CloudSuite On Demand Patch Policy, which are developed and tested in systems that are running on a standard software deployment. These code corrections will be made available via the normal code correction systems and procedures used by all customers running Infor CloudSuite.

Customers running non-standard software deployments of Infor CloudSuite may also access and apply these code corrections using standard procedures. INFOR makes no warranty, implied or otherwise, regarding the use of these fixes in non-standard software deployments.

More Information

The most common reason customers request non-standard software deployments is when they order new hardware that ships with software components that are higher than the software on the approved deployment list and they cannot 'back level' the software to the standard versions. Another common reason is that a non-Infor software vendor has suggested applying one or more fixes to one of the non-Infor software components that require installing a service pack level that is higher than the one on the standard software deployment list. In most cases service packs or newer versions of these components will support all of the functions and commands found in the currently supported version. For this reason, the risk of installing the newer code is small. However, there

have been situations where new versions or service pack levels have caused issues that have impacted Infor CloudSuite and required the new software to be removed.

Specific information regarding normal software deployment requirements is available on www.inforxtreme.com. Infor Support may update or change the standard software deployment list as new versions of software are available and can be tested internally.

Because the support teams only have access to standard documentation and systems running in standard software deployment configurations, we are unable to assist with specific non-standard software deployment installation, setup or performance questions and recommendations. Any and all information related to setting up a non-standard software deployment is the sole responsibility of the customer. This information may be obtained from various sources, which are not part of Infor Support, and may result in successful deployment of the software for a specific customer environment.

The customer assumes all risks associated with conflicts that arise between various system component software including, but not limited to, performance and system settings.

INFOR software may not work as intended in non-standard software deployments due to unknown conflicts between Infor CloudSuite and the new software version or component. If these issues cannot be resolved via normal code fixes, the customer may have to implement a standard software deployment system to correct the issue.

This information is subject to change, without notice, at any time.

Support Policy for Infor CloudSuite Software Running in Non-Standard Hardware Deployments

Summary

Infor CloudSuite is designed, developed, tested, and documented to run in a multi-tier / multi-server deployment. This document addresses support provided by INFOR for its software running in configurations that do not conform to the standard documented deployment.

INFOR does not test or maintain any support environments of Infor CloudSuite software running in non-standard hardware deployments. Therefore, INFOR will require any support issue reported to be reproduced in a Standard deployment system, before an APAR (software defect) will be logged. Where the issue is confirmed to be unrelated to the non-standard deployment, INFOR will support its software in a manner that is consistent with support provided when that software is running on a standard deployment.

INFOR will provide code corrections, per the Infor CloudSuite On Demand Patch Delivery Policy, which are developed and tested in systems that are running on a standard hardware deployment. These code corrections will be made available via the normal code correction systems and procedures used by all customers running Infor CloudSuite.

Customers running non-standard hardware deployments of Infor CloudSuite may also access and apply these code corrections using standard procedures. INFOR makes no warranty, implied or otherwise, regarding the use of these fixes in non-standard hardware deployments.

More Information

The most common reason customers request non-standard deployments is when they have very small user counts (10 or less) and smaller system requirements. The primary reason for multi-tier deployments is for performance and scalability for large user count systems.   Therefore, the low system load for these small user systems is more likely to provide adequate end user response times on fewer servers, provided the hardware is fast enough to handle the work load performed by the various layers.

Specific information regarding normal software deployment requirements is available on www.inforxtreme.com. Infor Support may update or change the standard software deployment list as new versions of software are available and can be tested internally.

Because the support teams only have access to standard documentation and systems running in standard deployment configurations, we are unable to assist with specific non-standard hardware deployment installation, setup or performance questions and recommendations. Any and all information related to setting up a non-standard hardware deployment is the sole responsibility of the customer. This information may be obtained from various sources, which are not part of Infor Support, and may result in successful deployment of the software for a specific customer environment.

The customer assumes all risks associated with conflicts that arise between various system component software including, but not limited to, performance and system settings.

INFOR software may not work as intended in non-standard hardware deployments due to hardware or software performance issues that are caused by sharing hardware for multi-tier functional deployment. If these issues cannot be resolved via normal code fixes, the customer may have to implement a standard hardware deployment system to correct the issue.

Sizing for Infor CloudSuite

Important Notice

If you plan to use Infor CloudSuite Web client sessions (standard Web-rendering, non-smart client), when sizing the utility server, treat one Web client sessions as one and one half concurrent sessions. For example, a utility server configured for 300 concurrent users of Infor CloudSuite via click-once client will support 150 Infor CloudSuite Web-rendered clients. The reason for this additional overhead on the server is that the rendering of forms and form scripts, which is otherwise processed by the click-once client must be handled by the server in a Web client-rendered presentation. Both click-once client and Web client rendered presentation methods work across LAN, WAN and Internet connections. All of the examples and sizing information for a utility server in this guide is intended for click-once client connectivity to the utility server.

Microsoft SQL Server Reporting Services (SSRS) is now used to generate reports in Infor CloudSuite. The SSRS component can be separated from the SQL Server servicing the ERP and other application databases. This distributed method is recommended on user counts exceeding 200 concurrent users. SSRS is supported on a separate server in version 9.00 and can be used in this model at any time. It is recommended that you validate that the proper licenses are purchased when distributing out SSRS or any other SQL Server component.

Additional resources may be added to the various Infor CloudSuite servers including the database server, utility server or other servers when additional modules or components are introduced. These resources may include physical/virtual server counts, processors, memory, disks, and disk configurations.

The sizing criteria of the servers listed in this document refer to server class components. This includes server class processors, memory bus, memory, SAS (Serial Attached SCSI) drives or better at high spindle speeds. This includes the infrastructure that might be in place from a hypervisor host perspective. Networking both in the LAN, WAN and DMZ locations should be complete and following best practices.

1-20 Concurrent Users

Database / Utility Server (combined servers)	
Operating System	Windows Server 2008 R2 / 2012 / 2012 R2
Processor Type, Speed, Number of Cores	Xeon 2.0 Ghz (or better), 4 Cores

Database / Utility Server (combined servers)

Memory Size	12 GB
Disk I/O Config	(6) 72/144/300 GB SCSI / SAS Drives
Other	Terminal Server Remote Administration
	SQL Server 2008 R2 / 2012 with SQL Reporting Services
	Infor CloudSuite Code
Network Interface	1 Gb Ethernet Adaptor

Example Disc Drive Configuration

Disk Array 0   Drive 0, 1 (RAID 1): Logical Drive C: / D: (72/144/300 GB drives)

- Operating System
- Swap File
- SQL Code
- Infor CloudSuite Code

Disk Array 1   Drive 2, 3 (RAID 1): Logical Drive E: (144/300 GB drives)

- SQL Databases (LDF)

Disk Array 2   Drive 4, 5 (RAID 1): Logical Drive F: (144/300 GB drives)

- SQL Databases (MDF)

21-50 Concurrent Users

Database / Utility Server (combined servers)

Operating System	Windows Server 2008 R2 / 2012 / 2012 R2
Processor Type, Speed, Number of Cores	Xeon 2.0 Ghz (or better), 8 Cores
Memory Size	16 GB
Disk I/O Config	(6) 72/144/300 GB SCSI / SAS Drives
Other	Terminal Server Remote Administration
	SQL Server 2008 R2 / 2012 / 2014 with SQL Reporting Services
	Infor CloudSuite Code
Network Interface	1 Gb Ethernet Adaptor

Example Disc Drive Configuration

Disk Array 0   Drive 0, 1 (RAID 1): Logical Drive C: / D: (72/144/300 GB drives)

- Operating System
- Swap File
- SQL Code
- Infor CloudSuite Code

Disk Array 1   Drive 2, 3 (RAID 1): Logical Drive E: (144/300 GB drives)

- SQL Databases (LDF)

Disk Array 2   Drive 4, 5 (RAID 1): Logical Drive F: (144/300 GB drives)

- SQL Databases (MDF)

51-100 Concurrent Users

Database Server	
Operating System	Windows Server 2008 R2 / 2012 / 2012 R2
Processor Type, Speed, Number of Cores	Xeon 2.0 Ghz (or better), 8 Cores
Memory Size	20 GB
Disk I/O Config	(8) 72/144/300 GB SCSI / SAS Drives
Other	Terminal Server Remote Administration
	SQL Server 2008 R2 / 2012 / 2014 with SQL Reporting Services
	Infor CloudSuite Code
Network Interface	1 Gb Ethernet Adaptor

Example Disc Drive Configuration

Disk Array 0   Drive 0, 1 (RAID 1): Logical Drive C: / D: (72/144/300 GB drives)

- Operating System
- Swap File
- SQL Code
- Infor CloudSuite Code

Disk Array 1   Drive 2, 3 (RAID 1): Logical Drive E: (144/300 GB drives)

- SQL Databases (LDF)

Disk Array 2   Drive 4, 5, 6, 7 (RAID 10): Logical Drive F: (144/300 GB drives)

- SQL Databases (MDF)

Utility Server	
Operating System	Windows Server 2008 R2 / 2012 / 2012 R2
Processor Type, Speed, Number of Cores	Xeon 2.0 Ghz (or better), 8 Cores
Memory Size	12 GB
Disk I/O Config	(2) 72 GB SCSI / SAS Drives RAID 1
Other	Internet Information Server (IIS)
	Infor CloudSuite Code
Network Interface	1 Gb Ethernet Adaptor

101-200 Concurrent Users

Database Server	
Operating System	Windows Server 2008 R2 / 2012 / 2012 R2
Processor Type, Speed, Number of Cores	Xeon 2.0 Ghz (or better), 8 Cores
Memory Size	24 GB
Disk I/O Config	(10) 72/144/300 GB SCSI / SAS Drives
Other	Terminal Server Remote Administration
	SQL Server 2008 R2 / 2012 / 2014 with SQL Reporting Services
	Infor CloudSuite Code
Network Interface	1 Gb Ethernet Adaptor

Example Disc Drive Configuration

Disk Array 0   Drive 0, 1 (RAID 1): Logical Drive C: / D: (72/144/300 GB drives)

- Operating System
- Swap File
- SQL Code
- Infor CloudSuite Code

Disk Array 1   Drive 2, 3, 4, 5 (RAID 10): Logical Drive E: (144/300 GB drives)

- SQL Databases (LDF)

Disk Array 2   Drive 6, 7, 8, 9 (RAID 10): Logical Drive F: (144/300 GB drives)

- SQL Databases (MDF)

Utility Server	
Operating System	Windows Server 2008 R2 / 2012 / 2012 R2
Processor Type, Speed, Number of Cores	Xeon 2.0 Ghz (or better), 8 Cores
Memory Size	16 GB
Disk I/O Config	(2) 72 GB SCSI / SAS Drives RAID 1
Other	Internet Information Server (IIS) Infor CloudSuite Code
Network Interface	1 Gb Ethernet Adaptor

201-300 Concurrent Users

Database Server	
Operating System	Windows Server 2008 R2 / 2012 / 2012 R2
Processor Type, Speed, Number of Cores	Xeon 2.0 Ghz (or better), 8 Cores
Memory Size	48 GB
Disk I/O Config	(12) 72/144/300 GB SCSI / SAS Drives
Other	Terminal Server Remote Administration SQL Server 2008 R2 / 2012 / 2014 Infor CloudSuite Code
Network Interface	1 Gb Ethernet Adaptor

Example Disc Drive Configuration

Disk Array 0   Drive 0, 1 (RAID 1): Logical Drive C: / D: (72/144/300 GB drives)

- Operating System
- Swap File
- SQL Code
- Infor CloudSuite Code

Disk Array 1   Drive 2, 3, 4, 5 (RAID 10): Logical Drive E: (144/300 GB drives)

- SQL Databases (LDF)

Disk Array 2   Drive 6, 7, 8, 9, 10, 11 (RAID 10): Logical Drive F: (144/300 GB drives)

- SQL Databases (MDF)

Reporting Server	
Operating System	Windows Server 2008 R2 / 2012 / 2012 R2
Processor Type, Speed, Number of Cores	Xeon 2.0 Ghz (or better), 4 Cores
Memory Size	8 GB
Disk I/O Config	(6) 72/144/300 GB SCSI / SAS Drives
Other	Terminal Server Remote Administration
	SQL Server 2008 R2 / 2012 / 2014 with SQL Reporting Services
Network Interface	1 Gb Ethernet Adaptor

Utility Server (Quantity 1-2)	
Operating System	Windows Server 2008 R2 / 2012 / 2012 R2
Processor Type, Speed, Number of Cores	Xeon 2.0 Ghz (or better), 8 Cores
Memory Size	16 GB
Disk I/O Config	(2) 72 GB SCSI / SAS Drives RAID 1
Other	Internet Information Server (IIS)
	Infor CloudSuite Code
Network Interface	1 Gb Ethernet Adaptor

301-600 Concurrent Users

Database Server	
Operating System	Windows Server 2008 R2 / 2012 / 2012 R2
Processor Type, Speed, Number of Cores	Xeon 2.0 Ghz (or better), 16 Cores
Memory Size	64 GB
Disk I/O Config	(14) 72/144/300 GB SCSI / SAS Drives
Other	Terminal Server Remote Administration
	SQL Server 2008 R2 / 2012 / 2014
	Infor CloudSuite Code
Network Interface	1 Gb Ethernet Adaptor

Example Disc Drive Configuration

Disk Array 0   Drive 0, 1 (RAID 1): Logical Drive C: / D: (72/144/300 GB drives)

- Operating System
- Swap File
- SQL Code
- Infor CloudSuite Code

Disk Array 1   Drive 2, 3, 4, 5 (RAID 10): Logical Drive E: (144/300 GB drives)

- SQL Databases (LDF)

Disk Array 2   Drive 6, 7, 8, 9, 10, 11, 12, 13 (RAID 10): Logical Drive F: (144/300 GB drives)

- SQL Databases (MDF)

Reporting Server	
Operating System	Windows Server 2008 R2 / 2012 / 2012 R2
Processor Type, Speed, Number of Cores	Xeon 2.0 Ghz (or better), 4 Cores
Memory Size	12 GB
Disk I/O Config	(6) 72/144/300 GB SCSI / SAS Drives
Other	Terminal Server Remote Administration
	SQL Server 2008 R2 / 2012 / 2014 with SQL Reporting Services
Network Interface	1 Gb Ethernet Adaptor

Utility Server (Quantity 2-4)	
Operating System	Windows Server 2008 R2 / 2012 / 2012 R2
Processor Type, Speed, Number of Cores	Xeon 2.0 Ghz (or better), 8 Cores
Memory Size	16 GB
Disk I/O Config	(2) 72 GB SCSI / SAS Drives RAID 1
Other	Internet Information Server (IIS)
	Infor CloudSuite Code
Network Interface	1 Gb Ethernet Adaptor

601-900 Concurrent Users

Database Server (Quantity 2 – Active / Active or Active / Passive Cluster)

When running an active / active or active / passive cluster, the sizing of a single node in the cluster should be configured to take on all workload of the system. In this configuration, the interruption to the user community during the failover activation of a node is limited to the amount of time that the cluster failover needs to transition the workload and ownership of the databases, connections, and processing. It is best practice to size all of the nodes in a cluster to the same specifications independently, whether on hard iron or running within a hypervisor.

Operating System	Windows Server 2008 R2 / 2012 / 2012 R2
Processor Type, Speed, Number of Cores	Xeon 2.0 Ghz (or better), 16 Cores
Memory Size	96 GB
Disk I/O Config	(16) 72/144/300 GB SCSI / SAS Drives
Other	Terminal Server Remote Administration
	SQL Server 2008 R2 / 2012 / 2014
	Infor CloudSuite Code
Network Interface	1 Gb Ethernet Adaptor

Example Disc Drive Configuration

Disk Array 0   Drive 0, 1 (RAID 1): Logical Drive C: / D: (72/144/300 GB drives)

- Operating System
- Swap File
- SQL Code
- Infor CloudSuite Code

Disk Array 1   Drive 2, 3 (RAID 1): Logical Drive Q: (144/300 GB drives)

- Quorum Drive

Disk Array 2   Drive 4, 5, 6, 7 (RAID 10): Logical Drive E: (144/300 GB drives)

- SQL Databases (LDF)

Disk Array 3   Drive 8, 9, 10, 11, 12, 13, 14, 15 (RAID 10): Logical Drive F: (144/300 GB drives)

- SQL Databases (MDF)

Reporting Server

Operating System	Windows Server 2008 R2 / 2012 / 2012 R2
Processor Type, Speed, Number of Cores	Xeon 2.0 Ghz (or better), 4 Cores

Reporting Server	
Memory Size	16 GB
Disk I/O Config	(6) 72/144/300 GB SCSI / SAS Drives
Other	Terminal Server Remote Administration
	SQL Server 2008 R2 / 2012 / 2014 with SQL Reporting Services
Network Interface	1 Gb Ethernet Adaptor

Utility Server (Quantity 3-5)	
Operating System	Windows Server 2008 R2 / 2012 / 2012 R2
Processor Type, Speed, Number of Cores	Xeon 2.0 Ghz (or better), 8 Cores
Memory Size	16 GB
Disk I/O Config	(2) 72 GB SCSI / SAS Drives RAID 1
Other	Internet Information Server (IIS)
	Infor CloudSuite Code
Network Interface	1 Gb Ethernet Adaptor

901-1200 Concurrent Users

Database Server (Quantity 2 – Active / Active or Active / Passive Cluster)	

When running an active / active or active / passive cluster, the sizing of a single node in the cluster should be configured to take on all workload of the system. In this configuration, the interruption to the user community during the failover activation of a node is limited to the amount of time that the cluster failover needs to transition the workload and ownership of the databases, connections, and processing. It is best practice to size all of the nodes in a cluster to the same specifications independently, whether on hard iron or running within a hypervisor.

Operating System	Windows Server 2008 R2 / 2012 / 2012 R2
Processor Type, Speed, Number of Cores	Xeon 2.0 Ghz (or better), 16 Cores
Memory Size	128 GB
Disk I/O Config	(18) 72/144/300 GB SCSI / SAS Drives
Other	Terminal Server Remote Administration
	SQL Server 2008 R2 / 2012 / 2014
	Infor CloudSuite Code

Database Server (Quantity 2 – Active / Active or Active / Passive Cluster)	
Network Interface	1 Gb Ethernet Adaptor

Example Disc Drive Configuration

Disk Array 0   Drive 0, 1 (RAID 1): Logical Drive C: / D: (72/144/300 GB drives)

- Operating System
- Swap File
- SQL Code
- Infor CloudSuite Code

Disk Array 1   Drive 2, 3 (RAID 1): Logical Drive Q: (144/300 GB drives)

- Quorum Drive

Disk Array 2   Drive 4, 5, 6, 7 (RAID 10): Logical Drive E: (144/300 GB drives)

- SQL Databases (LDF)

Disk Array 3   Drive 8, 9, 10, 11, 12, 13, 14, 15, 16, 17 (RAID 10): Logical Drive F: (144/300 GB drives)

- SQL Databases (MDF)

Reporting Server	
Operating System	Windows Server 2008 R2 / 2012 / 2012 R2
Processor Type, Speed, Number of Cores	Xeon 2.0 Ghz (or better), 8 Cores
Memory Size	16 GB
Disk I/O Config	(6) 72/144/300 GB SCSI / SAS Drives
Other	Terminal Server Remote Administration
	SQL Server 2008 R2 / 2012 / 2014 with SQL Reporting Services
Network Interface	1 Gb Ethernet Adaptor

Utility Server (Quantity 4-7)	
Operating System	Windows Server 2008 R2 / 2012 / 2012 R2
Processor Type, Speed, Number of Cores	Xeon 2.0 Ghz (or better), 8 Cores
Memory Size	16 GB
Disk I/O Config	(2) 72 GB SCSI / SAS Drives RAID 1

Utility Server (Quantity 4-7)	
Other	Internet Information Server (IIS)
	Infor CloudSuite Code
Network Interface	1 Gb Ethernet Adaptor

Infor CloudSuite Clients

Infor CloudSuite Smart Clients

A smart client provides the fully functional and user-friendly graphical interface of desktop applications with the communication protocol http/http(s) to allow internet or WAN deployment. The client leverages "click-once" deployment for ease of installation and is auto-updating from the Infor CloudSuite servers.

Smart Client Specification Example	
Operating System	Windows 7 / Windows 8 / Windows 10 Professional
Processor Type, Speed, Number of Cores	Multi-Core Processor 1.6 Ghz (or better), 2-4 Cores
Memory Size	2 GB / 3 GB (based on O/S)
Other	.NET Framework Network Connection

Infor CloudSuite Web-Rendering Browsers

Infor CloudSuite forms that are supplied with the application, personalized or created from scratch can be rendered in a web browser after the forms are saved and permissions are assigned. The following browsers are supported for Infor CloudSuite form web rendering:

- Internet Explorer
- Edge
- Firefox
- Safari
- Chrome

Infor CloudSuite Web Mobile Browsers

Infor CloudSuite Mobile has been tested on Android, Blackberry, and iPhone models and may also work on similar smartphones.

Sizing for Infor CloudSuite APS

1-7 Sites	
APS Server	
Operating System	Windows Server 2008 R2 / 2012 / 2012 R2
Processor Type, Speed, Number of Cores	Xeon 2.0 Ghz (or better), 4 Cores
Memory Size	12 GB
Disc I/O Config	(2) 72 GB SCSI / SAS Drives RAID 1
Other	Internet Information Server (IIS)
	Infor CloudSuite APS Code
Network Interface	1 Gb Ethernet Adapter

8-15 Sites	
APS Server	
Operating System	Windows Server 2008 R2 / 2012 / 2012 R2
Processor Type, Speed, Number of Cores	Xeon 2.0 Ghz (or better), 4 Cores
Memory Size	16 GB
Disc I/O Config	(2) 72 GB SCSI / SAS Drives RAID 1
Other	Internet Information Server (IIS)
	Infor CloudSuite APS Code
Network Interface	1 Gb Ethernet Adapter

16-24 Sites

APS Server

Operating System	Windows Server 2008 R2 / 2012 / 2012 R2
Processor Type, Speed, Number of Cores	Xeon 2.0 Ghz (or better), 8 Cores
Memory Size	32 GB
Disc I/O Config	(2) 72 GB SCSI / SAS Drives RAID 1
Other	Internet Information Server (IIS)
	Infor CloudSuite APS Code
Network Interface	1 Gb Ethernet Adapter

25+ Sites

When the number of sites nears or exceeds 20 Infor CloudSuite sites utilizing the APS engine it would be recommended that you run multiple servers and scale out the load across those servers. This could also be done at any site load level if desired.

Sizing for Business Intelligence for Infor CloudSuite

Utilization of an existing database server is assumed for the server(s) below:

1-40 Concurrent Users	
Operating System	Windows Server 2008 R2 / 2012 / 2012 R2
Processor Type, Speed, Number of Cores	Xeon 2.0 Ghz (or better), 4 Cores
Memory Size	12 GB
Disc I/O Config	(2) 72 GB SCSI / SAS Drives RAID 1
Other	Internet Information Server (IIS)
	Infor Business Intelligence for Infor CloudSuite OLAP and Web Components
Network Interface	1 Gb Ethernet Adapter

41-80 Concurrent Users	
Operating System	Windows Server 2008 R2 / 2012 / 2012 R2
Processor Type, Speed, Number of Cores	Xeon 2.0 Ghz (or better), 8 Cores
Memory Size	16 GB
Disc I/O Config	(2) 72 GB SCSI / SAS Drives RAID 1
Other	Internet Information Server (IIS)
	Infor Business Intelligence for Infor CloudSuite OLAP and Web Components
Network Interface	1 Gb Ethernet Adapter

81-100 Concurrent Users	
Operating System	Windows Server 2008 R2 / 2012 / 2012 R2

81-100 Concurrent Users	
Processor Type, Speed, Number of Cores	Xeon 2.0 Ghz (or better), 8 Cores
Memory Size	24 GB
Disc I/O Config	(2) 72 GB SCSI / SAS Drives RAID 1
Other	Internet Information Server (IIS)
	Infor Business Intelligence for Infor CloudSuite OLAP and Web Components
Network Interface	1 Gb Ethernet Adapter

Business Intelligence Microsoft Office – Plug-Ins

- Business Intelligence Office Plus – Office 2007 / 2010

Sizing for Infor CloudSuite Portals

Utilization of an existing database server is assumed for server(s) below:

Operating System	Windows Server 2008 R2 / 2012 / 2012 R2
Processor Type, Speed, Number of Cores	Xeon 2.0 Ghz (or better), 4-8 Cores
Memory Size	8-16 GB
Disc I/O Config	(2) 72 GB SCSI / SAS Drives RAID 1
Other	Internet Information Server (IIS)
	SharePoint Foundation 2010 / 2013 (optional)
	Microsoft Windows External Connector Licenses
	Infor CloudSuite Portal Code
Network Interface	1 Gb Ethernet Adapter

Because data is being served up from SQL server to potentially many end users of the portal application, you should configure the database server with a Per Processor (2008R2) Server license(s).

Sizing for Configure, Price, Quote

Utilization of an existing database server is assumed for the server(s) below:

1-5 Concurrent Users	
Operating System	Windows Server 2008 R2 / 2012 / 2012 R2
Processor Type, Speed, Number of Cores	Xeon 2.0 Ghz (or better), 4 Cores
Memory Size	8 GB
Disc I/O Config	(2) 72 GB SCSI / SAS Drives RAID 1
Other	Internet Information Server (IIS) Infor CloudSuite CPQ Code
Network Interface	1 Gb Ethernet Adapter

6-25 Concurrent Users	
Configuration Server	
Operating System	Windows Server 2008 R2 / 2012 / 2012 R2
Processor Type, Speed, Number of Cores	Xeon 2.0 Ghz (or better), 4 Cores
Memory Size	16 GB
Disc I/O Config	(2) 72 GB SCSI / SAS Drives RAID 1
Other	Internet Information Server (IIS) Infor CloudSuite CPQ Code
Network Interface	1 Gb Ethernet Adapter

26-75 Concurrent Users	
Configuration Server	
Operating System	Windows Server 2008 R2 / 2012 / 2012 R2
Processor Type, Speed, Number of Cores	Xeon 2.0 Ghz (or better), 8 Cores

26-75 Concurrent Users	
Configuration Server	
Memory Size	32 GB
Disc I/O Config	(2) 72 GB SCSI / SAS Drives RAID 1
Other	Internet Information Server (IIS)
	Infor CloudSuite CPQ Code
Network Interface	1 Gb Ethernet Adapter

Client Requirements

- See client requirements for Infor CloudSuite

Sizing for Infor Configure Price, Quote Sales Portal

Utilization of an existing database server is assumed for the server(s) below:

Operating System	Windows Server 2008 R2 / 2012 / 2012 R2
Processor Type, Speed, Number of Cores	Xeon 2.0 Ghz (or better), 4-8 Cores
Memory Size	8-16 GB
Disc I/O Config	(2) 72 GB SCSI / SAS Drives RAID 1
Other	Internet Information Server (IIS)
	Infor CloudSuite CPQ Portal Code
Network Interface	1 Gb Ethernet Adapter

Load balancing and additional servers can be added as necessary if the CPQ Portal application has a large volume of users. These servers may include content servers or additional product configuration management servers.
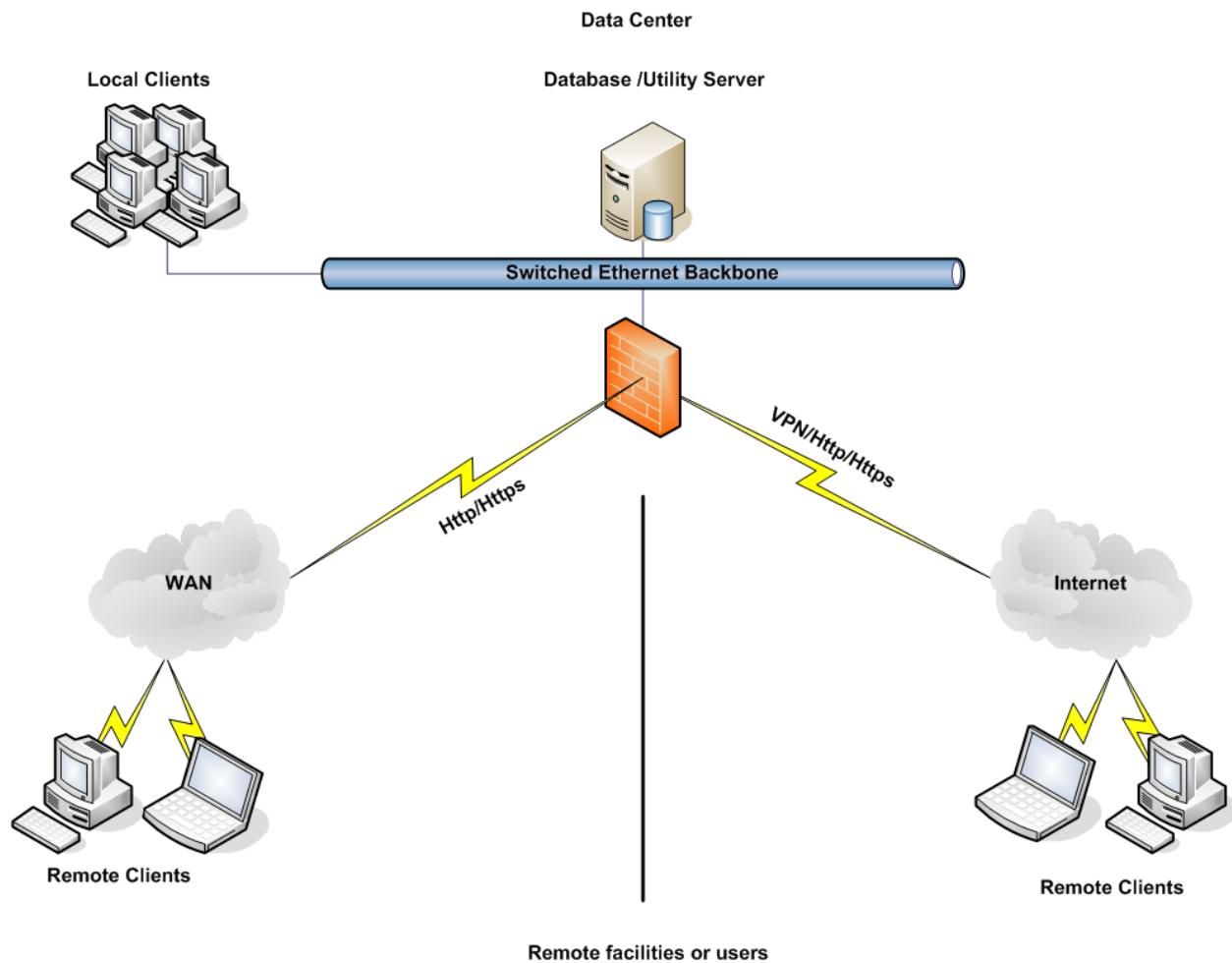
Example Hardware Recommendations

20 Concurrent Configuration Example

Definition of Implementation:

- 20 Concurrent Infor CloudSuite
- 1 Infor CloudSuite Site
- Local and/or Remote Users

Products include:

- Infor CloudSuite – MRP Mode

Data Center

Local Clients

Database /Utility Server

Switched Ethernet Backbone

VPN/Http/Https

Http/Https

WAN

Internet

Remote Clients

Remote Clients

Remote facilities or users

Database / Utility Server (combined servers)

The primary purpose of the database server is to house the volatile data for the company. This data is shared via services across the network to users who run object code that manipulates and reports on the data. The total number of SQL databases supported by the database server impacts the number of required processors, as well as memory. Infor CloudSuite uses a SQL database as the data repository. The utility server is a networked computer used to centrally store Mongoose applications. In this configuration, the utility server is combined with the database server. The primary reason for the utility server is to house non-volatile data and applications required for the Infor suite. The utility server runs the IDO Runtime Service. This service is used to render the Intelligent Data Objects (IDO) of the Infor CloudSuite system via metadata from the Infor CloudSuite Objects Database.

These IDOs contact the business processes of the Infor CloudSuite system.

Operating System	Windows Server 2008 R2 / 2012 / 2012 R2
Processor Type, Speed, Number of Cores	Xeon 2.0 Ghz (or better), 4 Cores

Database / Utility Server (combined servers)	
Memory Size	8 GB
Disc I/O Config	(6) 72/144/300 GB SCSI / SAS Drives
Other	Terminal Server Remote Administration
	SQL Server 2008 R2 / 2012 / 2014 with SQL Reporting Services
	Infor CloudSuite Code
Network Interface	1 Gb Ethernet Adapter

Example Disc Drive Configuration

Disk Array 0   Drive 0, 1 (RAID 1): Logical Drive C: / D: (72/144/300 GB drives)

- Operating System
- Swap File
- SQL Code
- Infor CloudSuite Code

Disk Array 1   Drive 2, 3 (RAID 1): Logical Drive E: (144/300 GB drives)

- SQL Databases (LDF)

Disk Array 2   Drive 4, 5 (RAID 1): Logical Drive F: (144/300 GB drives)
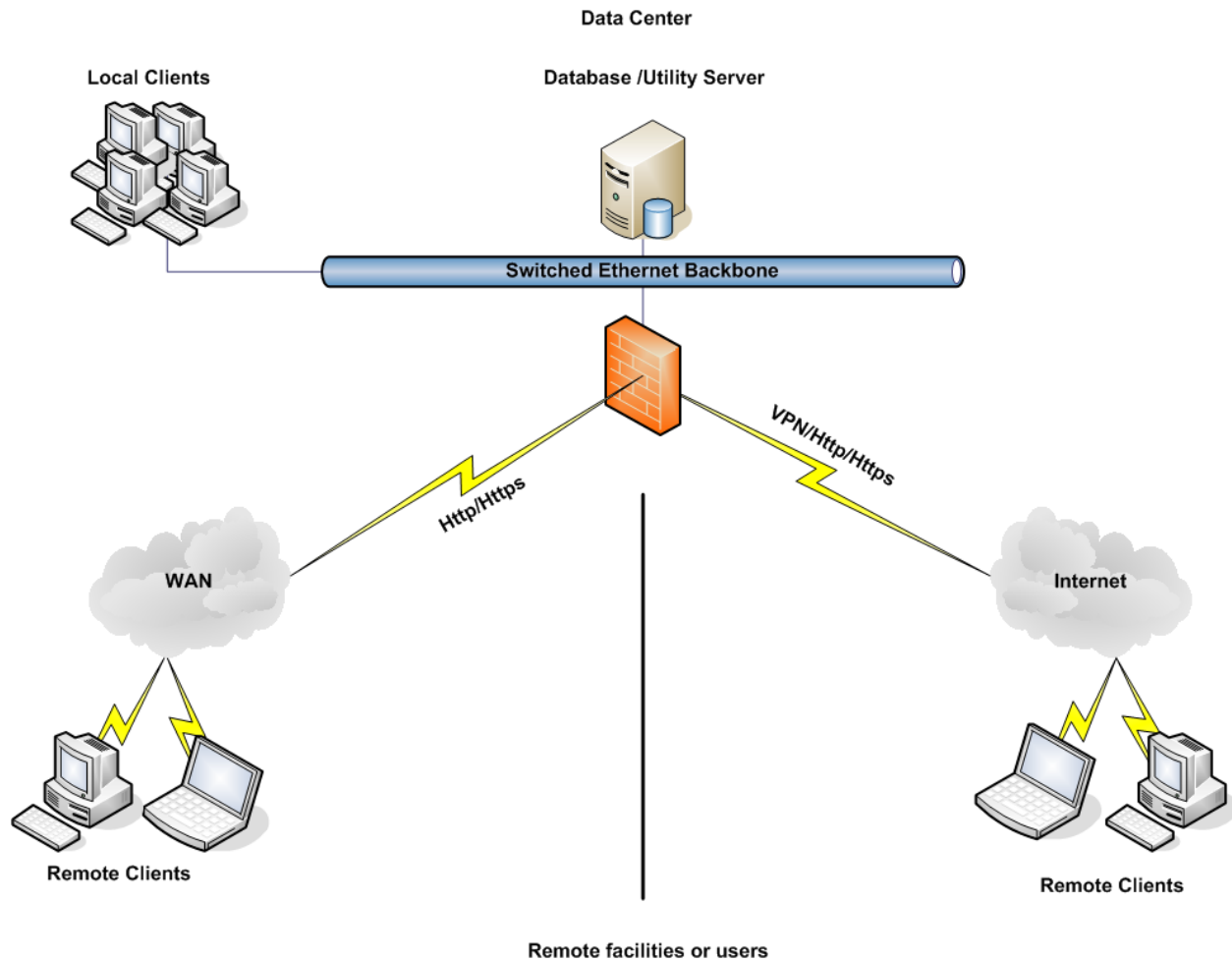
- SQL Databases (MDF)

50 Concurrent Configuration Example

Definition of Implementation:

- 50 Concurrent Infor CloudSuite
- 2 Infor CloudSuite Sites
- Local and/or Remote Users

Products include:

- Infor CloudSuite – MRP Mode

Data Center

Local Clients **Database /Utility Server**

Switched Ethernet Backbone

VPN/Http/Https

Http/Https

WAN **Internet**

Remote Clients **Remote Clients**

Remote facilities or users

Database / Utility Server (combined servers)

The primary purpose of the database server is to house the volatile data for the company. This data is shared via services across the network to users who run object code that manipulates and reports on the data. The total number of SQL databases supported by the database server impacts the number of required processors, as well as memory. Infor CloudSuite uses a SQL database as the data repository. The utility server is a networked computer used to centrally store Mongoose applications. In this configuration, the utility server is combined with the database server. The primary reason for the utility server is to house non-volatile data and applications required for the Infor suite. The utility server runs the IDO Runtime Service. This service is used to render the Intelligent Data Objects (IDO) of the Infor CloudSuite system via metadata from the Infor CloudSuite Objects Database.

These IDOs contact the business processes of the Infor CloudSuite system.

Operating System	Windows Server 2008 R2 / 2012 / 2012 R2
Processor Type, Speed, Number of Cores	Xeon 2.0 Ghz (or better), 8 Cores

Database / Utility Server (combined servers)	
Memory Size	16 GB
Disc I/O Config	(6) 72/144/300 GB SCSI / SAS Drives
Other	Terminal Server Remote Administration
	SQL Server 2008 R2 / 2012 / 2014 with SQL Reporting Services
	Infor CloudSuite Code
Network Interface	1 Gb Ethernet Adapter

Example Disc Drive Configuration

Disk Array 0   Drive 0, 1 (RAID 1): Logical Drive C: / D: (72/144/300 GB drives)

- Operating System
- Swap File
- SQL Code
- Infor CloudSuite Code

Disk Array 1   Drive 2, 3 (RAID 1): Logical Drive E: (144/300 GB drives)

- SQL Databases (LDF)

Disk Array 2   Drive 4, 5 (RAID 1): Logical Drive F: (144/300 GB drives)
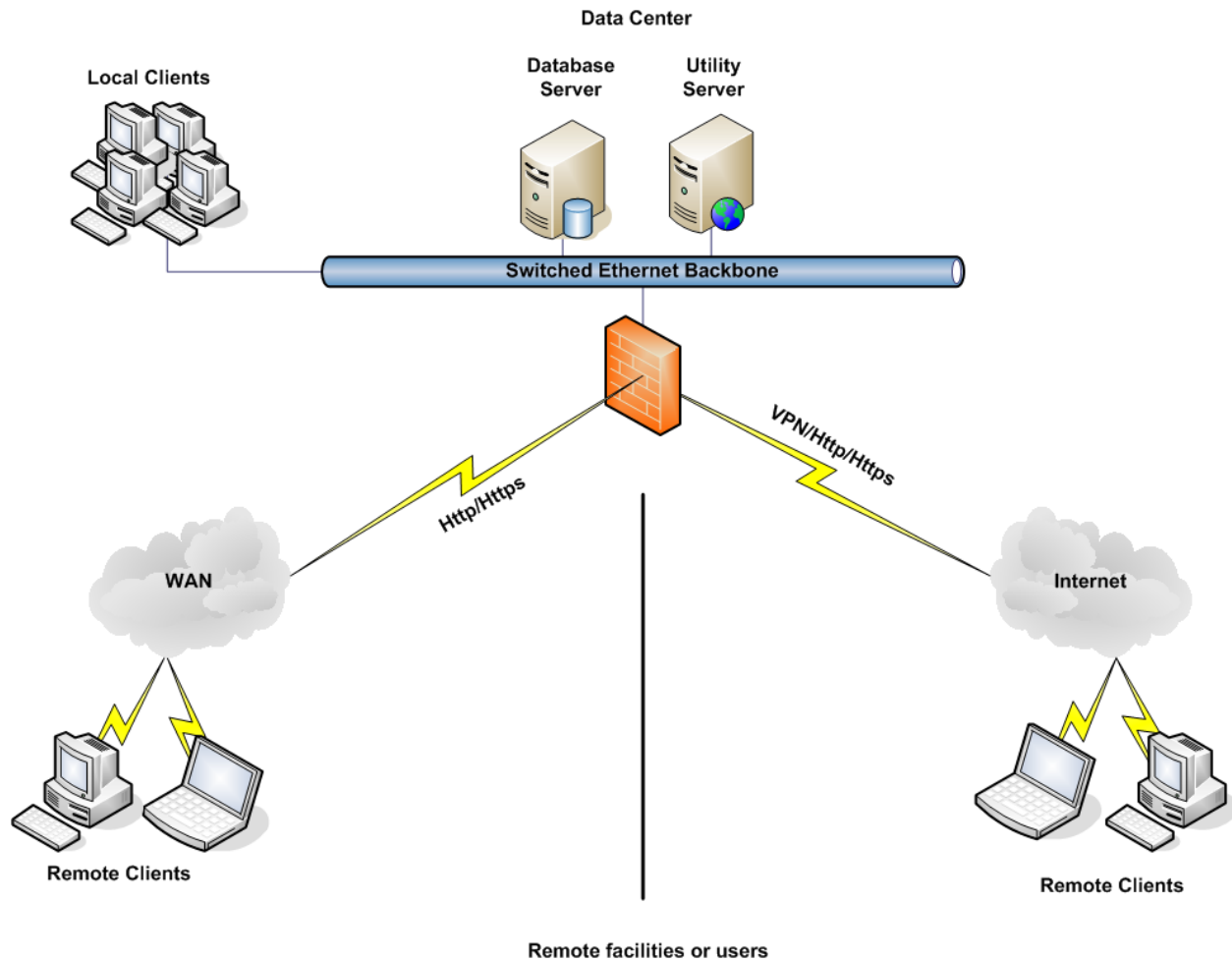
- SQL Databases (MDF)

75 Concurrent Configuration Example

Definition of Implementation:

- 75 Concurrent Infor CloudSuite
- 2 Infor CloudSuite Sites
- Local and/or Remote Users

Products include:

- Infor CloudSuite

Database Server

The primary purpose of the database server is to house the volatile data for the company. This data is shared via services across the network to users who run object code that manipulates and reports on the data. The total number of SQL databases being supported by the database server will impact the number of required processors, as well as memory. Infor CloudSuite uses a SQL database as the data repository.

Operating System	Windows Server 2008 R2 / 2012 / 2012 R2
Processor Type, Speed, Number of Cores	Xeon 2.0 Ghz (or better), 8 Cores
Memory Size	20 GB
Disc I/O Config	(8) 72/144/300 GB SCSI / SAS Drives

Database Server	
Other	Terminal Server Remote Administration
	SQL Server 2008 R2 / 2012 / 2014 with SQL Reporting Services
	Infor CloudSuite Code
Network Interface	1 Gb Ethernet Adapter

Example Disc Drive Configuration

Disk Array 0   Drive 0, 1 (RAID 1): Logical Drive C: / D: (72/144/300 GB drives)

- Operating System
- Swap File
- SQL Code
- Infor CloudSuite Code

Disk Array 1   Drive 2, 3 (RAID 1): Logical Drive E: (144/300 GB drives)

- SQL Databases (LDF)

Disk Array 2   Drive 4, 5, 6, 7 (RAID 10): Logical Drive F: (144/300 GB drives)

- SQL Databases (MDF)

Utility Server	

The utility server is a networked computer used to centrally store Mongoose applications. The primary purpose of the utility server is to house non-volatile data and applications required for the Infor suite. The utility server runs the IDO Runtime Service. This service is used to render the Intelligent Data Objects (IDO) of the Infor CloudSuite system via metadata in from the Infor CloudSuite Objects Database. These IDOs contact the business processes of the Infor CloudSuite system.

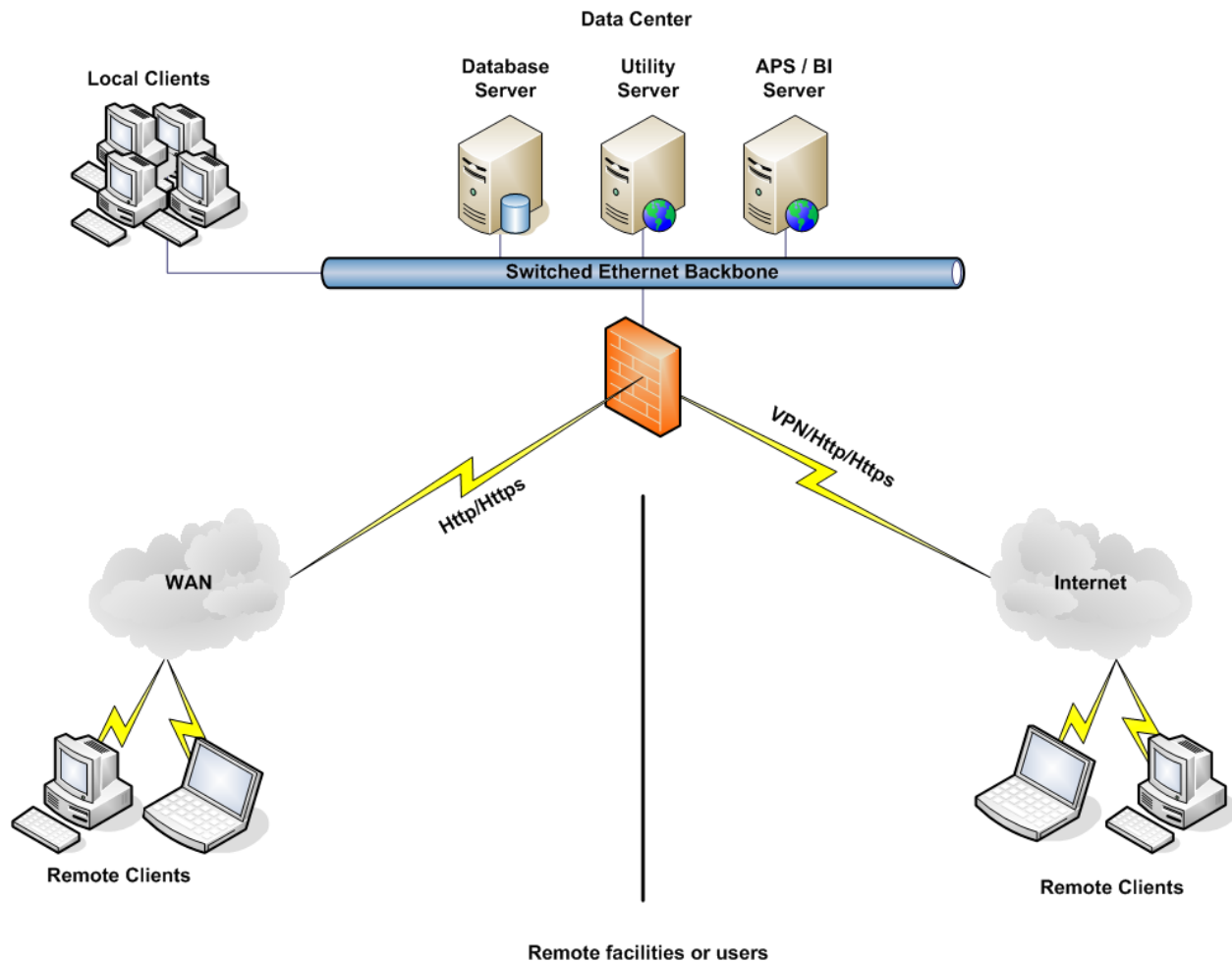| Operating System	Windows Server 2008 R2 / 2012 / 2012 R2
Processor Type, Speed, Number of Cores	Xeon 2.0 Ghz (or better), 8 Cores
Memory Size	12 GB
Disc I/O Config	(2) 72 GB SCSI / SAS Drives RAID 1
Other	Internet Information Server (IIS)
	Infor CloudSuite Code
Network Interface	1 Gb Ethernet Adapter

100 Concurrent Configuration Example

Definition of Implementation:

- 100 Concurrent Infor CloudSuite
- 10 Concurrent Infor CloudSuite Business Intelligence
- 4 Infor CloudSuite Sites
- Local and/or Remote Users

Products include:

- Infor CloudSuite
- Infor CloudSuite APS
- Infor CloudSuite Business Intelligence

Database Server

The primary purpose of the database server is to house the volatile data for the company. This data is shared via services across the network to users who run object code that manipulates and reports on the data. The total number of SQL databases being supported by the database server will impact the number of required processors, as well as memory. Infor CloudSuite uses a SQL database as the data repository.

Operating System	Windows Server 2008 R2 / 2012 / 2012 R2
Processor Type, Speed, Number of Cores	Xeon 2.0 Ghz (or better), 8 Cores
Memory Size	20 GB
Disc I/O Config	(8) 72/144/300 GB SCSI / SAS Drives
Other	Terminal Server Remote Administration
	SQL Server 2008 R2 / 2012 / 2014 with SQL Reporting Services
	Infor CloudSuite Code
Network Interface	1 Gb Ethernet Adapter

Example Disc Drive Configuration

Disk Array 0   Drive 0, 1 (RAID 1): Logical Drive C: / D: (72/144/300 GB drives)

- Operating System
- Swap File
- SQL Code
- Infor CloudSuite Code

Disk Array 1   Drive 2, 3 (RAID 1): Logical Drive E: (144/300 GB drives)

- SQL Databases (LDF)

Disk Array 2   Drive 4, 5, 6, 7 (RAID 10): Logical Drive F: (144/300 GB drives)

- SQL Databases (MDF)

Utility Server

The utility server is a networked computer used to centrally store Mongoose applications. The primary purpose of the utility server is to house non-volatile data and applications required for the Infor suite. The utility server runs the IDO Runtime Service. This service is used to render the Intelligent Data Objects (IDO) of the Infor CloudSuite system via metadata in from the Infor CloudSuite Objects Database. These IDOs contact the business processes of the Infor CloudSuite system.

Utility Server	
Operating System	Windows Server 2008 R2 / 2012 / 2012 R2
Processor Type, Speed, Number of Cores	Xeon 2.0 Ghz (or better), 8 Cores
Memory Size	16 GB
Disc I/O Config	(2) 72 GB SCSI / SAS Drives RAID 1
Other	Internet Information Server (IIS)
	Infor CloudSuite Code
Network Interface	1 Gb Ethernet Adapter

APS / BI Server	

The APS / BI Server is a networked computer used to centrally store Mongoose applications. The purpose of the APS Server is to run and calculate the Advance Planning engine of Infor CloudSuite along with providing results from CTP requests. Additionally this server will process components and application layer presentation for the Business Intelligence application.

Operating System	Windows Server 2008 R2 / 2012 / 2012 R2
Processor Type, Speed, Number of Cores	Xeon 2.0 Ghz (or better), 8 Cores
Memory Size	12 GB
Disc I/O Config	(2) 72 GB SCSI / SAS Drives RAID 1
Other	Internet Information Server (IIS)
	Infor CloudSuite APS Code
	Infor CloudSuite Business Intelligence
Network Interface	1 Gb Ethernet Adapter

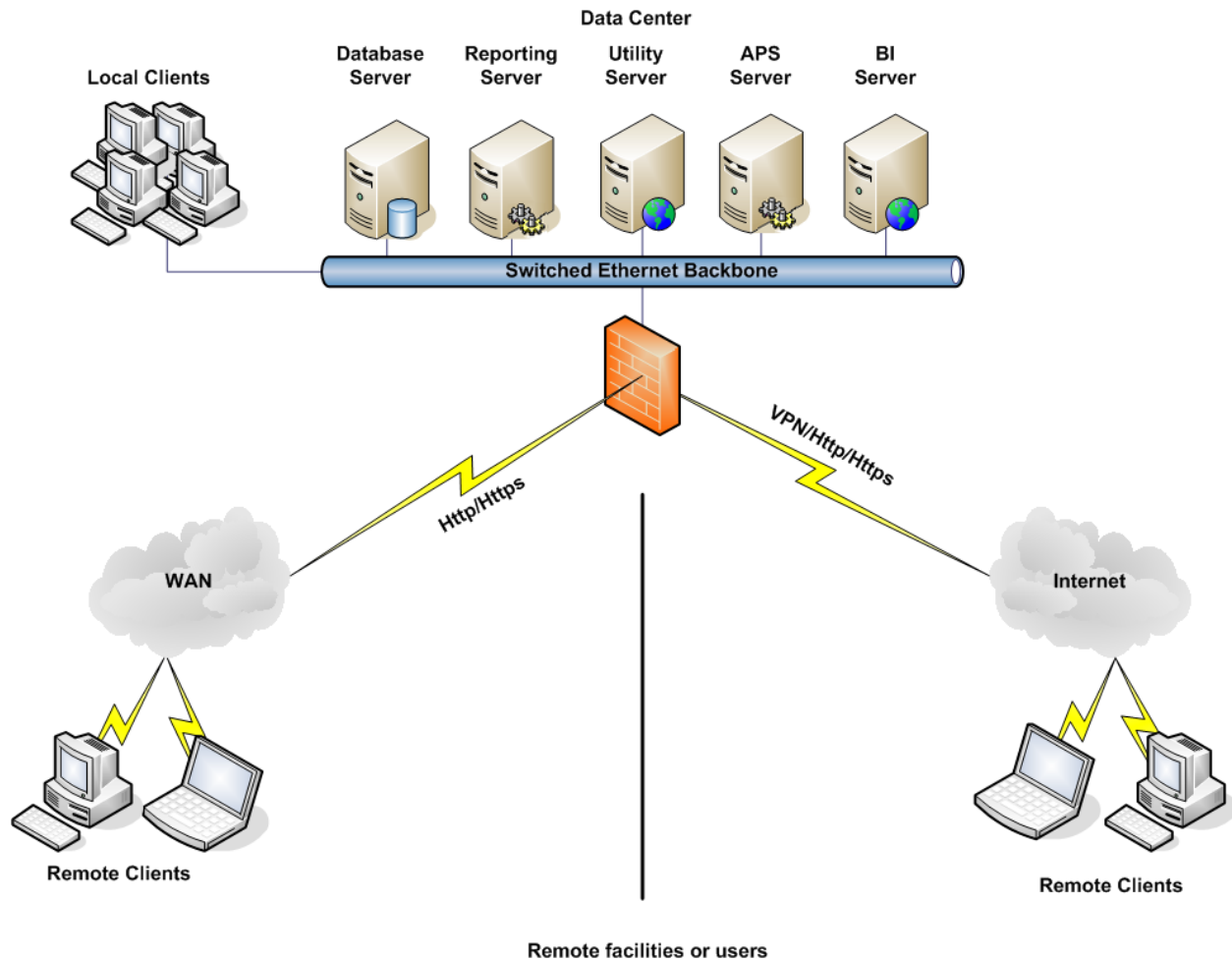# 200 Concurrent Configuration Example

Definition of Implementation:

- 200 Concurrent Infor CloudSuite
- 15 Concurrent Infor CloudSuite Business Intelligence
- 5 Infor CloudSuite Sites
- Local and/or Remote Users

Products include:

- Infor CloudSuite
- Infor CloudSuite APS

- Infor CloudSuite Business Intelligence

Database Server

The primary purpose of the database server is to house the volatile data for the company. This data is shared via services across the network to users who run object code that manipulates and reports on the data. The total number of SQL databases being supported by the database server will impact the number of required processors, as well as memory. Infor CloudSuite uses a SQL database as the data repository.

Operating System	Windows Server 2008 R2 / 2012 / 2012 R2
Processor Type, Speed, Number of Cores	Xeon 2.0 Ghz (or better), 8 Cores
Memory Size	32 GB
Disc I/O Config	(16) 72/144/300 GB SCSI / SAS Drives
Other	Terminal Server Remote Administration
	SQL Server 2008 R2 / 2012 / 2014
	Infor CloudSuite Code

Database Server

Network Interface	1 Gb Ethernet Adapter

Example disk drive configuration

Disk Array 0   Drive 0, 1 (RAID 1): Logical Drive C: / D: (72/144/300 GB drives)

- Operating System
- Swap File
- SQL Code
- Infor CloudSuite Code

Disk Array 1   Drive 2, 3, 4, 5 (RAID 10): Logical Drive E: (144/300 GB drives)

- SQL Databases (LDF)

Disk Array 2   Drive 6, 7, 8, 9 (RAID 10): Logical Drive F: (144/300 GB drives)

- SQL Databases (MDF)

Reporting Server

Operating System	Windows Server 2008 R2 / 2012 / 2012 R2
Processor Type, Speed, Number of Cores	Xeon 2.0 Ghz (or better), 4 Cores
Memory Size	8 GB
Disc I/O Config	(6) 72/144/300 GB SCSI / SAS Drives
Other	Terminal Server Remote Administration
	SQL Server 2008 R2 / 2012 / 2014 with SQL Reporting Services
	Infor CloudSuite Code
Network Interface	1 Gb Ethernet Adapter

Utility Server

The utility server is a networked computer used to centrally store Mongoose applications. The primary purpose of the utility server is to house non-volatile data and applications required for the Infor suite. The utility server runs the IDO Runtime Service. This service is used to render the Intelligent Data Objects (IDO) of the Infor CloudSuite system via metadata in from the Infor CloudSuite Objects Database. These IDOs contact the business processes of the Infor CloudSuite system. In this configuration the Infor CloudSuite Configuration server components will reside on this server.

Operating System	Windows Server 2008 R2 / 2012 / 2012 R2

Utility Server

Processor Type, Speed, Number of Cores	Xeon 2.0 Ghz (or better), 8 Cores
Memory Size	8 GB
Disc I/O Config	(2) 72GB SCSI / SAS Drives RAID 1
Other	Internet Information Server (IIS)
	Infor CloudSuite Code
Network Interface	1 Gb Ethernet Adapter

APS Server

The APS Server is a networked computer used to centrally store Mongoose applications. The purpose of the APS Server is to run and calculate the Advance Planning engine of Infor CloudSuite along with providing results from CTP requests.

Operating System	Windows Server 2008 R2 / 2012 / 2012 R2
Processor Type, Speed, Number of Cores	Xeon 2.0 Ghz (or better), 4 Cores
Memory Size	8 GB
Disc I/O Config	(2) 72GB SCSI / SAS Drives RAID 1
Other	Internet Information Server (IIS)
	Infor CloudSuite Code
Network Interface	1 Gb Ethernet Adapter

BI Server

The BI Server is a networked computer used to centrally store the Business Intelligence application. The purpose of the BI Server is to process components and application layer presentation for the Business Intelligence application.

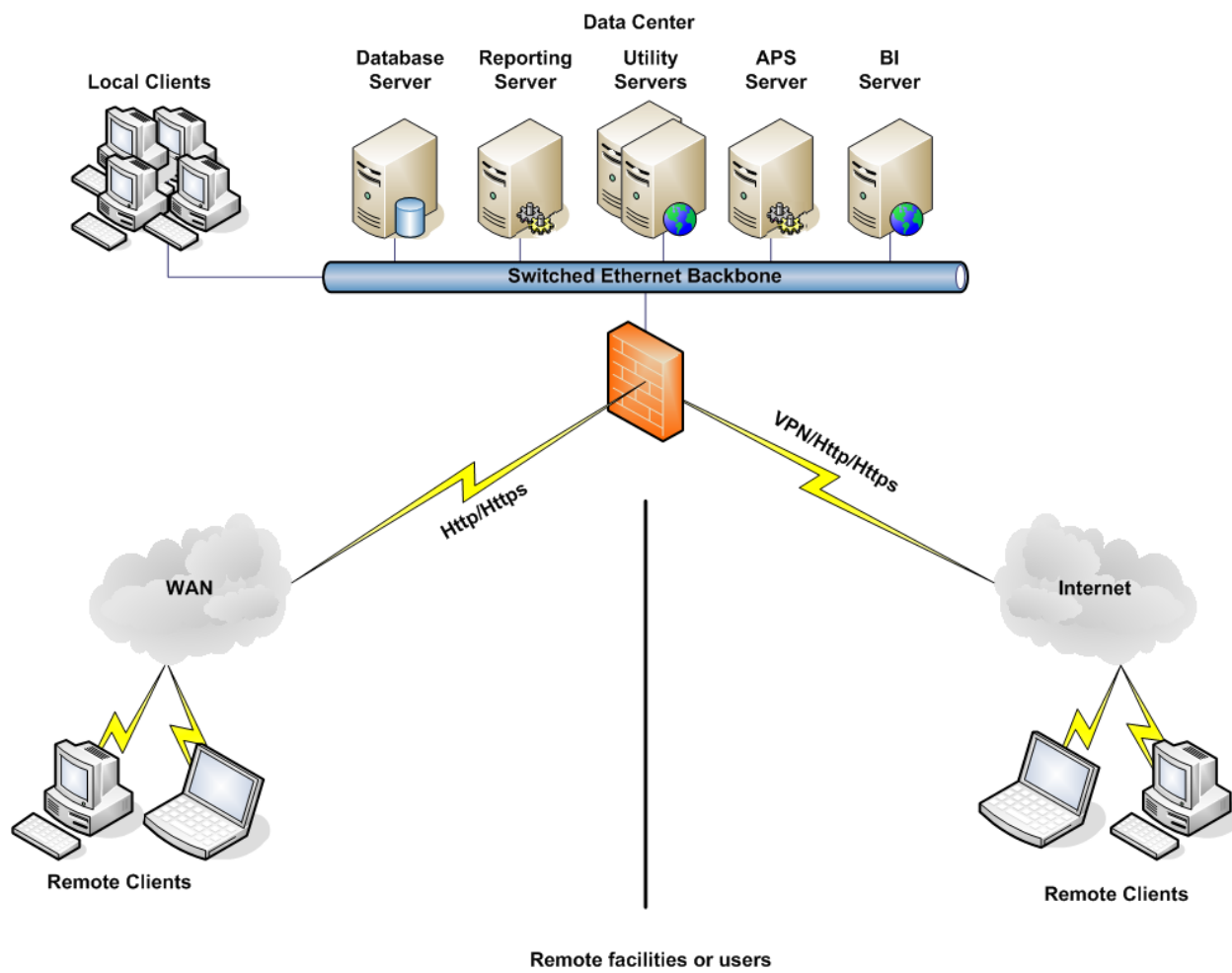| Operating System	Windows Server 2008 R2 / 2012 / 2012 R2
Processor Type, Speed, Number of Cores	Xeon 2.0 Ghz (or better), 4 Cores
Memory Size	12 GB
Disc I/O Config	(2) 72GB SCSI / SAS Drives RAID 1
Other	Internet Information Server (IIS)
	Infor CloudSuite APS Code
Network Interface	1 Gb Ethernet Adapter

400 Concurrent Configuration Example

Definition of Implementation:

- 400 Concurrent Infor CloudSuite
- 20 Concurrent Infor CloudSuite Business Intelligence
- 8 Infor CloudSuite Sites
- Local and/or Remote Users

Products include:

- Infor CloudSuite
- Infor CloudSuite APS
- Infor CloudSuite Business Intelligence

Database Server

The primary purpose of the database server is to house the volatile data for the company. This data is shared via services across the network to users who run object code that manipulates and reports on the data. The total number of SQL databases being supported by the database server will impact the number of required processors, as well as memory. Infor CloudSuite uses a SQL database as the data repository.

Operating System	Windows Server 2008 R2 / 2012 / 2012 R2
Processor Type, Speed, Number of Cores	Xeon 2.0 Ghz (or better), 16 Cores
Memory Size	64 GB
Disc I/O Config	(16) 72/144/300 GB SCSI / SAS Drives
Other	Terminal Server Remote Administration
	SQL Server 2008 R2 / 2012 / 2014
	Infor CloudSuite Code
Network Interface	1 Gb Ethernet Adapter

Example disk drive configuration

Disk Array 0   Drive 0, 1 (RAID 1): Logical Drive C: / D: (72/144/300 GB drives)

- Operating System
- Swap File
- SQL Code
- Infor CloudSuite Code

Disk Array 1   Drive 2, 3, 4, 5 (RAID 10): Logical Drive E: (144/300 GB drives)

- SQL Databases (LDF)

Disk Array 2   Drive 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 (RAID 10): Logical Drive F: (144/300 GB drives)

- SQL Databases (MDF)

Reporting Server

Operating System	Windows Server 2008 R2 / 2012 / 2012 R2
Processor Type, Speed, Number of Cores	Xeon 2.0 Ghz (or better), 4 Cores
Memory Size	12 GB
Disc I/O Config	(6) 72/144/300 GB SCSI / SAS Drives

Reporting Server

Other	Terminal Server Remote Administration
	SQL Server 2008 R2 / 2012 / 2014 with SQL Reporting Services
	Infor CloudSuite Code
Network Interface	1 Gb Ethernet Adapter

Utility Server (Quantity 2)

The utility server is a networked computer used to centrally store Mongoose applications. The primary purpose of the utility server is to house non-volatile data and applications required for the Infor suite. The utility server runs the IDO Runtime Service. This service is used to render the Intelligent Data Objects (IDO) of the Infor CloudSuite system via metadata in from the Infor CloudSuite Objects Database. These IDOs contact the business processes of the Infor CloudSuite system. In this configuration the Infor CloudSuite Configuration server components will reside on this server.

Operating System	Windows Server 2008 R2 / 2012 / 2012 R2
Processor Type, Speed, Number of Cores	Xeon 2.0 Ghz (or better), 8 Cores
Memory Size	16 GB
Disc I/O Config	(2) 72GB SCSI / SAS Drives RAID 1
Other	Internet Information Server (IIS)
	Infor CloudSuite Code
Network Interface	1 Gb Ethernet Adapter

APS Server

The APS Server is a networked computer used to centrally store Mongoose applications. The purpose of the APS Server is to run and calculate the Advance Planning engine of Infor CloudSuite along with providing results from CTP requests.

Operating System	Windows Server 2008 R2 / 2012 / 2012 R2
Processor Type, Speed, Number of Cores	Xeon 2.0 Ghz (or better), 4 Cores
Memory Size	16 GB
Disc I/O Config	(2) 72GB SCSI / SAS Drives RAID 1
Other	Internet Information Server (IIS)
	Infor CloudSuite Code

APS Server

Network Interface	1 Gb Ethernet Adapter

BI Server

The BI Server is a networked computer used to centrally store the Business Intelligence application. The purpose of the BI Server is to process components and application layer presentation for the Business Intelligence application.

Operating System	Windows Server 2008 R2 / 2012 / 2012 R2
Processor Type, Speed, Number of Cores	Xeon 2.0 Ghz (or better), 4 Cores
Memory Size	12 GB
Disc I/O Config	(2) 72GB SCSI / SAS Drives RAID 1
Other	Internet Information Server (IIS)
	Infor CloudSuite APS Code
Network Interface	1 Gb Ethernet Adapter

800 Concurrent Configuration Example

Definition of Implementation:

- 800 Concurrent Infor CloudSuite
- 40 Concurrent Infor CloudSuite Business Intelligence
- 8 Infor CloudSuite Sites (6 APS, 2 MRP)
- Local and/or Remote Users

Products include:

- Infor CloudSuite
- Infor CloudSuite APS
- Infor CloudSuite Business Intelligence

Database Server (Quantity 2 – Active / Active or Active / Passive Cluster)

The primary purpose of the database server is to house the volatile data for the company. This data is shared via services across the network to users who run object code that manipulates and reports on the data. The total number of SQL databases being supported by the database server will impact the number of required processors, as well as memory. Infor CloudSuite uses a SQL database as the data repository.

Operating System	Windows Server 2008 R2 / 2012 / 2012 R2
Processor Type, Speed, Number of Cores	Xeon 2.0 Ghz (or better), 16 Cores
Memory Size	96 GB
Disc I/O Config	(16) 72/144/300 GB SCSI / SAS Drives

Database Server (Quantity 2 – Active / Active or Active / Passive Cluster)	
Other	Terminal Server Remote Administration
	SQL Server 2008 R2 / 2012 / 2014
	Infor CloudSuite Code
Network Interface	1 Gb Ethernet Adapter

Example disk drive configuration

Disk Array 0   Drive 0, 1 (RAID 1): Logical Drive C: / D: (72/144/300 GB drives)

- Operating System
- Swap File
- SQL Code
- Infor CloudSuite Code

Disk Array 1   Drive 2, 3 (RAID 1): Logical Drive Q: (144/300 GB drives)

- Quorum Drive (optional*)

Disk Array 2   Drive 4, 5, 6, 7 (RAID 10): Logical Drive E: (144/300 GB drives)

- SQL Databases (LDF)

Disk Array 3   Drive 8, 9, 10, 11, 12, 13, 14, 15 (RAID 10): Logical Drive F: (144/300 GB drives)

- SQL Databases (MDF)

* The type of cluster quorum that is selected determines if this array of quorum drives is needed. Node Majority, Node and Disk majority (disk witness), Node and File Share Majority or No Majority – Disk Only quorums will determine this requirement.

Reporting Server	
Operating System	Windows Server 2008 R2 / 2012 / 2012 R2
Processor Type, Speed, Number of Cores	Xeon 2.0 Ghz (or better), 4 Cores
Memory Size	16 GB
Disc I/O Config	(6) 72/144/300 GB SCSI / SAS Drives
Other	Terminal Server Remote Administration
	SQL Server 2008 R2 / 2012 / 2014 with SQL Reporting Services
	Infor CloudSuite Code
Network Interface	1 Gb Ethernet Adapter

Utility Server (Quantity 4)

The utility server is a networked computer used to centrally store Mongoose applications. The primary purpose of the utility server is to house non-volatile data and applications required for the Infor suite. The utility server runs the IDO Runtime Service. This service is used to render the Intelligent Data Objects (IDO) of the Infor CloudSuite system via metadata in from the Infor CloudSuite Objects Database. These IDOs contact the business processes of the Infor CloudSuite system. In this configuration, the Infor CloudSuite Configuration server components will reside on this server.

Operating System	Windows Server 2008 R2 / 2012 / 2012 R2
Processor Type, Speed, Number of Cores	Xeon 2.0 Ghz (or better), 8 Cores
Memory Size	16 GB
Disc I/O Config	(2) 72GB SCSI / SAS Drives RAID 1
Other	Internet Information Server (IIS)
	Infor CloudSuite Code
Network Interface	1 Gb Ethernet Adapter

APS Server

The APS Server is a networked computer used to centrally store Mongoose applications. The purpose of the APS Server is to run and calculate the Advance Planning engine of Infor CloudSuite along with providing results from CTP requests.

Operating System	Windows Server 2008 R2 / 2012 / 2012 R2
Processor Type, Speed, Number of Cores	Xeon 2.0 Ghz (or better), 4 Cores
Memory Size	12 GB
Disc I/O Config	(2) 72GB SCSI / SAS Drives RAID 1
Other	Internet Information Server (IIS)
	Infor CloudSuite Code
Network Interface	1 Gb Ethernet Adapter

BI Server

The BI Server is a networked computer used to centrally store the Business Intelligence application. The purpose of the BI Server is to process components and application layer presentation for the Business Intelligence application.

Operating System	Windows Server 2008 R2 / 2012 / 2012 R2

BI Server	
Processor Type, Speed, Number of Cores	Xeon 2.0 Ghz (or better), 4 Cores
Memory Size	12 GB
Disc I/O Config	(2) 72GB SCSI / SAS Drives RAID 1
Other	Internet Information Server (IIS) Infor CloudSuite APS Code
Network Interface	1 Gb Ethernet Adapter

1000 Concurrent Configuration Example

Definition of Implementation:

- 1000 Concurrent Infor CloudSuite
- 45 Concurrent Infor CloudSuite Business Intelligence
- 12 Infor CloudSuite Sites (8 APS, 4 MRP)
- Local and/or Remote Users

Products include:

- Infor CloudSuite
- Infor CloudSuite APS
- Infor CloudSuite Business Intelligence

Database Server (Quantity 2 – Active / Active or Active / Passive Cluster)

The primary purpose of the database server is to house the volatile data for the company. This data is shared via services across the network to users who run object code that manipulates and reports on the data. The total number of SQL databases being supported by the database server will impact the number of required processors, as well as memory. Infor CloudSuite uses a SQL database as the data repository.

Operating System	Windows Server 2008 R2 / 2012 / 2012 R2
Processor Type, Speed, Number of Cores	Xeon 2.0 Ghz (or better), 16 Cores
Memory Size	128 GB
Disc I/O Config	(18) 72/144/300 GB SCSI / SAS Drives

Database Server (Quantity 2 – Active / Active or Active / Passive Cluster)	
Other	Terminal Server Remote Administration
	SQL Server 2008 R2 / 2012 / 2014
	Infor CloudSuite Code
Network Interface	1 Gb Ethernet Adapter

Example disk drive configuration

Disk Array 0   Drive 0, 1 (RAID 1): Logical Drive C: / D: (72/144/300 GB drives)

- Operating System
- Swap file
- SQL Code
- Infor CloudSuite Code

Disk Array 1   Drive 2, 3 (RAID 1): Logical Drive Q: (144/300 GB drives)

- Quorum Drive (optional*)

Disk Array 2   Drive 4,5,6,7 (RAID 10): Logical Drive E: (144/300 GB drives)

- SQL Databases (LDF)

Disk Array 3   Drive 8, 9, 10, 11, 12, 13, 14, 15, 16, 17 (RAID 10): Logical Drive F: (144/300 GB drives)

- SQL Databases (MDF)

* The type of cluster quorum that is selected determines if this array of quorum drives is needed. Node Majority, Node and Disk majority (disk witness), Node and File Share Majority or No Majority – Disk Only quorums will determine this requirement.

Reporting Server	
Operating System	Windows Server 2008 R2 / 2012 / 2012 R2
Processor Type, Speed, Number of Cores	Xeon 2.0 Ghz (or better), 8 Cores
Memory Size	16 GB
Disc I/O Config	(6) 72/144/300 GB SCSI / SAS Drives
Other	Terminal Server Remote Administration
	SQL Server 2008 R2 / 2012 / 2014 with SQL Reporting Services
	Infor CloudSuite Code
Network Interface	1 Gb Ethernet Adapter

Utility Server (Quantity 5)

The utility server is a networked computer used to centrally store Mongoose applications. The primary purpose of the utility server is to house non-volatile data and applications required for the Infor suite. The utility server runs the IDO Runtime Service. This service is used to render the Intelligent Data Objects (IDO) of the Infor CloudSuite system via metadata in from the Infor CloudSuite Objects Database. These IDOs contact the business processes of the Infor CloudSuite system. In this configuration, the Infor CloudSuite Configuration server components will reside on this server.

Operating System	Windows Server 2008 R2 / 2012 / 2012 R2
Processor Type, Speed, Number of Cores	Xeon 2.0 Ghz (or better), 8 Cores
Memory Size	16 GB
Disc I/O Config	(2) 72GB SCSI / SAS Drives RAID 1
Other	Internet Information Server (IIS)
	Infor CloudSuite Code
Network Interface	1 Gb Ethernet Adapter

APS Server

The APS Server is a networked computer used to centrally store Mongoose applications. The purpose of the APS Server is to run and calculate the Advance Planning engine of Infor CloudSuite along with providing results from CTP requests.

Operating System	Windows Server 2008 R2 / 2012 / 2012 R2
Processor Type, Speed, Number of Cores	Xeon 2.0 Ghz (or better), 4 Cores
Memory Size	16 GB
Disc I/O Config	(2) 72GB SCSI / SAS Drives RAID 1
Other	Internet Information Server (IIS)
	Infor CloudSuite Code
Network Interface	1 Gb Ethernet Adapter

BI Server

The BI Server is a networked computer used to centrally the Business Intelligence application. The purpose of the BI Server is to process components and application layer presentation for the Business Intelligence application.

BI Server	
Operating System	Windows Server 2008 R2 / 2012 / 2012 R2
Processor Type, Speed, Number of Cores	Xeon 2.0 Ghz (or better), 8 Cores
Memory Size	16 GB
Disc I/O Config	(2) 72GB SCSI / SAS Drives RAID 1
Other	Internet Information Server (IIS) Infor CloudSuite APS Code
Network Interface	1 Gb Ethernet Adapter

Example Information (All)

Standard Technical Requirements / Information

- A switched Ethernet backbone is required to create separate collision domains for users and independent collision domains for each of the servers described or configured for the Infor software.

- Infor strongly recommends that all servers are connected at 1Gbps to the same switch or backplane.

- There should be no more than 12-16 users per collision domain, to limit the number of Ethernet collisions on a broadcast domain within the IP network. This requirement is met if the entire network is switched. If Ethernet hubs are used, Infor recommends no more than 16 users on a hub, and that hub should be connected directly to a switched port on the backplane. This is a standard networking best practice.

- All environments require a Domain Controller to authenticate users and services on the network. It is assumed that this server/structure already exists. No Infor product server should perform any Domain Controller roles.

- Each user running over a WAN connection consumes approximately 15Kb to 24Kb of bandwidth. The Wide Area Network (WAN) configuration is recommended as follows:

- 20Kb per active user (20Kb * 10 users = 200Kb)

- A maximum of 150ms latency is recommended.

- The consumption of bandwidth per user can be very dynamic, dependent on the use of the system. The provided numbers give a conservative rule to follow when designing and reviewing the infrastructure.

- WAN sizing and configuration should also allow for other traffic across the WAN, including:
    - Domain authentication or replication, if applicable
    - DNS or WINS replication or lookups, if applicable
    - Internet traffic routing through gateways, if applicable
    - E-mail traffic, including client-to-server or server-to-server

- Printing to and from locations
- IP telephony
- Virtual Private Network (VPN) overhead (LAN-to-LAN VPN)

  It is strongly recommended that you invoke Traffic Shaping and/or QOS mechanisms on the WAN connectivity of choice.

- Disk space requirements vary depending on the use of the system and the amount of archive data that is maintained. When purchasing disk subsystems, allow for expansion in order to provide the needed disk space for your implementation and production environment.
- Use enterprise / data center editions of the operating system and SQL Server on the database server, to allow for expansion of the server past the limitations of the standard versions.
- The SQL Server – Client Access Licenses (CAL) model is sufficient for the licensing of the SQL Server and the applications that are served by SQL Server if all the users and/or devices used to access the application are used by company employees.
- The SQL Server – Per Processor (2008R2) or Per Core (2012 / 2014) license model is required when the applications served by SQL Server are used by "unknown" users or devices. This includes any user who is *not* an employee of the organization that owns the SQL Server. This license allows for unlimited connection counts of known or unknown users. When using this model, CALs are not needed for the users. Additionally the Microsoft SQL Server 2012 / 2014 Enterprise Edition version only supports licensing by the core.
- Per Processor (2008R2) or Per Core (2012 / 2012 R2) licenses are purchased as a server license, and each processor/processor filled socket or system cores requires a license.
- Enterprise SQL Server Per Processor (2008R2) or Per Core (2012 / 2014) licenses can be expensive. If the solution includes a requirement for applications that are accessed by unknown users, and Enterprise SQL Server is used, there are alternate ways to deploy the applications across two database servers. For example, one server running Enterprise SQL Server could be used for "known user" applications with CALs assigned. "Unknown users" could run on the standard version of SQL Server with a Per Processor (2008R2) or Per Core (2012 / 2014) license model. In some cases, this method can save substantial licensing costs. Ask for additional details from a technical resource.

Requirements Prior to the Installation of Infor Software

- All servers that will have the Infor software suite loaded must be fully functional. This means:
  - Operating systems are installed with the latest supported service pack for the software version being installed.
  - Appropriate Windows updates are applied.
  - Terminal Services, in Remote Administration mode, is installed on the appropriate servers.
  - All servers are fully configured as Member Servers within the domain or Active Directory structure.
  - Servers are not Domain Controllers.
  - No networking issues exist with these servers or on the environment backplane.

- Servers meet the recommended hardware specifications supplied by Infor.
- Disk partitions have been created as appropriate and based on information provided by Infor technical personnel.
- Servers are dedicated to running Infor software.
- A client PC is available for the installation of any Infor client software. This client is also used to train users on the installation of clients.
- A networked printer is available and can be accessed by the designated Infor CloudSuite utility server. This printer is used to train users on the configuration of the Infor CloudSuite system to printers, and to test printing from the software.
- If faxing from Infor CloudSuite is required, a fax modem must be installed in the appropriate fax server or utility server.
- Access to servers is available from a "comfortable working environment."
- Windows operating system media is available for all servers and clients.
- Media and licenses for Microsoft Office are available.
- Media and licenses for Microsoft SQL Server are available.
- Access is available to IT resources, including personnel, without excessive delay. The designated System Administrator should be present during the installation process.
- All relevant software to be installed has arrived / downloaded, including complementary products and components, at least 2 days before the installation is to occur.
- If data is to be backed up from a previous version of Infor CloudSuite, the existing server must have enough capacity for these backups to occur.

Important Notices

The material contained in this publication (including any supplementary information) constitutes and contains confidential and proprietary information of Infor. By gaining access to the attached, you acknowledge and agree that the material (including any modification, translation or adaptation of the material) and all copyright, trade secrets and all other right, title and interest therein, are the sole property of Infor. and that you shall not gain right, title or interest in the material (including any modification, translation or adaptation of the material) by virtue of your review thereof other than the non-exclusive right to use the material solely in connection with and the furtherance of your license and use of software made available to your company from Infor pursuant to a separate agreement ("Purpose").

In addition, by accessing the enclosed material, you acknowledge and agree that you are required to maintain such material in strict confidence and that your use of such material is limited to the Purpose described above.

Although Infor has taken due care to ensure that the material included in this publication is accurate and complete, Infor cannot warrant that the information contained in this publication is complete, does not contain typographical or other errors, or will meet your specific requirements. As such, Infor does not assume and hereby disclaims all liability, consequential or otherwise, for any loss or damage to any person or entity which is caused by or relates to errors or omissions in this publication (including any supplementary information), whether such errors or omissions result from negligence, accident or any other cause.

Trademark Acknowledgements

All other company, product, trade or service names referenced may be registered trademarks or trademarks of their respective owners