

CommonTime Limited

# mSuite5 Installation Pre-requisites

Administration considerations prior to an mSuite5 installation.

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## OVERVIEW

Thank you for your interest in mSuite, CommonTime's uniquely flexible wireless mobility solution exclusively for Lotus Domino and Lotus Notes.

mSuite installation is simple and straightforward and it should take less than one hour to get your first devices fully operational.

Installation should be carried out by an individual with knowledge of Lotus Domino such as an experienced IBM® Lotus® Domino® administrator. Depending on the decision regarding the location of the mSuite SQL database you may also need a DB Admin to be available. Firewall considerations may require the assistance of your Network or Security administrator. No other specialist knowledge is required.

This document highlights the necessary pre-requisites and the configuration decisions that are needed to ensure a quick and successful installation of mSuite.

**Please read the whole of this document and complete the checklist before starting the installation.**

## SQL CREDENTIALS

During the installation, you will need logon credentials for an account that has the right to create a new SQL database. On an ongoing basis, the mSuite server will need logon credentials that provide DBO level access to that database.

## INSTALLATION KEY

You will need an mSuite license key during the installation process.

- **EXISTING CUSTOMERS:** If you have a valid license key for Version 4 of mSuite, you will need a replacement key for the installation. Please go to (??URL to be provided) and enter your existing key. Your key will be upgraded and emailed to the contact registered as responsible for the license.
- **EVALUATORS:** If you are carrying out an evaluation, please use the Evaluation request form on CommonTime's web site at [https://www.commontime.com/shop/create\\_account.php](https://www.commontime.com/shop/create_account.php) to request a key. This will be sent to you by email.

**WARNING:** License keys are unique and are an integral part of your system. If they are shared with other mSuite systems in your organization or other organizations, none of the installations will work correctly. If you need help with your license key, please contact us by email at [admin@commontime.com](mailto:admin@commontime.com) and we will assist you in getting the right key for your installation.

## DEVICE SUPPORT

### Supported Devices

These device platforms are actively developed with features and enhancements being added all the time:

- Windows Mobile 5 Smartphone
- Windows Mobile 5 Pocket PC
- Windows Mobile 6 Standard
- Windows Mobile 6 Professional
- Windows Mobile 6.1 Standard
- Windows Mobile 6.1 Professional
- Nokia Symbian 9.1 Series 60 3<sup>rd</sup> Edition devices

We are always working on new device support. If the device you want to support is not listed, please contact us at [support@commontime.com](mailto:support@commontime.com) with details of the device type(s) that you need support for. They may be under development already, or your input can help us prioritize new device platforms.

### Discontinued Devices

The following devices, which were supported in mSuite 4.3, are no longer supported in mSuite5. These devices must continue to use mSuite version 4.3. Version 4.3 is supported for bug fixes only. There are no enhancements or feature upgrades planned for these platforms. All support for these platforms will cease on December 31<sup>st</sup> 2009:

- PalmOS 4.1 and later devices.
- Windows Mobile 2003 Pocket PC
- Windows Mobile 2003 Smartphone
- Symbian Series 80 (Nokia Communicator)

## INSTALLATION SCENARIOS

The recommended installation scenario is to install all of the standard mSuite components on a single Windows 2003 server that has a Domino Server already installed. The mSuite software will also need access to a Microsoft SQL server where it will create its configuration database (the repository). SQL Server Express will be adequate in most cases – particularly for evaluations & pilots.

The SQL requirements, Domino requirements and Windows 2003 requirements are detailed in the section “Installation Environment”.

### Proxy Configuration

mSuite will usually use a Proxy Component. The 3 proxy configurations are:

1. Internet Proxy (CommonTime Switching Center or CSC)
2. DMZ Proxy
3. Local Proxy

You need to decide which of these best meets your infrastructure requirements.

#### Internet Proxy - CommonTime Switching Center (CSC)

In this configuration, you do not install a proxy component. Instead the software is configured to use the CommonTime Switching Center as an Internet Proxy.

#### *CommonTime Switching Center (CSC)*

This is a remote Internet Proxy shared by many of our customers. It is implemented in a highly resilient multi-machine, multi-datacenter configuration that is fully redundant. Data centers are currently located in the US and the UK and the system will continue to operate even if a whole data centre and half of the equipment in the second center fails.

The CSC operates as a switch, routing connecting mobile devices to the appropriate back-end system. The encryption tunnel from the device to its server is maintained through the switch. There is no data decryption and no ‘store and forward’. Clients have a completely secure conversation with their respective servers in an AES 256 bit encrypted VPN tunnel.

#### *Firewall Requirements*

**Easiest Implementation** - This implementation does not require any inbound ports through the outer firewall. The only requirement is that the mSuite server can make an outbound connection to the CSC.

#### *Load Balancing and Failover*

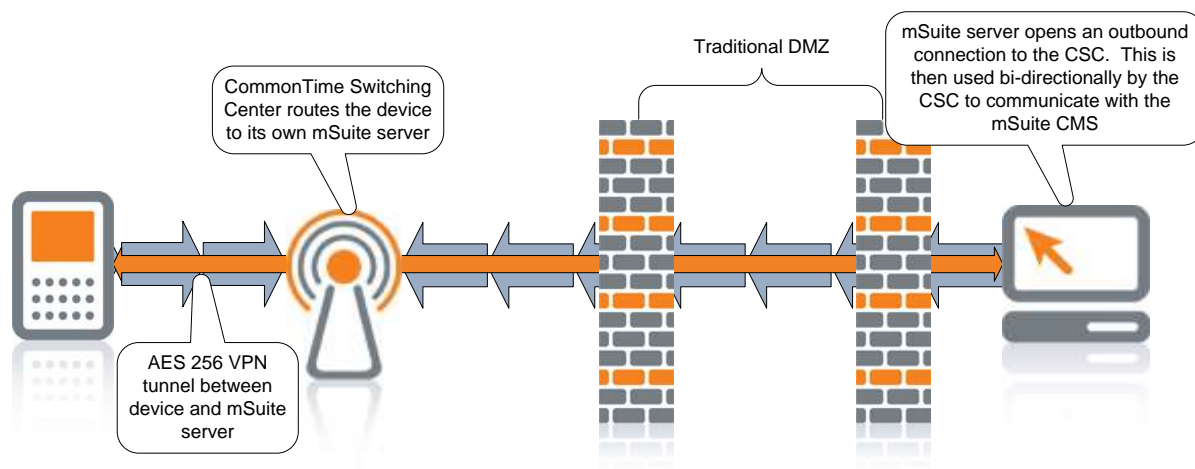
**Easiest Load Balancing and Failover** – If you implement your mSuite installation using a resilient SQL configuration database, you can take advantage of the Load Balancing and Failover capabilities of the CSC to provide a fully redundant solution to your users.

Just implement a second mSuite server that shares the SQL configuration database and uses the same license key.

The CSC will automatically distribute incoming client connection between the servers based on workload. It will also redirect traffic should one of the servers become unavailable. The

implementation can be scaled and made even more resilient by just adding additional mSuite servers that share the database and the license key.

### *Internet Proxy - Illustration*



### **DMZ Proxy**

This will be used where you want a device connection to be able to traverse a standard DMZ maintaining the VPN tunnel through the DMZ to the mSuite server located in the secure zone.

In this configuration a CommonTime proxy is installed on a Windows 2003 server class machine located in the DMZ. Its purpose is to accept incoming connections from device clients and connect them to the mSuite Server.

### *Firewall Requirements*

The DMZ proxy configuration require 1 TCP port (the port is configurable but defaults to 605) to accept inbound connections through the outer firewall.

### *Benefits*

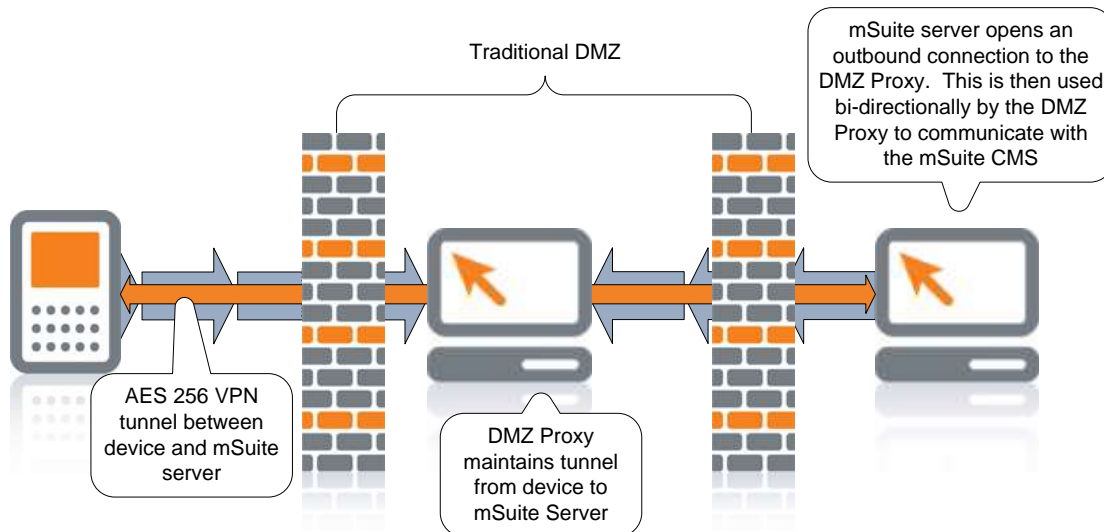
All equipment in the solution is hosted on the customer's premises.

### *Load balancing and Failover*

This requires multiple proxy/mSuite server installations.

This also requires either Round Robin DNS support for connecting to the proxies or hardware or software load balancing in front of the proxies.

### **DMZ proxy - Illustration**



### **Local Proxy - Behind a NAT firewall**

This is typically used in smaller installations where there is a single firewall that provides NAT.

#### **Firewall Requirements**

The Local Proxy configuration requires 1 TCP port (the port is configurable but defaults to 605) to accept inbound connections. This port needs to be published by the firewall.

#### **Benefits**

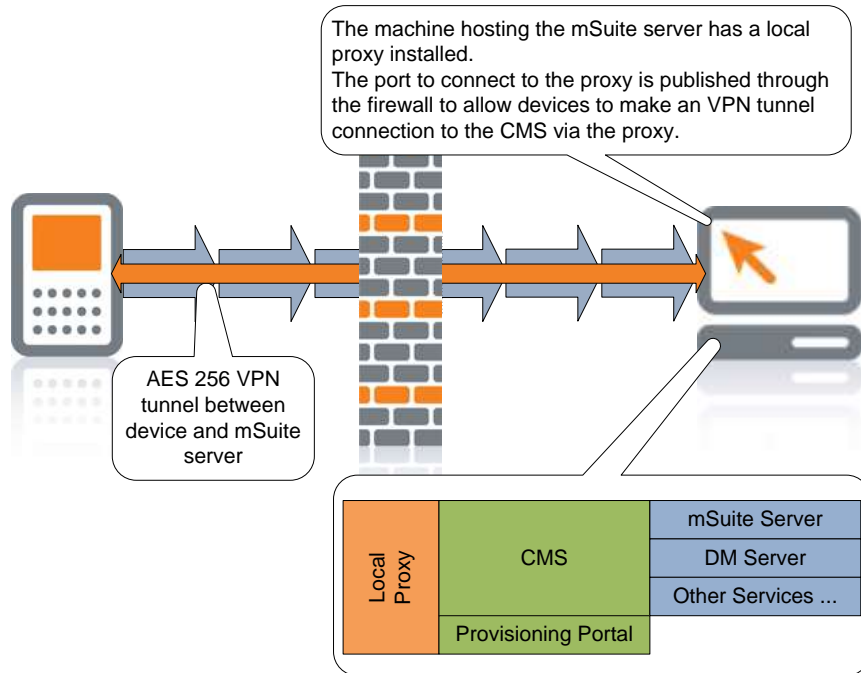
By using a Local Proxy, the provisioning portal and CMS traffic are multiplexed onto a single port. This simplifies the firewall requirements.

#### **Load Balancing and Failover**

This requires multiple proxy/mSuite server installations.

This also requires either Round Robin DNS support for connecting to the proxies or hardware or software load balancing in front of the proxies.

### Illustration- Local Proxy



### Complex configurations

mSuite is very configurable and can be implemented in multi layer DMZ or distributed architectures. These advanced configurations are beyond the scope of this document.

Please contact our Pre-Sales team or our Professional Services team via our support team ([support@commontime.com](mailto:support@commontime.com)) to discuss your requirements and plan an installation configuration that meets your requirements.

## INSTALLATION ENVIRONMENT

We recommend that mSuite is installed on server grade hardware. This server is normally located in the secure zone and needs to be network addressable from any cradled clients and also from the machine running the Admin Console.

### Virtualization

mSuite is validated to function correctly with VMWare Server.

### Server Operating System

Windows Server 2003 R2 or Windows Server 2008.

### Other requirements

The server must have the .Net Version 2 Framework installed.

### Admin Console

The administration console is an MMC snap in. This is normally installed on a workstation used by the system administrator. This machine should be running Windows XP SP3. It must be capable of making a network connection to the mSuite server.

The Admin Console also operates on a Windows Server 2003 machine, and is often installed on the mSuite server.

### Lotus Domino Considerations

Versions 6.5 and later of Lotus Notes/Lotus Domino are supported (32 bit only).

### Notes/Domino Operational Modes

You can install mSuite in 2 multi-user modes of operation. These are called Workgroup and Enterprise. The recommended option is Enterprise mode.

#### *Enterprise Mode*

mSuite is installed on a machine that is running a Domino server installation. The Domino server should have Lotus Domino Messaging Server 6.5 or later installed as a Domino Messaging server or Domino Enterprise server.

This server installation must conform to the following guidelines:

- Be installed with the "Primary Domino Directory (recommended)" option.
- Be installed as a Windows service and should be configured to run as a Windows service and not as a regular application
- Can be a "partitioned server."
- Must have "Manager Access" <sup>1</sup> with "Delete Documents" privileges on every:
  1. User mail file
  2. Personal address book replica
  3. Personal journal replica
  4. mForms application database

<sup>1</sup> You can run with read/write access with "Delete Documents" privileges but this can create problems with Unread Marks on earlier versions of Lotus Notes.

- Usually the "LocalDomainServers" group has the required rights. You may not need to alter the Access Control List as long as this Domino server is a member of the LocalDomainServers group.
- If the server is not a member of LocalDomainServers group, the server will require Manager access with the following rights to all of the databases mentioned above:
  1. Delete Documents
  2. Replicate or Copy documents
- mSuite uses the Lotus Domino server ID to access Domino mail databases and other databases on other servers in your Domino domain(s). Each user is restricted to their own Access rights. No one can gain Access privileges through the mSuite server that they wouldn't have via a Notes client.
- Normally a Domino server installation does not have a password to allow the server to restart without prompting for a password. If your server ID has a password, please contact us at [support@commontime.com](mailto:support@commontime.com) so that we can help you configure the Password Manager to provide the password when the mNotes server starts up.

### *Workgroup Mode*

Only use Workgroup Mode if for some reason your organization cannot install and configure a Domino server. Compared to Enterprise mode, it has the following disadvantages:

- Workgroup will usually require more ACL changes to databases to be made than an Enterprise installation.
- The Domino server, unlike the Notes Client, is intended to run 24x7 as a machine service.

mSuite is installed on a machine that has a Notes client version 6.5 or later installed. The client installation can be a standard default Notes client installation and needs to meet the following requirements:

- The Notes client installation needs to have a Notes ID file that has "Manager" access with "Delete Documents" to all of the databases that are going to be accessed via the mSuite server:
  1. User mail files
  2. Personal address book replicas
  3. Personal journal replicas
  4. mForms application databases

<sup>1</sup> You can run with read/write access with "Delete Documents" privileges but this can create problems with Unread Marks on earlier versions of Lotus Notes.

- Must be configured to use a Local Network location. This location must specify a valid Home/Mail server.
- Must have a connection record configured to access the Home Mail server,

### **Multiple Domino Domains**

If your Domino infrastructure has multiple domains:

- The Domino server on must have "Directory Assistance" enabled for every Domino domain in your organization.
- Must have connection documents to the Domino servers in the other Domino domains. The Domino server should be a member of "LocalDomainServers" group in every Domino domain.
- The necessary Cross certification, either per-server or per-organization level, must be established between the Domino server on which you are installing mSuite and the mail and directory servers in other domains to which this Domino server connects.

### **SQL Server**

The mSuite installer will create a database in a SQL server instance during the installation process. This must be SQL Server 2005 SP3 or SQL Server 2008 (or SQL Server 2005 Express SP2 or SQL Server 2008 Express).

### **Considerations**

- The SQL server instance must be network addressable from the machine where mSuite is to be installed.
- mSuite is dependent on the availability of the SQL server. If SQL server fails, so will the mSuite installation.
- If you do not have SQL Server then you can install SQL Server Express on the machine that will host the mSuite installation. Download this from the Microsoft Web site. Remember to also download and install the latest service pack. SQL Server Express can be installed using the default options.

### **Resilience**

- Resilience - If you are planning a resilient installation then you should create the database on a SQL Server configuration with Database Mirroring or Failover Clustering.

### **Machine Sizing**

#### **Guidelines 250 users**

The machine that mSuite5 is installed on should have the following minimum configuration to support 250 users:

- Server class hardware with XEON or equivalent multi core processor technology,
- 2 GB RAM
- 10GB hard drive space free for the mSuite servers, database and log files. The destination of the log files is configurable.
- The RAM and disk space requirements are adequate for 250 users. For each additional user, add 1MB memory and 5MB free disk space.
- If you are using virtual machine technology the free drive space and RAM requirements also apply.
- Required minimum LAN speed for the servers: 100Mbps

## Guidelines 3000 users

Do not put more than 3000 users on a single mSuite server.

The machine that mSuite5 is installed on should have the following minimum configuration to support 3000 users:

- Server class hardware with 4 XEON or equivalent multi core processors
- 16 GB RAM
- 50GB hard drive space free for the mSuite servers, database and log files. . The destination of the log files is configurable.
- If you are using virtual machine technology, the free drive space and RAM requirements also apply.
- Required minimum LAN speed for the servers: 100Mbps

## NOTES:

The mSuite server connection to other Domino servers in your Domino domain must maintain a sustained minimum rate of at least 100Mbps. Slower network connections will increase latency and impact the performance of the system.

Remember: all wireless users are making a connection from the Internet. The machine's connection to the Internet must have the necessary bandwidth to support the peak concurrency amongst your user community.

## Detailed Sizing

Please discuss this with your CommonTime support representative.

## PERSONAL ADDRESS BOOKS AND JOURNALS

A Lotus Notes client installation has a Personal Address book and, where configured, a Personal Journal. These are normally databases that exist only in the user's local Notes installation however Domino has 3 methods of making them available to server based applications like mSuite.

- IBM Lotus Domino Web Access (DWA) (formerly known as iNotes) allows users of IBM Lotus Domino to access their Domino-based mail, calendar, schedule, to-do list, contacts, and notebook (Notes Journal) from any computer, at any location, as long as they have an Internet connection. It makes copies of the user's Contact and Personal Journal information in the user's mail database where it is accessible to mSuite.
- Roaming Profiles - Roaming user privileges allow Notes users to access their customized settings and personal information from any computer that has Lotus Notes 6 or later installed. Data and settings for these users, known as roaming users, replicates between the user's computer(s) and a roaming user server or roaming replica server. (The roaming user server is usually, but not always, the user's home server. Roaming replica servers are servers that contain replicas of the user's roaming databases.)
- If your organization is not using either of these methods then it is also possible to make replicas of each user's Personal Address Book and Personal Journal database onto a Domino server so that they are accessible to mSuite clients in normal operation. If you choose this option, create the replicas in a Domino server directory such as JNL for the Journals and PAB for the Personal Address Books. Name each replica with the same name as the user's mail database, so for example if you have a user whose mail database is mail\jsmith.nsf then his Personal Address Book replica will be located in PAB\jsmith.nsf and his Personal Journal in JNL\jsmith.nsf.

If you already have replicas named for some other mobility solution, mSuite will be able to use these replicas.

You must decide which of these methods best suits your organization. The mSuite installer will default to the "iNotes" (DWA) method.

## PRE-INSTALLATION CHECKLIST

- Do you have a license key for your installation

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- Is your mSuite5 server machine ready
  - Dedicated machine available with suitable hardware specification?
  - Windows Server 2003 R2 installed?
  - .Net 2.0 or later Framework installed?
  - Domino server (or Notes client) 6.5 or later installed and configured?

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Do you know the address of your Sametime server (host and port) if you want Sametime support?

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Do you have access to the SQL Server that will host the configuration database or have you installed SQL Server Express on this machine?

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Have you chosen the proxy installation scenario you are going to use?  
Internet Proxy (CSC), DMZ Proxy, Local Proxy?

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Has your firewall been configured to meet the firewall requirements of the chosen proxy installation scenario?

Are you using a DMZ proxy? Inbound TCP Port opened through outer firewall? Port being used .....

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Are you using a Local proxy? Inbound TCP Port published? Port being used .....

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Have you chosen a method of supporting Personal Address books and Personal Journals? iNotes, Roaming, or Server replica?

iNotes? Do all of the user's mail files have an iNotes or Domino Web Access template?

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Roaming? Are all users configured with Roaming profiles?

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Server Replica? Have all of the server replicas been made?  
What is the location of the Personal Address book replicas .....

What is the location of the Personal Journal replicas .....

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Have you chosen a primary authentication method?  
Domino Internet, LDAP, RADIUS, mCenter (not recommended)?

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Have you chosen a secondary authentication method?  
None, Notes ID (required for mail encryption/decryption), Domino Internet

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