

# Binary Tree Integration for Notes | BTCal FreeBusy 20.12

## Requirements

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## Legend

 **CAUTION:** A CAUTION icon indicates potential damage to hardware or loss of data if instructions are not followed.

 **IMPORTANT, NOTE, TIP, MOBILE, or VIDEO:** An information icon indicates supporting information.

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# Section 1: Introduction

Binary Tree Integration for Notes | BTCal and FreeBusy features a new name and logo, but is the same, trusted product previously known as CMT for Coexistence.

This document details the requirements for implementing Integration for Notes BTCal and FreeBusy between Domino and Exchange on premise or Office 365 (also known as Microsoft 365). These include the requirements for each of the two servers needed to run all the components of Integration for Notes BTCal and FreeBusy, as well as any environmental requirements.

Please refer to the Integration for Notes BTCal User Guide and the Integration for Notes FreeBusy User Guide for details on implementing this solution.

## Section 2: Server Hardware Requirements

Recommended:

- Domino Coexistence Server
  - 4 Cores
  - 8 GB of RAM
  - 100 GB of storage
  - Add 50 GB of storage if deploying ZApp
- Windows Coexistence Server
  - 2 Cores
  - 8 GB of RAM
  - 100 GB of storage

Minimum:

- Domino Coexistence Server
  - 2 Cores
  - 4 GB of RAM
  - 100 GB of storage
  - Add 25 GB of storage if deploying ZApp
- Windows Coexistence Server
  - 2 Cores
  - 4 GB of RAM
  - 100 GB of storage

## Section 3: Prerequisites

The following is a list of supported and unsupported environments:

	Supported	Not Supported
<b>Domino Coexistence Server</b>	<ul style="list-style-type: none"> <li>Windows Server 2012 R2, Windows Server 2016 and Windows Server 2019 (US English) *Language packs are supported</li> <li>Domino 8.5.3, 9.0.1, 10, or 11 (English) *Language packs are supported *Domino 8.5.x - End of Service/Support (EOS) September 30, 2018</li> </ul>	Domino versions prior to 8.5.3; Domino 9.0.1 Fix Pack 9 are not supported
<b>Windows Coexistence Server</b>	Windows Server 2012 R2, Windows Server 2016, and Windows Server 2019 (US English) *Language packs are supported	All other versions of Windows Server
<b>Exchange Environment</b>	Exchange 2013, 2016, 2019 or Office 365	Exchange 2010 or previous
<b>Domino Environment</b>	Domino 8.5.3 to 11	Any versions prior to 8.5.3



Clients are responsible for checking with Microsoft or HCL to make sure the version of Domino they are deploying is supported on the version of Windows they are deploying it on.

As an example, Binary Tree supports Domino 8.5.3 and Windows 2016, but it is not possible to deploy Domino 8.5.3 on a Windows 2016 server - you would need to deploy Domino 9.0.1 on a Windows 2016 server. Binary Tree documentation does not explain which versions work together.

Clients are responsible for validating Domino fix packs to ensure correct functioning of Domino mail and Free/Busy processing. Details for Domino Fix Packs and updates for Domino issues that these Fix Packs address should be verified with HCL support.

### 3.1 Domino Coexistence Server

The Domino Coexistence server is responsible for Directory Synchronization, Free/Busy Look-up, and Messaging, Calendaring and Application Remediation.

- Windows Server 2012 R2 Windows Server 2016 and Windows Server 2019 (US English) (Language packs are supported)
- Domino 8.5.3, 9.0.1, 10 or 11 English (Language packs are supported)



Domino 8.5.x will reach End of Service/Support (EOS) on September 30, 2018. If there is an issue related to Domino or if a fix is required related to an issue, it may be necessary to upgrade to an officially supported version of Domino (9.x).

Domino 9.0.1 does require Fix Pack 8 as a minimum patch level. Versions prior to this

have known issues with the Domino mail router task.

- .NET 4.8 and Microsoft Visual C++ 2015 Update 3 dependencies (of which the necessary C++ runtimes are in the installation package)
- The Domino Coexistence server should be dedicated to Domino and the Integration for Notes BTCal and BTFreeBusy add-in tasks only
- The Domino Coexistence server should be a separate server from the Domino Mail servers, and no user mail files should reside on the Domino Coexistence server

## 3.2 Windows Coexistence Server

- Windows Server 2012 R2, Windows Server 2016 and Windows Server 2019 (US English) (Language packs are supported) running as a standalone IIS 7.0 server with the Web Server (IIS) Role installed

The Role Services that are needed can be installed by selecting the role using the following commands

Windows Server 2012 R2 Command:

```
Install-WindowsFeature AS-NET-Framework, RSAT-ADDS, Web-Server, Web-Basic-Auth, Web-Asp-Net45, Web-Windows-Auth, Web-Metabase, Web-Net-Ext45, WAS-Process-Model, Web-ISAPI-Ext, Web-Digest-Auth, Web-Dyn-Compression, NET-HTTP-Activation, RPC-Over-HTTP-Proxy -Restart
```

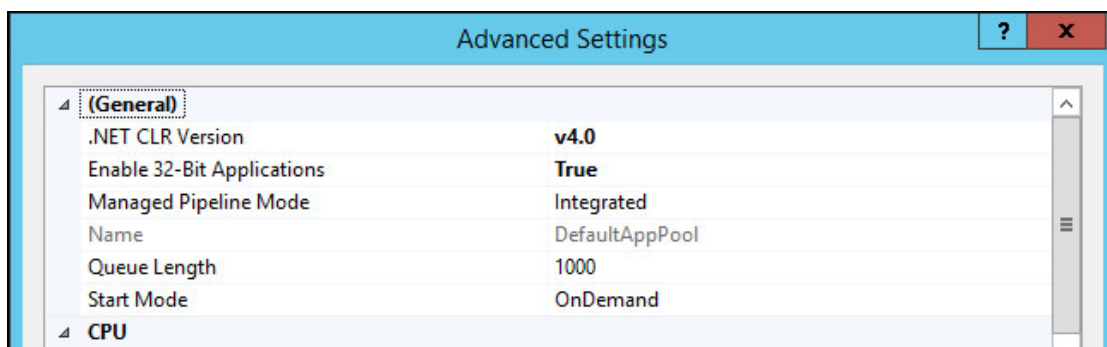
Windows Server 2016 and Windows Server 2019 Command:

```
Install-WindowsFeature RSAT-ADDS, Web-Server, Web-Basic-Auth, Web-Asp-Net45, Web-Windows-Auth, Web-Metabase, Web-Net-Ext45, Web-Lgcy-Mgmt-Console, WAS-Process-Model, Web-ISAPI-Ext, Web-Digest-Auth, Web-Dyn-Compression, NET-HTTP-Activation, RPC-Over-HTTP-Proxy -Restart
```

You can run these commands from the PowerShell window, which is a part of the Windows Server.

- Windows Installer 4.5 or higher
- .NET 4.8
- Once the install completes, each of the three Binary Tree IIS applications (Autodiscover, AvailabilityService, and BTRouter) needs to be configured to use a .Net 4.0 application pool.

This can be set via the Advanced Settings for the DefaultAppPool in IIS; change Application Pool to ASP.NET v4.0. For further clarification, below is a screen shot of the setting:



- SSL Certificate with the hostname of the server, fully qualified domain name of the server, and the Autodiscover host name(s) representing the Domino environment (i.e. autodiscover.domino.contoso.com), as its subject or subject alternative name (SAN) must be installed
- PKI Domain sign certificate can be used for on-premises implementation of Office 365. Office 365

implementation requires a third-party certificate

- IIS PowerShell Snap-In (x64) (already installed on the server when using Windows Server 2012 R2 or higher)
- The Windows Coexistence Server cannot have Exchange installed on it
- Free/Busy will only be supported on a standalone Windows Coexistence Server

### 3.3 SQL Coexistence Server (for Directory Sync Pro Implementations)

The requirements for Directory Sync Pro must be met if Directory Sync Pro components are to be installed on the Integration for Notes BTCal infrastructure. Refer to the Directory Sync Pro Requirements document for more information.

### 3.4 General

- Integration for Notes BTCal requires a license supplied by Quest.
- All Domino mail files should use a standard Notes template, currently supported by HCL; modifications to the standard mail templates can result in unexpected behavior in messaging, calendaring or application remediation, and should be validated before deploying Integration for Notes BTCal in production environments
- All Domino Servers need to be at release level currently supported by HCL:
  - Users on Domino Mail Server prior to release level 6.0.3 will experience issues receiving iCalendar (calendaring) data from Microsoft Exchange
- All Domino entries to be synchronized into Exchange must have valid and unique SMTP addresses in the Domino Directory; this includes people, groups, mail-in databases, and rooms and resources
- At least one Microsoft Exchange Server version 2013 or higher with Send and Receive Connectors configured for communication with Domino
- All Microsoft Outlook clients are version 2013 or higher; Outlook 2003 clients will **NOT** be able to access Free/Busy information for Domino users and Outlook 2007 is no longer supported
- At least one end-user workstation with Lotus Notes Client (version 8.x or higher), and one end-user workstation with Microsoft Outlook Client (version 2013 or higher) should be available to represent end-users; these workstations may run on physical or virtual machines
- All components of Integration for Notes BTCal are fully functional on physical as well as virtual machines. When setting up Proof of Concept or Pilot coexistence environments, Binary Tree fully supports, in fact, recommends the use of virtual machines as a means of lowering the expense of such projects. However, when it comes to production coexistence environments, Binary Tree has not yet gathered sufficient information to determine whether virtual environments have the same stability and performance characteristics as physical machines. Because a majority of production coexistence environments have been and are deployed on physical machines, Binary Tree advises potential customers of these facts, but defers to them to make the final decision. Binary Tree will provide product support in both physical and virtual environments; however, if either stability or performance issues are found in a virtual environment, Binary Tree may recommend switching to a physical one as a means of issue correction.
- The Microsoft Exchange and Domino Servers must be connected via a LAN (10 Mbps or higher) connection; a high-speed WAN (5 Mbps or higher) connection may be acceptable but is not recommended. Where possible, it is recommended to have the Exchange and Domino servers as well as the Binary Tree migration workstations on the same physical network.
- Characters with diacritics (é, ü, etc.) are supported, but NOTES.INI must be in UTF-8 format without a BOM. Notepad++ is the recommended tool for saving in this format; UTF-8 format that includes the BOM, or byte order mark cannot be read.
- A SAN Certificate for the FreeBusy Name space if secure connections are to be enabled.



- TLS 1.2 is required to ensure SSL security

### 3.5 Exchange Access Requirements

To deploy Integration for Notes Free/Busy on the Windows Coexistence Server, an Active Directory account with Server Administration rights must be able to log on to the server interactively. The account must be able to run programs with Administration-level access on the target Exchange Server and specifically be able to open the Exchange Management Shell (PowerShell).

The BT FreeBusy application will require an account to access Exchange or Office 365 Scheduling data.

#### Exchange Configuration

- Administrative rights to Exchange or Office 365

#### Exchange Access

- Exchange or Office 365 access account (e.g. BtFreeBusy@yourSMTPdomain.com or BtFreeBusy@tenant.onmicrosoft.com)

#### Windows Coexistence Server

- Member of local administrators group

### 3.6 Microsoft Office 365 Modern Authentication

For Integration for Notes FreeBusy access to Office 365 with Modern Authentication an Azure AD App Registration is necessary.

Please refer to the Integration for Notes FreeBusy User Guide for this configuration.

### 3.7 Domino Access Requirements

For program installation and restarts if necessary, an AD account with remote logon and server administration rights to Windows Servers on which the Domino Servers reside.

For the modification of the routing scheme in Domino, a Lotus Notes ID with a minimum of Editor rights to the Domino Directory is required. In addition, the ID must at a minimum have the following roles assigned:

- NetCreator
- NetModifier
- ServerCreator
- ServerModifier

A Notes ID with greater administration rights is preferred for modification of the Domino routing scheme

- To provide Zero-Touch Application Remediation (ZApp) access to Domino Administrators to diagnose ZApp issues, a multipurpose group needs to be created in Domino. This group should be called BTZAppREADERS. This group should contain LOCALDOMAINADMINS (or equivalent group name) and LOCALDOMAINSERVERS (for scalability and failover).

A Notes Account for Free/Busy access (e.g. BtFreeBusy/DominoOrgName)

## Appendix A: Supported Environments

This section outlines the supported environments.

A = Supported

B = No known issues, not tested

C = Not Supported

<b>Domino Server Operating System Versions</b>	<b>20.12</b>	<b>20.11</b>	<b>Notes</b>
Windows Server 2008 R2	C	B	
Windows Server 2012	C	B	
Windows Server 2012 R2	B	A	
Windows Server 2016	A	A	
Windows Server 2019	A	A	

<b>Domino Server Installation Versions</b>	<b>20.12</b>	<b>20.11</b>	<b>Notes</b>
Domino/Notes 8.x	B	B	
Domino/Notes 9.x	A	A	Release 9.0.1 Fix Pack 9 not supported, Fix Pack 10 or higher recommended
Domino/Notes 10.x	A	A	
Domino/Notes 11.x	A	A	

<b>IIS Operating System Versions</b>	<b>20.12</b>	<b>20.11</b>	<b>Notes</b>
Windows Server 2008 R2	C	B	
Windows Server 2012	C	B	
Windows Server 2012 R2	B	A	
Windows Server 2016	A	A	
Windows Server 2019	A	A	

<b>Exchange Versions (Target)</b>	<b>20.12</b>	<b>20.11</b>	<b>Notes</b>
Exchange 2010	C	C	
Exchange 2013	B	B	
Exchange 2016	A	A	
Exchange 2019	A	A	

Microsoft 365 (Office 365)	A	A	
Microsoft 365 GCC High	A	A	Requires Modern Authentication Configuration
<hr/>			
<b>Messaging Environment (Source)</b>	<b>20.12</b>	<b>20.11</b>	<b>Notes</b>
Domino/Notes 6.0.x	C	C	
Domino/Notes 6.5.x	B	B	
Domino/Notes 7.x	B	B	
Domino/Notes 8.x	B	A	
Domino/Notes 9.x	A	A	Release 9.0.1 Fix Pack 9 not supported, Fix Pack 10 or higher recommended
Domino/Notes 10.x	A	A	
Domino/Notes 11.x	A	A	
<hr/>			
<b>Character Support</b>	<b>20.12</b>	<b>20.11</b>	<b>Notes</b>
Double Byte Character Set Support	B	B	

Note: Versions not listed are considered as unsupported