



# Configure Microsoft Exchange 2013 Server Role Requirements Calculator

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## Configure the Microsoft Exchange 2013 Server Role Requirements Calculator

### Overview

Download the Microsoft Exchange Workload modeling spreadsheet from [Microsoft Exchange 2013 Server Role Requirements Calculator](#). Read the Microsoft Exchange Calculator Readme file for comprehensive guidance on using the calculator.

Cisco HyperFlex Sizer provides the BOM for the primary datacenter only. This section provides the parameters that should be configured on the **Input Tab** of the Microsoft Exchange Calculator. Customers who plan to deploy in multiple datacenters and stretch the Database Availability Group (DAG) must complete the input for the secondary datacenter under **Site Resilience Configuration**. Completing this input ensures that the primary datacenter Compute and Storage requirements are properly sized to handle all users in the event that the secondary datacenter is down.

### Exchange Environment Configuration

Configuration Settings	Value
Exchange Server Version	2016
Global Catalog Server Architecture	64-bit
Server Role Virtualization	Yes
High Availability Deployment	Yes <i>If a DAG is planned, ensure that <b>High Availability Deployment</b> is set to <b>Yes</b> and that the proper number of database copy instances are selected for each site.</i>

**Tier-1 [2,3,4] User Mailbox Configuration**

Ensure that the user mailbox tiers are set to the appropriate initial and maximum mailbox sizes. With HyperFlex, adding additional persistent tier disks or adding converged nodes to the cluster expands the usable storage on the cluster automatically. Adding additional databases, expanding the HyperFlex datastore, or expanding the Windows LUN where an online database is located, is instant and can occur without any downtime.

<b>Configuration Settings</b>	<b>Value</b>
<b>User Mailbox Configuration Settings</b>	
<b>Number of Days in a Work Week</b> field	5 days
<b>Tier-1 User Mailbox Configuration</b> field	
<b>Total Number of Tier-1 User Mailboxes / Environment</b> field	10000 Tier-1 User Mailboxes/Environment
<b>Projected Mailbox Number Growth Percentage</b> field	0%
<b>Total Send/Receive Capability / Mailbox / Day</b> field	200 messages
<b>Average Message Size (KB)</b> field	75 KB
<b>Initial Mailbox Size (MB)</b> field	2048 MB
<b>Mailbox Size Limit (MB)</b> field	10240 MB

**Backup Configuration**

<b>Configuration Settings</b>	<b>Value</b>
<b>Backup Methodology</b> field	<p>Backup Methodology can have a sizing impact. The recommended methodology is to utilize the Cisco HyperFlex native snapshot, along with a third-party backup application that will keep a copy of the backup off the cluster, typically in a backup repository.</p> <p>The following backup methodology options are available:</p> <ul style="list-style-type: none"> <li>• (Recommended) Hardware VSS Backup/Restore—Requires the smallest amount of capacity to restore LUNs.</li> <li>• Software VSS Backup/Restore—Requires a larger capacity to restore LUNs.</li> <li>• Exchange Native Data Protection—Requires a larger capacity to restore LUNs.</li> <li>• VMware redo-log snapshots—Large restore LUNs must be provisioned on each Exchange Server to provide enough space to pull a copy of the backup and then enable roll forward recovery.</li> <li>• Exchange Native Data Protection with lagged database copies—Large restore LUNs must be provisioned on each Exchange Server to provide enough space to pull a copy of the backup and then enable roll forward recovery.</li> </ul>
<b>Backup Frequency</b> field	Weekly Full or Daily Incremental
<b>Backup/Truncation Failure Tolerance</b> field	3
<b>Network Failure Tolerance (Days)</b> field	0 days

**Storage Options**

<b>Configuration Settings</b>	<b>Value</b>
Automatically Calculate Number of Exchange Database Volumes Required	<p>Yes</p> <p>If set to <i>No</i>, carefully size and ensure that enough Exchange Data Volumes are selected so that the databases fit on the server. If they do not fit, you will be unable to upload the spreadsheet into the Cisco HyperFlex Sizer, and a warning will appear on cell G216 on the Role Requirements tab.</p>
<b>Number of AutoReseed Volumes per Server</b>	1 AutoReseed Volumes

### Server Configuration

The Microsoft Exchange Calculator is based on a particular baseline CPU. To properly calculate the megacycle to actual CPU consumption, enter both the number of vCPUs for the Microsoft Exchange Server VM in *Processor Cores / Server*, and the *SPECint2006 Rate Value* for the Cisco HyperFlex Server. For example values, refer to [SPEC CINT2006 Result](#).

Server Configuration	Processor Cores / Server	SPECint2006 Rate Value
Primary Datacenter Mailbox Servers	16	2330
Secondary Datacenter Mailbox Servers	16	2330

## Troubleshooting

Error Message	Recommended Solution
One or more workloads have exceeded the maximum CPU limits.	Toggle to <i>HX+Compute</i> , or include <i>All-Flash</i> options if not already set. Split the Workload into smaller Workloads.
No SmartPlay hyperconverged nodes have been chosen, due to filters. Please change the filters.	For <i>All-Flash</i> Option, select <i>SmartPlay Hyperconverged Nodes</i> from the <i>Customize</i> option.