Configure a Secondary Server

Setup Guide

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System Requirements

- Solutions releases 2024.x and beyond

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Related Documentation

- Crunchtime Kitchen Install Guide: https://links.crunchtime.com/CHIG-InstallCrunchtimeKitchen
- Crunchtime Host Install Guide: https://links.crunchtime.com/CHIG-InstallCrunchtimeHostforWindows
- ControlPoint Install Guide: https://links.crunchtime.com/CPIG-ControlPointInstallServerandClient
- Hub.Agent Install Guide: https://links.crunchtime.com/HAIG-InstallHubAgent
- Licensing and Deployment Reference Guide: https://links.crunchtime.com/LDRG-UsingControlCenter.Portal

SETUP GUIDE

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Getting Started

Introduction

Crunchtime Kitchen software supports continuous high availability so restaurant kitchens can operate with minimal disruption. Crunchtime Kitchen Server can run redundant Kitchen instances, allowing a backup instance to take over if the primary fails. This helps increase availability and reduce data-loss risk during failover.

Server Requirements

Component	Requirement
Operating System	Windows 10 Anniversary Version 1607 or later Windows Server 2016 Windows Server 2019 Windows Server 2022 Windows 11
Processor	2.8 GHz Pentium 4 or higher
Physical Memory (RAM)	8 GB
Storage	2 GB for Server Installation 20 GB for Speed of Service Data + Logs
Prerequisite Software	Microsoft .NET version 4.8 or later **Note**: Installer will automatically install if not detected for use with Bin Editor. Kitchen Server does not require .NET.
Networking	10/100 base T Ethernet Connection Access to a POS or other system with QSRintegration Support

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Frequently Used Terms

Crunchtime Kitchen uses a Primary/Secondary redundancy setup, so a backup server is ready to become active when needed. The following frequently used terms will be used to describe setup, use and troubleshooting the system with two servers.

Terminology	Definition
Primary	Kitchen server instance that is actively running under normal operating conditions. It is registered with Enterprise and designated as the Primary server on the Crunchtime Network utility.
Secondary	Kitchen server instance that is a fallback in the event of a catastrophic failure of the primary instance. The secondary instance is designated as such in the Crunchtime Network utility and when registered to Enterprise.
Active	The Kitchen server instance that is currently in charge of data and order flow. Ideally this is the primary but it may also be the secondary if there has been a failure on the primary.
Backup	The Kitchen server instance that is passively receiving all kitchen data from the active instance so that Kitchen can recover if the active instance fails. In normal conditions this will be the secondary server.
Persistence	A current snapshot of everything in the Kitchen at any given moment.

Both the Primary and Secondary Kitchen instances keep local copies of persistence data, a current snapshot of Kitchen activity.

- The active instance, usually the Primary, updates its local persistence data whenever Kitchen activity changes, such as new orders, item bumps, or a course entering Rush status.
- The updated data is synced to the backup instance, the Secondary.
- A small millisecond-level lag is expected because the active instance writes to its local file before syncing to the backup.

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Whitelisting and Network Configuration

The platform requires an Enterprise Connection, with all connections secured via HTTPS/SSL SHA-256 with RSA Encryption.

Comprehensive Whitelisting

To ensure reliable connectivity, the comprehensive option is to whitelist the following wildcard domains:

- *.qsr.cloud
- *.dinetime.com
- *.amazontrust.com
- *.amazonaws.com
- *.shareFile.com
- o.ss2.us
- s.ss2.us
- *api.licensespring.com

Note: It is highly recommended to use the wildcard (*) version as AWS may change specific URLs at any time, but they will stay within the recommended wording.

Network Requirements

Protocol	Port(s)	Description / Example URLs
TCP	443	General secure connections (e.g., to https://host-api.dinetime.com and https://kitchen-api.dinetime.com
TCP	32768, 32880, 32897, 32890, 33024	Various API and service ports
UDP	33536, 33537, 28672, 28673	Various API, discovery and ingestion services

Network Adapter Best Practices

To ensure constant communication, follow these best practices on each server:

- Disable Unused Adapters: Disable all unused network adapters, including WAN miniports in the Windows Device manager.
- Set Interface Metric: Set the metric to 1 on the network adapter actively used by Kitchen, Host and or ControlPoint. This is done by selecting the Internet Protocol Version 4 (TCP/IPV4) | properties | Advanced Settings.
- Deselect the Automatic Metric and enter 1 in the interface box.

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Failover and Data Integrity

The system is designed to minimize potential data loss as much as possible, which is especially important with third party off premises ordering solutions and streaming data metrics.

- Failover Trigger: If the Secondary loses its connection to the Primary, it gives the Primary 10 seconds to recover.
- If the Primary is still not communicating after 10 seconds, the Secondary assumes the Primary is down and becomes the new active instance.
- Data Loss Window: There is a chance for lost data in that 10-second failover period. Orders sent during that time may be dropped, depending on the source and settings.
- Persistence Check: If there is data loss or a significant data difference after the Secondary becomes active, it means something caused the persistence data on the two servers to get out of sync.

Switch back to Primary

The secondary stays in charge, even if the primary comes back online. This helps prevent confusion while the kitchen is running.

- Waits Its Turn: If the primary comes back while the secondary is active, the primary does not take over right away. It becomes the backup because the secondary has the newest saved Kitchen data.
- Persistence Sync: After the primary becomes the backup, the secondary sends its current saved data to the primary. The secondary keeps sending Kitchen updates so both servers stay the same.
- Gives Control Back: The secondary gives control back to the primary at the next End of Day (EOD), when the activity level changes, or if the secondary is stopped and started again. If the primary is online after EOD, it becomes the active server again.

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Configuration Requirements for Redundancy

For redundancy to function, both servers must be correctly configured on the same network with line of sight to each other.

- Installation: The Secondary Server must be installed and running the same version of Kitchen Server as the Primary Server.
- Network Configuration: The Crunchtime NetworkConfig file on both the Primary and Secondary must be edited to select the correct IP addresses for both the Primary and Secondary Kitchen Server instances.
- ControlPoint Config: The Secondary Server's IP address must be added to the ControlPoint Client under Server Settings, in the ConnectSmart Network tab.
- Enable Redundancy in Kitchen Configuration: Redundancy must be explicitly enabled on the Primary Server by selecting Enable Redundancy under System Recovery in Kitchen Builder.
- Start-up Order: The Primary Kitchen Server must be restarted and started completely before the Secondary Kitchen Server is turned on to automatically synchronize all data files and configurations.
- Secondary Kitchen Server will not attempt to retrieve a license from Enterprise or Hub.Agent even when it is acting as the active server. While the secondary or backup server is acting as the active Kitchen Server instance, licenses cannot be renewed or changed.
- If the Primary Kitchen Server instance is offline for an extended period of time, the “Kitchen Server license approaching expiration” message may display when the license is within 7 days of expiring. Kitchen Server displays this notice on idle stations, and the notice clears when an action is taken or an item is routed to the view.

Important: Redundancy must be enabled in the dataset that Kitchen Server will use, or it will not know to look for a secondary server instance in the event of a failure from the primary server.

Software and Resources

Software version releases 2026.x and later requires Hub.Agent installation during initial setup. Follow the instructions in this guide. Follow the same instructions for installation on both servers.

After installation, the agent maintains licensing through Enterprise. For future server replacements or upgrades, include Hub.Agent in the deployment package. It will automatically authenticate using the Site UID and license itself through the portal.

Install Software

Use ControlCenter to access software releases 2026.x and later. From ControlCenter, you can automatically deploy the software or download the files for manual installation on both servers.

For installation instructions, click here.

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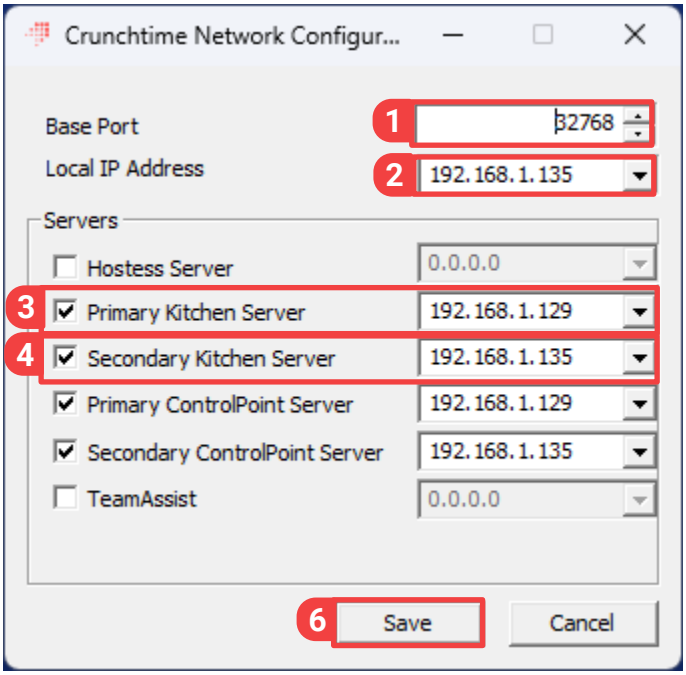
Network Configuration



Crunchtime Network Configuration on Secondary

After installation, network configuration allows the primary to see the secondary and exchange information in near real time.

After Kitchen Server is installed on the secondary machine, go to the Start Menu on the PC and open the Crunchtime Network Configuration utility.

1. Set the correct base port for this Kitchen Server instance. By default, the base port is 32768.
2. For Local IP Address, select the IP address of the current (secondary) machine.
3. Select the checkbox next to Primary Kitchen Server and type the IP address of the PC running the primary Kitchen Server instance.
4. Select the checkbox next to Secondary Kitchen Server and select the appropriate IP from the dropdown.
5. If you are using Crunchtime Host or Crunchtime ControlPoint, be sure to enter the correct IP addresses for those applications as well.
6. Click Save.

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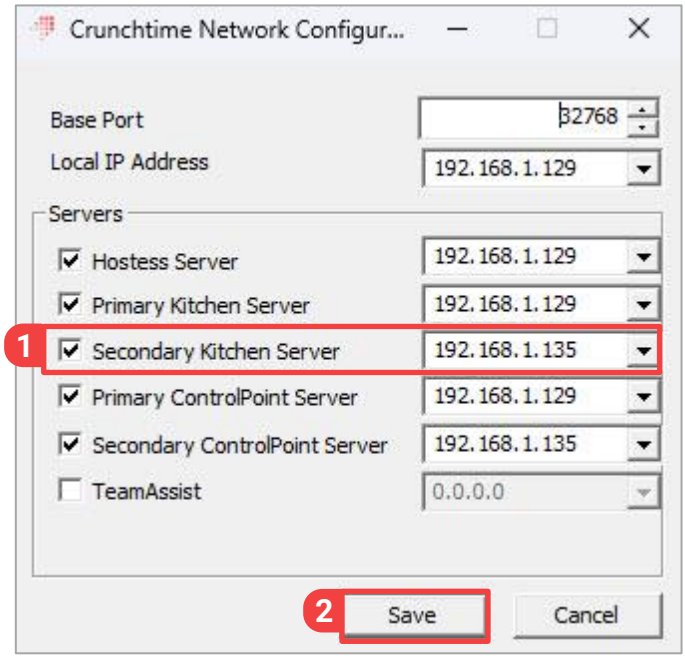
Network Configuration

Crunchtime Network Configuration on Primary

The Crunchtime Network Configuration settings will need to be updated on the primary Kitchen Server machine, to allow it to recognize the secondary instance.



On the primary PC, open the Crunchtime Network Configuration utility from the Start Menu.

1. Select the checkbox next to Secondary Kitchen Server and type the IP address of the PC running the secondary Kitchen Server instance.
    a. Verify all other information displayed by the utility is correct.
2. Click Save to save the settings and close the utility.

Tip: The Primary and Secondary Kitchen Server IP addresses should be different.

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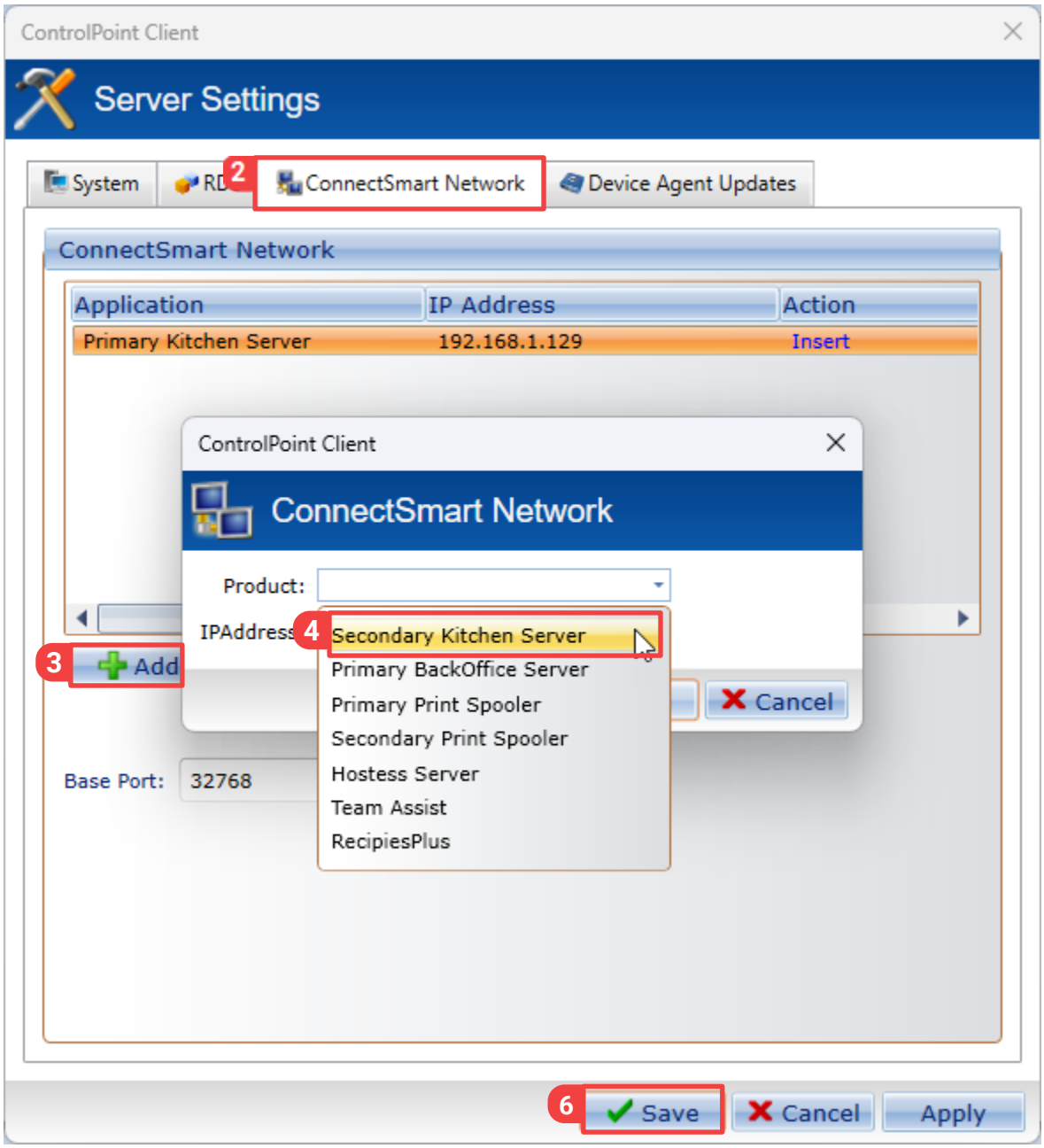
Configure ControlPoint

ControlPoint Client Settings

Secondary Kitchen Server Configuration

The secondary Kitchen Server will need to be configured in ControlPoint to allow both the primary and secondary Kitchen Servers to properly communicate with devices running DisplayClient, receipt printers, and pagers.

Open ControlPoint Client.



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Configure ControlPoint

1. Open the Server Settings.
2. Select the ConnectSmart Network tab.
3. Select Add.
4. Select Secondary Kitchen Server from the dropdown box.
5. Enter the IP address of the secondary Kitchen Server.
6. Select Save.

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Installing a Secondary Server

Step-by-Step Software Configuration

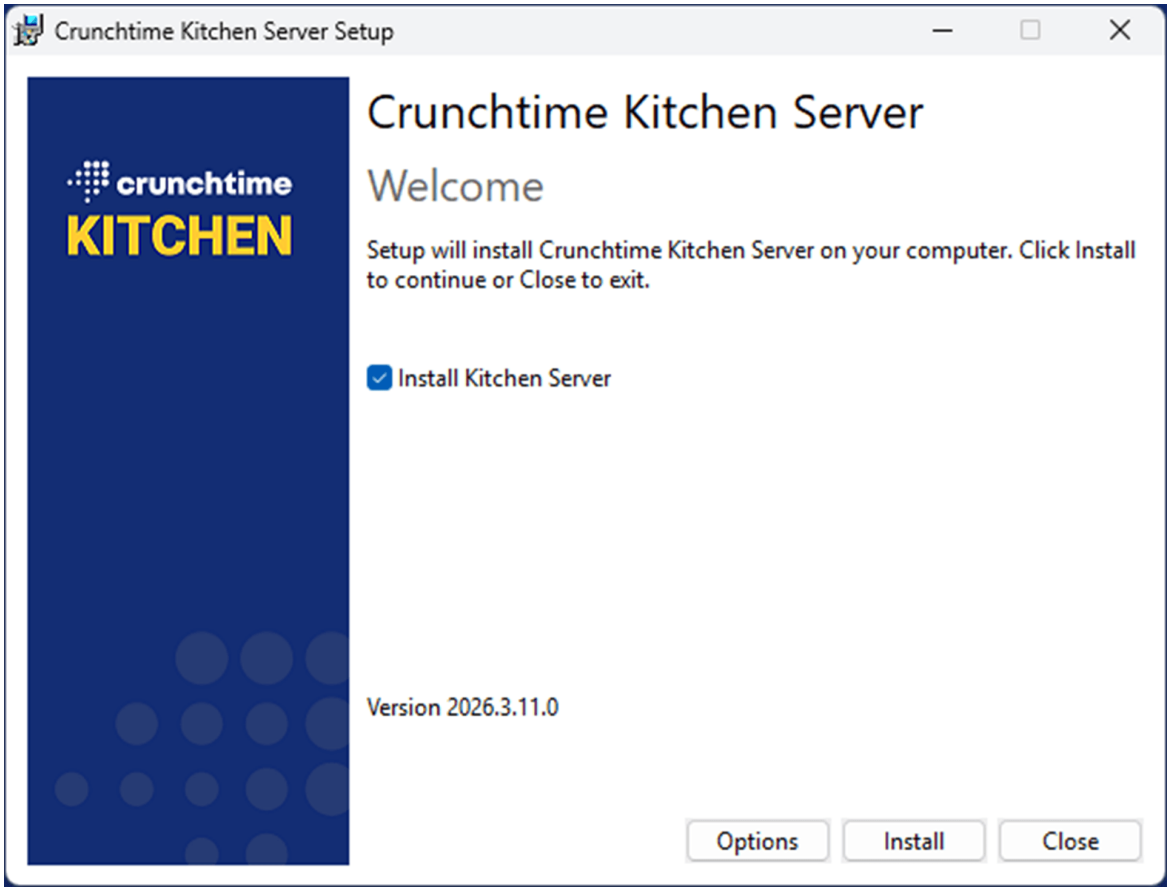
To establish a reliable redundancy setup, your kitchen software must be installed on two separate computers that can communicate with each other over your restaurant network. Follow these clear steps to link them together.

Install Kitchen Server on the Secondary PC

The secondary computer needs the exact same software version as your primary computer to communicate properly.

1. Download the Kitchen Server installer onto your backup computer, or deploy it directly via the Control Center platform.
2. Follow the on-screen installation wizard prompts to complete the setup.

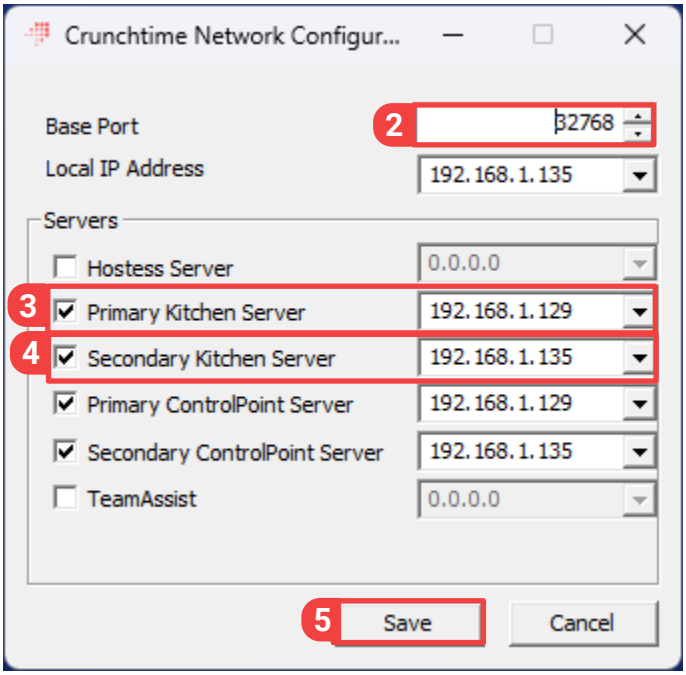
Tip: It is not required to have Builder Pro on the secondary server.



Update the Network Configuration Utility

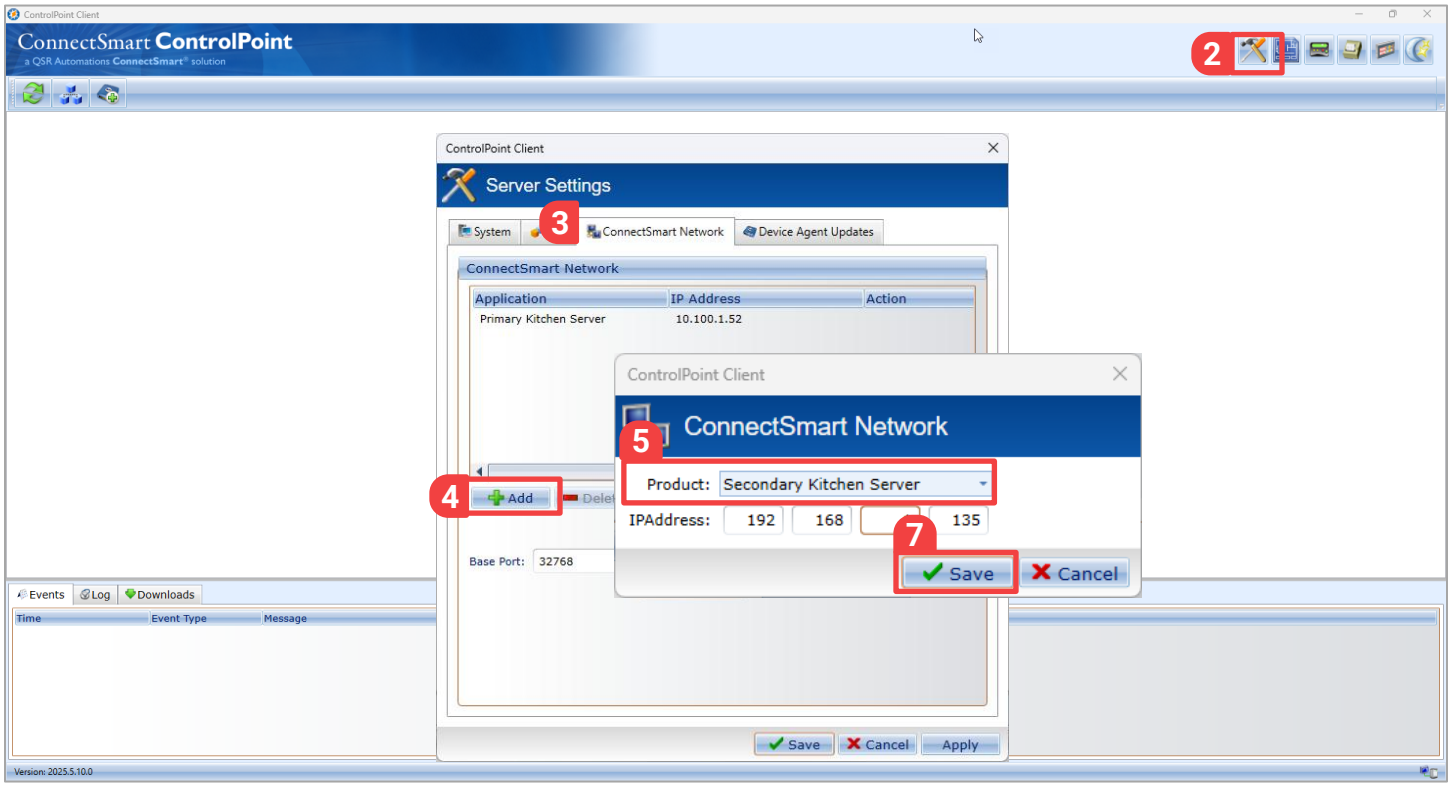
Configure the Network configuration to tell both computers how to find one another on your network.

1. On your Secondary PC, open the Network Configuration utility from the Start Menu.
2. Ensure the base port is set to the default value (typically 32768) and select your backup computer's local IP address.
3. Check the box next to Primary Kitchen Server and type in the network IP address of your primary computer.
4. Check the box next to Secondary Kitchen Server and select its own IP address from the dropdown list.
5. Click Save to secure these settings.
6. Next, move to your Primary PC and open its Network Configuration utility.
7. Check the box next to Secondary Kitchen Server, type in the IP address of your backup computer, and click Save.



Add the Secondary Server in ControlPoint

This step ensures that your kitchen screens, station bump bars, and printers can still receive information if a failover happens.



1. Open your ControlPoint Client application.
2. Navigate to Server Settings.
3. Click on the ConnectSmart Network tab.
4. Click the Add button.
5. From the dropdown menu, select Secondary Kitchen Server.
6. Enter the IP address of your backup computer.
7. Click Save.

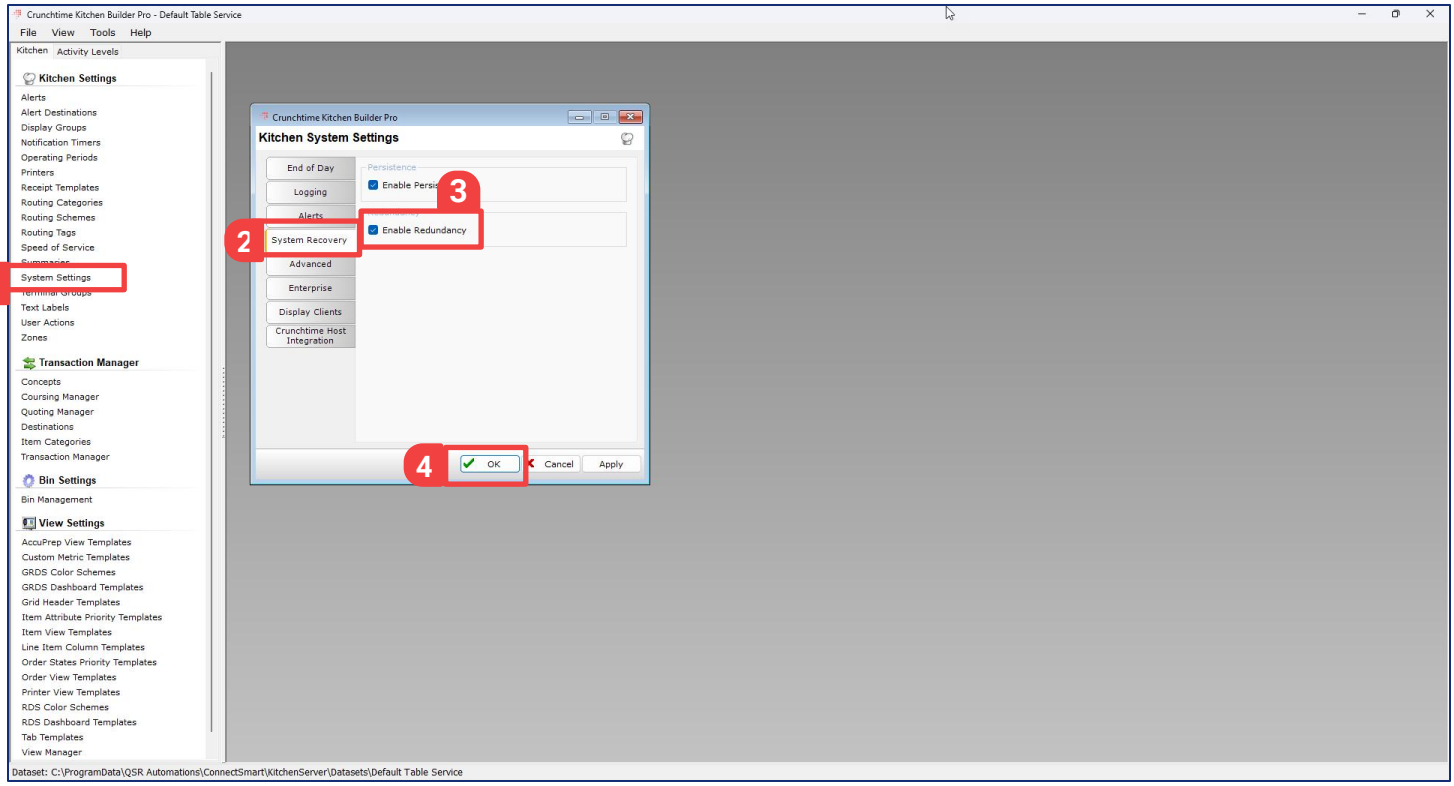
(continued)

Install A Secondary

Enable Redundancy in Your Dataset

Finally, we need to activate the automatic data-sharing feature in your management system. You can perform this update in either Kitchen Builder or Kitchen Portal.

Kitchen Builder Pro



1. Open your current dataset using Kitchen Builder on your primary computer.
2. Go to System Settings and click on System Recovery.
3. Check the box labeled Enable Redundancy.
4. Click OK, copy the changes to runtime, and restart the server service for the update to take effect.

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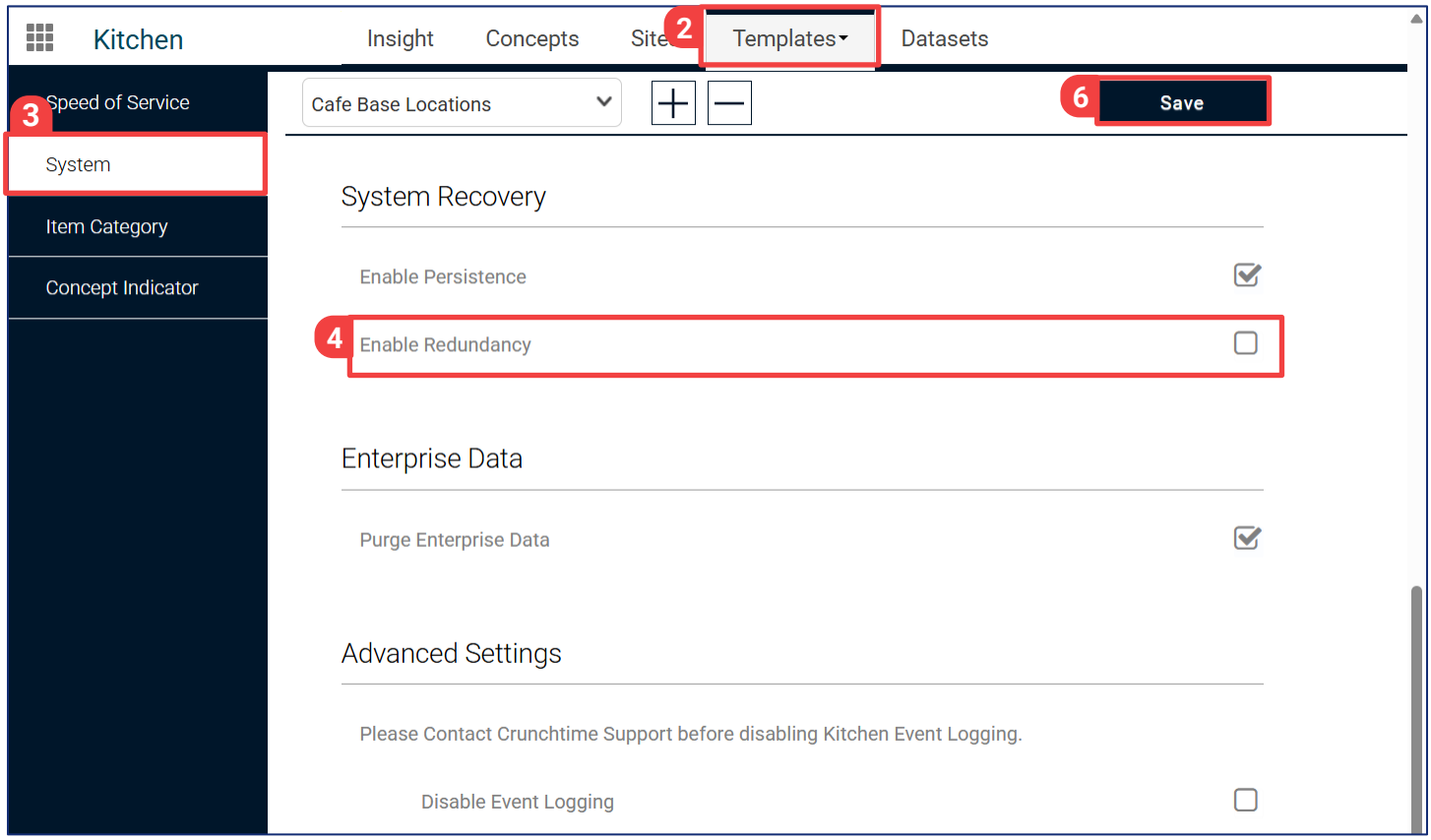
Kitchen Portal

If not using Builder Pro, Kitchen Portal provides the same configuration options in Templates.



Log in to your online Kitchen Portal.

2. Navigate to Templates.
3. System from the left-hand panel menu.
4. Scroll down to the System Recovery section.
5. Ensure Enable Persistence is checked, and then select Enable Redundancy.
6. Click Save at the top of the page and apply the template to your sites.
    a. The changes will load upon the next software restart.

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Licensing & Registration

A major benefit of this redundancy system is that you do not need to purchase a separate software license for your secondary backup computer. Your primary computer automatically shares its licensing details with the backup whenever they are connected. However, to guarantee that digital orders, guest text notifications, and cloud features continue running perfectly during a backup event, it is highly recommended to register your secondary server with the main system enterprise network utility.

Registration

The primary Kitchen Server instance **must** be registered to Crunchtime Enterprise using either the Crunchtime Registration utility or command line operations. Registration of the secondary Kitchen Server instance is not required in all circumstances, but it is **strongly** recommended.

If the secondary Kitchen Server **is not registered** to Crunchtime Enterprise, the following features **will not function** when the secondary is the active instance:

- Communication with CloudPOS (including receiving orders)
- Kitchen webhooks
- Order Ready SMS messages
- Task Management (via Crunchtime OpsExecution)

A small subset of features will not function when the secondary Kitchen Server is the active instance, regardless of the secondary's registration status:

- Kitchen metrics, such as Speed of Service and Bin Usage data, will not sync to Enterprise while the secondary is active. These metrics are stored locally and delivered to Enterprise when the primary Kitchen Server becomes the active instance again. Depending on how long the secondary is active, this may delay data availability in Crunchtime Insights reports.
- Item Category updates made through the Item Category Routing Editor will not sync.
- Kitchen Portal dataset downloads will not be available.

Operational Best Practices

To keep your system running optimally and synchronized, keep these highly practical tips in mind:

- **Proper Startup Order:** Always start the Primary Server first and let it fully load before starting the Secondary Server. This is critical to ensure current menu settings and configurations sync to the backup.
- **Automatic Handback:** If the Primary Server goes offline, the Secondary takes over after 10 seconds. When the Primary is restored, it syncs from the Secondary and resumes control at the next EOD or activity-level shift to prevent disruption on the line.

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