

System Requirements

This section details the system requirements for the web server and terminal machines where you can install and run Hospitality Suite and its add-on modules.

User Workstation

Category	Minimum Requirement	Best Experience
HS Database Version		≥ 23.10.1.4
HS Secure Version		≥ 22.3.0.3
Device Type	<ul style="list-style-type: none"> • Desktop Computer • Laptop • Tablet 	Desktop Computer
Windows Display Scaling		100% scaling
Operating System	<ul style="list-style-type: none"> • Windows 10 or 11 (64-bit) • Windows 10 or 11 (32-bit) 	Windows 10 or 11 (64-bit)
Oracle Client	Oracle 19c 32-bit software for Windows	
C++ Redistributable Version	Microsoft Visual C++ Redistributable for Visual Studio 2015	
Microsoft .NET Framework Version	4.8	4.8+
CPU (cores)	2	≥2
RAM	4 GB	≥8 GB
Disk Space	5 GB	>5 GB
Additional Notes	<ul style="list-style-type: none"> • For deploying in a thin-client environment, a Citrix or RDP client must be installed. • For thick-client environments, refer to the Application Server section for a list of software that must be installed depending on which software was licensed. 	

Database Server

The database server holds all application data and can be used as a maintenance server to perform nightly back-up and maintenance routines.

Category	Minimum Requirement		Best Experience
Operating System (Windows)	Windows 2012 R2		Windows Server 2022
Operation System (Linux)	Red Hat Enterprise Linux (RHEL) 7.x		
Oracle Database	Oracle 12c with latest tested CPU	Oracle 19c with latest tested CPU	
Oracle Database	Oracle 19c with latest tested CPU		
Oracle Client	Oracle 19c 32-bit software for Windows		
Microsoft .NET Framework	4.8	4.8+	
	1-15 Users	16-30 Users	31-50 Users
CPU (cores)¹	2	4	8
RAM	8 GB	12 GB	16 GB
Disk Space	4x146 GB (RAID 10)	4x146 GB (RAID 10)	4x146 GB (RAID 10)
Additional Notes	<ul style="list-style-type: none"> If virtualized servers are going to be used, refer to the Virtualization section for specific requirements and limitations. 		

Middleware Server

The following applications are installed on a middleware server:

- XChange Gateway
- Tray InMotion (TIM) Service
- Room Service Manager (RSM)
- DataArc

¹ As per Oracle licensing requirements, there is a maximum of (2) CPU sockets allowed and the SE2 software will limit you to a maximum of 16 threads.

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Category	Minimum Requirement
Operating System	<ul style="list-style-type: none"> Windows Server 2012 R2 Windows Server 2016 Windows Server 2019
CPU (cores)	2
RAM	4 GB
Disk Space	5 GB
Additional Notes	<ul style="list-style-type: none"> 2 CPU Cores, 4 GB RAM, and 5 GB Disk Space should be allocated for each application instance that is installed on the server. For example, installing one instance of the XChange Gateway, Tray InMotion, and the Room Service Manager the server should have a minimum of 6 Cores, 12 Gb RAM, and 15 Gb available Disk Space.

Web Application Server for HS Browser-Based Applications

This section details the requirements for the web server where you install Hospitality Suite browser-based applications. Your facility can provision a single web server for all the following CI applications as needed: CI Configuration Service, Inventory Connect, Bedside/Room Service Connect, Operations Connect, and HS HealthCORE. Additionally, you can install HS onTray on the same web server if you intended to enable access to that application from inside your facility's firewall (otherwise it must be installed on its own web server).

Category	Minimum Requirement	
Operating System	Compatible with Microsoft Server 2016, 2019, 2022	
Web Server Management	Microsoft IIS Manager 10.0+	
Microsoft .NET Framework	4.8	
	Minimum	Recommended
CPU (Cores) (per IIS Site)	2	4
RAM (per IIS Site)	8 GB	≥ 16 GB
Disk Space (per IIS Site)	20 GB	50 GB

Category	Minimum Requirement
Additional Notes	<ul style="list-style-type: none"> At least 2 CPU Cores, 8 GB RAM, and 20 GB Disk Space should be allocated for each application instance that is installed on the server. If more than 100 concurrent users will be accessing the web server contact our Support Team for additional configuration and deployment options. For example, installing one instance of Bedside Connect and Inventory Connect, the server should have a minimum of 4 Cores, 16 GB RAM, and 40 GB available Disk Space.

Application/Citrix Server (if using Citrix or RDS for user access)

The following applications are installed on a web application server:

- Hospitality Suite
- EasyTouch Menus
- SuitePoint! BackOffice (legacy)
- Meal Choice Connect

Category	Minimum Requirement	
Operating System	<ul style="list-style-type: none"> Windows Server 2012 R2 Windows Server 2016 Windows Server 2019 	
Oracle Client	Oracle 19c 32-bit software for Windows	
CPU (cores)	2	
RAM	4 GB	
Disk Space	5 GB	
	1-15 Users	16-30 Users
CPU (cores)	2	2
RAM	4 GB	8 GB
Disk Space	2x146 GB (RAID 1)	2x146 GB (RAID 1)
Additional Notes	<ul style="list-style-type: none"> Contact the Computrition Technical Team for information regarding other thin client solutions. For more than 30 Concurrent Users it is recommended that a second server, built to the 16-30 specs, is added. Servers should be load balanced for best performance. 	

HL7 ADT/DO Interface Server

Computrition's HL7 Interface is typically provided as a full turnkey on either a physical rack mounted server or a VMware packaged image. This interface provides a unidirectional, HL7-compliant interface with a facilities electronic medical record system in order to pass Admit/Discharge/Transfer and Diet Orders over to the Oracle database based upon applicable business rules that are put into place. The interface will be utilizing Red Hat Enterprise Linux Server Entry Level as the operating system. Please note that although Computrition includes Red Hat for installation purposes, it is the responsibility of the client to register it with Red Hat in order to receive critical patch updates. The approximate cost for workstation edition is \$349 per year. If your organization does not want to incur the cost of a Red Hat license, then CentOS is supported as an alternative.

Category	Minimum Requirement
Operating System	<ul style="list-style-type: none"> CentOS 7.x Red Hat Enterprise Linux 7.x
CPU (cores)	2
RAM	2 GB
Disk Space	80 GB

Other User Devices and Peripherals

Device Type	Specifications	Application Used For
<ul style="list-style-type: none"> iPad Mini iPad Air iPhone 	Latest generation devices running the most current iOS/iPad OS release or one version prior (currently: 14, 15).	<ul style="list-style-type: none"> HS onTray Tray InMotion Plus (iTIM+) SPOON
<ul style="list-style-type: none"> iPad Mini 4 or newer iPad Air 2 or newer 	Current version of iOS/iPadOS and one version prior (currently: 14, 15) running the latest version of Safari browser are supported. (64 GB disk space or higher is preferred.)	<ul style="list-style-type: none"> HS onTray Bedside Connect Room Service Connect Inventory Connect Operations Connect SPOON
Android Devices	Current version of Android or one version prior using the latest version of the Chrome web browser. (64 GB disk space or higher is preferred.)	<ul style="list-style-type: none"> HS onTray Operations Connect SPOON

Device Type	Specifications	Application Used For
<ul style="list-style-type: none"> • Epson TM-T88VI • Epson TM-T88VII • Epson TM-T88VI-i (intelligent) 	<ul style="list-style-type: none"> • Thermal • Ethernet modules are required 	Room Service Ticket Printers
Epson TM-U230B	<ul style="list-style-type: none"> • Impact • Ethernet modules are required 	
Epson TM-H6000IV	<ul style="list-style-type: none"> • High Speed Thermal • Ethernet modules are required 	
Epson TM-T88VI-i (intelligent)	<ul style="list-style-type: none"> • Thermal • Ethernet modules are required 	SPOON
Zebra T230 / ZT231	94681 Label Roll (4"x2.5", perforated)	Nutrition Food Labeling

Additional Module Descriptions

Room Service

CompuTrition's Room Service module requires the use of point-of-sale receipt printers, referred to as kitchen ticket printers, in order to print off the on-demand tickets used in this module. Only the printers specified above are supported.

EasyTouch Menu Selections (ETMS)

EasyTouch Menu Selections, also referred to as ETMS, is a touch screen-based user interface used for taking room service orders. Although any touch screen device can be used, CompuTrition recommends the ELO 1715L. Although the software has been optimized for use with a touch screen, a mouse and keyboard may still be utilized as the touch screen is not required for the operation of the software. ETMS requires the installation of .NET 3.5 (Full Package) or higher in order to operate.

If ETMS will be deployed in a Citrix environment, please add 1GB of RAM to the Citrix server for every 5 concurrent users who will be accessing the software.

Tray InMotion Service (TIM)

The Tray InMotion Service, also referred to as TIM, is a real-time tray tracking solution that utilizes iOS based hardware devices. The following devices have been tested with TIM. We support the latest generation iPod Touch, iPad Mini, or iPad running the current iOS version or one prior.

In addition to the scanning devices needed, a middleware piece of software, the TIM Service will need to be running in order to send the transactions over to the Hospitality Suite database. All communication and setup of the iPod Touch's will be over the wireless network. In the event the wireless connection is not available some scanning functions can still occur, but in an offline mode until connectivity is restored and the transactions pushed across.

XChange Gateway

Computrition's XChange Gateway product is a bi-directional interface that can process XML GET and POST commands in order to send or receive data from the Hospitality Suite Oracle database server to any 3rd party product that has the ability to send/receive such data. Upon purchase of this module Computrition will supply the API in order for the facility to be able to utilize this web service.

Meal Choice Connect/Web Recipes

Computrition's web products are pre-built web components that are used for the viewing of menus and recipes on a client's local intranet or on their main facility internet website.

Inventory/Bedside/Room Service Connect

Computrition's Connect products are pre-built web components that can service and fulfill a variety of needs and tasks. These modules can be put on new or existing web servers for rapid deployment.

Operations Connect

Operations Connect is Computrition's browser-based application that displays live Tray InMotion data. The information is displayed in an individually configurable dashboard in real time.

With Operations Connect you can:

- View live TIM data from any desktop or mobile device in the kitchen or diet office.
- Track the delivery progress for the current meal and quickly identify any bottlenecks affecting the flow.
- Monitor delivery total times as well as average times for each stage of the delivery process.
- Designate maximum delivery time to increase tray delivery speed and record late tray deliveries.

- Display late tray deliveries in both number and percentage formats.
- Track and rank employee efficiency by either number of trays delivered or average tray delivery time.

SuitePoint! Point-of-Sale

Computrition's SuitePoint! product is integrated into the same database as FOM/NCM. A separate database is not required; it will simply reside in an additional schema within the same instance.

If the SuitePoint! database will be installed on its own server, either Windows 2016/2019 or Red Hat Enterprise Linux 6.x/7.x should be used with the following specs:

- Dual Core Processor 2.0GHz or better
- 4GB RAM
- 2 146GB HDD (RAID 1)

SuitePoint! Online Ordering Now (SPOON)

Computrition's SuitePoint! Online Ordering Now (SPOON) is a comprehensive online ordering system that provides hospital employees with the flexibility to view menus from participating retail locations, place orders, and pay for their meals using a smartphone, tablet, or desktop. Users can also leverage retail account management and rewards through its Account Connect and Customer Loyalty features. Additionally, customers will utilize SuitePoint! Point-of-Sale 21.1 for a robust retail experience.

Users will access the SPOON URL from the "internal" hospital network. This access can be gained by using a workstation browser (authenticated via Active Directory) or by connecting to the hospital's internal wireless network.

The following browsers will be fully-supported:

- Chrome on Windows10
- Chrome on Android
- Safari on IOS 13 and 14

The following browsers are supported and the site still works, but there may be some degradation of look-and-feel and user experience.

- Edge on Windows 10 or 11
- Chrome on IOS

Nutrition Food Labeling (NFL)

Computrition's Nutrition Food Labeling module, also referred to as NFL, has the ability to print out labels in 2 ways. The first method is using a standard laser printer utilizing Avery-style 5514 weatherproof labels. The other method for printing out such labels requires the use of a Zebra T230 with a 72292 roll. This is the only label printer supported at this time.

Virtualization



Note: Any Computrition product can be installed in a virtual environment. However, if virtualizing the database, please see the below statement.

As server virtualization becomes more popular, there is an increasing number of customers asking to migrate over to this platform. Oracle does not certify its products in a virtual environment and can only provide assistance if the specific issue has been determined to not be a result of the VM environment itself. The main reason is that in a virtual environment, the standard practice is to over-allocate resources on the host machine. Often times, sharing out more resources than what actually exists on the physical hardware. This can cause contention issues while multiple servers battle it out for the same resources. The end-result of this is that the database can suffer major performance issues which are unresolvable from a Computrition standpoint and will not be supported by Oracle.

Computrition **will** support installation in a virtual environment provided the guidelines & exceptions are followed below.

- If the Oracle database is virtualized, it is recommended to use a SAN storage device.
- The same hardware specifications listed above apply to a virtual environment as well. These resources **must be dedicated in the guest VM** and not shared with another guest VMs.

- Please note that even if the above considerations are met, performance may still vary depending on the exact configuration of the virtual environment. If a problem were to surface that is deemed an Oracle issue, they could require proving the error out on a physical device before they will assist. Although these situations are few and far between, it is a possibility and could hinder support from them.
- Please contact Computrition's Technical Support team before utilizing a virtual environment in order to go over specific deployment strategies and licensing requirements.

Oracle SE2 Licensing in a VM Environment

- As per Oracle licensing requirements for Standard Edition 2 (SE2), there is a maximum of (2) physical CPU sockets on the physical host server, either on a standalone server or in a RAC cluster.
- Standard Edition 2 (SE2) is limited to utilizing a maximum of 16 CPU threads at any time.
- VMs licensed with SE2 cannot be part of a cluster unless all host in the cluster are licensed. The only exception is if you're using Oracle's VM solution.



Note: Oracle doesn't officially recognize Affinity/DRS rules.

Oracle Pluggable Databases

Beginning with our support of Oracle 19 across all of our applications, Computrition recommends the conversion of the Oracle instance to utilize Pluggable Databases when converting to Oracle 19. Pluggable database will be an Oracle requirement will be for all Oracle users starting with Oracle 20.