Oracle® Simphony
Property Device Configuration Guide

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ORACLE®

Oracle Simphony Property Device Configuration Guide, Release 19.8

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Contents

Preface

Purpose

This document provides a guidance on how to set up and configure property hardware for use with Oracle MICROS Simphony.

The information contained within this document applies to the following products:

- Oracle Simphony Point of Sale
- Oracle Simphony Premium Cloud Service
- Oracle Simphony Standard Cloud Service

Audience

This document is intended for experienced user configuring property hardware and services used with Oracle MICROS Simphony.

Scope

This document assumes that the user is generally familiar with the Oracle Simphony architecture and features. It only contains information regarding the features and their functionality relative to the topics covered in this document.

Customer Support

To contact Oracle Customer Support, access the Customer Support Portal at:

https://iccp.custhelp.com/

When contacting Customer Support, please provide the following:

- Product version and program/module name
- Functional and technical description of the problem (include business impact)
- Detailed step-by-step instructions to re-create
- Exact error message received and any associated log files
- Screenshots of each step you take

Documentation

Product documentation is available on the Oracle Help Center at http://docs.oracle.com/en/industries/food-beverage/.

Acronyms and Abbreviations

The following acronyms and abbreviations are used throughout this document:

Table 1 Acronyms and Abbreviations

Acronym	Full Description
BUCAPS	Backup Check and Posting Service
CAPS	Check and Posting Service
EMC	Enterprise Management Console
KDS	Kitchen Display System
OPI	Oracle Payment Interface
POS	Point of Sale
PSP	Payment Service Provider
TMS	Table Management System

Revision History

Table 2 Revision History

Date	Description of Change
February 2025	Initial publication.

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Introduction

Oracle Simphony uses shared services to manage on-premises, operations functionality. These services ensure maximum availability and prevent Internet failures from causing outages and functionality loss. Using either point of sale workstation hardware or dedicated machines to run the shared services allows customers to optimize performance, cost, and resilience to meet their goals.

Many factors influence the shared services configuration, including:

- Transaction volume
- Point of sale client count
- Application feature usage, such as:
  - Kitchen management
  - Labor management
  - Table management
- Resilience
- Available hardware
- Network topology

Simphony manages properties ranging in size from a single POS client to large resorts, casinos, theme parks, or stadiums with hundreds of POS and Kitchen Display System clients. As the number of clients and features used by a property increase, so do the hardware requirements for the devices hosting the services.

For small sites, shared services are commonly run on the POS client hardware (for example, an Oracle MICROS Workstation 610). For large sites, shared services are commonly run on a dedicated physical or virtual device.

Use the information contained within this document to select the shared services deployment model that best suits the operation's requirements.

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Shared Services

Simphony relies on shared services to operate property level functions that require high availability. These services run at the property instead of in the cloud, due to the business' dependency upon their functionality.

Losing connectivity to these features can have a severe, negative affect on operations. For example, if the Kitchen Display System controller becomes unavailable, orders stop appearing on the kitchen displays.

Deploying these services on-premise eliminates the greatest potential communication failure source, the Wide Area Network or Internet.

The following table provides a summary of each shared service and a brief explanation of its primary functionality.

Table 2-1   Shared Services On-premise

Shared Service	Key Functions
Backup Check and Posting	Stores a redundant copy of the POS transaction posting messages sent to CAPS
Backup Kitchen Display System Controller	Takes over Kitchen Display System client management if the KDS controller service fails
Check and Posting	• Posts transaction to enterprise • Property reporting • Check sharing
Distributed Client Application Loader	• Stores CAL packages locally • Upgrades Simphony clients
Kitchen Display System Controller	Manges communication with the Kitchen Display System clients
Oracle Payment Interface	Manages communication between POS clients and Payment Service Provider middleware
Print Controller	Manages print jobs and queues for local and network connected printers
Property Management System Interface	Standard interface typically used to connect Simphony with Property Management System
Transaction Services	• Web service based POS client • Create new and update existing transactions • Provides configuration information

The Oracle Payment Interface is not technically a "shared service" because it sits outside of the Simphony service host. It can be installed through a CAL package, but it is not configured or managed through the Enterprise Management Console (EMC). This Shared Services section contains information regarding this service because it contributes to the property hardware requirements.

Transaction Services is also not technically a shared service. It is a Simphony POS client that receives input from third party systems instead of a graphical user interface. It is listed here because of the similar characteristics it shares with the other services.

- It runs in the background (no user interface)
- It can run on the same service host as the POS Client
- It uses data stored in the POS client database

For hardware configuration purposes, think of Transaction Services in the same manner as shared services.

The following items are commonly referred to as shared services, but they always run as a part of the CAPS. There is no ability to assign them to a different service host. These features affect the system's performance, and configurations must take into account the additional load they place on the CAPS hardware.

Table 2-2   Features Running with CAPS

Feature	Key Functions
Cash Management	• Tracks cash totals • Deposit/safe totals
Labor Management	• Clock in/out • Schedule management • Enterprise time punch posting
Table Management	• Manages reservations • Manages wishlist • Updates table status on POS clients

Services Overview

Backup Check and Posting (BUCAPS)

The BUCAPS stores copies of transaction posting messages sent from the Simphony POS client to the CAPS. It protects the system against data loss in the event the hardware running the POS client and CAPS fails while offline from the enterprise and there are unposted transactions from the POS client.

Only deploy the BUCAPS on properties where there is hardware that is running both a Simphony POS client and the CAPS. If the CAPS runs on hardware that is not also a POS client, there is no need for this feature. The BUCAPS and CAPS cannot exist on the same hardware.

Backup Kitchen Display System Controller

The Backup KDS controller is an optional redundancy component that provides resilience for the KDS clients. Whenever the system detects that the primary KDS controller is not functioning, the backup KDS controller takes over communication to the KDS clients.

When the primary KDS controller is available again, the operator must manually change the system to the primary.

While the system is in a non-fault state (the primary controller is functioning), the backup KDS controller receives order information from the primary KDS controller. If the system fails over to

the backup KDS controller, the POS clients will send messages directly to the backup until the system is manually switched back to the primary controller. The Backup KDS Controller and KDS Controller services cannot exist on the same hardware.

Check and Posting

The Check and Posting Service insulates the POS clients from enterprise latency by providing transaction posting, check sharing management, and property reporting. When enterprise communications are disrupted, the CAPS queues transaction posting messages and sends them upon connection restoration.

Deploy a single CAPS for each property defined in the Simphony Enterprise Management Console. If a large physical property (such as a resort or stadium) is divided into multiple logical properties in EMC, there will be one CAPS for each logical property.

When splitting up a large property into smaller, virtual properties consider the following:

- POS client reports only show data for the logical property, not the entire physical property

- Checks transfers only occur between revenue centers on the same CAPS

- The virtual properties appear as separate locations in Reporting and Analytics; create reporting hierarchies that combine the locations to obtain a single view of the property

- Creating a zone in EMC that combines the virtual properties makes it possible to configure common items (that is, menu items, discounts, and service charges) in one place

The CAPS and BUCAPS cannot exist on the same hardware.

Properties that use Enterprise Cash Management, Labor Management, or Table Management may require additional hardware resources for CAPS.

The CAPS cannot run on a mobile device (that is, battery-powered hardware that you can move between wireless access points). You can install the CAPS on workstations such as the 610 and 620 which use wireless network cards but are not moved. You can install the CAPS on a tablet that is locked into place on a counter. However, you cannot install the CAPS on a tablet that is moving in a server's hand or on a wireless POS workstation that moves throughout the property.

CAPS on IIS

For high volume environments such as stadiums, arenas or casinos, Oracle recommends CAPS running on IIS (Internet information Services). CAPS on ISS swaps the native "Servicehost" webserver for IIS. Windows Server 2012 or higher with 4 CPUs and 16 GB ram is recommended. Oracle Standard v11.2.0.4 or higher is recommended.

Distributed Client Application Loader

The Distributed Client Application Loader service provides local CAL package storage and client upgrade services. During the Simphony enterprise upgrade, the new CAL is added to the system for installation on the property devices. When using the DCAL service, deploy the new packages to the site's DCAL service before the upgrade. After deployment, the Simphony clients can upgrade from the DCAL service instead of the enterprise, so Simphony clients can upgrade from this service instead of pulling the packages from the cloud. Only use this service when there are more than two Simphony devices on a property.

Kitchen Display System Controller

The Kitchen Display System Controller provides the bridge between the POS and KDS clients and manages the communication with the KDS clients.

The KDS controller device uses both the Simphony KDS shared service and the KDS Controller Windows service. When an order is sent to the kitchen, POS clients send data to the KDS shared service running on the designated service host. The KDS shared service forwards the information to the KDS Windows service, which then manages the communication to and from the KDS clients.

As the number of KDS clients and orders increase, the resource utilization of the KDS controller Windows service increases.

There is always a one-to-one relationship between Simphony KDS shared services and KDS Controller Windows Services. A property can have more than one KDS controller, which can be useful when there are revenue centers with independent kitchens, such as in airport and large venue configurations.

The KDS Controller and Backup KDS Controllers services cannot exist on the same hardware.

Oracle Payment Interface

The Oracle Payment Interface provides a bridge between Simphony and the Payment Service Provider credit processing solution. Customers that use the OPI enjoy the benefits that come from keeping cardholder data out of the point of sale by processing the payments on semi-integrated devices provided by the PSP.

The OPI consists of an application and database that sit outside of the Simphony software. Each Simphony POS client communicates with the OPI whenever there is a need to process a credit card transaction.

Print Controller

The Print Controller service is automatically configured with each Simphony POS client. The service manages the printer queue and status updates.

The Print Controller always manages any printers connected through the local serial or IDN port. IP printers are linked to a printer controller, which might also manage locally connected devices. A printer may only communicate with a single print controller.

As a print controller manages more printers, its workload increases. Balancing the property's printing workload evenly across all available printer controllers prevents a service host from becoming overwhelmed with by the print jobs.

Oracle recommends that different Print Controllers manage the primary and backup printers to prevent a single Print Controller failure from preventing all printing activity.

Property Management System Interface

The Property Management System interface service provides room charge and guest inquiry functionality with PMS solutions. In some cases, the PMS interface is used by SIM scripts to communicate with non-property management systems.

Transaction Services

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Transaction Services is more akin to a Simphony POS client than shared service, but is included in this section because it can run on hardware that is also running the Simphony POS client. Transaction Services is best thought of as a "UI-less" Simphony POS client.

Transaction Services provides check processing and definition extraction services that third party applications typically consume. The Oracle Hospitality eCommerce Integration Cloud Service and Oracle Payment Interface both use Transaction Services to connect Simphony with third parties.

Customers with high transaction counts coming from third party sources (for example, mobile, online, and non-Simphony client kiosks) should consider running the Transaction Services client on dedicated hardware.

Transaction Services (Generation 1 and Generation 2) cannot run on a mobile device (that is, battery-powered hardware which you can move between wireless access points). You can install Transaction Services on workstations such as the Oracle MICROS 610 and 620 which use wireless network cards, but are not moved and can maintain a strong connection.

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Client/Server vs. Distributed Services

Traditional POS systems rely on a server located on property to manage the system, configuration, and back office applications. With a server available to perform the heavy lifting, POS workstations required only enough resources to run the POS client application and lightweight system level tasks.

Figure 3-1   Traditional Client/Server Model
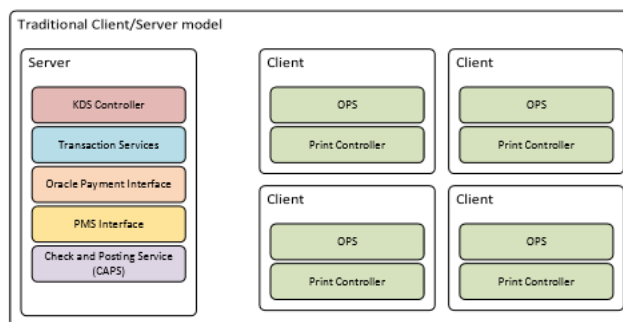
Simphony supports using a single device to host shared services. In some cases, this choice provides advantages over the distributed model described below. A device's resource requirements increase as it hosts more shared services.

Simphony also supports spreading shared services across multiple devices, such as the Oracle MICROS Workstation 610. By using the hardware's computing power, it is possible to eliminate the need for an extra device to run the shared services.

Figure 3-2   Distributed Model
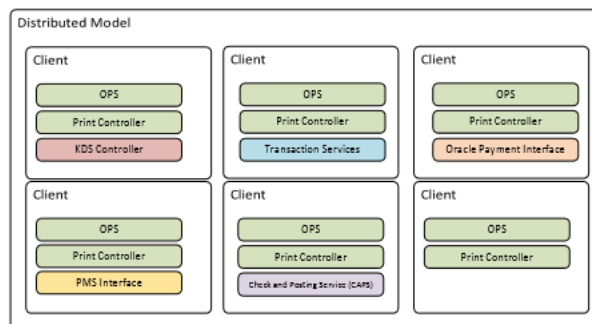
4

Service Allocation Considerations

Consider the following when determining the optimal shared services configuration:

- Point of Sale Client Count
- Resilience
- Transaction volume
- Hardware

Point of Sale Client Count

As the number of POS clients increase on a property, the workload increases on the shared services.

Often times, "right sizing" the shared services devices for the initial installation leaves no headroom for future growth. Without room to grow, there will be incremental hardware and consulting costs to expand property infrastructure for adding the new POS clients.

When recommending a property configuration, consider future growth plans, such as the following:

- Will tablets be added?
- Will online or mobile orders be added?
- Will the site start using or add more KDS clients?

Resilience

Place shared services on highly available devices. The POS client functionality and performance decrease when a shared service is under performing or cannot be accessed. Simphony enables the ability to balance fault tolerance and cost management requirements.

While modern wireless network infrastructure is more stable than in the past, wireless devices lose network connectivity more frequently than wired devices. If possible, use wired network connections for devices that host shared services.

Use the Backup CAPS (BUCAPS) and Backup KDS Controller services only when necessary. BUCAPS is only useful for scenarios in which CAPS and a POS or Transaction Services client share the same hardware. If CAPS runs on a machine without a POS or Transaction Services client, there is no need for BUCAPS.

Backup services increase both network traffic and workstation hardware requirements. The same hardware requirements apply for both the primary and backup devices. For example, if a site requires a Workstation 620 for CAPS, a Workstation 620 (or greater) must also be used for BUCAPS.

Spreading the services around multiple workstations accomplishes the following:

- Place shared services on highly available devices. Placing shared services on devices that lose network connectivity frequently will negatively affect the POS client operations on other devices.

- In a workstation-only environment, spread the services around as much as possible to mitigate the risk of a single workstation issue taking out large amounts of functionality.

- For larger properties, run shared services on appropriately powered, dedicated hardware that the staff interacts with infrequently, such as a virtual machine or dedicated back office PC.

Transaction Volume

As a site's guest check volume increases, so does the workload placed on the share services. A guest check consists of one or more transactions, also known as a service round. Each round begins either by picking up (resuming) an existing check or starting a new check. The round is complete when the check is service totaled (saved) or tendered completely.

Here are some examples of transaction counts:

- Counter service:

  – Begin check, add items, pay check

  – 1 transaction

- Drive thru:

  – Order window/speaker: begin check, add items, save check

  – Payment/pickup window: resume check, pay check

  – 2 transactions

- Table service:

  – Begin check, add appetizers, service total

  – Pick up check, add entrees, service total

  – Pick up check, apply discounts, print check, service total

  – Pick up check, pay check

At the end of each service round, the POS client sends updates to CAPS, items to Print Controllers for remote printing, items to the KDS controller, and so on.

It is also important to consider the traffic patterns at a site. POS systems typically require high performance for short spurts, such as halftime at a sporting event or a lunch rush. The hardware selected must handle the peak loads seen at a site.

Hardware

In some cases, using a dedicated shared services device may be more cost effective than purchasing larger workstations to operate these services. For example, a customer may require 4 high end workstations to run the shared services. Alternatively, a dedicated shared services device and 4 lower cost workstations could be more cost effective.

While Simphony does not require a "back office server" to run shared services, there are advantages to consider with using a dedicated machine for shared services:

- An employee is less likely to turn off or move the shared services device

- Lesser powered POS client hardware can be used throughout the operation

- Support related activities will not require interrupting the service staff to use their device

- There isn't a need to mix and match different POS client types on the property, making it easier to maintain the workstation hardware

- Running CAPS separately from the POS clients eliminates the need for BUCAPS

While wireless networks are more reliable than ever, restaurant environments often provide challenges not seen in other environments like offices. Restaurant equipment (such as microwave ovens, broilers, and refrigerators) can adversely affect wireless connectivity.

Sites that want to only deploy tablets to the wait staff need a wired, dedicated shared services PC to run CAPS, KDS or other shared services.

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Devices

See the Oracle Restaurants Compatibility Matrix for information on supported devices and supported services by device and operating system type.