micros®

*Restaurant Enterprise Solution
Version 5.1
Installation Guide*

General Information

About This Document

This document provides installation and setup instructions for the MICROS Restaurant Enterprise Solution (RES) Version 5.1 software. The process ensures the proper transfer and configuration of the files, programs, and databases required for the smooth operation of the applications.

The procedures described in this document are applicable to both new and upgraded systems.

****************************REMINDER*****************************

It is recommended that custom applications be re-installed and tested after applying any upgrade to a RES system. This includes SQL scripts that add or alter custom stored procedures.

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Declarations

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To help you navigate the document, information is organized in sections and displayed in the following sequence:

Who Should be Reading this Document

This document is intended for the following audiences:

- MICROS Installers/Programmers
- MICROS Dealers
- MICROS Customer Service
- MICROS Training Personnel
- MIS Personnel

What the Reader Should Already Know

This document assumes that you have the following knowledge or expertise:

- Operational understanding of PCs
- Understanding of POS terminology and concepts
- Working knowledge of the Microsoft Windows interface

RES Setup Procedures

Before You Begin: Tips, Traps, and Precautions

Before running the RES Setup procedure, the following should be noted:

- Adding a new user to the Administrator Group is required to install RES and all other setup programs.

    - The existing administrator account should only be used to create a new user and add users to the Administrator Group.

- The installation of RES 5.1 will fail unless the User Account Control (UAC) setting is set to the default level.

    - Follow these steps to verify the UAC setting:

        1. Navigate to *Start | Control Panel | User Accounts* and select *'Change User Account Control settings'*.

        2. Verify the description of the setting selected says *'Default'*.

        3. If not already set to Default, change it to Default and select *OK*.

        NOTE: An administrator password maybe needed.

        4. Re-start the server for the new settings to take effect.

- All testing on RES 5.1 has been done with the User Account Control (UAC) set to *'Default'*. MICROS recommends keeping the server and Windows 7 clients at the *'Default'* UAC setting for daily POS Operations.

- RES 5.1 must be installed to local drives only. Attempting to install RES to any mapped drive will fail, and is not supported.

Installing RES on non-English Operating System

◆ RES 5.1 requires the group *'Users'* for installation. Non-English operating systems must edit the name of *'Users'* (the translation of user in non-English) to *'Users'* (English translation). After RES 5.1 installation, the *'Users'* group can be edited to the non-English translation.

   ◆ Steps to change group name:

      1. Right click on *'My Computer'* and select *Manage*.

      2. Navigate to *Local Users* and *Groups*.

      3. Select *Groups*.

      4. In the right panel, rename *'Users'* to *'Users'*.

      5. Install RES.

      6. Navigate to *Local Users* and *Groups | Groups* and change *'Users'* back to the correct name.

   ◆ RES 5.1 will require the user to install the shell database, or let RES install a user database on non-English operating systems. If user fails to install a database during setup, the following registry setting must be added prior to running the command dm -u <path to db>.

      1. From the run line enter, regedit.exe (Registry Editor). (An administrative password is required.)

      2. 64 Bit Users: Navigate to *Computer | HKEY_LOCAL_MACHINE | Software | Wow6432Node | MICROS | Common | DBMS*.

      3. 32 Bit Users: Navigate to *Computer | HKEY_LOCAL_MACHINE | Software | MICROS | Common | DBMS*.

      4. Right click to add new DWORD.

   5. Enter in *'Number Backups'* as New Value #1.

6. Highlight new DWORD and right click.

7. Select *Modify.*

8. Select Hexadecimal.

9. Enter 1 and save.

- Servers with dual NIC cards must configure the MICROS RES Network Adaptor to be the first one in the binding order. This is to ensure that all software functions properly.

    - Perform the following steps to properly configure binding order:

    1. Navigate to *Start | Control Panel | All Control Panel Items | Network and Sharing Center | Change Adapter Settings | Advanced | Advanced Settings | Adapters and Bindings.*

    2. Change the binding order to have the MICROS RES Network Adaptor use the first NIC card.
        - Highlight the MICROS RES adapter and use the up arrow on the form to move it up to be the first one in the list.

- RES 5.1 can be installed on the root of any drive. Installation cannot be performed on a folder off of the root of the drive.

    - For Example: Installing RES 5.1 on *C:\Program Files* will lead to application failures.

- The Sybase ODBC service registry setting has been changed with the installation of RES 5.1. Setup will now ignore all broadcast responses to enhance security.

- Some applications, such as delivery dispatch can cause the task bar to show in POS Operations on Windows 7 and Pos Ready clients. The solution for this issue is to enable 'Auto-Hide Task Bar' in the task bar properties.

◆ Error 1603 and error 1904 can occur if there are networking issues, or if the server is downloading updates during the RES installation. If this should occur, remove the server from the network and run RES setup and/or RES 5.1 Prerequisite from the local media CD.

Error 1603:
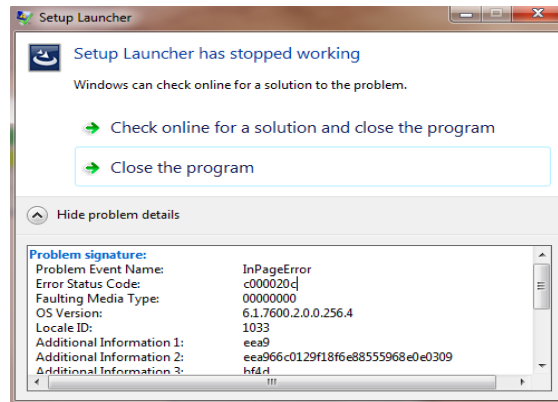
Error 1904:
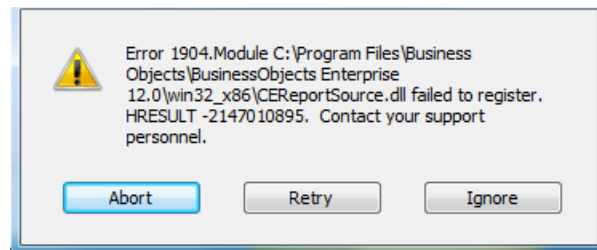
◆ When upgrading on a RES system where the MICROS Portal is installed, be sure to manually shut down the Micros Agent and Micros Watchdog services. Failure to shut down these Portal-related services can result in a system lockup during database conversion.

◆ MICROS recommends using NTFS partitions for both the Operating System and the MICROS drive. This is because the NTFS file system provides greater security than FAT partitions.

◆ No previous installations of RES should be present on the server when RES 5.1 is installed.

◆ The RES 5.1 shell and sample database will only have the following three users.

1. MICROS

2. DBA

3. Fiscal

The following legacy users will no longer be installed with the RES 5.1 shell or sample DBs.

1. custom

2. dbsrpc

3. emrepl

4. eosapps

5. eoscfg

6. esd

7. general

8. gsscfg

9. gsserver

10. installer

11. kdsserver

12. manager

13. procedures

14. reports

15. reportuser

16. setup

17. support

18. syscfg

If upgrading a 3.2 database to RES 5.1 then all legacy users will be deleted except for MICROS, DBA and Fiscal.

If upgrading a v4.x database to RES 5.1 then only the legacy users that do not have passwords will be deleted. The MICROS, DBA and Fiscal users will not be deleted.

If upgrading an existing 5.1 database then nothing will be deleted.

◆ Make sure that any OPOS devices and related software that need to be installed are compliant with the operating systems.

◆ When installing on a Win 2008 system, double-clicking on **Setup.exe** to run a full RES build will display the following warning:

"This type of file could harm your computer if it contains malicious code."

Users then have the option of pressing **Open** (to continue with setup), **Cancel** (to exit), or a generic **More Info** button. This can be problematic, particularly with remote installations.

To avoid this, users can disable the warning message as follows:

1. Open Internet Explorer.

2. Go to *Tools | Internet Options | Security | Internet | custom level*.

3. Scroll down to **Launching Applications and unsafe files** and change the value from *Prompt* to *Enable*.

◆ Due to enhanced security in Windows 7 and 2008 R2, third party applications that attempt to write to protected locations will fail.

◆ Example:

   ◆ If pms1.isl attempts to write to C:\ on a Server 2008 R2 system, it will fail. If run through POS Operations the error could be *'input/*

output error'. These applications will need to be adjusted to work with the new operating systems.

◆ In RES 5.1 Win32 clients will get .NET Framework 3.5 sp1 installed as part of the Win32RES setup.

◆ The command for database update has changed from DBUpdate.exe to DbUpdt.exe.

◆ If the proper steps to restore a database are not followed, the update could fail with a *'table in use'* message in the Micros\common\etc\DM.log.

   ◆ Perform the following steps to restore a database from the command line:

   1. Navigate to MICROS Control Panel.

   2. Set the Restaurant to OFF.

   3. Close MICROS Control Panel.
      NOTE: MICROS Control Panel must be closed and not minimized.

   4. Remove or rename the existing MICROS.DB and MICROS.log.

   5. Run DM -U <path to.mbz> from the command prompt.

◆ The following steps are required to change the IP address of the server with the installation of RES 5.1:

   1. Navigate to *POS Configurator | Network Node*, select the server from the node list.

   2. Change the IP address of the server.

   3. Click the *'Update Host File'* button in network node.

   4. Allow the change when prompted by User Account Control. User may need administrator password.

   5. Open the MICROS Control Panel and reload the database.

6. Take the Restaurant to off in MICROS Control Panel.

7. Reboot the server.

8. Reconfigure CAL on all clients.

♦   During RES 5.1 installation, both the Backup Server Service
    (**ResBSM.exe**) and the KDS Controller are installed to all Win 32
    clients.Though installed, please note that the Backup Server Service
    and KDS Controller are not supported on POS Ready and WePOS.

♦   MICROS recommends assigning no more than 8 print devices to a
    client. More than that may cause the print service to fail.

♦   Rerunning RES Version 5.1 or higher for purposes of installing,
    modifying, or repairing any of the applications will reset all of the
    applications to their General Release versions. If you have already
    installed service packs to RES 5.1, you will need to rerun all service
    packs again. Failure to do so may prevent you from opening
    previously installed programs.

♦   Powering off either the WS or the Server during an upgrade to a
    version of RES can cause the WS's compact flash to become corrupt.
    This can also occur if you pull the power cord out of the WS4 while it
    is writing to the compact flash. To correct the problem, the compact
    flash must be reformatted.

♦   When updating the system's Time Zone setting, users must stop/start
    RES services before attempting to run POS Operations. This will
    resynchronize the RES application time zones (which are set on
    startup) with those on the updated POS clients.

    Failure to do so, or to reboot the system, will cause errors when using
    the Future Order feature and may affect other time-related
    functionality.

♦   Firewalls should be enabled prior to installing RES 5.1 on a Server. If
    the firewall is enabled after installation, the clients will not be able to
    communicate with the server and will continuously display prompts
    for Backup Server Mode (BSM) and Stand-alone Resiliency (SAR).

To fix the problem post installation, users should:

1. Start the firewall from *Control Panel | Windows Firewall*.

2. Run **Micros\common\Bin\ConfigureICF.bat**. This will update the exceptions list that RES needs to successfully run with the firewall enabled.

◆ Certain Micros applications (e.g., KDS Controller, Backup Server, ILDS, IFS) can be configured to run on both the server or a client (XP, Windows 7 or 2008). When switching the configuration to run a service on a PC, users should do the following to ensure that the system updates properly:

1. Make the necessary changes in POS Configurator to run the service on the PC.

2. Open Micros Control Panel.

3. Highlight *Restaurant* and click **Reload**. This will propagate all changes out to all clients.

4. Reboot the Server.

5. Reopen MICROS Control Panel. Highlight *Restaurant* and click **Reboot All** to reboot all of the clients.

◆ There are conversion issues due to custom tables, triggers, stored procedures, etc. that Sybase 11 cannot handle. Therefore, every customer must upgrade their existing database on a lab system prior to installing at a live site. This serves to verify that the upgrade will be successful.

◆ The LX Display Controller needs to be configured to use the correct touch screen driver when installed. If this is not done, the touch screen will still work, but the tool bar buttons may become depressed and will not come back up.

Follow these steps to configure the correct touch screen driver:

1. Go to *Start | Programs | Windows Explorer | Control Panel | Touch Display.*

2. Select the correct driver for your monitor.
   Ex: Elo Touch

3. Select the correct connection type.
   Ex: USB

4. Reboot the Display Controller.

◆ To avoid a possible disruption in network communications, set the following option on the server and any clients that are allowed to go into Standby mode.

   1. Open *Device Manager* and right-click on your Network Card.

   2. Select *Properties | Power Management* and then *Disable* the '**Allow the computer to turn off this device to save power**' option.

◆ If the *'MICROS Autosequence Server'* service has been changed to *'allow service to interact with Desktop'* it can cause a COM object error to appear when running an autosequence. If a COM object error is seen do the following to correct it.

   1. Navigate to *Start | Control Panel | Administrative Tools | Services*.

   2. Highlight the service called *'MICROS Autosequence Server'*.

   3. Click on the *'LogOn'* tab.

   4. Under the option *'Local system account'*, un check the box that says *'Allow service to interact with desktop'*.

   5. Restart the MICROS Autosequence Server after disabling this option.

◆ Any external programs that are executed from the Autosequence Server should be configured to have a User Interface of *"None"*.

◆ To avoid Micros services being turned off when the server is inactive, perform the following steps to not allow the server to enter sleep mode:

1. Navigate to *Start | Control Panel | Power Options.*

2. Select *"Change when the computer sleeps"*.

3. Set the option *"Put the computer to sleep"* value to *Never.*

* Adobe version 9 or higher is required on any Win32 clients that will be used as a Manager PC. The Adobe reader installation is required to allow the following reporting applications to function properly:

    1. Autosequence & Reports

    2. Report Viewer

    3. Report Explorer

* Custom report paths for report viewer cannot contain a space unless quotations are used.

    The following are examples of a correct report viewer path:

    * "C:\Custom Report\InvenCountLandscape.rpt"&Login=7

    * C:\CustomReport\InvenCountLandscape.rpt&Login=7

* To be able to use Manager Procedures and Report Viewer on Windows Server 2008 R2 PC, the following steps need to be completed:

    1. Navigate to *Windows Control Panel | Administrative Tools | SERVER MANAGER | Security Information options | Configure IE ESC*

    2. Turn *"OFF"* the IE Enhanced Security for Administrator and Standard User.

* When using Adobe Version 10 or higher, the Adobe floating toolbar will be used as a default when viewing reports from Autosequences and Reports, as well as Report Viewer. Moving the mouse up into the report viewer form will activate the floating toolbar.

◆ The standard toolbar can be displayed by selecting the Adobe
Icon. This will suppress the floating tool bar temporarily.

◆ To toggle back to the floating toolbar, and suppress the
standard toolbar, select the double arrow icon located to the
far right.

◆ Perform the steps below to permanently disable the floating
toolbar and only use the standard toolbar.

1. Open Adobe Reader application.

2. Navigate to the *File Control Menu*.

3. Select *FILE | Edit | Preferences*.

4. Select *Internet*.

5. Under *Web Browser Options*, un check (disable) option
"Display in Read Mode by default."

6. Select *Ok* to save.

7. Close the Adobe Reader application.

◆ When using Adobe Version 9 or lower, the standard tool bar will
display at the top of report viewer.

◆ When configuring object ranges in Report Viewer *(POS Configurator
| Reporting | Report Viewer)*, the user must:

◆ Select and hold the shift + the arrow key to multi-select.

◆ Select using the control key, to select one object at a time.

◆ Servers and Win32 Clients can preview and print reports from Report
Viewer. CE clients can preview reports, but cannot print them.

◆ Note: RES v4.x has the same limitation with Report Viewer on
CE clients.

- RES version 5.1 will no longer support the VeriFone vx670, Pay at the Table device.

- RES version 5.1 currently only supports PM Procedures on the MC55 and MC70 HHT clients.

- RES version 5.1 currently only supports Manager Procedures on the MC55, MC70 and DT430 HHT clients.

- RES version 5.1 does not support finger print scanners on the following operating systems:

  - Windows 7 64 Bit

  - Windows Server 2008

- RES version 5.1 does support finger print scanners on the following clients and operating systems:

  - Workstation 4

  - Workstation 4LX

  - Workstation 5

  - Workstation 5A

  - POS Ready 2009

  - Windows XP

  - Windows 7 32 Bit

- The following are the steps to install the DigitalPersona driver on a 32bit Windows 7 computer:

  1. Do NOT connect the Finger Print Scanner until AFTER the driver is installed.

  2. In *POS Configurator | Devices | User Workstations | Peripherals*, configure a Finger Print Scanner.

3. On a Windows 7 32 bit system, go to Micros\DigitalPersona. Note: If this is a RES server, take the Restaurant to off in the MICROS Control Panel as you will be prompted to reboot once the driver is installed.

4. Right click 'Setup.exe', and then left click 'Run as administrator'.

5. Follow the on screen prompts and when asked for a key, click 'Default Key'.

6. Allow reboot when prompted.

7. Connect the Finger Print Scanner to the workstation.

8. Start RES (POS Operations).

◆ For XP and POS Ready 2009 clients the steps are the same as above Except the MICROS\DigitalPersona\InstallOnly.bat should be used instead of Setup.exe.

◆ For CE clients, just configuring a Finger Print Scanner as a peripheral and restarting POS Operations will load the driver.

◆ RES 5.1 no longer supports the MICROS Secure Desktop. Due to enhanced security in the newer Microsoft operating systems the secure version of the MICROS Desktop is no longer needed. However, the MICROS Desktop without the added security is still supported.

◆ The MICROS Desktop has the ability to add other items to the Desktop. The option 'Close with Desktop' will only support 32 bit operating system applications. If a 64 bit application is selected during setup a message will be displayed and the option to *'Close with Desktop'* is greyed out.

◆ In RES 5.1, the Manager Procedures Help button is only supported on Win32 client types, and is no longer supported on any CE clients.

◆ A Microsoft update must be completed in order for context sensitive help to work on a Windows 7 or a Server 2008 R2 operating system.

- Select the appropriate link below:

  - Windows 7:

    - http://www.microsoft.com/downloads/en/
      details.aspx?displaylang=en&FamilyID=258aa5ec-e3d9-
      4228-8844-008e02b32a2c

  - Server 2008 R2:

    - http://www.microsoft.com/downloads/en/
      details.aspx?FamilyID=a83698ae-4ecb-4660-b402-
      2c5659dcb4ef

- Financial Management Configuration cannot be opened from the *'Search programs and files'* tool. The user will be able to use the Run line and enter FM /cfg to open the configuration utility. A shortcut can be created and targeted to FM.exe /cfg to open the configuration utility as well.

Setname Utility

- Setname Utility (setname.cfg) will not function correctly if extra characters are added to the end of the existing name. The name should be completely changed.

  Example:

  - Changing from MyPC to MyPC1 will not update the server name.

    - The following steps are an example to achieve an update to the server name using the example above:

      - Use Setname to change from MyPC to Temp. Allow reboot when prompted.

      - Use Setname to change from Temp to MyPC1. Allow reboot when prompted.

- The Setname Utility is no longer supported on clients running RES versions 4.3 or higher. Setname of the servers is still supported. This will have no impact on functionality because when RES is installed on a Win32 client, CAL automatically changes the client's name and IP Address to match what is configured in the database.

Delivery Dispatch
- RES 5.1 now installs DeliveryDispatch.Ing in MICROS\RES\POS\Etc. Prior to RES 5.1, it was in MICROS\RES\POS\Bin.

Kitchen Display System (KDS)
- RES 5.1 now uses a version of KDS that is POS independent. Prior to RES 5.1 the KDS was dependent upon RES.

  - KDS features and functionality remain the same.

  - At the release of RES 5.1, the Independent KDS version is 2.1.0.458.

- Restaurant Display Controllers (RDC) require .Net Compact Framework 2.0 to be compatible with RES 5.1.

  - RES v4.x and lower used .Net Compact Framework 1.0.

  - The following can be performed to check the version of .Net Compact Framework on a RDC.

    1. Navigate to *My Device | FS | Utilities | Regeditce.exe*

       - Note: This file may not be available on all RDC clients.

    2. Navigate to HKLM\Software\Microsoft\.NetCompactFramework

  - Steps to Upgrade RDC client to .Net Compact Framework 2.0. (2.0.7045.00)

    1. Determine which type of RDC client you have.

       - The GX model has Part No. 700876-200

       - The LX model has Part No. 700876-210

    2. Attach a USB device with the update package to your DC box.

       - Note: Those two packages are posted to the KDS Hardware tab on the Hardware Portal.

3. Go to *Start | Programs | Update (Swiss Army Knife icon).*

◆   OR   *Start | Settings | Control Panel | Update*.

4. Select *'Local'*.

5. Click Browse and then double click on Hard Disk.

6. Select the correct update package (LX or GX).

7. Highlight the .dtr file and click OK.

8. Click Update.

9. Allow Reboot when prompted for it by setup.

10. Double click the Power Plug icon in bottom right corner of Task Bar and set as follows:

   ◆   Switch state to user idle (screen off) = Never

   ◆   Switch state to system idle = Never

◆   RES 5.1 no longer supports SEI KDS devices. If any SEI OASys or SEI Elite devices are configured and RES is upgraded to 5.1, these devices will be changed to PC-Based. Any KDS device configured to use an SEI display will no longer have a layout and a new chit type will have to be selected.

Credit Card

◆   Users must have full administrative privileges to install credit card drivers.

◆   When installing credit card drivers on a RES 5.1 Server, a Windows Program Compatibility Error dialog box appears: *'This program might not have installed properly'*. Select "This program installed correctly", to complete the driver installation.

Documentation

◆   Documentation is available from the MICROS website, on the RES Product page.

Site Requirements

In order to successfully install and enable a RES Setup system, the following requirements must be met:

Product	Version
Microsoft Windows 7 32 Bit and 64 Bit Ultimate, Enterprise, Professional	SP 1 or higher
Microsoft Server 2008 R2	SP1 or higher
Internet Information Services	7.5 or higher
Microsoft .NET Framework	4.0
Adobe Reader	9.0 or higher

Win32 Clients will require Microsoft. NET Framework 3.5 sp1.

Note: Microsoft. NET Framework 3.5 sp1 will automatically get installed during setup on Win32 RES clients.

Additional Software Requirements

The following third-party applications are used with RES Setup. These application versions must not be changed by the installation of other third-party software. Any changes to the software application will make the RES System unsupportable.

Application	Version
Microsoft DCOM	6.1
ODBC	6.1
Sybase Adaptive Server	11
Crystal Reports Professional*	2008
Borland Delphi Engine	5.0
Sentinel Software Key Driver	7.5
Adobe Acrobat Reader	9.0 or higher

Application	Version
ADO	6.1

*Crystal Reports viewer is installed with RES. If report development is required, the installer must load a full version of Crystal Report Professional. If done, RES Setup must be reloaded afterwards.

Reports developed in later versions of Crystal must be saved using Version 2008 format.

Hard-Drive Space Requirements

The space requirements listed below assume that the full range of options are to be installed:

RES Environment	2008/7 Server	Windows Client
Clean, no prior RES installation	4 GB + size of DB	1 GB

Prior to setup, the system calculates how much space is required for installation of the selected features. If the available disk space is inadequate, an error message is displayed.

Note   *RES 5.1 and higher requires a minimum of 200 MB free space on the root drive, (usually C:). This is true even if choosing to install RES to a different drive.*

For optimum system performance, 30% of the root drive should be free space.

Server Requirements

Overview

This section provides guidelines for configuring a RES store system. Please refer to the Enterprise Management site survey and consult with MICROS Research & Development, Product Management when configuring the EM corporate server.

There are four computer resources that affect system performance:

- Memory (RAM)
- Hard-Disk Size
- Controller Type/Number
- Processor Speed

The demands placed on these resources by RES and Enterprise Office applications are a function of the database and the number of transactions posted in the system. Transactions may be posted from any one of the RES applications. These guidelines are predicated on the RES server being dedicated to RES applications only. If the RES server is to be used for other third-party applications, additional resources may be required. Please refer to third-party software source requirements when determining the configuration needs of your system.

The recommendations provided in this section are designed to yield an acceptable performance under average conditions and based on the current version of software. Every effort is made by the development group to prevent significant increases in server resource requirements as RES moves forward. However, because of our reliance on third-party components such as the Microsoft Operating System, Sybase ASA DBMS, and other tools, we cannot guarantee that the suggested minimum requirements will be suitable for future versions of RES, Sybase, and the Windows OS.

For increased performance, or if the customer is planning future upgrades, MICROS recommends increasing the hardware to the next level of server configuration. These recommendations are based on the current Personal Computer offerings.

<u>Disclaimer</u>

The MICROS Research & Development team has neither tested nor certified PCs from other manufacturers, nor does it keep current on their offerings.

As a rule, the MICROS Customer Service and Research & Development groups do not support PCs from other manufacturers. Non-MICROS PCs should be evaluated in terms of their equivalence to the Hewlett-Packard model. For example, a Dell Optiplex is an equivalent model for an HP Vectra, but NOT for an E60 or E800 Net Server.

MICROS neither recommends nor supports loading an operating system on a hardware platform that is not officially supported by the manufacturer.

Service and support for customers not using a MICROS-approved product will be the total responsibility of the end user. (Note: Performance testing and initial configuration of a third-party PC is available at prevailing rates.)

Further System Recommendations

Performance can be enhanced significantly by increasing RAM and by storing the database on a second hard drive, or moving to a RAID configuration with a caching RAID Controller.

- **Clients** – Windows 7 Pro Hard Drive clients provide better performance for larger configurations.

- **Network** – A 100MB flat network provides adequate performance for a 25-workstation configuration. Integrating into existing, non-MICROS networks requires special considerations.

- When determining system size, the total number of clients refers to all units, including POS Clients, KDS Clients, Hand-Held Terminals, and Backoffice Clients.

◆ **Resiliency** – Raid 5 is a resilient hard-drive configuration that will protect a site in the event of a single hard drive failure. Any sites that require additional operational and data resiliency should consider using a Raid 5 configuration on an appropriate server. It is always recommended to utilize raid configurations through the hardware controller and not recommended to use the raid features of the Operating System.

◆ **Dual Processors** – RES 5.1 and higher do support Dual Processors and Dual Core Servers, however RES applications will not take advantage of the dual-processor/core technology. This means that the user will not see a major performance improvement over a computer utilizing a single processor.

◆ For system purchases, RAM should be purchased in increments of 1 GB or greater. Not only is this the most cost effective option, it is the most efficient. Larger RAM means less slots are used and space is preserved for future expansion.

◆ A mass storage device is recommended when configuring your system. Make sure that this backup storage device has sufficient capacity to hold the MICROS database and all other critical files.

MICROS recommends backing up to the server's physical hard-drive or to another PC on the network (i.e., a 2015 workstation). Tape drives may still be used, but are no longer common. ZIP, Jazz, and CD Read/Write drives are not recommended as they do not have adequate capacity to backup a RES database.

RES 5.1 and higher installs an encrypted database. Sybase recommends that no compression be used when storing an encrypted database. This should be taken into consideration when selecting a backup storage device.

◆ Hard drives can be an important factor in selecting a PC. For maximum system performance, at least 33% of the hard-drive should be free during operations. This is true for each hard drive and each drive partition.

Disk defragmentation tools such as Diskeeper are recommended to maintain hard drives at their most optimum performance.

System Configuration Types

System configuration is based on two factors: 1) number of clients, 2) volume of transactions.

For clarity, transaction levels are defined as follows:

◆ **Low Transaction volume** – Refers to a site where the volume of transactions rarely engages all workstations simultaneously. Hotels and some fine dining table-service restaurants (TSRs) are typically low-volume sites.

◆ **Medium Transaction volume** – Refers to a site where all workstations are often (but not always) engaged simultaneously. Family-style TSRs and moderately busy quick-service restaurants (QSRs) are examples of medium-volume sites.

◆ **High Transaction volume** – Refers to a site where all workstations are continually and simultaneously engaged. High transaction rates, during extended, peak meal periods are typical of QSRs. Also included in this category are TSRs and hotels with a busy bar, and stadiums and arenas where the transaction volume is concentrated during an event timeframe.

Recommended Configurations

System Purchases

This section provides a matrix of possible server configurations. To determine your optimum setup, match the letter in the Client/Volume table (top) with the corresponding column in the Server Configuration details table (below).

# of Clients	Low Volume	Medium Volume	High Volume
4	A	A	A
8	A	B	B
12	B	B	B

# of Clients	Low Volume	Medium Volume	High Volume
16	B	B	B
20	B	B	B

Note   *Any system with more than 9 clients must automatically use Configuration B. Systems with more than 20 clients must use the Windows Server 2008 Operating System.*

Server Configuration	A (Less than 10 clients)	B (More than 10 clients)
Processor Speed	Pentium 4 3.2 GHz	Pentium 4 3.2 GHz
RAM	2GB	4 GB
HD Size	80 GB	80 GB
Network Card	10/100	10/100
CD Drive	DVD\CDRW Combo	DVD\CDRW Combo
OS	Windows 7 Pro, Enterprise, Ultimate	Windows Server 2008 R2, Windows 7 Pro[1]
KDS Controller OS requirements	Windows 7, XP, Server 2008	Windows Server 2008, Windows 7, XP

[1]Windows 7 Pro supports up to 20 clients.

Client Requirements

RES Win 32 Client Requirements

The following table provides the minimum hardware requirements for RES user workstation clients:

Network	10/100 Interface Network
Processor	1.0 GHz
Random Access Memory (RAM)[1]	256 MB
Hard Drive	4 GB
Operating System	Windows XP Pro/WePOS/POS Ready/Win 7 (32 and 64 bit)
Virtual Registry Size	20 MB

[1]RAM requirements for a specific operating system should be used when the minimum is higher than 256 MB.

RES Mobile MICROS Client Requirements

The following table provides the minimum hardware/software requirements for RES Mobile MICROS clients:

Network	802.11b Wireless Ethernet
Processor	ARM V4I - Compatibility
Random Access Memory (RAM)	128 MB
Operating System	Windows Mobile 5 or higher
Monitor	Monochrome or Color
Software	Windows Mobile Device Center

Pre Converting Databases for RES 5.1

RES databases version 3.1 and earlier cannot be upgraded to 5.1. They must first be upgraded to version 3.2 or 4.x, and then pre-converted and then upgraded to 5.1.

The following versions of RES databases can be upgraded to RES 5.1.

- 3.2 ***

- 4.3 HF1, 4.3 HF2, and 4.3 MR3 ***

- 4.4 ***

- 4.5 and 4.5 MR1 ***

- 4.6 and 4.6 MR1 ***

- 4.7 and 4.7 MR1 through MR4 ***

- 4.8 and 4.8 MR1 through MR7 (4.8 MR3 and lower ***)

- 4.9 and 4.9 MR1 through MR9 (4.9 GR ***)

- 4.10 and 4.10 MR1, MR2

- 4.11 and 4.11 MR1, MR2, MR3

- 5.0 and 5.0 MR1 through MR4

Warning   *Any RES version not listed here cannot be upgraded to RES 5.1.*

*** These databases must have a pre-convert script run against them prior to upgrading to 5.1.

All Enterprise Management databases not already at RES 5.x must run the pre-convert script.

Pre Converting RES 3.2 Databases

Warning	*RES 3.2 and 4.x databases that are pre converted for RES 5.1 will no longer work correctly in those earlier RES versions. Therefore all databases should be backed up prior to pre converting.*

◆ The pre convert script does not take the database to RES 5.1. It prepares the database to be upgraded to RES 5.1 later.

◆ Pre convert scripts are on the RES 5.1 CD in the support folder.

◆ All RES v3.2 databases must be pre converted prior to upgrading them to 5.1.

◆ After a v3.2 database has been pre converted, it can either be installed by RES 5.1 Setup, or restored from a command line after RES 5.1 is installed.

Steps to Pre Convert RES 3.2 Databases

1. Copy the "32PreConvertTo5x" folder onto your RES v3.2 server.

2. In MICROS Control Panel take Restaurant to *'OFF'*.

3. Double click PreConvert32DB.bat.

   ◆ The update should complete in 10-20 seconds.

4. Rename that Micros.DB to PreConverted32.DB (just for clarity), and copy it to the RES 5.1 Server.

5. If RES 5.1 has not yet been installed, you can run RES 5.1 Setup and select the PreConverted32.DB to be installed.

6. If RES 5.1 is already installed, see the .

Pre Converting RES 4.x Databases

- The pre convert script does not take the database to RES 5.1. It prepares the database to be upgraded to RES 5.1 later.

- Pre convert scripts are on the RES 5.1 CD in the support folder.

All Enterprise Management databases, both corporate and store must be pre converted prior to upgrading to RES 5.1, regardless of RES version.

| *Note* | *For non EM databases:*
A 4.8 Maintenance Release 4 database (or MR5), or a 4.9 Maintenance Release 1 database, can be upgraded directly to 5.1 without running a pre convert script.

All other 4.3 HF 1 and higher database versions must run the PreConvertRes4XTO50.mcs script prior to upgrading to RES 5.1. |

Steps to Pre Convert RES 4.x Databases

1. Copy the 4xPreConvertTo5x.mcs to your 4.3 HF 1 or higher Server.

2. Have the 4.x DB to be converted running.

3. Open database manager with a user that has rights to do a database rebuild.

4. In database manager go to the Rebuild\Update tab.

5. Click the folder icon under Apply Scripts and browse to PreConvertRes4xTo50.mcs.

6. Select PreConvertRes4xTo50.mcs and click Apply Script.

   - In a few seconds database manager will show *'Successfully applied Micros Compressed Script to Database'*.

7. Click the *'Backup Database'* tab.

8. Enable *'Backup Database'* and click Run.

9. Rename the Database\Data\Backup\Archive\4x.MBZ file just created to PreConverted4x.MBZ (just for clarity), and copy it to the RES 5.1 server.

10. If RES 5.1 has not yet been installed, you can run RES 5.1 Setup and select the PreConverted4x.MBZ to be installed.

11. If RES 5.1 is already installed, see the "Restoring Databases in RES 5.1" section on page 38.

Installing Point Releases and Hotfixes

This section describes the requirements and procedures for installing an upgrade to the RES Version 5.0 or higher software. The current system version must be a released version of RES 5.0 (build 5.0.0003.0416) or RES 5.0 Maintenance Release 1, 2, 3 or 4.

Site Requirements Review

With RES Version 5.0 or higher, the installation process comprises two parts: a **Prerequisite** file and a **RES** setup file. Updates to these files are made independently of each other. Therefore, running the Prerequisites installation may not be necessary for every RES patch release. If your Server is not currently at RES 5.0, refer to RES50_Install_rmf.pdf for details on how to install the RES 5.0 General Release prerequisite and RES Setup files.

Important	*POS Operations will no longer start if the site is not PCI-compliant. Make sure that the proper steps are taken to achieve compliance. Refer to RES411_Install_rmf.pdf for configuration step details, in "Appendix M: RES Security Standard" under 'Enhanced Passwords' section.*

Before You Begin

◆ Make sure that *Script Locking* is turned off when using Norton Anti-Virus software, and that all anti-virus software is disabled when running the service pack.

◆ If using McAfee VirusScan 8.0, disable the Script Stopper software located in the directory under *McAfee Security Center | Virus Scan | Configure virus scan options | Advanced*.

◆ When upgrading on a RES system where the MICROS Portal is installed, be sure to manually shut down the Micros Agent and Micros Watchdog services. Failure to shut down these Portal-related services may result in a system lockup during database conversion.

◆ RES Setup creates 2 log files, **MicrosResPatch.log**, and **MicrosMainPatch.log**, that are both located on the RES Server in the Windows folder. The MicrosResPatch.log documents the pre and post installation procedures and the microsmainpatch.log covers the installation of the files. The client setup log is located in the CALTemp folder on each client and is called Setup_log.txt.

◆ Users who have modified the **Global.css** file (allowing Manager Procedures to support double-byte characters) will need to restore the original version of this file (located in the *Micros\common\ ManagerProcAsp* folder) before installing the Service Pack. Failure to do so will prevent the Service Pack from running. Once the installation is complete, the modified file can be copied back to the directory.

◆ When installing a Service Pack, the user must log in with Administrator rights both before running the patch and after the server reboots.

◆ Sites using Product Management (PM) software should reconcile and approve all packing slips and invoices prior to applying the service pack upgrade. Otherwise, the system may not prevent a user from selecting and modifying receipts in a closed period.

◆ Verify that the prerequisites and versions of RES meet the requirements for patch installation. Prior to installation, the patch will check the prerequisites and RES version in the registry. The patch will not run if the version string does not match. If the patch is run a second time the error message, "Patch terminated by custom action," will display. To determine the specific action that stopped the patch, users can scroll to the bottom of WinDir\MicrosRESPatch.log.

◆ Keep in mind that after installing a patch, attempts to perform an incremental database backup (e.g., calling DM -T) will be unsuccessful. This is because a full database backup must be performed before incremental backups can occur.

Installation and Setup

Follow these steps to install the Point Release (Service Pack):

Stop the System

1. In the MICROS Control Panel, set the Restaurant to **OFF**.

2. Make sure all hard-drive clients are at system closed.

3. Close all applications prior to running the Service Pack, including the MICROS Control Panel.

4. If you have altered any RES core files, you must replace them with the original versions before proceeding. Failure to do so will not stop the patch, but some files may not get updated.

Note   *Prior to installation the system is scanned for escalation files (files with the extension .prepatchrestore). If one is found (e.g., Ops.exe.prepatchrestore), the .prepatchrestore extension will be deleted, and the patch will be able to update the escalated file.*

Apply the Service Pack

1. Create a temporary working folder on your server's hard drive. Make sure that you have 1 GB of available space on the hard drive where the application is stored and the drive where Windows resides.

2. Copy the file (RES_51.exe) to the temporary folder on the RES Server.

3. Double-click to decompress the files from this self-extracting executable. A DOS window will display during the Service Pack installation. The Service Pack will install automatically, copying the files to the appropriate directories.

4. The server will automatically reboot.

Update the Clients

Hard-Drive Clients

In RES 5.x hard drive clients use CAL to update just like WS4's do. After the server reboots, all clients will automatically upgrade. They will reboot several times during the upgrade process.

WS4, WS4 LX, WS5, WS5A, and RDC Clients

Clients will use CAL to automatically update to the current version of RES. Once the server has rebooted, CAL will start the upgrade process. This should occur within 5 minutes of the Server rebooting.

Mobile MICROS Clients

The PPC clients (e.g., MC50) use CAL to get updated. All other Mobile MICROS clients will use the POS Loader to automatically update to the current version of RES.

Once the server has rebooted, the POS Loader will start the upgrade process. This should occur within 5 minutes of the server rebooting. If the upgrade process does not start, cold boot the unit.

Once the upgrade is complete, cold boot the unit.

When a RES 4.0 Server is patched, all clients will be updated automatically.

Restoring Databases in RES 5.1

This section covers restoring databases to an existing RES 5.1 system.

If restoring a 3.2 or 4.x DB to a RES 5.1 system, you should first read the "Pre Converting Databases for RES 5.1" section on page 30.

◆ Restoring from a Micros.DB and a MicrosKeyBackup.mbz or MicrosKeyBackup.MBZ5 is not supported.

◆ Restoring a 4.x database must be only from a complete Micros.MBZ.

◆ Restoring a 5.x database must be only from a complete Micros.MBZ5.

◆ Database Manager (DM) determines what type of database it is by the extension.

- ◆ Micros.DB = 3.2

- ◆ Micros.MBZ = 4.x

- ◆ Micros.MBZ5 = 5.1

◆ If the database has the incorrect extension, DM will believe it is a different version than it actually is, and therefore any update actions taken will fail.

◆ A RES50.MBZ5 database can be restored from either the Database Manager GUI, or from a command line.

◆ RES 3.2 and 4.x databases can only be restored from the command line.

◆ When restoring a RES50.MBZ5 from the Database Manager GUI, it will save a copy of the existing 5.1 database as Data\Replaced.mbz5 just like it did in 4.x.

◆ But if restoring any version of a RES database from the command line, any existing micros.db and micros.log left in the Micros\Database\Data folder will be deleted.

Steps to Restore a 3.2 Database to a RES 5.1 Server

1. Copy your PreConverted32.DB to the RES 5.1 Server.

2. On the RES 5.1 Server open Micros Control Panel and take Restaurant to OFF.

3. Rename or remove any existing Micros\Database\Data\Micros.DB and Micros.log.

   - Warning: If you do not do this, they will be deleted.

4. From CMD line: DM -u <path to PreConverted32.DB>

   - Example: DM -u C:\Temp\PreConverted32.DB

5. If there are spaces in the path, then double quotes must be used.

   - Example: DM -u "C:\My DBs\PreConverted32.DB"

6. This will restore, rebuild and upgrade the database.

7. The server and database will use the 4.0 default encryption keys and DBA and Micros passwords.

8. Micros recommends changing the encryption keys and DBA and Micros passwords.

Steps to Restore a 4.x Database to a RES 5.1 Server

1. Copy your PreConverted4x.MBZ to the RES 5.1 Server.

2. On the RES 5.1 Server open Micros Control Panel and take Restaurant to OFF.

3. Rename or remove any existing Micros\Database\Data\Micros.DB and Micros.log.

   - Warning: If you do not do this, they will be deleted.

4. From CMD line: DM -u <path to PreConverted4x.MBZ>

◆ Example: DM -u D:\Temp\PreConverted4x.MBZ

5. If there are spaces in the path, then double quotes must be used.

◆ Example: DM -u "C:\My DBs\PreConverted4x.MBZ"

6. This will restore, rebuild and upgrade the database.

7. The server and database will use the encryption keys and passwords from the 4x.MBZ.

Appendix A: GSS Setup

Installing Caller ID with Rochelle Box

Use the following steps to install Caller ID with the Rochelle Box.

> *Note: Before installing Caller ID with the Rochelle box, contact the phone company to have the phone line split so that one part goes to the phone and the other part goes to the Rochelle box.*

Rochelle Model 2045

1. Add the following registry entry to the server:

Key Location	[HKEY_LOCAL_MACHINE\SOFTWARE\MICROS\ GSS\CALLERID\ROCHELLE\PARAMETERS]
Name	ComPort
Data	COM1*

*COM1 is the default setting. If using Caller ID on a COM port other than COM1, be sure to set the value accordingly.

2. Attach the Rochelle Caller ID box to the correct COM port on the Server.

3. Start the MICROS Caller ID Service from the Windows Control Panel Services.

> *Note: Visit www.rochelle.com for more information about installing your Caller ID device.*

Rochelle Model 2050

1. Add the following registry entry to the server:

Key Location	[HKEY_LOCAL_MACHINE\SOFTWARE\MICROS\ GSS\CALLERID\ROCHELLE]
Name	NumDevices
Data	1

The device registry settings for the first device are added at the key location shown below. Default parameters are provide:

Key Location	[HKEY_LOCAL_MACHINE\SOFTWARE\MICROS\ GSS\CALLERID\ROCHELLE\PARAMETERS]
Name	ComPort
Data	COM1*
Name	ComParameters
Data	Baud = 2400 Parity = N Data = 8 Stop = 1
Name	InitString
Data	AT_F0\r\nAT_R0=0\r\n
Name	DeviceLines
Data	4

*COM1 is the default setting. If using Caller ID on a COM port other than COM1, be sure to set the value accordingly.

The device registry settings for each additional device are added at \SOFTWARE\MICROS\GSS\CALLERID\ROCHELLE\PARAMETERS[#], where [#] refers to the device number. The table below provides the default parameters for sample Device 2:

Key Location	[HKEY_LOCAL_MACHINE\SOFTWARE\MICROS\GSS\CALLERID\ROCHELLE\PARAMETERS2]
Name	ComPort
Data	COM3
Name	ComParameters
Data	Baud = 2400 Parity = N Data = 8 Stop = 1
Name	InitString
Data	AT_F0\r\nAT_R0=0\r\n
Name	DeviceLines
Data	4

2. Attach the Rochelle Caller ID box to the correct COM port on the Server.

3. Start the MICROS Caller ID Service from the Windows Control Panel Services.

> *Note: Visit www.rochelle.com for more information about installing your Caller ID device.*

Running Caller ID in Demo Mode

Use the following steps to run Caller ID in Demo Mode:

1. Add the following registry entry to the server:

Key Location	[HKEY_LOCAL_MACHINE\SOFTWARE\MICROS \GSS\CALLERID\ROCHELLE\PARAMETERS]
Name	ComPort
Data	COM1*

*COM1 is the default setting. If using Caller ID on a COM port other than COM!, be sure to set the value accordingly.

2. Attach a null model cable from COM1 to COM2 on the server.

3. Start the Rochelle Emulator.

4. Start the MICROS Caller ID Service from the Windows Control Panel Services.

Note: The Rochelle emulator can be found on the Guest Services Solution product page at www.micros.com.

Appendix B: Firewall Setup

Firewall Setup

Firewalls should be enabled prior to installing RES 5.1 on a RES server or Win 32 client.

If the firewall is enabled after installation, the clients will not be able to communicate with the server and will continuously display prompts for Backup Server Mode (BSM) and Stand-alone Resiliency (SAR).

Once RES is installed, the problem can be corrected by running the batchfile %**MicrosDrive%\Micros\common\Bin\ConfigureICF.bat**. This will update the exceptions list that RES needs to successfully run with the firewall enabled.

Appendix C: Frequently Asked Questions (FAQs)

This section provides answers to the most frequently asked questions about RES.

RES 5.1 Issues

1. Why won't the image display after I replace the res3700.bmp file in \micros\res\pos\etc folder?

The **res3700.bmp** has been moved to the **\Bitmaps** folder under MICROS. RES Setup automatically moves this file from its old location to the folder. If you wish to place your own **res3700.bmp** on the system, you must copy it to the appropriate folder location on each client, as indicated below:

> *Note: A single .bmp file may be used on all three platforms. However, you may want to create a separate file for the Mobile MICROS due to its smaller screen size.*

- **Win32 Clients** — **\MICROS\RES\POS\Bitmaps**.

- **WS4 Clients** — **\MICROS\Bitmaps**:

  To replace the file on the WS4:

  1. Copy the **res3700.bmp** to the following folder on the RES Server: **\MICROS\RES\CAL\WS4\Files\CF\MICROS\Bitmaps**

  2. Wait up to 30 seconds for the file to transfer to the WS4 Client.

  3. Reboot the WS4 Client to load the image for POS Operations.

◆ **WS4 LX Clients** — **\MICROS\Bitmaps**:

To replace the file on the WS4 LX:

1. Copy the **res3700.bmp** to the following folder on the RES Server: **\MICROS\RES\CAL\WS4LX\Files\CF\MICROS\ Bitmaps**

2. Wait up to 30 seconds for the file to transfer to the WS4 LX Client.

3. Reboot the WS4 LX Client to load the image for POS Operations.

◆ **WS5 Clients** — **\MICROS\Bitmaps**:

To replace the file on the WS5:

1. Copy the **res3700.bmp** to the following folder on the RES Server: **\MICROS\RES\CAL\WS5\Files\CF\MICROS\ Bitmaps**

2. Wait up to 30 seconds for the file to transfer to the WS5 Client.

3. Reboot the WS5 Client to load the image for POS Operations.

◆ **Mobile MICROS** — **\MICROS\Bitmaps**.

To replace the file on the Mobile MICROS client:

1. Copy the **res3700.bmp** to the following folder on the RES Server: **\MICROS\RES\CAL\HHT\MICROS\Bitmaps**

2. Wait up to 30 seconds for the file to transfer to the Mobile MICROS Client.

3. Reboot the Mobile MICROS Client to load the image for POS Operations.

◆ **PPC Clients — \MICROS\Bitmaps**:

To replace the file on the PPC:

1. Copy the **res3700.bmp** to the following folder on the RES Server: **\MICROS\CAL\PPC\Files\MICROS\ Bitmaps**

2. Wait up to 30 seconds for the file to transfer to the PPC Client.

3. Reboot the PPC Client to load the image for POS Operations.

◆ **PPC70 Clients — \MICROS\Bitmaps**:

To replace the file on the PPC70:

1. Copy the **res3700.bmp** to the following folder on the RES Server: **\MICROS\CAL\PPC70\Files\MICROS\ Bitmaps**

2. Wait up to 30 seconds for the file to transfer to the PPC70 Client.

3. Reboot the PPC70 Client to load the image for POS Operations.

Note: Bitmaps used for POS touchscreen keys should also be placed in the \Bitmaps folder.

2. Why are all client nodes listed in the POS Configurator (Devices | Network Nodes) displayed in the MICROS Control Panel even when they are not currently connected to the system?

With this release, MICROS Control Panel allows the user to specify whether all client nodes or just connected client nodes will be displayed. Previously (Version 3.1 and lower), only connected client nodes were shown. This remains the default behavior.

To display all clients:

1. From the Windows Start Menu, select **Programs | MICROS Applications | MICROS Control Panel**.

2. Go to the menu bar and select **View | Show All Clients**. The system tree is modified to display all clients.

3. After changing the computer name or IP address of the Server, why can't I start POS Operations on any of my clients?

Changes made to the Server identity are not automatically propagated out to the clients. To send these changes to the clients:

1. After making changes in network node, click the *"Update Host File"* button.

2. From the Windows Start Menu, select **Programs | MICROS Applications | MICROS Control Panel**.

3. Highlight the SQL Database Server node.

4. Go to the Status tab and click the **Reload** button.

5. Take Restaurant to *'OFF'*.

6. Reboot server.

Within a few minutes, the clients should be operational.

4. Is the host file still important to the system?

Yes, the host file is still used by the RES System and must be accurate. The RES System also uses a file called **MDSHosts.xml**. This file is automatically generated by the system and should not be manually copied or edited by the user. The location of the file depends on the platform, as indicated below:

- **Server — \MICROS\Common\etc**

- **Win32 Clients — \MICROS\Common\etc**

- **WS4, WS4 LX, WS5 Clients — \CF\MICROS\etc**

- **Mobile MICROS — \MICROS\etc**

- **RDC Clients — \FS2\MICROS\etc**

Note: *For troubleshooting purposes, this file may be read only. Do not edit this file in any way.*

This file is generated by the system and is based on information from the MICROS database. The following POS Configurator forms need to have accurate client information in order for the file to be correct:

- *Devices | Network Node*

- *Devices | Devices*

- *Devices | User Workstations*

- *System | Restaurant*

Client Issues

1. Can I save the Compact Flash on a malfunctioning MICROS 3700 WS4?

Yes. If you have a WS4 Client that has gone bad, you simply remove the Compact Flash from that unit and install it into a good WS4.

> *Note: For information and instructions on removing/ installing the Compact Flash, please refer to the Workstation 4 Setup Guide, available on the MICROS website under Products | Hardware Solutions | Documentation.*

2. Can I move a WS4 from one system to another?

Yes. To do this, follow these steps to remove the MICROS folder from the Compact Flash of the WS4 before installing a unit into a RES System:

1. On the WS4, open the Windows Explorer and navigate to **\CF**.

2. Delete the **\MICROS** subfolder at this location.

3. Power up the WS4 Client and establish a network connection to the system.

4. Reconfigure CAL as follows:
   - Select Start | Programs | CAL | Reconfigure CAL.

   - Select the RES Server to which this WS4 will be connected. (Do not select the DHCP option.)

   - Select a name for this WS4 Client from the list of available nodes.

   - Save the configuration. CAL will update the unit with the system application software.

3. How do I map a drive to a WS4 client?

You don't. The WS4 does not allow files to be transferred to it using traditional Windows methods. Instead, files are transferred to the unit via the Client Application Loader (CAL). For information on setting up CAL packages and files, refer to *Client Application Loader (CAL) File Specification (MD0003.061)*.

On the other hand, the system Server and its hard-drive (Win32) clients may be accessed *from* the WS4 using a method similar to Windows mapping. To do this:

1. From the WS4, open the Windows Explorer.

2. In the location box, type the UNC path of the PC to be accessed.

    For example, to access the **c:\micros\res\pos** share on a server with a computer name of "RESServer 5," enter **\\RESServer5\micros\res\pos**.

Once the appropriate share has been accessed, you may perform the required Windows operation.

4. How do I set up my custom icons to work on a Mobile MICROS and WS4 client?

The **customicons.dll** created for previous versions of RES will work only on hard-drive clients. Additional **customicons.dll** files were created for Mobile MICROS and WS4 devices. As before, you will need to load your own icons into these files using an Icon Editor.

All **customicons.dll** files are available in the **Support\CustomIcons** folder on the RES 5.1 CD and must be manually copied to the folder location for each client type:

◆ **Win32 Clients — \MICROS\RES\POS\Bin**

◆ **WS4 Clients — \MICROS\Bin**

To copy the file to the WS4:

1. Create a **\MICROS\RES\CAL\WS4\Files\CF\MICROS\Bin** folder on the RES Server:

2. Copy the WS4 **customicons.dll** to this folder.

3. Wait up to 30 seconds for the file to transfer to the WS4 Client.

◆ **Mobile MICROS** — **\MICROS\Bin**

To copy the file to the Mobile MICROS client:

1. Create a **\MICROS\RES\CAL\HHT\MICROS\Bin** folder on the RES Server:

2. Copy the Mobile MICROS **customicons.dll** to this folder.

3. Wait up to 30 seconds for the file to transfer to the Mobile MICROS Client.

> *Note: You will need to reboot the clients in order for the images to take effect.*

5. **How do I copy my OPSDisplayUser.cfg to all clients?**

A single **OPSDisplayUser.cfg** file may be used on all three platforms. However, because it is not included in RES Setup, the file will not automatically copy during the installation. Instead, it must be manually copied to the following folder location for each client type:

◆ **Win32 Clients** — **\MICROS\RES\POS\etc**

◆ **WS4 Clients** — **\MICROS\etc**

To transfer the file to the WS4:

1. Copy the **OPSDisplayuser.cfg** file to the **\MICROS\RES\CAL**

WS4\Files\CF\MICROS\etc folder on the RES Server.

2. Wait up to 30 seconds for the file to transfer to the WS4 Client.

3. Reboot the WS4 Client to load the settings for POS Operations.

◆ **WS4 LX Clients — \MICROS\etc**

To transfer the file to the WS4 LX:

1. Copy the **OPSDisplayuser.cfg** file to the **\MICROS\RES\CAL\ WS4LX\Files\CF\MICROS\etc** folder on the RES Server.

2. Wait up to 30 seconds for the file to transfer to the WS4 LX Client.

3. Reboot the WS4 LX Client to load the settings for POS Operations.

◆ **WS5 Clients — \MICROS\etc**

To transfer the file to the WS5:

1. Copy the **OPSDisplayuser.cfg** file to the **\MICROS\RES\CAL\ WS5\Files\CF\MICROS\etc** folder on the RES Server.

2. Wait up to 30 seconds for the file to transfer to the WS5 Client.

3. Reboot the WS5 Client to load the settings for POS Operations.

◆ **WS5A Clients — \MICROS\etc**

To transfer the file to the WS5A:

1. Copy the **OPSDisplayuser.cfg** file to the **\MICROS\RES\CAL\ WS5A\Files\CF\MICROS\etc** folder on the RES Server.

2. Wait up to 30 seconds for the file to transfer to the WS5A Client.

3. Reboot the WS5A Client to load the settings for POS Operations.

◆ **Mobile MICROS — \MICROS\etc**

To transfer the file to the Mobile MICROS:

1. Copy the **OPSDisplayuser.cfg** file to the **\MICROS\RES\CAL\
   HHT\MICROS\etc** folder on the RES Server.

2. Wait up to 30 seconds for the file to transfer to the Mobile
   MICROS Client.

3. Reboot the Mobile MICROS Client to load the settings for POS
   Operations.

6. How do I copy custom scripts to all clients?

Scripts are custom files, created by the installer to do a variety of tasks.
They are not included during installation, but must be manually copied to
the appropriate directory.

> *Note: Because the WS4 and Mobile MICROS platforms
> are based on Windows CE, existing Win32 scripts may
> not work on those platforms. Be aware that compiled files
> may need to be recompiled in a development environment
> that supports this type of Operating System.*

Although scripts can reside anywhere on the system, MICROS
recommends storing them together in the **Scripts** folder. The location of
this folder will vary, depending on the client type:

◆ **Win32 Clients** — **\MICROS\RES\POS\Scripts**

◆ **WS4 Clients** — **\MICROS\Scripts**

   To add scripts to the WS4:

   1. Copy file(s) to the **\MICROS\RES\CAL\WS4\Files\CF\
      MICROS\Scripts** folder on the RES Server.

   2. Wait up to 30 seconds for the file(s) to transfer to the WS4 Client.

◆ **WS4 LX Clients** — **\MICROS\Scripts**

To add scripts to the WS4 LX:

1. Copy file(s) to the **\MICROS\RES\CAL\WS4LX\Files\CF\ MICROS\Scripts** folder on the RES Server.

2. Wait up to 30 seconds for the file(s) to transfer to the WS4 LX Client.

◆ **WS5 Clients — \MICROS\Scripts**

To add scripts to the WS5:

1. Copy file(s) to the **\MICROS\RES\CAL\WS5\Files\CF\ MICROS\Scripts** folder on the RES Server.

2. Wait up to 30 seconds for the file(s) to transfer to the WS5 Client.

◆ **WS5A Clients — \MICROS\Scripts**

To add scripts to the WS5A:

1. Copy file(s) to the **\MICROS\RES\CAL\WS5A\Files\CF\ MICROS\Scripts** folder on the RES Server.

Wait up to 30 seconds for the file(s) to transfer to the WS5A Client.

◆ **Mobile MICROS — \MICROS\Scripts**

The same method is used to add a file to any hand held device. Using the PPC 70 as an example:

1. Copy file(s) to the **\MICROS\RES\CAL\ PPC70\MICROS\Scripts** folder on the RES Server.

2. Wait up to 30 seconds for the file(s) to transfer to the Mobile MICROS Client.

6. How do I copy SIM scripts to all clients?

A single SIM script (**pmsxxx.isl**) may be used on all three platforms. This file is not included during installation, but must be manually copied to the appropriate client directory.

> *Note: Because the WS4 and Mobile MICROS platforms are based on Windows CE, existing Win32 scripts may not work on those platforms. For more information, refer to the RES 3.2 Read Me First (MD0003-057).*

- **Win32 Clients — \MICROS\RES\POS\etc**

- **WS4 Clients — \MICROS\etc**

   To add SIM scripts to the WS4:

   1. Copy the **pmsxxx.isl** file to the **\MICROS\RES\CAL\WS4\ Files\CF\MICROS\etc** folder on the RES Server.

   2. Wait up to 30 seconds for the file to transfer to the WS4 Client.

- **WS4 LX Clients — \MICROS\etc**

   To add SIM scripts to the WS4 LX:

   1. Copy the **pmsxxx.isl** file to the **\MICROS\RES\CAL\WS4LX\ Files\CF\MICROS\etc** folder on the RES Server.

   2. Wait up to 30 seconds for the file to transfer to the WS4 LX Client.

- **WS5 Clients — \MICROS\etc**

   To add SIM scripts to the WS5:

   1. Copy the **pmsxxx.isl** file to the **\MICROS\RES\CAL\WS5\ Files\CF\MICROS\etc** folder on the RES Server.

   2. Wait up to 30 seconds for the file to transfer to the WS5 Client.

◆ **WS5A Clients — \MICROS\etc**

To add SIM scripts to the WS5:

1. Copy the **pmsxxx.isl** file to the **\MICROS\RES\CAL\WS5A**
   Files\CF\MICROS\etc folder on the RES Server.

2. Wait up to 30 seconds for the file to transfer to the WS5A Client.

◆ **Mobile MICROS — \MICROS\etc**

To add SIM scripts to the Mobile MICROS:

1. Copy the **pmsxxx.isl** file to the **\MICROS\RES\CAL**
   PPC70\MICROS\etc folder on the RES Server.

2. Wait up to 30 seconds for the file to transfer to the Mobile
   MICROS Client.

7. How do I open a file on a WS4, WS4 LX, WS5, WS5A or RDC Client?

Files can be opened on a WS4, WS4 LX, WS5, WS5A or RDC Client as
follows:

◆ Using WordPad:

   ◆ From the Windows Start Menu, select *Programs | Microsoft*
      WordPad to start the application.

   ◆ From the menu bar, select *File | Open* to launch the dialog box.

   ◆ Browse to the appropriate file and select. (You may need to
      change the **File Type** to *All Documents* to locate the desired file.)

   ◆ Double-click to open the file.

◆ Opening a file directly:

   ◆ Locate the required file in the Window Explorer.

◆ Rename the file, giving it a .txt or .doc extension.

◆ Double-click to open the file.

8. Where can I find MICROS Confidence Test on a WS4, WS4 LX, WS5 or WS5A Client?

This application can be launched from the Windows Start Menu by selecting *Programs | MICROS Applications | Confidence Test*.

> *Note: The WS4 comes with a built-in diagnostic utility for all hardware components. This utility may also be used. To access it:*
>
> ◆ *From the Desktop, touch the My Computer icon twice.*
> ◆ *Touch the DOC icon twice.*
> ◆ *Touch the Utilities folder twice.*
> ◆ *Touch the DiagUtility icon twice to start the WS4 diagnostic utility.*

If a shortcut for the MICROS Confidence test is not available, you can always access the program via Explorer using the following steps:

◆ From the Windows Start Menu, select *Programs | Windows Explorer.*

◆ Open **\CF\MICROS\bin**.

◆ Touch **microscfdtest.exe** twice.

9. How do I open the Windows Registry on a WS4, WS4 LX, WS5, or WS5A Client?

The registry on a WS4, WS4 LX, and WS5 is similar to a Win32 client registry. MICROS does not recommend editing the registry directly. However, should it be necessary, the following steps should be taken:

◆ From the Windows Start menu, select *Programs | Windows Explorer.*

◆ Open \DOC\Utilities.

◆ Touch the regeditWS4.exe twice to start the WS4 registry editor.

Note: Mobile MICROS Clients do not permit direct access to the registry.

10. How do I open the Windows Registry on a RDC Client?

The registry on a RDC is similar to a Win32 client registry. MICROS does not recommend editing the registry directly. However, should it be necessary, the following steps should be taken:

◆ From the Windows Start menu, select *Programs | Windows Explorer.*

◆ Open \FS\Utilities.

◆ Touch the regeditCE.exe twice to start the RDC registry editor.

11. How do I start POS Operations on a WS4, WS4 LX, WS5 or WS5A Client?

If the Client is up, POS Operations should be running already. That is the default start position for this workstation. If it is not, you may start POS Operations by going to the Windows Start Menu and selecting *Programs | MICROS Applications | Start RES.*

If a shortcut is not available, you can always access the program via Explorer using the following steps:

◆ From the Windows Start Menu, select *Programs | Windows Explorer.*

◆ Open **\CF\MICROS\bin**.

◆ Touch **AppStarter.exe** twice.

12. Why does POS Operations say "System Closed" on a Client?

Although POS Operations should always be running on the clients, that does not guarantee the units will be operational (i.e., able to ring transactions).

In RES 4.0 or higher, clients are not individually controlled by the MICROS Control Panel. You cannot start and stop POS Operations on these devices.

All clients are considered unmanaged clients — they take on the state of the RES Server. Therefore, if the Server is set to Back of House in the MICROS Control Panel, then all unmanaged clients will display a "System Closed" screen.

To ring transactions on unmanaged clients, the MICROS Control Panel must set the entire RES System (i.e., the Restaurant) to Front of House.

13. How do I bring up the CE Task Manager on a WS4, WS4 LX, WS5, WS5A or RDC Client?

To start Task Manager on a WS4 Client, hold down the [Alt] key and press the [Tab] key on the keyboard.

14. How do I access other applications while POS Operations is running on a WS4, WS4 LX, WS5 or WS5A Client?

The CE Operating System does not provide a mechanism for minimizing POS Operations. You can still program a Minimize function key on a touchscreen, but be aware that when the key is pressed, it will bring up the Windows CE Start Bar. From here, you can access other applications, as necessary.

If a keyboard is attached to the Client, the Windows CE Start Bar may be accessed by holding down [Ctrl] and pressing the [Esc] key.

15. How do I shutdown POS Operations on a WS4, WS4 LX, WS5 or WS5A Client?

Although MICROS does not recommend shutting down POS Operations, we recognize that sometimes this is necessary for troubleshooting purposes.

To shutdown POS Operations, attach a keyboard to the Client and do the following:

* Bring up the Windows CE Start Bar by pressing the [Ctrl]-[Esc] key combination simultaneously.

* Hold down the [Alt] key and touch the POS Operations application that appears in the Task Bar. A **Close** option will display at the bottom of the screen.

* Press **Close** to shutdown POS Operations.

16. How do I turn off my WS4, WS4 LX, WS5 or WS5A Client?

The power switch is located on the front right of the unit, on the underside of the display screen. It is a small circular switch that protrudes very little and can be easily missed.

To turn off the unit, you must hold the power switch for at least five seconds. Make sure that the Operator LED changes from a solid green or blue to OFF. **This is critical**. Failure to properly turn off the power will place the unit in Suspend Mode, not OFF. For more information about the power switch and it's different states, refer to the Workstation 4 Setup Guide, available from the MICROS Website under *Products | Hardware | Documentation*.

17. How do I create a screen capture on a Mobile MICROS HHT or a WS4, WS4 LX, WS5 or WS5A Client?

Microsoft provides a utility called "Remote Display Control" which may be used through ActiveSync® to capture HHT screens and save them as bitmap files.

Currently, there are no tools available to capture screens on a WS4, WS4 LX, or WS5.

18. Can I load other applications on a WS4, WS4 LX, WS5 or WS5A Client?

The WS4, WS4 LX, WS5 and WS5A are capable of running any CE-compatible application. However, the WS4, WS4 LX, WS5 and WS5A are each intended to be a POS appliance that allows the RES user to run POS Operations and Manager Procedures. By running other applications on the WS4, WS4 LX, WS5 or WS5A, you assume the responsibility for installation and testing on this platform.

The WS4, WS4 LX, WS5 and WS5A have a built-in Client Application Loader (CAL). Additional information can be found in the *Workstation 4 Setup Guide* and in the *Client Application Loader (CAL) File Specification (MD0003-061)*.

19. Do I need to translate POS Operations text for each client platform?

No. You can create one set of POS Operations' translation files and copy them to all three platforms.

20. Why are my fonts different sizes since I upgraded?

Please refer to the document "Editing OPSDisplayUserConfig File," located on the RES 5.1 CD under **\Support\OPSDisplayUser\ OPSDisplayUserCfg.pdf.**

21. Is there a way to set the number of lines displayed in the database tables?

Yes. By default, when viewing any of the database tables through the Interactive SQL (DBISQL), there is a MICROS-imposed limit of 500 records. To change this:

1. Open ISQL by selecting *Start | MICROS Applications | Utilities | Database | Sybase Adaptive Server Anywhere | Interactive SQL*.

2. From the menu bar, select *Tools | Options* and click on the **Results** icon.

3. Change the **Maximum number of rows to display** to the desired value.

Appendix D: Wireless Workstation 4

This section describes procedures for setting up the Wireless Workstation 4 (WS4).

Before You Begin

Before installing the Cisco Wireless Card in the WS4, follow these steps to confirm that the system has been upgraded to RC5.1 or higher. To do this:

1. From the WS4, click *Start | Programs | Windows Explorer | Doc | Utilities | DiagUtility* to open the utility program.

2. Check to make sure that the following versions of the software are running:

   ◆ Diagnostic Version 1.84

   ◆ CAL Version 1.0.2.26 or higher

If these versions are not installed on the workstation(s), you will need to upgrade the system through the Client Application Loader (CAL), using a hard-wired network cable. This must be done before configuring the wireless network card.

Encryption

The wireless Cisco card does not support 128-bit encryption. If you are using 128-bit encryption on your wireless access point, you will need to downgrade it to 40-bit encryption.

Configuring the Workstation

Once the workstation is running the correct versions of the software, follow these steps to configure for wireless communication:

1. In the MICROS Control Panel, set the Restaurant level to **Off** or **Database**.

2. Power off the WS4.

3. Disconnect any LAN cables.

4. Insert the Cisco wireless card into the card slot on the bottom of the WS4.

5. Power on the WS4.

6. After the system restarts (the first 1-2 seconds), press **[Ctrl]-[Shift]-[End]** to exit CAL.

7. Configure the wireless card:

    ◆   From the Windows Start menu, click *Settings | Control Panel | Network and Dial-up Connections*.

    ◆   Select CISCO1. A dialog window is displayed.

    ◆   On the *IP Address* tab, select one of the radio buttons to either manually enter an IP Address or use DHCP to assign one automatically.

- Skip the *Name Servers* tab.

- Go to the *Wireless Networks* tab).

- Select an access point from the list of **Available Networks** and click the **Configure** button to define encryption that will allow the workstation and access point to communicate.

  An example of 40-bit encryption would be:

  1. Enable only the **Data encryption (WEP enabled)** option.

  2. Disable all other options.

  3. Click **Modify WEB KEY**.

  4. Input the network key (e.g., 1011121314). The access key should be the same value/number you selected when you configured your wireless access point for encryption. If you are using a Symbol device, you have the ability to insert your own values or select one of four predefined values.

  5. In the **Key Format** box, choose *Hexadecimal* digits.

  6. Select a **Key Length** of *40-bit* (10 digits).

  7. The **Key Index** can remain at *0*.

  8. Click **OK** to exit.

  9. Click **OK** again.

  10. Verify that your selected network is in the **Preferred networks** list. If not, highlight it and click the **Add** button.

Other Security Considerations

While configuring the CISCO card, users may define the **Network to Access**. This is done through the Windows Start Menu by selecting *Settings | Control Panel | Cisco1 | Wireless Networks* and clicking the **Advanced** button.

The following options are presented:

1. Any available Network (access point preferred).

2. Access point (Infrastructure) networks only.

3. Computer-to-Computer (Ad hoc) networks only.

For greater security, MICROS recommends using option 2, allowing communications with the defined access point only.

8. Exit all forms.

9. From the ICON tray (bottom right corner of the task bar), double-click on the Cisco1 network icon. The icon looks like 2 computer screens.

10. Go to the *IP Information* tab and confirm the information.

11. Go to the *Wireless Information* tab. Confirm the connection to the access point and signal strength.

12. Reboot the WS4.

Once the unit comes back up, the error message "Network Cable is not connected. Please reconnect." may be displayed. Click **OK** to continue. This message is triggered by a timeout condition and does not affect operation. It will be addressed in the next version of CAL.

Be advised that the message may display every time the workstation is rebooted. In addition, the system may ask if you want to disable CAL. If this occurs, select **No**.

At this point, the system should be on the network and CAL should be looking for updates. If not, retrace your steps and try again.

> ***Note:*** *If you are changing the IP Address or the Name of either the Client or Server, you will need to configure the POS Configurator accordingly.*
>
> *In addition, you will need to point the workstation to the Server by going to the Windows Start Menu and selecting Programs | Reconfigure CAL.*

Known Issues

The following issues have been noted while configuring the Wireless Workstation 4:

1. Location and antenna positions are very fragile. Moving the antenna six inches can cause the WS4 to lose its connection and create a system-closed message until the signal is reacquired. When this happens, the WS4 should go to SAR Mode, provided that the feature is enabled.

2. Side-by-side WS4 units displayed different characteristics in their ability to get a signal, and in the degree of signal strength going to the same access point.

Appendix E: SwitchTo.exe

Description

SwitchTo.exe is a Windows application that allows users to change the system's focus (i.e., the active, foreground window) from one application to another using a command-line prompt.

Platforms

Win32, CE-WS4

File Location:

%RESROOTDIR%\Bin

Usage

SwitchTo.exe is a command line application with 4 possible arguments:

Note: Using the Switchto.exe command without a command line parameter will display a short message box describing the available switches.

-w WindowTitle

The -w switch tells the application to bring the window with the specified windows title to the foreground.

Example

C:\MICROS\res\pos\bin>SwitchTo.exe -w 3700 POS Operations

(Brings POS Operations to the foreground)

-c Class Name

The -c switch tells the application to bring the window with the specified windows class to the foreground.

Example

C:\MICROS\res\pos\bin>SwitchTo.exe -c 3700OPSAPP

-s StartCommand

The -s command is to start an application if the window with the windows title or class name cannot be found.

Example

C:\MICROS\res\pos\bin>SwitchTo.exe -w 3700 POS Operations -s Ops.exe

(Starts OPS.exe if the Windows title cannot be found.)

Common Name

The common name allows windows that have different class names and Windows titles across platforms to be unified under a single, logical name. At this time, the only common name supported by the application is KDS.

Example

C:\MICROS\res\pos\bin>SwitchTo.exe KDS

Configuring a Logical Name

Optional logical names can be added using the Windows registry. The optional logical names only operate on the windows title.

To add another logical name to the registry:

1. Make sure that following Key has been added:

    HKEY_LOCAL_MACHINE\SOFTWARE\MICROS\Common\ SwitchTo

2. Add a String Value to this registry key and enter the logical name as the string value identifier. Add the desired window title as the actual string value.

Example

String Name: OPS

String Value: 3700 POS Operations

Sample Command: C:\MICROS\res\pos\bin>SwitchTo.exe OPS
(changes focus to POS Operations)

Appendix F: Order Confirmation Board (OCB)

This section contains instructions for installing, configuring, and using the 3700 POS Interface to the Texas Digital AccuView Order Confirmation Board (OCB), the Texas Digital Wenview OCB, and the MICROS OCB.

The OCB Interface supports output from the following POS Clients to the OCB device:

◆ RES Server

◆ Win32 Client

◆ WS4 Client

◆ WS4 LX Client

◆ WS5 Client

◆ WS5A Client

*****************************IMPORTANT*****************************

Installing RES could overwrite the existing Scripts\OCBserver.ini file. This new file will not have any default settings. Therefore, it is crucial that you Save a copy of your existing Scripts\OCBServer.ini Prior to running a RES patch.

****

Introduction

As of RES 4.11 MR3 and RES 5.1, RES supports the new MICROS Drive-Thru Display Controller. The MICROS Drive-Thru Display Controller can run on any supported MICROS platform. POS Operations can also run on a workstation that is running the MICROS Drive-Thru Display Controller.

In the following installation instructions, the new files that are only associated with the MICROS Drive-Thru Display Controller have been added. The steps will be marked with a note and applicable instructions.

Installation

In RES 5.x, OCB files are installed with RES Setup. Some editing, renaming and copying of the appropriate files is necessary to configure the system for use.

Procedures

Follow these steps to configure the OCB Interface software:

1. Configure the files on the RES Server. After RES Setup has been run, all files are located in the *\micros\res\pos\scripts* folder.

   Confirm that the folders listed below exist on your server. If not, create them.

   - **OCBClient.isl**   Rename and copy to the following folders:

     - \micros\res\cal\win32\files\micros\res\pos\etc

     - \micros\res\cal\ws4\files\cf\micros\etc

     - \micros\res\cal\ws4LX\files\cf\micros\etc

     - \micros\res\cal\ws5\files\cf\micros\etc

     - \micros\res\cal\ws5A\files\cf\micros\etc

   - **OCBClient.ini**   Copy to the following folders:

     - \micros\res\cal\win32\files\micros\res\pos\scripts

     - \micros\res\cal\ws4\files\cf\micros\scripts

     - \micros\res\cal\ws4LX\files\cf\micros\scripts

     - \micros\res\cal\ws5\files\cf\micros\scripts

     - \micros\res\cal\ws5A\files\cf\micros\scripts

> *Note: The OCBClient.isl file must be renamed to match the Interface Configuration.*

> *Note: The installation of the client files to the CAL folder structure is all that is needed to install the OCB Interface software on a client. Once the files have been downloaded to the client, they may be deleted from the server and edited at the client level. This optional procedure allows you to create a unique configuration at any of the clients.*

> *Note: The OCBClient.isl and OCBClient.ini files are required for the workstation hosting the Drive-Thru Display. These files need to be copied into the folder locations listed above.*

2. In RES 5.x, the OCB Service is registered during the RES Setup process and the service is set to auto start after reboot.

3. Confirm that the Service has been properly installed. To do this:

   ◆ From the Windows Start menu, select *Settings | Control Panel | Administrative Tools | Services*.

   ◆ Confirm that there is an entry in the Service list for *MICROS OCB Server* and that its **Startup Type** is set to *Automatic*.

   ◆ Highlight the entry and click the **Start Service** button. (This will be done automatically on subsequent reboots of the Server.)

   ◆ Confirm that the service starts up without error. If an error is displayed, the cause is most likely a problem with the **OCBServer.ini** file. Among the likely errors messages are:

  ◆ *The data is Invalid* — The **OCBServer.ini file** contains an invalid configuration.

  ◆ *The system cannot find the file specified* — The **OCBServer.ini** file is missing or in the wrong location.

4. The OCB Server is added to the Firewall Exception List during RES 5.x Setup process. The **ConfigureICF.bat** file will be executed automatically as part of RES Setup process.

> *Note: After running RES Setup, the ConfigureICF.bat file can be found in the \micros\common\bin folder.*

Configuration

Configuring the OCBServer.ini File

Most configuration is done at the Server in the **OCBServer.ini** file. This file defines the OCB devices attached to the system and the device-specific settings for each.

With the release of RES v. 5.1, a new MICROS OCB has been introduced that uses a new file (**OCB.ini**) located on the OCB. With this additional file, only some of the settings in the OCBServer.ini file are used, including [OCB1 Device], [OCB2 Device], [OCB1 Display Options], and [OCB2 Display Options]. For more information on the OCB.ini file, see "Configuring the MICROS OCB and Drive-Thru Display Controller Devices" on page 83.

With the release of RES 4.11 MR3 and RES 5.1, the OCB.ini is still used for the standard MICROS Order Confirmation Board (OCB). If using the new Drive-Thru Display Controller, a new OCB32.ini is required, see "Configuring the MICROS OCB and Drive-Thru Display Controller Devices" on page 83. The Drive-Thru Display Controller also uses the existing OCBServer.ini file. This file will allow for the configuration on a Drive-Thru Display as [OCB1 Device] and a standard MICROS Order Confirmation Board as [OCB2 Device], since these are both configured in the OCBServer.ini file as Device Type 5 (Micros OCB).

Server Setup for the OCBServer.ini File

Each OCB device entry contains the following set of configuration items:

[Device] — Defines the device type and communication parameters.	
DeviceType	0 = None 1 = Texas Digital AccuVIEW 2 = Texas Digital WenVIEW 3 = Texas Digital AccuVIEW CE 4 = Everbrite SNS OCS 5 = MICROS OCB and Drive-Thru Display Controller
ConnectType	1 = COM Port 2 = TCP/IP [Currently supported for MICROS OCB only]
ComPort	1 = COM1 2 = COM2 ...etc.

[Device] — Defines the device type and communication parameters.	
BaudRate	1 = 1200 2 = 9600 3 = 19200 (Suggested Baud Rate for AccuVIEW OCB devices) 4 = 38400 5 = 57600 6 = 115200 NOTE: If the site encounters display issues set the baud rate to 19200 (3 in the OCBServer.ini file).
IpAddress	IP Address [ipaddr:port] of the OCB device [MICROS OCB only] NOTE: The IP address is the IP address of the OCB device and the port value is found in the OCB.ini file, listed as the Listen Port value.

[Labels] — Defines the labels for various display elements.	
TotalLabel	Label displayed at the bottom of the OCB display immediately before the total due value.
TaxLabel	Label displayed at the bottom of the OCB display immediately before the tax value.
TotalScreenLine1	Line 1 of the text displayed on the total screen. The total screen is displayed after an order has been completed and the associated check on the POS has been service totaled or final tendered.
TotalScreenLine2	Line 2 of the text displayed on the total screen.

[Default Message] — Defines the default message displayed on WenVIEW OCB devices.
This text is displayed whenever the OCB is idle and not taking an order.

Line1, Line2, ...	Defines each line of the default Message. Can add or delete lines as necessary (Line3, Line4, etc.).

[Scroll Text] — Defines the set of messages scrolled at the bottom of the OCB display.
AccuVIEW devices can display an unlimited number of scroll messages. WenVIEW devices can display only 1 scroll message.

ScrollText1, ScrollText2, ...	Defines the text of each scrolling message. Can add/ delete scroll messages as necessary (ScrollText3, ScrollText4, etc.).

[Display Options] — Contains the display options available for the device.	
DisplayMenuItems, DisplayDiscounts, DisplayTenders, DisplayServiceCharges	Determines whether or not the specified detail type will be displayed on the OCB. 0 = Do not display 1 = Display
DisplayVoids	This configuration option bit is no longer supported in OCBServer. If this option is set to '1', within the OCBSERVER.INI file, a message will be logged (at verbosity 4 or higher) to indicate that the option is no longer supported. NOTE: Direct voids always display.

[Display Options] — Contains the display options available for the device.	
DisplayMenuLevelPrefix	Determines whether or not menu level prefixes will be displayed.
	This option has no effect if the menu item is not configured to display the menu level prefix using the **Menu level name** menu item class option. The main or sub level prefix is selected based on the **Use sub menu level for pricing** menu level class option.
DisplayMenuItemDefaults	Determines whether or not default condiments will be displayed. this option only applies in Conversational Ordering Mode where default condiments are used.
	0 = Do not display
	1 = Display
DisplayTaxAndTotalLine	Determines whether or not a running tax and total line will be shown at the bottom of the OCB display when an order is taken.
	0 = Do not display
	1 = Display
DisplayTotalScreen	Determines whether or not the total screen will be displayed. The total screen is displayed after an order has been completed and the associated check on the POS has been service totaled or final tendered. If set to 0, the total screen will be skipped and the display will go directly to the default message screen (WenVIEW) or slide show (AccuVIEW).
	0 = Do not display
	1 = Display
DisplayAllCondimentQty	Determines whether or not the condiment quantity will display even if it is a single item. This can be added but it not included in the installed version.
	0 = Do not display
	1 = Display

In addition to the device-specific options, the following set of global options are system-wide and are available in the **OCBServer.ini**.

[Global Options].	
CurrencySymbol	Defines the currency symbol displayed with the total due on the total screen. If blank, defaults to '$'.

Example OCBServer.ini

```
[Global Options]
CurrencySymbol = "$"


;
; OCB Device Configuration
;
; DeviceType   : 0 = None
;              1 = Texas Digital AccuVIEW
;              2 = Texas Digital WenVIEW
;              3 = Texas Digital AccuVIEWCE
;              4 = Everbrite SNS OCS
;              5 = Micros OCB
;
; ConnectType  : 1 = COMPort
;              2 = TCP/IP (Currently supported for Micros OCB only)
;
; IpAddress    : IP address [ipaddr:port] of OCB  (Micros OCB only)
; ComPort      : 1 = COM1, 2 = COM2, etc..
; BaudRate     : 1 = 1200, 2 = 9600, 3 = 19200, 4 = 38400, 5 = 57600, 6 = 115200

[OCB1 Device]
DeviceType  = 0
ConnectType = 0
ComPort     = 0
BaudRate    = 0
IpAddress   = ""

[OCB2 Device]
DeviceType  = 0
ConnectType = 0
ComPort     = 0
BaudRate    = 0
IpAddress   = ""

;
```

```
; Label Defintions
;

[OCB1 Labels]
TotalLabel      = "Total: "
TaxLabel        = "Tax: "
TotalScreenLine1  = "YOUR"
TotalScreenLine2  = "TOTAL IS"

[OCB2 Labels]
TotalLabel      = "TTL: "
TaxLabel        = "TX: "
TotalScreenLine1  = "YOUR TOTAL"
TotalScreenLine2  = "IS"


;
; Display Options
;

[OCB1 Display Options]
DisplayMenuItems      = 1
DisplayDiscounts      = 1
DisplayServiceCharges   = 1
DisplayTenders        = 1
DisplayVoids          = 0
DisplayMenuLevelPrefix  = 0
DisplayMenuItemDefaults = 0
DisplayTaxAndTotalLine  = 1
DisplayTotalScreen      = 1

[OCB2 Display Options]
DisplayMenuItems      = 1
DisplayDiscounts      = 1
DisplayServiceCharges   = 1
DisplayTenders        = 1
DisplayVoids          = 0
DisplayMenuLevelPrefix  = 0
DisplayMenuItemDefaults = 0
DisplayTaxAndTotalLine  = 1
DisplayTotalScreen      = 1


;
; Default Message Defintions
;
; Currently only applies for a WenView device
; Can add/delete lines as neccessary (Line3, Line4, ...)

[OCB1 Default Message]
```

```
; N/A

[OCB2 Default Message]
Line1 = ""
Line2 = "     Welcome To"
Line3 = "       the OCB"

;
; Scroll Text Defintions
;
; AccuView supports unlimited scroll lines, WenView supports only one.
; Can add/delete lines as neccessary (ScrollText5, ScrollText6, ...)

[OCB1 Scroll Text]
ScrollText1 = "Todays Specials : "
ScrollText2 = "Hamburger Combo only $2.00"
ScrollText3 = "Chicken Nuggets only $1.00"
ScrollText4 = "Chicken Filet Sandwich only $2.00"

[OCB2 Scroll Text]
ScrollText1 = "Try our Famous Bacon Cheezeburger Combo for only $2.00!!"
```

Configuring the MICROS OCB and Drive-Thru Display Controller Devices

Use the information below to configure the MICROS OCB Device and the MICROS Drive-Thru Display Controller.

Server Setup (MICROS OCB)

The files needed for the MICROS OCB device are installed with RES 5.1. They are located on the server in the \micros\res\CAL\OrderConfirmation.

A network node will need to be added by following the instructions below.

1. Open *POS Configurator | Devices | Network Node*.

2. Select the blue plus icon to add a record.

3. Complete the form by entering the Name, Computer Name, IP Address, Subnet Mask, and by selecting 'Order Confirmation' as the Workstation Type.
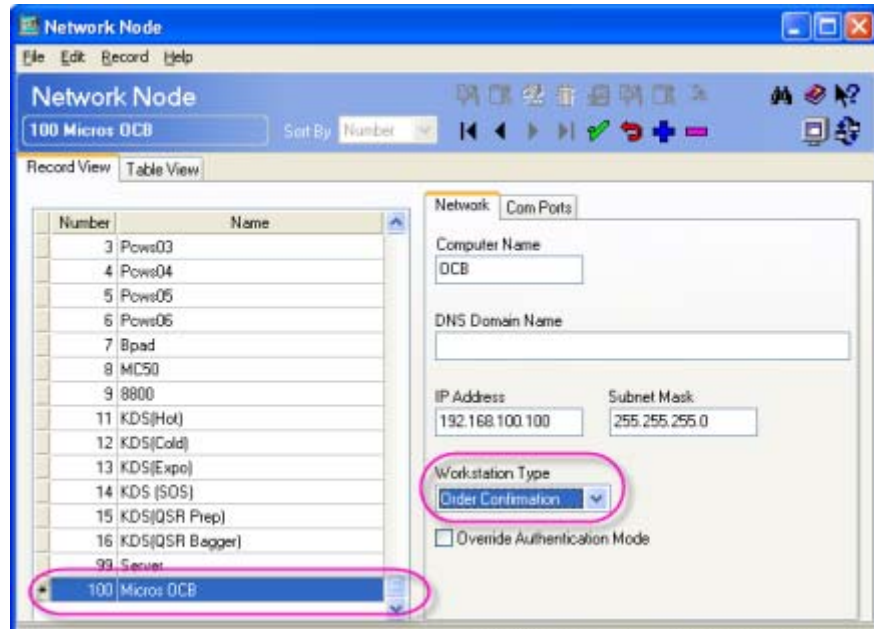
4. Save the changes.

Server Setup (MICROS Drive-Thru Display Controller)

RES 5.1 Setup will install all software for the Drive-Thru Display. The following files will be placed in the *MICROS\Res\CAL\Win32\Packages\Win32RES\Micros\Common\Bin* folder:

*   OCB32.exe

*   OCBStop.exe

The following file will be placed in the *MICROS\Res\Pos\Scripts* folder:

*   OCB32.ini

CAL setup will create the appropriate icons on the Windows desktop for the OCB32 and OCBStop applications.

The existing AppStarter (Start RES) will start the Drive-Thru Display Controller.

On the Start menu under *MICROS Applications | Utilities | POS*, **Stop Drive-Thru Display Controller** has been added.

> *Note: Attempting to run these applications on a workstation that does not support them will result in an error.*

A network node will need to be added by following the instructions below.

1. Open *POS Configurator | Devices | Network Node.*

2. Select the blue plus icon to add a record.

3. Complete the form by entering the Name (i.e., POSReady2015), Computer Name, IP Address, Subnet Mask and selecting Workstation as the Workstation Type.

4. Configure Com Ports if needed.

5. Save the changes and close the form.

6. Open *Devices / Devices.*

7. Select the blue plus icon to add a record.

8. Select Drive-Thru Display Controller for the Device Type and the record added in step 3 (POSReady2015) for the Network Node.
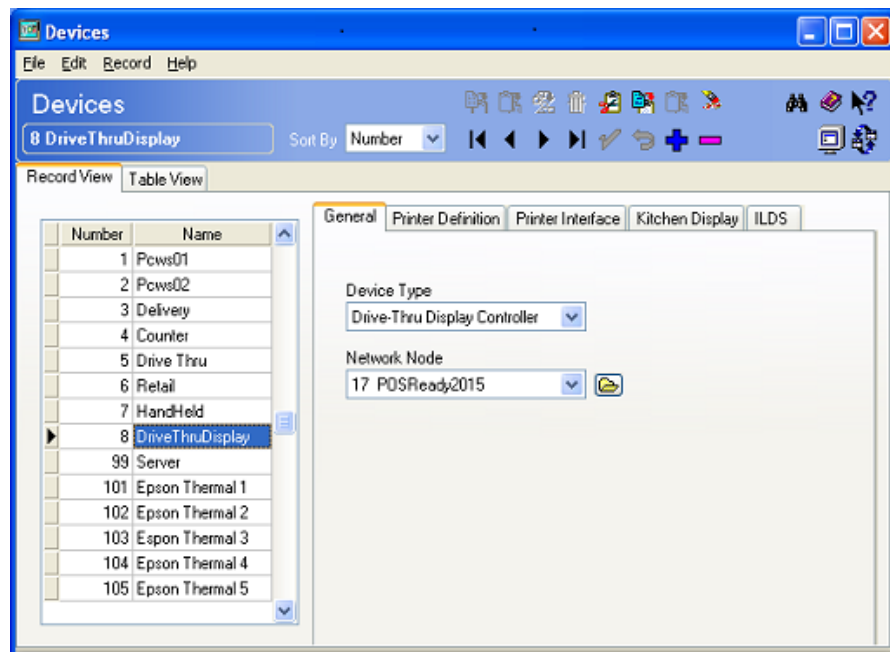
9. Save the changes and close the form.

> *Note: If the site will be using a Workstation as the Drive-Thru Display Controller and will be running POS Operations, a second record needs to be added in Devices with the Device Type of User Workstation and a record added to User Workstations.*

*Note: The Screen Saver on the workstation hosting the Drive-Thru Display Controller must be set to **None.** In addition, any Power Options related to the workstation monitor must be set to **Never turn off the monitor.***

MICROS OCB Device Setup

MICROS OCB devices use the Client Application Loader (CAL) technology to locate, install, and maintain the most up-to-date software programs implemented on the server.

Many settings can be configured in the OCB.ini file. It is installed to *\micros\res\CAL\OrderConfirmation\Packages\OrderConf\Micros\ETC.*

To change a setting, simply uncomment it by removing the semicolon ';' and change the data. After saving the file, copy it to the *\micros\res\CAL\OrderConfirmation\Files\CF\Micros\ETC folder.*

```
;; OCB.ini
;;
;; Standard Colors (HTML Standard)
;; #000000 black     #C0C0C0 silver   #808080 gray    #FFFFFF white
;; #800000 maroon    #FF0000 red      #800080 purple  #FF00FF fuchsia
;; #008000 green     #00FF00 lime     #808000 olive   #FFFF00 yellow
;; #000080 navy      #0000FF blue     #008080 teal    #00FFFF aqua
;;
;; Font Names
;; Arial, Arial Black, Comic Sans MS, Courier New, Tahoma, Times New Roman,
Verdana
;;
;; Font Styles
;; Regular, Bold, Italic, Underline, Strikeout
;;

[General]
; Listen Port = 13001
; Display Update = 500

[Logging]
; Verbosity = 0

[Total Screen]
```

```
;; Number of seconds to display the Total screen before going to the Idle screen
; Timeout = 5

;; The information to display with the total price
; Line 1 = Your total
; Line 2 = is $
; Line 3 = Please drive through




;; The color of the total text and background color of the Total screen
; Line 1 Color = #FFFFFF
; Line 2 Color = #FFFFFF
; Line 3 Color = #FFFF00
; Background Color = #000080
; Font Name = Verdana
; Font Size = 68

[Detail Screen]
;; Text colors for items on the Detail screen
; Quantity Text Color = #FFFFFF
; Description Text Color = #FFFFFF
; Price Text Color = #FFFFFF

; Tax Text Color = #FFFF00
; Total Text Color = #FFFF00
; Background Color = #000080

;; The text to display on the Detail screen
; Tax Prompt = Tax $
; Total Prompt = Total $

;; Details about how the detail list is displayed, affects quantity, description, and
price
; Font Name = Verdana
; Font Size = 32
; Font Style = Bold

;; Font style for descriptions only, does not affect quantity or price font style
; Combo Font Style = Regular
; Condiment Font Style = Italic

;; Controls degree of indentation for condiments and combo items
;; Set to 0 for no indentation, higher for more indentation
; Indent Level = 2;

; Total Font Name = Verdana
```

; Total Font Size = 42
; Total Font Style = Bold

[Idle Screen]
;; A web page to display during the Idle screen
; url = \cf\micros\ocb\index.htm
url = about:blank

; Background Color = #FFFFFF

Drive-Thru Display Setup

The MICROS Drive-Thru Display is based on the current MICROS Order Confirmation Board (OCB) and also uses the Client Application Loader (CAL). Since the new Drive-Thru Display is hosted by the Win32 client, the clients CAL folder is used to get updates to this new display.

Like the MICROS OCB, the Drive-thru Display presents two screens to the customer during a transaction. First the customer is presented with the 'Detail Screen', which shows each item on the check and the total amount of the check, as the order is entered by the cashier. After the order is complete, the customer is shown the 'Total Screen', which displays the amount due along with configurable prompts. Between transactions, the 'Idle Screen' is shown, which typically features a slide show of product information. Each of these three screens has configurable components to alter the appearance of the screen.

RES Setup will install all software for the Drive-thru Display. The following files are required to support this feature: OCB32.exe, OCBStop.exe, and OCB32.ini. On the RES server, these files will be placed into the Win32 CAL folder. The two executables will typically be found in
\MICROS\Res\CAL\Win32\Packages\Win32RES\Micros\Common\Bin
and OCB32.ini will be in
\MICROS\Res\CAL\Win32\Packages\Win32RES\Micros\Common\Etc.
CAL Setup will create the appropriate icons on the Windows desktop for the OCB32 and OCBStop applications.

The attributes of the OCB are configured through the OCB32.ini configuration file. A default OCB32.ini file is included with the installation. The file may be altered on-site to change attributes of the Drive-Thru Display. The file is a text file and may be altered with any Windows text editor.

> *Note: In most configurations, the installer/user should place the altered OCB32.ini file into the MICROS\RES\CAL\Win32\Files\Micros\Common\Etc folder, so that it is updated on the workstation that is hosting the Drive-Thru Display Controller.*

Below is the OCB32.ini file. To change a setting, simply uncomment it by removing the semicolon ';' and change the data. After saving the file, copy it to the MICROS\RES\CAL\Win32\Files\Micros\Common\Etc folder.

```
;; OCB32.ini
;; This is the configuration used for the OCB32/drive thru display
;; application. This file should be placed in the \Micros\Common\Etc folder
;; of the workstation hosting the Drive-Thru Display Controller.
;; This sample OCB32.ini file contains the description of each configuration
;; option as well as its default value. Each option is "commented out" below
;; with a ';' character at the start of the line. To change an option, remove
;; the semi-colon and alter the option's value by changing the value that
;; appears after the equals sign.
;; Section names and option names are all case-sensitive.
;;
;; Standard Colors (HTML Standard)
;; #000000 black      #C0C0C0 silver   #808080 gray    #FFFFFF white
;; #800000 maroon     #FF0000 red      #800080 purple  #FF00FF fuchsia
;; #008000 green      #00FF00 lime     #808000 olive   #FFFF00 yellow
;; #000080 navy       #0000FF blue     #008080 teal    #00FFFF aqua
;;
;; Font Names
;; Arial, Arial Black, Comic Sans MS, Courier New, Tahoma, Times New Roman,
Verdana
;;
;; Font Styles
;; Regular, Bold, Italic, Underline, Strikeout
;;

[General]
;; The following should never be changed
```

```
; Listen Port = 13001
; Display Update Interval = 250
; Configuration Update Interval = 60

;; The day parts list is deliminated by | with each name
;;  corresponding to a section in this ini. See below for
;;  configuration of each day part. If 'Day Parts' is omitted
;;  than the screens will have the same configuration
;;  throughout the whole day.
; Day Parts = Morning|Evening

[Logging]
; Verbosity = 0


;; Day parts include five fields, all are required.
;;  'Start Time' and 'End Time' define the period that this
;;  day part is valid. Value can be formatted as '1:00 AM'
;;  or '01:00'. The start and end times of day parts should
;;  not overlap.
;; Each screen may have its own configuration during a
;;  day part. The desciption should reference a label
;;  within this ini file that describes the screen.
;;  If day parts are not defined, the default sections
;;  for screen ('Idle Screen', 'Detail Screen', and 'Total
;;  Screen') will be used.
;;

; [Morning]
; Start Time = 12:00 AM
; End Time = 11:30 AM
; Total Screen Description = Total Screen
; Idle Screen Description = Idle Screen
; Detail Screen Description = Detail Screen

; [Evening]
; Start Time = 11:30 AM
; End Time = 11:59 PM
; Total Screen Description = Total Screen
; Idle Screen Description = Idle Screen
; Detail Screen Description = Detail Screen


[Idle Screen]
;; A web page to display during the Idle screen
; url = about:blank
; Background Color = #FFFFFF
```

```
[Detail Screen]
;; Text colors for items on the Detail screen
; Quantity Text Color = #FFFFFF
; Description Text Color = #FFFFFF
; Price Text Color = #FFFFFF

; Tax Text Color = #FFFF00
; Total Text Color = #FFFF00
; Background Color = #000080

;; The text to display on the bottom of the Detail screen
; Tax Prompt = Tax $
; Total Prompt = Total $

;; How the detail list is displayed, affects quantity, description, and price
; Font Name = Verdana
; Font Size = 32
; Font Style = Regular

;; Font style for descriptions only, does not affect quantity or price font style
; Combo Font Style = Regular
; Condiment Font Style = Italic

;; Controls degree of indentation for condiments and combo items
;; Set to 0 for no indentation, higher for more indentation
; Indent Level = 2;

;; Font for the Tax/Total line of the display
; Total Font Name = Verdana
; Total Font Size = 46
; Total Font Style = Bold

;; Positions of the columns of information on the detail screen
; Quantity Column Offset X = 0;
; Quantity Column Width = 100;
; Item Column Offset X = 110;
; Item Column Width = 700;
; Price Column Offset X = 820;
; Price Column Width = 204;
; Column Offset Y = 0;
; Column Height = 640;

;; Position of the Web window on the detail screen
; Web Offset X = 3;
; Web Offset Y = 3;
; Web Width = 0;
; Web Height = 0;
```

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;; A web page to display during the order detail screen
; url = about:blank

[Total Screen]
;; Number of seconds to display the Total screen before going to the Idle screen
; Timeout = 5

;; The information to display with the total price
; Line 1 = Your total
; Line 2 = is $
; Line 3 = Please drive through

;; The color of the total text and background color of the Total screen
; Line 1 Color = #FFFFFF
; Line 2 Color = #FFFFFF
; Line 3 Color = #FFFF00
; Background Color = #000080
; Font Name = Verdana
; Font Size = 68

;; Location of each line of the Total screen
; Line 1 Offset X = 0
; Line 1 Offset Y = 100
; Line 2 Offset X = 0
; Line 2 Offset Y = 250
; Line 3 Offset X = 0
; Line 3 Offset Y = 650

;; Position of the Web window on the total screen
; Web Offset X = 3;
; Web Offset Y = 3;
; Web Width = 0;
; Web Height = 0;

;; A web page to display during the total screen
; url = about:blank

<u>Editing Day Parts:</u>

A new feature for the Drive-Thru Display is the notion of 'Day Parts'. A 'Day Part' is a period of time that has a specific display configuration. The display configuration controls all aspects of how information is shown on the Drive-Thru Display, including text style, background color and graphics used on each of the three display screens.

The three display screens are Total Screen, Detail Screen and Idle Screen.

The Day Part configuration is optional. If Day Parts are not configured in the OCB32.ini file, the default configuration will be used.

Sample Day Part configuration:

[General]
Day Parts = Morning|Evening

[Morning]
Start Time = 00:00
End Time = 11:30
Total Screen Description = Total Screen Morning
Idle Screen Description = Idle Screen Morning
Detail Screen Description = Detail Screen Morning

[Evening]
Start Time = 11:30
End Time = 23:59
Total Screen Description = Total Screen Evening
Idle Screen Description = Idle Screen Evening
Detail Screen Description = Detail Screen Evening

The above configuration indicates that there are two day parts, Morning and Evening. The number and names of the day parts is first established by including the 'Day Parts=' configuration item followed by each day part separated by '|'.

For each of the day parts, the OCB32.ini file will have a section named for that day part. The format of these items may be expressed in '24-hour' (00:00 - 23:59) or '12-hour' (12:00 AM - 11:59 PM).

Below the time period are configuration items to indicate the section names for each of the screens. In the above example, the 'Evening' period has screens named 'Total Screen Evening', 'Idle Screen Evening' and 'Detail Screen Evening', which means that elsewhere in the OCB32.ini file there should be sections [Total Screen Evening], [Idle Screen Evening] and [Detail Screen Evening]. Within each of these screen sections there will be configuration items for aspects of these screens.

Graphic Elements:

There is also the ability to display content alongside of the order screen while in a transaction. The content will be displayed within a web element that is positioned on the Detail Screen. The position, size and content of the web element is configurable within the OCB32.ini file. The graphic elements are positioned using screen coordinates.
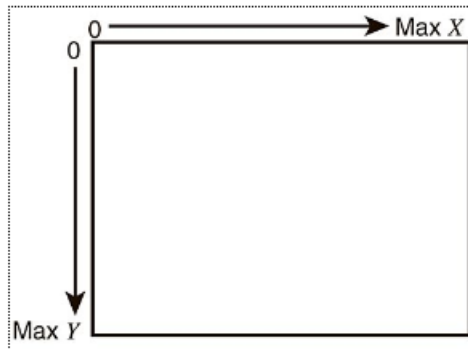
Screen coordinates originate at the top left corner of the screen and extend to the lower right corner. At the top left corner, the coordinates is X = 0 and Y = 0. The bottom right has coordinates X = 1024 and Y = 768. Width and height dimensions are also based on the screen coordinates values.

Sample configuration:

[Detail Screen Evening]
Quantity Column Offset X = 540;
Quantity Column Width = 45;
Item Column Offset X = 590;
Item Column Width = 320;
Price Column Offset X = 915;
Price Column Width = 100;

Column Offset Y = 0;
Column Height = 640;

Total Font Size = 48
Total Font Style = Regular

Web Offset X = 0;
Web Offset Y = 0;

Web Width = 540;
Web Height = 640;
url = \micros\OCB\BkOcbDetail\evening.html

The last five lines above describe the web element for the Detail Screen. The element is defined as a region that roughly fills the top left corner of the detail screen. The other attributes above position the order columns of the detail screen beside the web element. The web element references an HTML file that controls the content that is displayed. The web content is always written in standard HTML, it may point to a file on a disk (as above) or a URL on the network.

A similar web element may be added to the Total Screen. This web element is configured in the OCB32.ini file, similar to configuring the element for the Detail Screen. If the web element width and height are set to '0', then the element will not appear on the Detail Screen or the Total Screen. The URL may be set as 'about:blank' to display a blank page in the web element.

Client Setup   The Client-side configuration is done in the **OCBClient.ini** located on the POS Operations client. All Clients that are going to output to the OCB need the following configuration setup:

[Options]	
ServerIP	Defines the IP address of the server hosting the OCB Service. In most cases, this will be the IP address of the 3700 RES Server.
	Change the default ServerIP from 127.0.0.1 to the server's IP address.
OCBToClaimOnStartup	Defines the OCB device to claim on Startup.
	This can one of the following values:
	0 = Do not claim any device on startup.
	1 = Claim OCB device 1 on startup.
	2 = Claim OCB device 2 on startup.
	NOTE: When using the new MICROS OCB, we recommend a setting of '0' for this option.

Example of OCBClient.ini
[Options]
ServerIP = "127.0.0.1" ---> Change to the server's IP address
OCBToClaimOnStartup = 0   ; 0 = NONE, 1 = OCB1, 2 = OCB2

Touchscreens and Macros

To control the functionality of the OCB Interface, most installations will need to have touchscreen buttons and/or macros configured. This section provides a reference list of common configurations. Information provided his is for reference only. Actual selections will vary (and may be modified) based on a site's requirements.

Touchscreens

User Touchscreen Buttons

1. **"Start Lane 1" / "Start Lane 2"** — Linked to the Macros defined below or linked directly to the PMS/SIM inquiry.

2. **"Claim Lane 1" / "Claim Lane 2"** — Linked to the SIM Inquiry Event "Perm. Claim OCB1" (3) or "Perm. Claim OCB2" (4).

3. **"Temp Claim Lane 1" / "Temp Claim Lane 2"**
   Linked to the SIM Inquiry Event Temp Claim OCB1 (5) or Temp Claim OCB2 (6)

Manager Touchscreen Buttons

1. **"Stop OCB"** — Linked to the SIM Inquiry Event "OCB Stop" (2).

2. **"Start OCB"** — Linked to the SIM Inquiry Event "OCB Start" (1).

3. **"Release Lane 1" / "Release Lane 2"** — Linked to the SIM Inquiry Event "Release OCB1" (7) or "Release OCB2" (8).

   POS Configuration
   1. In *POS Configurator | Devices | Interfaces*

      ◆ Name OCB

      ◆ Check box SIM Interface

Macros

1. **"Start Lane 1" / "Start Lane 2"** — Sends one order to a particular OCB device.

   ◆ Call SIM Inquiry Event "Temp Claim OCB1" (5) or "Temp Claim OCB2" (6).

   ◆ Begin Check (by Table, ID, etc.) — Not required for fast transaction environments.

2. **"Send Order"** — Replaces the standard SEND key.

   ◆ Call SIM Inquiry Event "Set SEND flag" (9).

   ◆ Tender/Media Number of the 'Send' tender.

SIM Inquiry List

Inquiry Number	Summary	Details
1	OCB Start	Loads the **OCBClient.dll**, establishes a connection to the OCB Server, and claims the startup OCB device, if configured. This operation is automatically performed by the SIM script when POS starts up. This event can be used to restart the OCB Interface if it has been previously stopped using the **OCB Stop Inquiry** event.
2	OCB Stop	Releases the currently claimed OCB device, shuts down the connection to the Server, and unloads the OCBClient.dll. This operation is automatically performed by the SIM script when POS is shut down. If the OCB Server is currently down or unreachable, this operation can be used to completely bypass all OCB functionality preventing any delays associated with trying to reconnect to the OCB Server.
3	Perm. Claim OCB1	Will Permanently Claim OCB device #1. An informational message box will be displayed to the user indicating the result of the claim request (except when claiming a device on Startup).
4	Perm.Claim OCB2	Same as above, except for OCB device #2.

Inquiry Number	Summary	Details
5	Temp. Claim OCB1	Will Temporarily Claim OCB device #1. If successful, no message box will be displayed. If unsuccessful, the name of the owning workstation will be displayed in a formatted message box. The Temporary claim will be automatically released when one of the following operations is performed in POS Operations: Transaction Cancel Cancel Order Service Total Suspend Check Final Tender
6	Temp. Claim OCB2	Same as above, except for OCB device #2.
7	Release OCB1	Will Release OCB device #1, even if the current workstation does not currently have the device claimed. This operation must be used with caution as it may disrupt another user's operation of the OCB device.

Inquiry Number	Summary	Details
8	Release OCB2	Same as above, except for OCB device #2.
9	Set SEND flag	This flag is used to indicate that a SEND ORDER tender/media key is about to be used. Currently, SIM has no way to distinguish between a SEND ORDER key and a regular service total key. This flag is a work around and should be used to indicate that the next service total event is a SEND ORDER. It is intended to be used in a macro that calls this Inquiry event and then performs the actual SEND ORDER. When the SIM receives the next service total event, the processing of the END ORDER request is skipped and the flag is reset. For proper SEND ORDER functionality, all touchscreen keys linked to the SEND ORDER tender/media should be replaced with keys that call this macro.

SIM Inquiry 1 (OCB Start) and SIM Inquiry 2 (OCB Stop) are not needed for the new Drive-Thru Display Controller. There is a new shortcut key installed on the Win32 client that can be used to stop the OCB Display. The shortcut is called **Stop Drive-Thru Display Controller** and is located on the Start menu under *MICROS Applications | Utilities | POS.* To restart the OCB Display on the WIN32 client hosting the Drive-Thru Display, simply run the AppStarter (Start RES). This will restart the Drive-Thru Display.

Appendix G: Customized Installation Procedures

Introduction

This section provides information for sites with complicated Client/ Server setups that require customized installation.

Registry Settings

There are two registry settings that affect the RES patch. They are:

- HKLM\Software\Micros\Patch\BypassDBUpdate (True)   :STRING

- HKLM\Software\Micros\Patch\BypassReboot (True)   :STRING

These values must be set to True in order for them to work.

BypassDBUpdate

The existence of this registry value will cause the RES patch to bypass the database update portion of the patch.

BypassReboot

The existence of this value will cause the RES patch to bypass the execution of **Shutdown.exe**. The patch will simply stop. The Server will not reboot.

If running MICROS Desktop, the BypassReboot setting should NOT be used as this will leave the system on but disabled. The only recourse at that point is to reboot the server using the power button.

Appendix H: Pre and Post Custom Installation Procedures

A custom pre and post update hook has been added to allow an integrator to add their own install processes to the patch installation process.

When running a patch upgrade on the RES Server, the system can be setup to execute a batch file before the patch is started or before the patch is finished. These batch files cannot be used to reboot the system. They can be used to stop third party services that affect the RES system.

Follow these steps to create a custom file that can be called while a MICROS patch is running:

1. In the server's registry, go to *HKLM\Software\Micros* and add a key called **Patch**.

2. Create a string value for this key and name it either **CustomPreUpdate** or **CustomPostUpdate**, depending on when it will be executed.

   CustomPreUpdate will occur at the beginning of the patch. Use this key to shut down non-Micros services at this time (see Step 3).

   CustomPostUpdate will run after all files have been updated, but before the database is updated.

3. Set the value of CustomPreUpdate to the location of the file you want to call (e.g., *C:\Temp\StopService.bat*).

4. Set the value of CustomPostUpdate to the location of the file you want to call (e.g., *C:\temp\InstallCustomReports.bat*).

Appendix I: MagTek® IPAD Reader Installation

MagTek® IPAD Operations
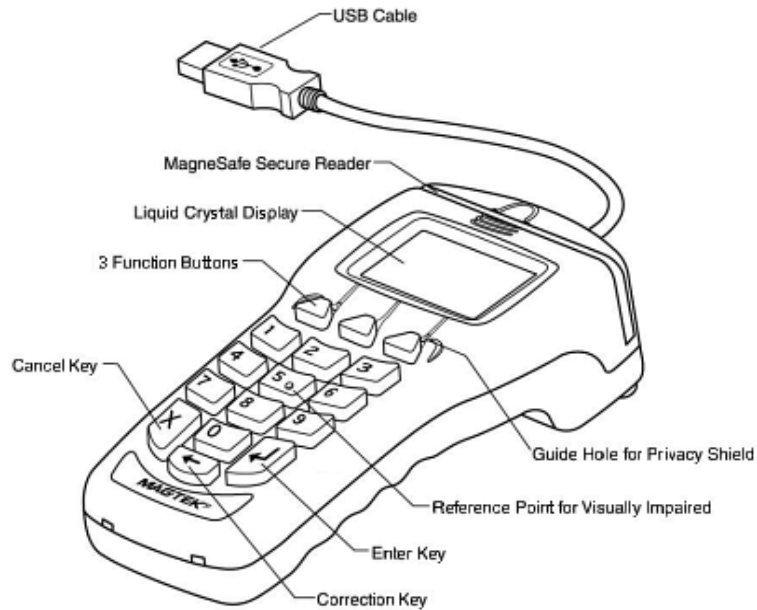
General Information about the MagTek IPAD Card Reading Device:

The IPAD contains a MagneSafe® reader that encrypts card data at the point of swipe to protect the cardholder's personal information. The MagTek IPAD card reader securely reads, decodes, and encrypts card data within the head of the device. This technology secures the magnetic stripe data at the earliest point in the transaction chain-the initial swipe. As a card is swiped through the reader, it can be authenticated immediately by the Merchant Link Host Processor, to determine whether the card is counterfeit or has been altered.

<u>Sample screen showing the IPAD is ready for the next transaction</u>:

<u>For Credit or Gift Card Swipe</u>:

Use the secure reader slot. After pressing the Credit Authorization or desired Gift Card/ Loyalty Card key, the IPAD will display the 'Please Swipe Card' prompt (per the example shown below).

- Make sure that the Magnetic Stripe on the card is facing you and the card can be swiped in either direction (i.e. - left to right or right to left).

- After the card has been swiped on the IPAD device, the screen displays 'PROCESSING'.

- The display then changes to 'APPROVED', and the PC Workstation confirms 'Authorized'.

- You can then Service Total or Credit Card Finalize to close the guest check.

> ***Note:*** *The integrated Mag Card Reader on the Workstation itself, can still be used for all kinds of employee card swipes. If desired, the MagTek IPAD can read employee cards for Clock-In or Manager Authorizations without any further configuration. In order to use the MagTek IPAD for employee Sign-Ins, a new touchscreen button can be added (Function: Non-Sales/Sign in PINpad swipe).*

<u>Manually Keyed Card Entry</u>:

If there is something wrong with the Magnetic Stripe on a card; to manually enter the card number into the MagTek IPAD Device, press the 'Red X' key. This will display the required data that needs to be entered from the card:

```
ACCOUNT NUMBER
 8888888888888888888
EXPIRATION DATE
 0813
CARD VERIFICATION CODE
 0358
```

- ◆ **Account Number** - press the 'Green' key to move down to the next line.

- ◆ **Expiration Date** - press the 'Green' key again.

- ◆ **CVV Number** - a 3 or 4 digit number on the back of the customer's card; press the 'Green' key again.

- ◆ The IPAD device will display 'Processing' and card will either be approved or declined.

> ***Note:*** *If a mistake is made while entering data, use the 'Yellow' key to backspace and re-enter.*

Error Handling with a MagTek IPAD:

◆ If a 'Card Has Expired' message is received, the IPAD device will display 'CANCELLED' and then return to the 'Welcome' screen.

◆ If a '***** CHECK DIGIT ERR' message is received, this means that the manually entered card account number is invalid. Re-enter the card number again (per instructions above).

MagTek® IPAD Device Installation Instructions

From the Workstation(s) where the device(s) will be installed;

1. Stop the POS Operations on the Workstation. You will need a keyboard or remote access (i.e.- VNC) to do this.

2. Connect the MagTek device to one of the Workstations USB ports. *****Not all USB Ports work. See diagrams on page **108**.

3. Start POS Operations.

4. The MagTek IPAD will say 'Initializing' and then display 'Welcome'.

5. To Test Device: Press the Clock-In Key and the MagTek device should sound a 'beep' tone, then prompt 'Please Swipe Card'.

6. Clear the 'Clock In' dialog box and the MagTek IPAD device is ready for use.

IMPORTANT:

When EMSR Mode is enabled, no other PINPad Payment device type will be allowed. In POSCfg | Devices | User Workstation | Peripherals, make sure that none of the following devices are configured under any clients: PINpad; Mx870 Terminal; ViVOPay or ViVOPay 4800.

The Magtek IPAD does not require any UWS Peripheral configuration.

The Protégé (since it is not a payment device), could be configured and run on a workstation that did ***not*** have an IPAD connected, but it would have to be a cash only terminal, as it would not be able to accept any kind of electronic payments.

Important USB Connection Instructions

Question:

What USB Ports can be used for connecting the MagTek IPAD device?
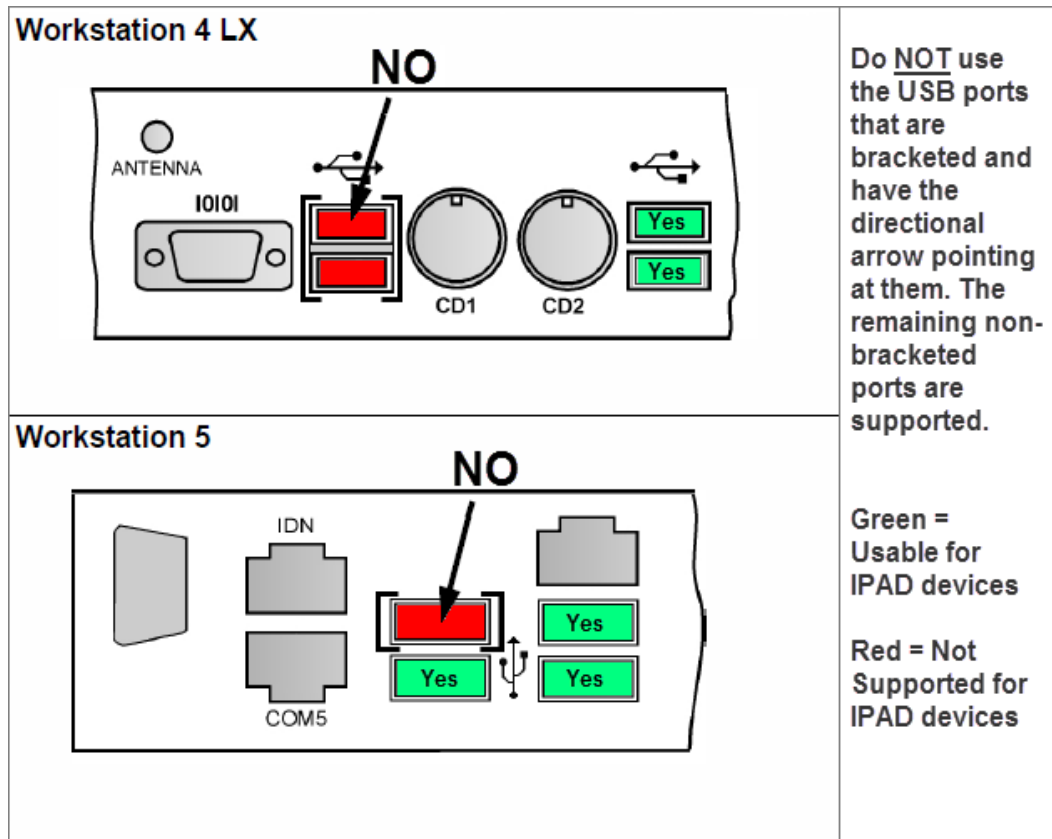
Answer:

PCWS 2010 - All USB Ports

PCWS 2015 - All USB Ports

WS5A - All USB Ports

WS4 LX & WS5 - An IPAD device will *not* work after a reboot on some USB Ports. Please see the diagram below.

WS4 - Not Supported

Troubleshooting

If for any reason the device stops working:

1. Power off the client, then power it back on.

2. Press the Clock-In Key and the MagTek IPAD device should sound a 'beep' tone, then prompt 'Please Swipe Card'.

3. If the device does not respond, then stop POS Operations on the Workstation. You will need keyboard or remote access (i.e.- VNC) to do this.

4. Disconnect the MagTek's USB connection for 10 seconds.

5. Re-connect the MagTek device to one of the Workstations USB ports.

6. Start POS Operations.

Appendix J: Integrated Encrypted Reader

Point-to-Point (PtP) Encryption with the MagTek® IPAD Device

RES v5.1 supports the new TransactionShield Credit Card Feature. This feature requires enabling a new option to engage Encrypted Magnetic Card Mode (EMSR), when the new MagTek IPAD PINpad devices are used. TransactionShield ™ provides a means to eliminate cardholder data at the customer system level and now encrypts the data as the card is swiped through the external MagTek IPAD device. The data is then stored in a secure, hosted 'vault' via transmission to Merchant Link. This feature utilizes cloud-based decryption, so the merchant no longer has decrypted data on site and protects the cardholder's personal information.

For more information about the MagTek IPAD device, see **"Appendix I: MagTek® IPAD Reader Installation"** .

Feature Requirements

- ◆ RES v 5.1

- ◆ MagTek® IPAD Secure Card Reader[1]

- ◆ Transaction Vault Credit Card Driver (CaTVCA v4.13.0.2468 or higher)

MICROS workstations will be enhanced to replace its current Magnetic Stripe Reader (MSR) with one that provides encrypted and masked Credit Card (CC) information to the POS. In order to continue to process CC transactions, RES was enhanced to interact with the Encrypted MSR (EMSR) and process transactions using the encrypted account information provided by the EMSR. Currently, only the MagTek IPAD device is supported for this feature.

WS4 support has been added for the MagTek® IPAD PINpad device. The MagTek® IPAD can be used with either of the two available USB ports on the WS4.

---

1. The MagTek® IPAD Secure Card Reader can be ordered using the following Part Number information: PN# 700293-570 - MagTek IPAD Encrypting MSR/Keypad, Featuring Merchant Link Key Injection, USB HID Interface.

Connection
- ◆ When POS Operations is loading, the PINpad device is initialized. It will first check for the presence of a MagTek IPAD device and will try to open it. If it is successful, then it will ignore any other PINpad device that may be configured in POS Configurator.

- ◆ The connection of the MagTek IPAD device may be tested using the MICROS Confidence Test by navigating to the MICROS Confidence Test | PINpad | MagTek IPAD section.

Configuration
1. Navigate to *POS Configurator | System | Restaurant | Security |* '**Encrypted MSR Mode**'. By default, this option is disabled.

2. Prior to enabling this feature, users will receive the following confirmation prompt. Select '**Yes**' to continue or '**No**' to close the prompt.

Confirm	✕
❓ Once Encrypted MSR Mode is enabled, it cannot be disabled. Do you want to continue?	
Yes No	
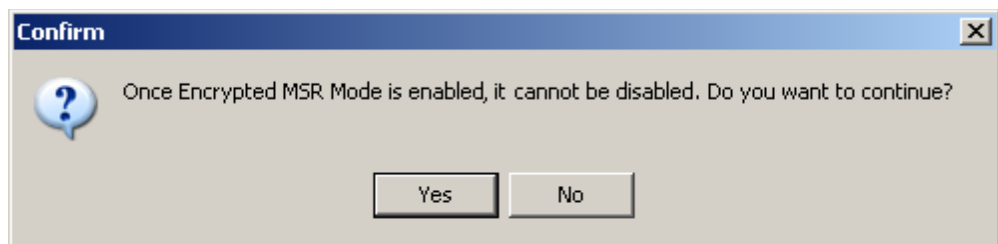
3. A new function key was added (Functions: Non-Sales/Sign in PINpad swipe) to allow prompting the EMSR to swipe an Employee ID card for sign in purposes. If desired, the Mag Card Reader on the workstation may still be used for Employee ID cards only.

> *Note: Once the 'Encrypted MSR Mode' option is enabled, the option is grayed out and out of focus so that a user cannot change or reverse it. If accidentally enabled, users should be directed to contact their MICROS support representative. The only way to change it is with DBA authority in the database.*
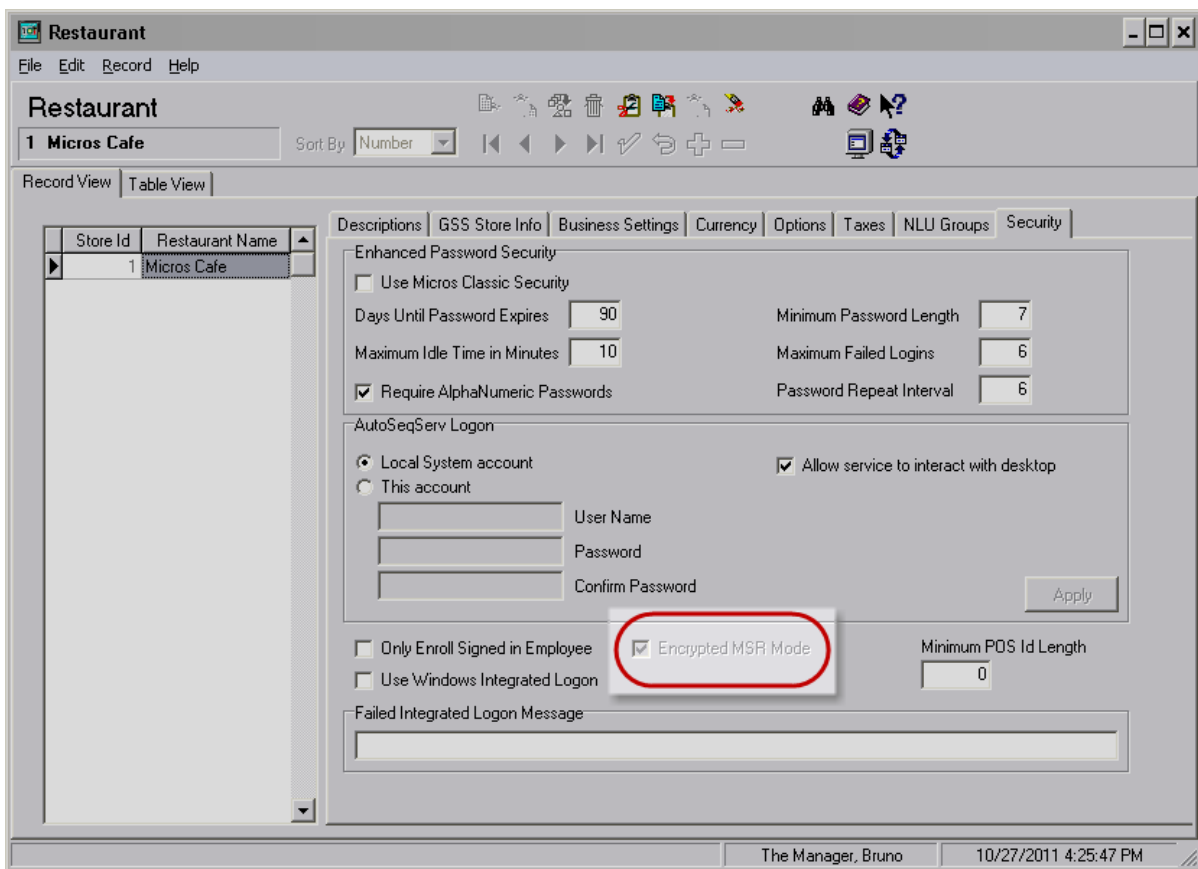
Functionality	◆ Bank card data will not be accepted on anything else except the MagTek IPAD EMSR device if the system is running EMSR mode.
	◆ POS Operations has been enhanced to accept card swipes on the MagTek IPAD for not only bank-issued cards, but for employee ID cards as well.
POS Operations	◆ POS Operations will error if an attempt is made to swipe a card for a CC Authorization on the integrated PCWS MSR. It displays a "Not Allowed, Please Use Encrypting Mag Reader" message.

Known Limitations   GSS support - when EMSR mode is enabled, it will no longer allow GSS Function keys that require a card swipe. By design, if an attempt is made to use GSS Credit Card related Touch Screen function keys (i.e., GSS Auth Card and GSS Store Credit Card), users will receive an error message 'Not available with EMSR mode enabled.'

PtP Encryption with MerchantLink and MICROS Integrated EMSR

The MICROS workstations have been enhanced to replace the Magnetic Stripe Reader (MSR) with the new Point to Point (PtP) encrypted MSR (EMSR). The EMSR provides encrypted and masked credit card information to the POS. RES has been enhanced to interact with the EMSR and process transactions using the encrypted account information provided by the EMSR.

The EMSR is compatible with Win32 and WinCE workstations. The EMSR is not accessible on Windows Mobile devices. Sites using RES v5.1 with Win 7 workstations must manually reboot them after changing the EMSR Mode setting. This is a KNOWN LIMITATION.

Configuration   1. Navigate to *POS Configurator | System | Restaurant | Security |* '**Encrypted MSR Mode**'. By default, this option is disabled.

Manual Entry   If a credit card cannot be read with the magnetic stripe reader (MSR), the ID TECH SecureKey device can be used to manually enter the account number. The POS Operations touch screen cannot be used to enter credit card data when EMSR mode is enabled. If EMSR is enabled and either a non-encrypting keyboard or non-encrypting MSR is used to enter credit card data, the following message will be returned:

NOT ALLOWED. PLEASE USE ENCRYPTING MAG READER

The new integrated magnetic stripe readers have been shipping with new workstations since Fall 2012. The WS5A and 2015 clients that have a serial number equal to or greater than the following are shipped with the encrypting magnetic stripe reader installed.

◆   WS5A = 2167105845

◆ PCWS2015 = 2166004747

> *Note: Read the latest hardware releases or visit the hardware portal for information regarding platform upgrades needed to support these new Encrypting MSRs and also for information on purchasing just the EMSR part to install on an existing workstation.*

These new MSRs and SecureKey devices can be used alone, or in the same restaurant as the existing MagTek IPAD devices.

> *Note: When EMSR Mode is first enabled, all XP and POS Ready workstations running POS Operations and having the latest API files from hardware will pop up a message saying the device will reboot in 30 seconds. This is necessary for the Encryption to begin working on Win32 workstations. CE workstations do not need to be rebooted*

Known Limitation   Windows 7 workstations must be manually rebooted after EMSR mode is enabled in order for the encrypting readers to work correctly.

> *Note: The MagTek IPAD devices function the same in RES v5.1 as they did in RES v4.10 MR1 and later. See the appendix at the back of this document for more information on MagTek IPADs.There are no platform upgrades needed to support the MagTek IPAD device in RES v5.1.*

Appendix K: Database Update Rules and Solutions

There are rules in place to prevent a database of a higher version from being 'updated' to a lower version.

Since this would generally not work and could easily lead to database errors, we prevent it.

However, in some cases these safeguards can prevent a system from upgrading a database that should be allowed.

Example:

RES 4.10 MR2 (4.10.4.3634) has a higher 4th octet in the build number than RES 4.11 (4.11.1.3616).

In most cases this upgrade will just work because Maintenance Release (MR) patches do not update the 'database' row of the db_version_cfg table, which is what gets compared to the value in the registry to determine if the update will be allowed.

However, if a RES 4.10 MR2 database gets rebuilt for any reason, including changing the encryption keys, then all rows in db_version_cfg will be updated with the new version number and the built-in safeguard will prevent it.

Warning	*These safeguards are in place for a good reason and should NOT be circumvented unless Micros has documented that this update is allowed.*

Solution:

If the system prevents a database from being updated, when it should not, the server's registry can be temporarily changed to allow it.

Example:

If a RES 4.10 MR2 DB has been restored on a RES 4.11 server and the DB update fails, you can verify why it failed by looking in MICROS\Common\Etc\DM.log

Ex: "Cannot update a version 3634 database on a version 3618 system."

Solution:

To successfully update a database that has failed due to version checking, do the following:

1. If a RES patch was run, but failed the DB update, reboot the server.

2. Start | Run, type **regedit** and hit enter.

3. Go to HKLM\Software\Micros\Version and change the value From: 4.11.1.3618

   To: 4.11.1.9999

4. Exit the registry.

5. Start | Run, type **DM -U** and hit enter. Allow the database update to complete.

6. Start | Run, type **regedit** and hit enter.

7. Go to HKLM\Software\Micros\Version and change the value back to it's original value of 4.11.1.3618.

8. Reboot the server.

Warning   *Failing to change the Micros Version back to it's original value in the registry could lead to database errors if an incorrect database is updated, and will also prevent any future patches from running.*