



## NCR Aloha RAL v14.1

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# NCR Aloha RAL v14.1



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# About NCR Aloha RAL

NCR Aloha RAL at a Glance	
Core Product	NCR Aloha RAL
Complementary Products	Aloha Quick Service, Aloha Table Service, and Aloha Kitchen
Separate License Required?	No
Other References	Aloha Quick Service Reference Guide; Aloha Table Service Reference Guide; Aloha Kitchen Reference Guide

Formerly Radiant Auto Loader, NCR Aloha® RAL is one of the modules in the Aloha Support Ready suite of technical support tools. RAL provides a simple way of replacing existing POS terminals and Aloha Kitchen devices and eases mass deployment of both.

RAL consists of three components:

**Aloha Admin Service** Located on the Aloha Back-of-House (BOH) file server, the Aloha Admin service determines and communicates the configuration of the Aloha network. This service scans for RAL client applications attempting to connect, and passes the necessary information for a terminal become to part of the Aloha network.

**Terminal Configuration Utility** Also located on the Aloha BOH file server running the Aloha Admin Service, the Terminal Configuration utility (Aloha Admin service user interface) allows you to customize the configuration of each terminal.

**RAL Aloha Admin Application** Located on each Aloha Front-of-House (FOH) terminal, the RAL Aloha Admin application provides communication to the Aloha Admin service on the Aloha BOH file server. The RAL Aloha Admin can initially connect to the Aloha Admin service without a consistent network configuration. Once connected, the RAL Aloha Admin application provides touch screen prompts to the user with which to select the correct terminal ID.

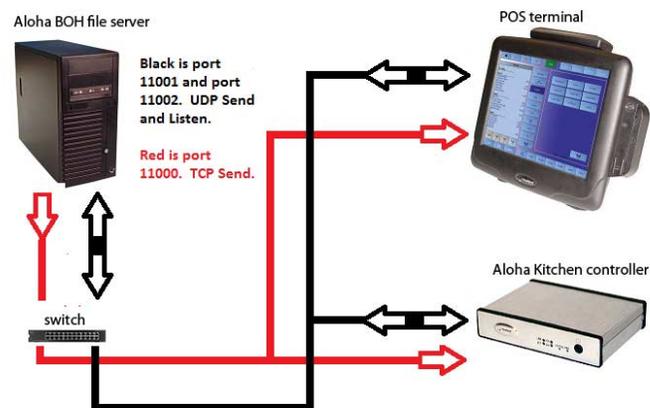


Figure 1 Aloha POS System with RAL

# Hardware and Software Requirements

- Radiant terminals, NCR terminals, and non-NCR terminals.
- Aloha Table Service or Quick Service, installed on the Aloha BOH file server. Aloha Kitchen installed on the BOH file server to configure Aloha Kitchen devices.
- Windows® XP Embedded, Windows 2003 Server, Windows WES, Windows POS Ready (all versions), Windows 7, and Windows 2008 Server.
- Supported on both 32-bit and 64-bit operating systems.
- Microsoft® .NET Framework v2.0 on both BOH server and FOH terminal.
- Network Interface card (NIC) on both Aloha BOH file server and POS terminals. RAL also supports wireless networking.
- RAL supports Remote File Storage (RFS), with no modifications required to RAL or to the Aloha system.
- RAL supports the use of Syncinclusion, a feature used to limit the binaries the system syncs to the FOH terminals due to hard drive space limitations. Refer to RKS ID [10247](#) for more information on this feature.
- Open ports 11000, 11001, and 11002 for TCP and UDP on the firewall for each terminal, Aloha Kitchen device, and Aloha BOH file server.

## Creating Windows User Accounts

The Payment Card Industry Data Security Standards (PCI DSS) v.1.2 states that you must assign a unique ID to each user with computer access and require them to log in using complex, expiring passwords. RAL supports the use of a separate Windows user account and password for each terminal and kitchen device, which minimizes the effort involved in configuration. RAL also supports using complex passwords and automatically changing the passwords after a defined number of days. This section discusses how to create user accounts for use with Aloha, if not already created. We recommend you create these user accounts before you install and configure RAL to simplify later steps.

**To create a unique log in account for each device in the Aloha network:**

1. Access **Administrative Tools > Computer Management** and create a **user account** for each terminal on your network, and a **user account** for the Aloha services, such as EDCSvr, RFSSvr, and CtISvr, if one does not already exist.

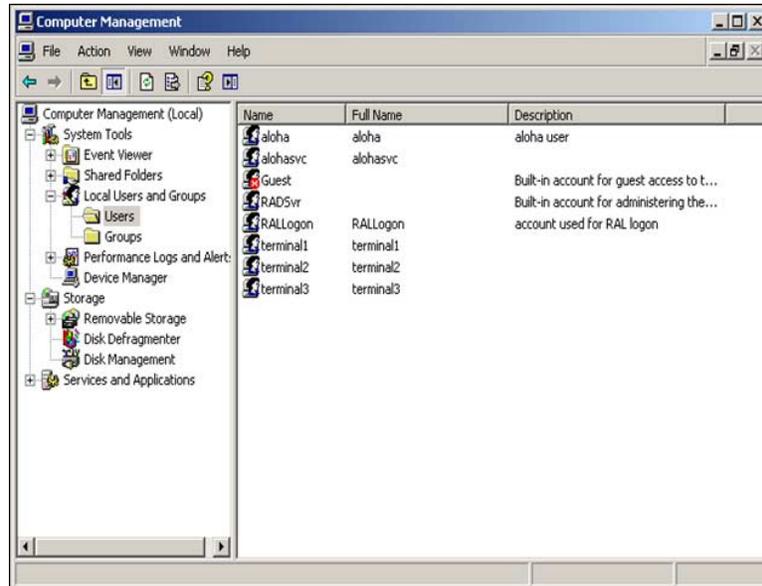


Figure 2 Example of User Accounts

2. Select **Password never expires** and **User cannot change password** for each account created.
3. Add **each user account** to the Administrators group.
4. Close the **Computer Management screen**.
5. Open **Windows Explorer**.
6. Locate the **Bootdrv share**, right click, and select **Properties**.
7. Select the **Sharing** tab.
8. Click **Advanced Sharing**.
9. Click **Permissions**.
10. Click **Add** and type the **user account** for the first terminal.
11. Click **Check Names**. The system should find the user account.
12. Select **Full Control**.
13. Click **OK** to add the user account.
14. Repeat the **above steps** for each terminal user account, the service user account, and the Administrator group.
15. Select the **Everyone** account.
16. Click **Remove**.
17. Click **OK** and exit the folder **Properties** window.

# Implementing NCR Aloha RAL

This section details the implementation requirements within RAL. If you are an experienced user, refer to Procedures at a Glance for abbreviated steps. If you prefer more detail, continue reading this document.

Procedures at a Glance:	
If you are viewing this document using Adobe Acrobat Reader, click each link for detailed information regarding the task.	
1.	Install <b>RAL</b> on the Aloha BOH file server.
2.	Access the <b>AlohaAdminUI</b> , click <b>BOH Config</b> , and edit <b>options</b> , as necessary. <b>Save</b> and <b>exit</b> .
3.	Select a <b>terminal</b> and click <b>Configure</b> . Edit the <b>options</b> , as necessary. <b>Save</b> and <b>exit</b> . Repeat for all other <b>terminals</b> and <b>Aloha Kitchen devices</b> .
4.	Install <b>RAL</b> on the FOH terminals and Aloha Kitchen devices.
5.	Reboot each <b>terminal</b> and <b>Aloha Kitchen device</b> .
6.	If multiple terminals or kitchen devices are available for reload, select the <b>appropriate profile</b> for each device using the touch screen or kitchen bump bar.

## Implementing RAL on the BOH File Server

By default, the NCR image build process installs RAL on NCR terminals. You must install RAL on the BOH file server after installing and configuring the Aloha POS system.

RAL install supports customized installs using a custom configuration file with any name, such as RAL.config. You can modify this file, using Notepad®, before you install. Unlike earlier versions of RAL, this file can reside anywhere since you indicate the path to the file when you pass the CONFIG= parameter on install. If it is not found, RAL uses the default values in each configuration file to install. More information on the supported values and a sample configuration file can be found in the Custom Install section.

You no longer have to uninstall RAL on the server or terminal to upgrade. Simply run RALInstall.exe. The installer makes a backup of the currently installed xml data and configuration files, uninstalls the old version, then reinstalls the new version using the xml and configuration files from the prior version. You will not receive a prompt on the terminal. RAL automatically detects the new version, uninstalls the old version, installs the new version, then automatically restarts.



The RAL installer changes with the release of RAL version 14.1. It is necessary to click the red X and select the component you want to install, either 'Server' or 'Terminal.' If you do not make a selection, it will install the terminal component only. You must uninstall RAL to change from one component to another.

You can also install RAL using a command line with the OPTION= parameter. The two values are 'terminal' and 'server.' Example: RALInstall.exe OPTION=terminal

## Installing RAL on the BOH File Server

Primary control of RAL is on the Aloha BOH file server. If you are installing RAL for the first time, you should complete the installation and configuration process on the Aloha BOH file server before moving to the terminals. The process is straightforward, and follows the procedure outlined in this section. This section assumes you have met all of the requirements and prerequisites to install RAL.



**Before installing RAL on the Aloha BOH file server, you must set your time zone to the correct setting for your location.**

### To install RAL on the Aloha BOH file server:

1. Download the **installation file**, in zipped file format, from the Aloha Update site to the Aloha BOH file server.
2. Extract the **contents** of the zip file to a folder on your server.
3. Optionally, create a **custom configuration file**, if you want to use a customized install. See Help > Help Topics. [See "Installing RAL Using a Command Line" on page 31.](#)
4. Double-click **RALInstall.exe** to launch the installation program.
5. Click **Install** to start the installation.
6. Click **Next** to continue the installation.
7. Select **I accept the terms in the License Agreement**, then click **Next** to continue.

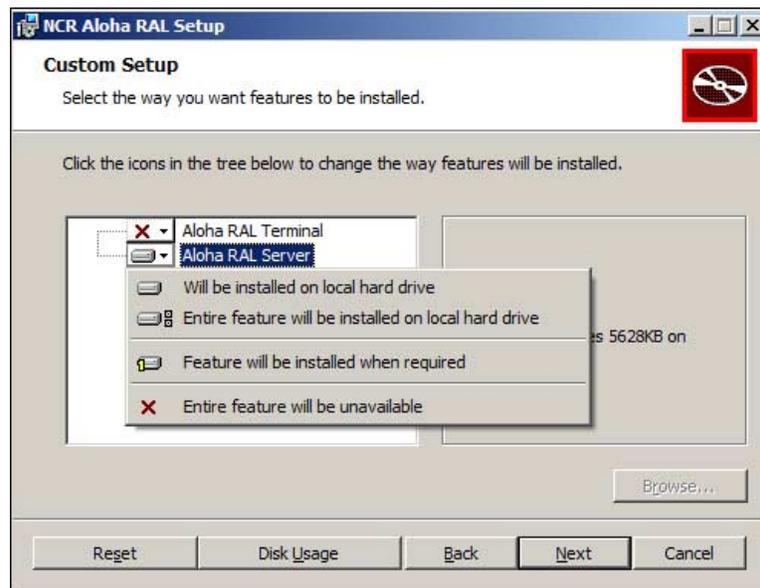


Figure 3 Install Aloha RAL Server Component

8. Click the **Aloha RAL Server** drop-down arrow, select **Will be installed on the local hard drive**, then click **Next**.
9. Click **Install** to begin the RAL installation process. At the end of the RAL installation process, the Setup Complete screen appears.
10. Click **Finish**.
11. Click **Close** to exit the RAL Installer wizard. RAL automatically launches.

**12.** If the Aloha BOH file server has more than one NIC installed and no active network card is set to LANA 0, a select NIC screen appears. Select the **NIC** for the Aloha network from the drop-down list.

If you select a NIC with a LANA number other than zero, a message appears, asking you to select one of three choices:

- Select **Change** to change the LANA number of the selected NIC to zero. RAL changes the LANA number of the card currently set to zero to the next highest available number, then changes the LANA of the selected network card to zero.
- Select **Don't Change**, and use the selected NIC without resetting the LANA number. You must change the LANA number of the selected network card to zero manually, prior to attempting to run the FOH on a terminal.
- Select **Cancel** to abort NIC configuration. The BOH Configuration screen returns, to allow you to select another NIC from that location.



If you select the incorrect NIC, you can change this in the BOH Configuration screen after the Site Configuration screen appears.

---



When you select a NIC, RAL assumes the default user ID and password combination of 'Aloha' and 'hello' is present and active, even though you can remove it later. If this user ID and password combination is not available, a dialog box appears, requiring you to select an administrator user account from a drop-down list.

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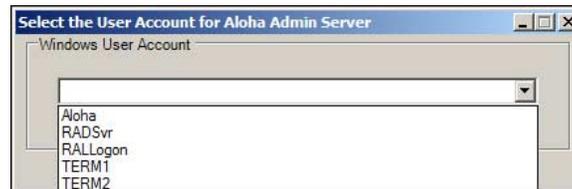


Figure 4 Select User Account for Aloha Admin Server

**13.** When prompted, click the drop-down **arrow** and select the **user account** to use for the Aloha Admin Server. The Set Windows User Account screen appears.



Figure 5 Type Password for User Account

**14.** Type the **password** for the user account you selected for the Aloha Admin Server.

**15.** Click **OK** to complete.

## Using RAL for Site Configuration

Once you install RAL on the Aloha BOH file server, you must next configure it, in preparation for loading the terminals. As part of the installation, RAL obtains many of the required settings directly from environment variables already configured on the file server.

The RAL menu provides access to the RAL Aloha Admin service, which appears as AIAdmSvr in the list of services in Administrative Tools. The initial RAL installation process installs and starts the RAL Aloha Admin service, and configures it to start automatically, so it normally runs at all times. You can select 'Service' from the RAL menu to verify the current status of the service, or you can stop, start, or restart this service directly from the menu.

## Accessing RAL from the System Tray

Right click the icon in the system tray (systray)  to view the menu options.

**Service** — Expands out to another submenu that provides the following options:

Start — Starts the AIAdminSvr service. Appears grayed out if the service is already started.

Stop — Stops the AIAdminSvr service. Appears grayed out if the service is stopped.

Restart — Restarts the AIAdminSvr service.

**Open UI** — Opens the RAL user interface to the Site Configuration screen. You can also double-click the icon to open the user interface.

**Show UI** — Selected by default, the user interface appears in the taskbar when minimized. If cleared, the user interface does not appear in the task bar, but the icon appears in the systray if you did not exit the user interface. Exiting the user interface will completely exit the program.

**Help** — Expands another submenu with the following options:

Help Topics — Allows you to view the RAL help file.

About RAL — Allows you to view the About screen.

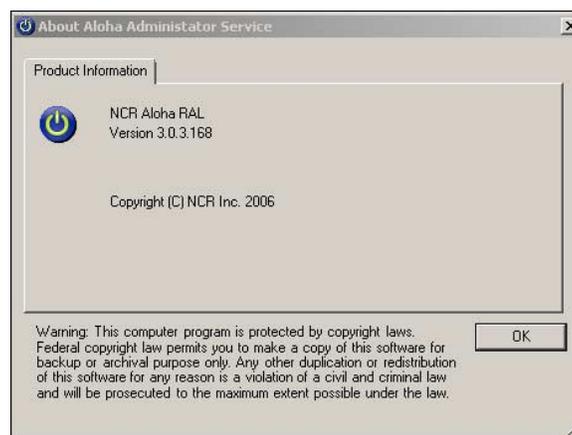


Figure 6 About Screen

# Configuring RAL Settings for FOH

After the initial installation, some sites require additional configuration. If your site must join a domain, or you use Windows log-in accounts (recommended), other than the default NCR accounts, you must edit the RAL site configuration. You may also need to make other changes on the Aloha BOH file server, depending on local needs.

The RAL user interface is divided into three main screens:

- Site Configuration screen
- BOH Configuration screen
- Terminal Configuration screen

## Accessing the Site Configuration Screen

The Site Configuration screen is the main screen of RAL. All defined terminals, site information, server name, and the functions to set up the server to prepare for configuration appear on this screen. RAL auto-populates the Site Configuration screen by default with any order entry terminals defined in \New-data\Trm.dbf and any Aloha Kitchen devices found in AlohaKitchen.xml. (See ["Using RAL on a FOH Terminal to Complete the Configuration" on page 23](#) for an exception to this rule). Use the button functions in Site Configuration to open the Terminal Configuration screen and adjust each terminal with specific settings.

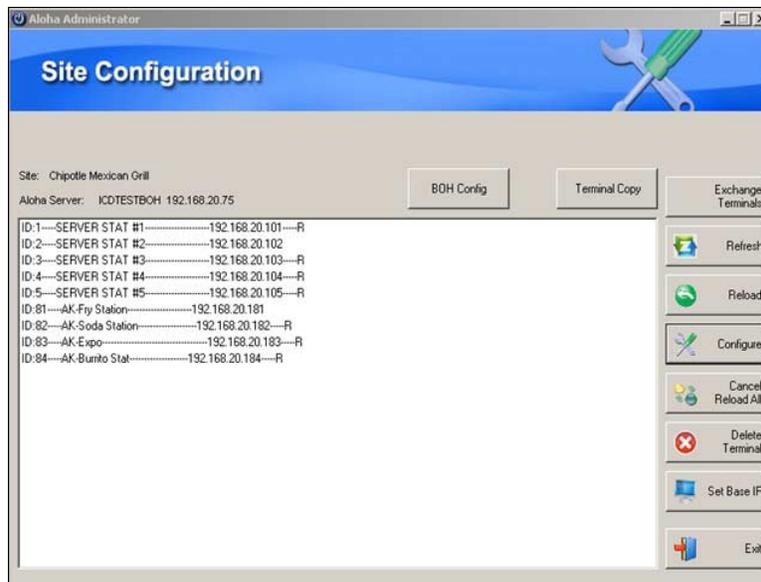


Figure 7 Site Configuration Screen

**Site** — Specifies the unit name as defined in Aloha.ini.

**Aloha Server** — Specifies the Windows computer name of the Aloha BOH file server.

**BOH Config button** — Accesses the BOH Configuration screen.

**Terminal Copy button** — Accesses the Terminal Copy screen. [See "Copying Settings from One Terminal to Another" on page 20.](#)

**Reset Site** — Resets all previous configuration settings for each terminal to the default values. This button only appears if you set the system environment variable RALResetSite with a value of TRUE on the server.

**Exchange Terminals** — Allows you to select two terminals and exchange the number for each terminal to move a terminal to a critical location, such as driving a kitchen printer.

**Refresh** — Refreshes the RAL user interface screen with the latest configuration information. Do not confuse this with the Refresh function of the Aloha POS.

**Reload/Cancel Reload** — Sets the selected terminal for reload or cancels the reload of a terminal set to reload. If the selected terminal is set for reload, the button label toggles to Cancel Reload. A terminal reloads the next time RAL starts on that terminal, connects to the Aloha Admin service, and detects it must reload.

**Configure** — Accesses the Terminal Configuration screen. If you select a terminal on the Site Configuration screen, it will load the configuration for that terminal. If a terminal is not selected, RAL allows you to add a new terminal.

**Reload All/Cancel Reload All** — Reloads or cancels the reload for all terminals at once. If one or more terminals is set to reload, the button label toggles to Cancel Reload All.

**Delete Terminal** — Deletes the selected terminal from this screen and clears all information for the terminal from the data xml file.

**Set Base IP** — Allows you to define the IP address RAL uses to base the IP numbering schema for your terminals. RAL adds to the terminal number to the last octet for consistent numbering. For example, if you define 100 as the last octet, RAL sets Term1 to 101, Term2 to 102, etc.

**Exit** — Closes and exits the Site Configuration screen.



Select F1 from this screen to call the RAL Help file.

---

## Defining the Network Using the RAL BOH Configuration Screen

Use the RAL BOH Configuration screen to define or change global terminal settings, such as:

- Defining the Windows user account to allow terminals to join a domain.
- Defining the EDC path.
- Defining the Windows user account the terminals use to connect to the EDC and Control services on the Aloha BOH file server.
- Defining the Windows user account the terminals use to log in.
- Removing default Windows user accounts.

- Defining password change management rules.
- Changing the NIC used by RAL and Aloha on the BOH file server.

On the Site Configuration screen, click **BOH Config** to access the RAL BOH Configuration screen.

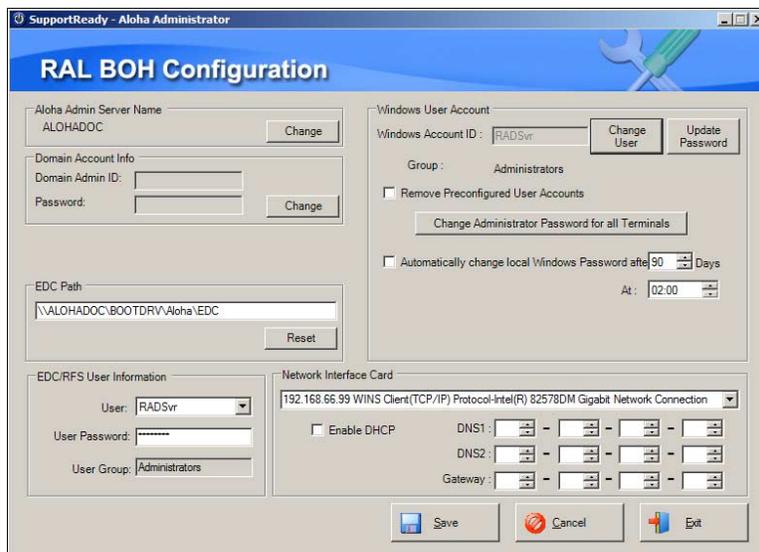


Figure 8 RAL BOH Configuration Screen

## Defining the Server Name

Allows you to change the computer name in system properties from the RAL BOH Configuration screen. Most sites do not use this feature.

### To change the computer name:

1. In 'Aloha Admin Server Name,' click **Change**. The Aloha Admin Server Name screen appears.
2. Type the **new computer name**, then click **OK**.
3. Reboot the **Aloha BOH file server**.
4. Change the **SERVER** variable value in system environment variables to match the new computer name then start the user interface.

## Defining Domain Account Information

If your Aloha BOH file server and terminals belong to a domain, you must use the following option to allow the terminals to join the domain.

### To define domain credentials:

1. In 'Domain Account Info,' click **Change**. A dialog appears to enter the user name and password for the domain.
2. Type the **name** of the user with rights to join a terminal to a domain in 'Domain Admin ID.' This account is not the same as local Admin rights. Check with your network administrator for the correct user account.
3. Type the **password** for the domain user account in 'Domain Admin Password.' The password appears as a series of dots when entered.

## Defining the Path to the EDC Server

Use this option if you use an EDC server that is not the same server as the BOH file server. By default, RAL uses the SERVER variable on the file server to populate the server name here.

### To define the EDC path:

1. Type the **network path** to the EDC server in 'EDC Path.'
2. Click **Save**.



The Reset button will set the EDC Path back to the default value.

---

## Defining the EDC/RFS User Account

If you use EDC or RFS, you must define the user account for the system to use when accessing these services. When defined, RAL creates this account on each terminal to access these services on the Aloha BOH file server.

### To select the EDC/RFS user account:

1. Select the **account** defined for the EDC/RFS Services on the BOH from the 'User' drop-down list.
2. Type the **password** for the selected account.

## Managing the Administrator Windows User Account on Terminals

This section discusses managing preconfigured user accounts and rotating the password of the Administrator account on each terminal.

### To define the Windows user account used by the terminal:

1. In 'Windows User Account,' leave the **Windows Account ID** as default.



This functionality is obsolete. There is no need to click Change User or Update Password. Editing these options has does not affect RAL functionality.

---

2. Select **Remove Preconfigured User Accounts**. This removes any NCR factory user accounts, such as Aloha and User01, from each terminal.
  3. Click **Change Administrator Password for All Terminals** to change the built-in administrator account password on all terminals configured by RAL.
  4. Select **Automatically change local Windows Password after x Days** to automatically change the password of the Administrator account of each terminal periodically.
  5. Accept the **default value** of 90 days or adjust to a lower number of days. RAL enforces a maximum of 90 days in accordance with PCI guidelines.
  6. Select the **time of day** at which RAL automatically changes the password.
- 



The password change must occur within a short time of the system changing the password on the BOH file server. Terminals log off or reboot after an EOD, therefore; we recommend you set the time to change the password to at least one minute before you run EOD.

---

## Defining the Network Interface Card

The 'Network Interface Card' drop-down list provides a list of all NICs installed on the Aloha BOH file server. By default, RAL lists the NIC associated with LANA 0 for use with the Aloha system. If only one NIC exists on the file server, this box appears dimmed and RAL defaults to use this NIC.

### To select another NIC to use with the Aloha POS system:

1. Select a **NIC** from the 'Network Interface Card' drop-down list. RAL prompts you to set the LANA number to zero.
2. Select **Yes** to change the LANA number to zero and allow the Aloha system to communicate over the selected NIC.

## Enabling DHCP

Select 'Enable DHCP,' if you do not use static IP addresses for your terminals and have a DHCP server to assign IP addresses. RAL does not validate if there is a DHCP server. You must configure a DHCP server for the terminal to get an IP, DNS, and Gateway address.

## Allowing Your Terminals Access to the Internet

If your terminals require access to the Internet for training or third-party applications, you must configure the DNS addresses and gateway for your network.

### To configure access to the Internet for terminals:

1. Type the **IP address** for the first DNS server in 'DNS1.'
2. Type the **IP address** for the second DNS server in 'DNS2.'
3. Type the **IP address** for the gateway on your network that provides access to the Internet in 'Gateway.'



The system will not populate the gateway, DNS1, and DNS2 entries on the terminal, even if you set them up in the user interface, unless you also use the following key in AlhAdmin.exe.config on the terminal before the initial configuration.

```
<add key="SetGatewayInfo" value="1"/>
```

---

## Saving Your Changes

After you define your configuration in the RAL BOH Configuration screen:

- Click **Save** to update the system with the changes.
- Click **Cancel** to return to the Site Configuration screen without saving changes.
- Click **Exit** to exit the BOH Configuration screen. RAL prompts to save changes. Click **Yes** or **No** to save any changes.

## Configuring Terminals

Use the Terminal Configuration screen to define terminal specific settings, such as the Windows user account the terminal uses to log on, IP configuration, and to enable Order Point.

### To access the Terminal Configuration screen:

- From the Site Configuration screen, click **Configure**, without a terminal selected, to configure a new terminal.
- OR-
- Select a **terminal**, and click **Configure** to view the configuration for the selected terminal.

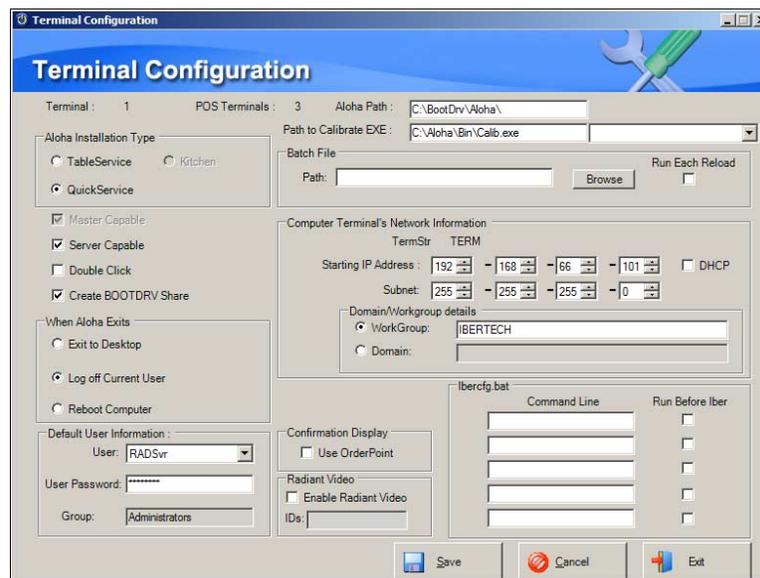


Figure 9 Terminal Configuration Screen

### To configure a terminal:

1. Select either **TableService** or **QuickService** in 'Aloha Installation Type.' By default, RAL auto selects the proper setting based on the presence of a "Fastfood" flag file in the %Iberdir% on the Aloha BOH file server. If found, RAL automatically selects 'QuickService.' Conversely, if the file is not found, RAL automatically selects 'TableService.'
- By default, RAL selects 'Kitchen' if the device is found in the AlohaKitchen.xml file.
2. Select **Master Capable** if the terminal has enough resources to perform the master role in the Aloha POS system and you would like the terminal to become master, if necessary.
3. Select **Server Capable** if the terminal has enough resources to perform as a redundant server, if necessary. By default, the system selects 'Master Capable' when you select 'Server Capable.'
4. Clear **Double Click** unless you use a mouse with the terminal. This prevents undesired double button touches when you access the POS on the terminal. Select **Double Click**, if you use a mouse on the terminal with other applications and to set the environment variable DOUBLECLICK=TRUE.
5. Select **Create BOOTDRV Share** to create the share used by the Aloha POS system to exchange files between terminals and the Aloha BOH file server.

6. Select the **desired behavior** for a terminal when Aloha exits due to a refresh or EOD.
  - **Exit to Desktop** — Exits to the Windows desktop after a refresh or EOD (not recommended). This option is the same as using the environment variables AUTOEXIT=FALSE and REBOOTNT=FALSE.
  - **Log off Current User** — Logs the current user off after a refresh or EOD. This option is the same as using the environment variables AUTOEXIT=TRUE and REBOOTNT=FALSE.
  - **Reboot Computer** — Restarts the terminal after a refresh or EOD. The terminal logs back on with auto-login settings. This option is the same as using the environment variables AUTOEXIT=TRUE and REBOOTNT=TRUE.
7. Select the **user account** the terminal uses to log on. We recommend selecting a unique account for each terminal, as defined in "Creating Windows User Accounts" on page 6.
8. Type the **password** for the selected user account in 'User Password.'
9. In 'Confirmation Display,' select **Use OrderPoint** if the terminal has an attached customer display.



'Uses OrderPoint' is not available for selection if Order Point is not installed on the Aloha BOH file server or Kitchen is selected as the device type.

---

10. Select **Enable Radiant Video**, if this terminal controls Radiant video devices. Type the ID number of each display in use in the 'IDs' text box, using commas to separate multiple Radiant video devices. This option is not available for Aloha Kitchen devices.
11. Type the **path** where RAL installs Aloha on the terminal in 'Aloha Path.' The default is C:\Bootdrv\%Iberroot%.  
  
For Aloha Kitchen, it defaults to C:\Bootdrv\AlohaKitchen.
12. Type the **path** where the calibration program is located in 'Path to Calibrate EXE.' The drop-down list allows you to select a terminal type. RAL auto-populates 'Path to Calibrate EXE' with the correct setting when you use this drop-down list.
13. (Optional) In 'Batch File,' type the **drive letter, path, and file name** of a batch file to run, when RAL reloads or runs on the initial configuration. RAL runs the batch file before it calls Ibercfg.bat file on the terminal. Enclose the string in double quotes if it contains spaces.

You can click **Browse** to select the drive, path, and file for automatic insertion in this text box.

Select **Run Each Reload** to run the batch file each time the terminal reloads. We recommend you save the batch file to %Iberdir%\EXTData\RAL on the Aloha BOH file server, since this directory is already shared.

---



TermStr is hard coded and pulled from the TERMSTR system environment variable on the Aloha BOH file server. If this does not exist on the server, an error message appears stating the variable is missing and RAL exits the Terminal Configuration screen.

---

14. If necessary, adjust the **Starting IP Address** of the terminal to meet your needs. All fields are editable, effective with RAL 14.1, including the subnet mask. By default, RAL sets the last octet of the first terminal as 101. You can change this by:
    - Manually changing the **IP address** on this screen.
    - Clicking **Set BaseIP** on the Site Configuration screen.
    - Using Notepad to open AIAdmSvr.exe.config file and type 1 for the 'UseServerIP4thOctet' key value, to set the Base IP to start one number higher than the last octet of the server.
  15. If you are not using fixed IP addresses in your site, select **DHCP**. 'Starting IP Address' becomes unavailable. The terminal obtains its IP address from a DHCP server each time it restarts.
-

**16.** In most cases, we recommend you accept the **default values** to allow the terminals to connect to your network. RAL auto-populates 'Domain/Workgroup Details,' based on the network configuration of the Aloha BOH file server. You can define the **RALWORKGROUP** system environment variable on the server to have RAL bypass this option.

**17.** Type additional **custom lines** to add to the Ibercfg.bat file in any of the four 'Command Line' boxes and select if you want the command to run before Iber. This allows you to define any variable that is not already defined either in system environment variables or through the use of specific flags, such as 'Use Radiant Video' or 'Uses OrderPoint.' You can enter more than one command on each line but you must separate the commands using the following syntax: amp&;.

This option is not available when the selected device type is Kitchen. When RAL configures a terminal, the only lines in this batch file, by default, are:

- A command to copy files from Newbin to Bin.
- A command to delete the contents of Newbin.
- A command line to start the FOH.

Select **Run Before Iber** for each command line you want RAL to insert in Ibercfg.bat prior to the line that launches Iber(QS). Do not include environment variables in Ibercfg.bat, as RAL adds these to the environment during configuration. Add lines to Ibercfg.bat to run external applications, such as QSR.

**18.** Click **Save**, then **Exit** to return to the Site Configuration screen.

**19.** Repeat **these steps** for each terminal, using a different account for each terminal.

## Configuring Aloha Kitchen Devices in RAL

RAL queries the AlohaKitchen\Data folder for AlohaKitchen.xml to populate the RAL user interface with kitchen devices to configure.

RAL creates the following system environment variables on a kitchen device as part of configuration:

- IBERROOT
- CALIBRATE
- SERVER
- TRMSTR
- RALEXE

The path to RALEXE is set to the same location as AlhAdmin.exe. Do not delete or edit this variable or its associated value. The system needs this variable to start RAL after EOD or a refresh on the kitchen devices.

RAL creates an AKStart.bat file, which looks similar to the following: (KPSController, Termstr, Iberroot, and POSServer will all match your system and setup).

```
SET KPSCONTROLLER=81
SET TERMSTR=TERM
SET KITCHENFOLDER=C:\BootDrv\AlohaKitchen
SET IBERROOT=Aloha
SET POSSERVER=ALOHABOH
NET TIME \\%POSSERVER% /SET /Y
COPY %KITCHENFOLDER%\NEWBIN\*. * %KITCHENFOLDER%\BIN\ /Y
DEL %KITCHENFOLDER%\NEWBIN\*. * /Q
START /WAIT %KITCHENFOLDER%\BIN\ALOHAKITCHEN.EXE /CONTROLLER %KPSCONTROLLER%
CALL "%RALEXE%"
EXIT
```

# Copying Settings from One Terminal to Another

The Terminal Configuration Copy screen is available in RAL versions 2.3.2.14 or later. This screen allows you to set specific settings in the configuration on one terminal and copy the settings to another terminal, a range of terminals, or all terminals, saving you time and effort.

## To copy the configuration of a terminal:

1. Click **Terminal Copy** on the Site Configuration screen.

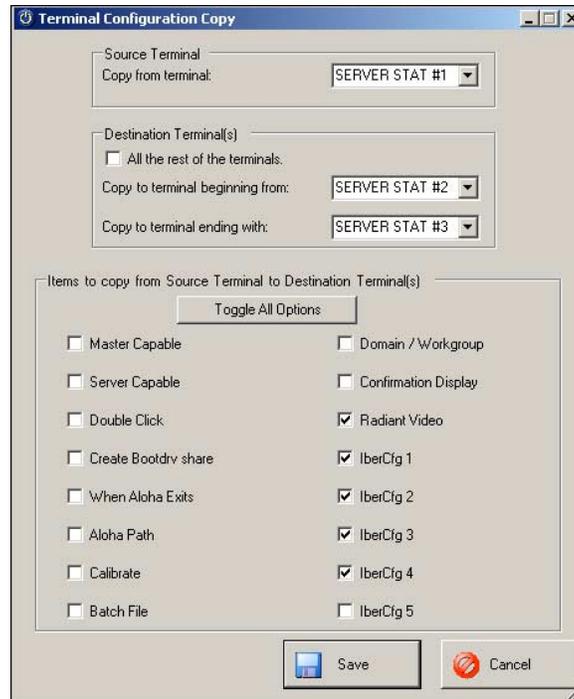


Figure 10 Terminal Copy Screen

2. In 'Source Terminal,' select the **terminal** from which to copy the configuration from the drop-down list.
3. In 'Destination Terminal(s),' select **All the rest of the terminals** to copy the configuration to all other terminals.

-OR-

Select a **specific terminal** or a **range of terminals** using the 'Copy to terminal beginning from' and 'Copy to terminal ending with' drop-down lists.

4. In 'Items to copy from Source Terminal to Destination Terminal(s),' click **Toggle All Options** to select or clear all options. Clear or select individual **options**, as necessary.



Aloha Kitchen devices ignore most of the check boxes since they are not used for configuration.

5. Click **Save**.



The copy function only works for like terminals. For example, if the source device you select is a POS terminal, you can only copy to POS terminals, not Aloha Kitchen devices. The same holds true if the source is a kitchen device, it can only copy to like Aloha Kitchen devices.

## Restricting User Account Login on the BOH

Once you define the Aloha service and terminal user accounts in the FOH Configuration screen, we recommend you restrict the ability of someone using one of these user accounts to log in to the Aloha BOH file server.

### To prevent a user account from being used:

1. Select **Start > Run** and type **gpedit.msc**. The Local Group Policy Editor screen appears.
2. Select **Computer Configuration > Windows Settings > Security Settings > Local Policies > User Rights Assignments**, then double-click **Deny log on locally**.
3. On the Local Security Setting tab, click **Add User or Group**.
4. Type each **user account** you created for the Aloha service and terminals.
5. Click **Apply**, click **OK**, and exit the **Local Group Policy Editor**.
6. On the Bootdrv share, remove **Everyone** and add **each terminal** and the **services account** from the permissions.



You must reverse this procedure, if you change the password for a terminal using the Terminal Configuration screen. When changing passwords on this screen, RAL attempts to log in the user account. If you include the user account in the 'Deny log on locally' group, RAL fails the change password function.

## Installing RAL on a FOH Terminal or Kitchen Device

NCR terminals ship with RAL installed and ready to run. If you have an older or a non-NCR terminal without RAL installed, you must install RAL manually. Use the following procedure to install RAL on a terminal.



If RAL is already installed on the terminal it will upgrade to the server version automatically, if using version 2.3.2.10, or later, on the terminal.

### To install RAL on a terminal:

1. Use a portable memory device, such as a USB flash drive, LAN, or other means, to copy **RALInstall.exe** to the terminal.
2. Locate and launch **RALInstall.exe** on the terminal to begin the RAL installation.
3. Click **Install**, in a typical installation, to skip to the next step, and complete the installation.
4. Click **Next** to continue the installation.

5. Select **I accept the terms in the License Agreement**, then click **Next** to continue.

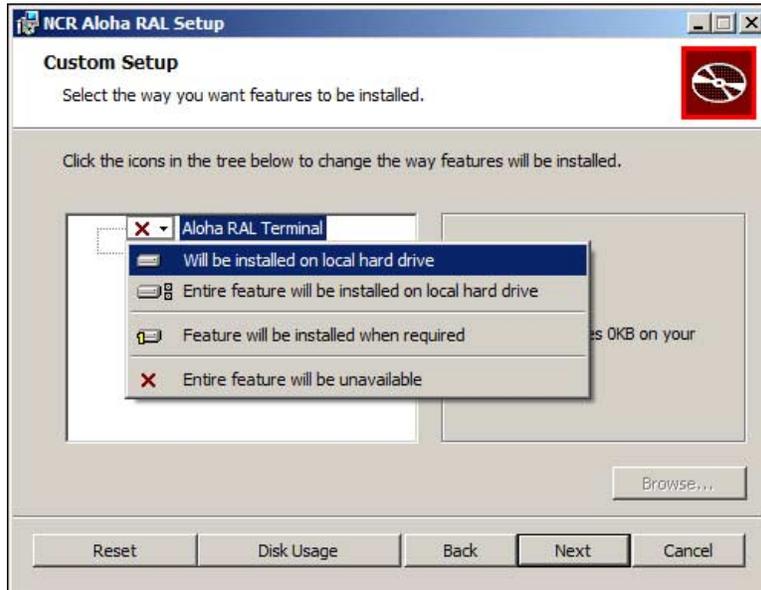


Figure 11 Installing the Aloha RAL Terminal Component

6. Click the **Aloha RAL Terminal** drop-down arrow, select **Will be installed on the local hard drive**, and click **Next**.



In RAL 14.1 versions, the installer cannot auto detect if the machine is a Radiant POS terminal. It will always default to no component being installed and will require you to define the proper component to install or use the command line option below to force the installer to use the component of your choosing.

7. Click **Install** to begin the RAL installation process. At the end of the RAL installation process, the Setup Complete screen appears.
8. Click **Finish**.
9. Click **Close** to exit the RAL Installer wizard and return to the desktop.



By default, RAL version 2.3.2.18 currently ships on all NCR terminals preinstalled and the installer and RALInstall.exe.config file reside in the C:\Staging folder on all terminals. Aloha Kitchen devices will ship with RAL version 3.0.3.168.

10. Click **Start > All Programs > Startup > Aloha Terminal Configuration** to launch RAL and configure the terminal.

## Using RAL on a FOH Terminal to Complete the Configuration

When you add a new Aloha terminal or Aloha Kitchen device (with RAL installed) to the network, the RAL client uses User Datagram Protocol (UDP) calls to the server to detect the configuration settings and configure the terminal.

The RAL client runs on the terminal at startup. Each time the terminal starts, RAL checks for the reload marker on the BOH file server, as it loads.

- If the RAL client detects the reload marker for the terminal, RAL discards the current terminal configuration, and reloads the terminal.
- If this is the initial configuration or you select Reset Terminal on the terminal, RAL prompts you to select the terminal number, if more than one terminal is available for reload.

If only one terminal is available, RAL automatically selects this terminal and continues with the configuration.

- If the terminal is an existing, functioning Aloha terminal, and the terminal is not marked for reload, RAL starts the terminal normally.
- If there is a Reload marker on the BOH for the terminal and you did not select Reset Terminal, RAL will simply do a partial configuration on the FOH terminal, meaning it will only make the changes necessary and restart the terminal, if necessary.
- If the RAL client detects a difference between the version of RAL installed on the terminal and the version installed on the BOH file server, the BOH file server receives notification from the terminal, and propagates its version to the terminal. In this manner, RAL maintains version synchronization between the BOH file server and the terminals in the network.

When you make changes to your restaurant that impact the number of terminals in your system, you must change the NUMTERMS variable to reflect the number of terminals in use after the change. If for any reason, a mismatch develops between the NUMTERMS variable and the number of terminals actually in use on your network, a message to this effect appears on the Aloha BOH file server, asking you to make this correction.

### To change the NUMTERMS variable:

1. Access Environment Variables on the Aloha BOH file server and adjust the NUMTERMS **variable**, as necessary.
2. Restart the **AIAdmSvr service** to detect this change. RAL marks all terminals for reload.
3. After you restart each terminal, the Select Terminal screen appears. You must go to each terminal, in turn, and select the **terminal number** for each one. Each terminal begins reloading when you touch its number.

## Selecting the Network Interface Card on the FOH

When you connect a new terminal to the Aloha network and power it up, the Aloha system is not part of the installed software load on the terminal. The RAL client application, installed on the terminal during manufacture, works with the Aloha BOH file server to accomplish this installation. Depending on the terminal you are installing, more than one NIC may be part of the hardware suite. Although the system configures only one NIC with its LANA number set to zero (0), all NICs installed during manufacture are active and ready for use.

If the FOH terminal has more than one NIC, select the appropriate NIC to use for the Aloha network.

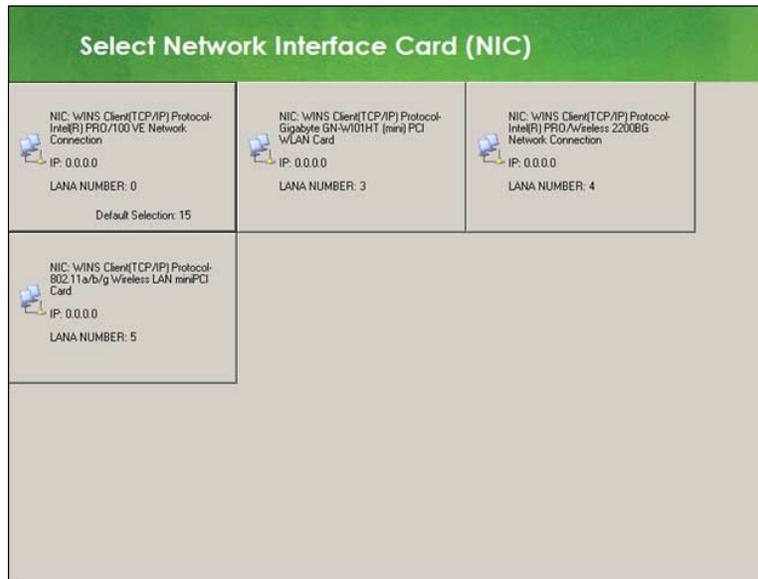


Figure 12 Multiple NIC Selection Screen

When RAL loads on the terminal for the first time, it checks the terminal for all installed NICs, and asks you to select the card you want to use if it finds multiple NICs. By default, RAL places focus on the card with its LANA number already set to zero, but allows you the opportunity to select another card. RAL displays a 30-second countdown timer, giving you the opportunity to select a different NIC. If RAL does not receive input within 30 seconds, it binds to the NIC selected by default. If you select the other NIC, RAL changes its LANA number to zero, and binds to it, prior to restarting.

**If you configure the terminal to use the wireless NIC from the start, and experience difficulties, you can:**

1. Connect a **network cable** to the terminal.
2. Select the **terminal** on the Site Configuration screen and click **Reload**.
3. Click **Aloha Reset Terminal** the desktop of the terminal and allow the terminal to restart.
4. When the NIC selection screen appears, select the **NIC** to which you connected the network cable. Allow RAL to continue the configuration and select the terminal, as necessary.
5. If RAL successfully configures the terminal using the wired network cable, correct the **wireless network settings**. Repeat steps 1 - 4, selecting the **wireless NIC** on step 4 to attempt to connect using the wireless NIC.

## Selecting the Device Type

If you select multiple terminals or kitchen devices for reload, the Select Terminal screen appears on each device, prompting you to select the terminal type to install, either POS or Kitchen. As in NIC card selection, RAL displays a 30-second countdown timer, with the first device in the list selected. If RAL

does not receive input within 30 seconds, it configures the device per the default selection. If only one terminal is marked for reload, this screen does not appear and RAL automatically reloads the available terminal. The countdown timer does not appear on initial configuration of a terminal.



This timer is configurable from AlhAdmin.exe.config using the 'DefaultTermSelTime' key.

---

The terminal restarts, after completing the reload. The floating logo screen appears when the terminal is ready for use as a POS terminal and Aloha Kitchen screen loads for kitchen devices.

If you run Reset Terminal on the FOH after RAL configures the terminal, the 30-second timer does not appear. Using the Reset Terminal button is basically resetting the terminal configuration settings as though the terminal just came out of the box.

If you have both POS terminal and Aloha Kitchen devices, the Select Aloha Terminal Type screen appears.



Figure 13 Terminal Type Selection Screen

Select **POS** or **Kitchen**, based on the role of the terminal. Your selection determines which Select Aloha Terminal id screen appears.

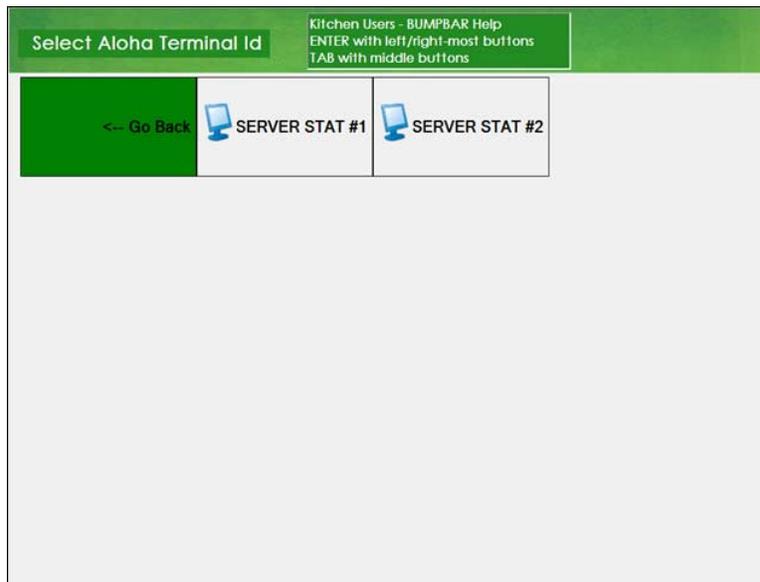


Figure 14 Select Aloha Terminal Screen

**To select a terminal:**

- Touch one of the **available terminals** on the Select Aloha Terminal ID screen.

-OR-

Touch **Go Back** to return to the Terminal Type selection screen, if you touched the wrong button.



Figure 15 Select Aloha Kitchen Device Screen

**To select an Aloha Kitchen Device:**

Touch one of the **available kitchen devices** on the Select Aloha Terminal ID screen.

-OR-

Touch **Go Back** to return to the Terminal Type selection screen, if you touched the wrong button

**To use a bump bar to select a kitchen device:**

If the kitchen device does not use a touch screen or has a bump bar attached, you can use the bump bar to select the Aloha Kitchen terminal profile.



*Figure 16* 16-key Bump Bar

1. On the 16-key bump bar, use any of the **buttons** between the large left and right arrow buttons to tab between the terminal selection buttons on the screen.
2. Press the **left** or **right button** to load the terminal using the selected profile.

# Discussing Using Separate User Accounts on a Terminal

This section discusses how RAL configures accounts on each terminal when you define a separate user account for each terminal.

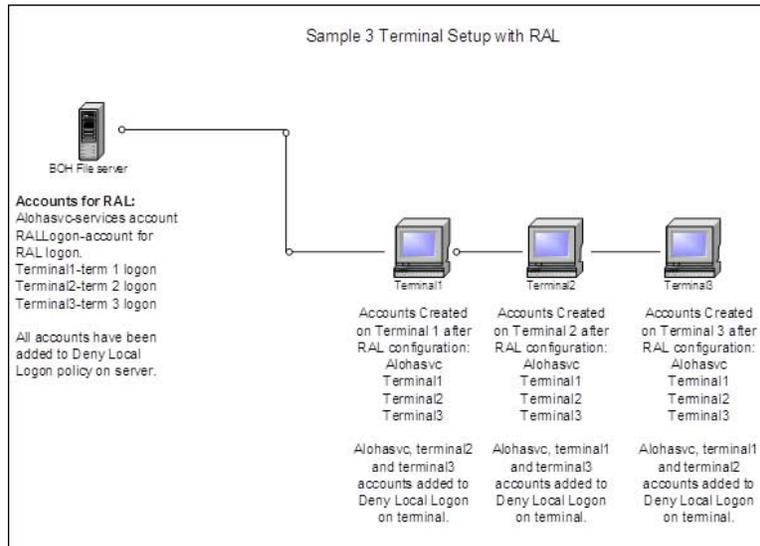


Figure 17 Example of User Accounts on a Three Terminal System

## When RAL configures a terminal, it:

- Adds the user account used by a terminal to log in.
  - Sets the account to automatically log on.
  - Encrypts and hides the auto-logon account password in the registry.
- Adds the EDC/RFS services account and each terminal user account that is not the login account for that terminal to the 'Deny local log on' policy on the terminal, similar to how you configured the accounts on the Aloha BOH file server.
- Removes EVERYONE from the Bootdrv share and adds the EDC/RFS services account and each terminal account to the share permissions with full access.
- Disables the Administrator account on each terminal. Use the following key in the AlhAdmin.exe.config file:

```
<add key="DisableAdmin" value="1" />
```

# Upgrading RAL

Upgrading RAL is a fairly simple process, but it can involve connecting a keyboard to each terminal, in turn, which can be very time-consuming, especially for sites with a large number of terminals. In addition, manual processes are subject to error. This section discusses the RAL upgrade process, including a method for accomplishing the upgrade without connecting a keyboard to each terminal, thus potentially saving you considerable time.

The first step in upgrading RAL is to install the new version on the FOH terminals. After accomplishing this, you can then install it on the BOH file server without finding yourself unable to reload a terminal.

If you follow this procedure, the terminals will still run, as the newer versions of RAL are backward compatible, but use only the functions active in the version on the file server, if it is older.



NCR currently ships terminals with RAL version 2.3.2.18. RAL is not installed on the file server due to the requirement that Aloha be installed. The install package can be found in C:\Staging folder on all terminal images and D:\Staging\RAL on all server images.

If you install different versions of RAL on the file server and the terminals, the results vary, depending on the versions involved. The following table discusses the actions you may need to take in response to specific version mismatches between servers and terminals.

Server Version	Terminal Version	Result	Upgrade Required
2.3.2.21 or lower	14.1.4.0 or later	RAL does not run on the terminal. It drops to the desktop by design. The log file shows the following message: Server response was null, possible version mismatch. Verify that RAL Server version is equal or later than RAL Terminal.	Must upgrade server to 3.0.0.0 or later version.
14.1.4.x	14.1.4.x	Normal configuration.	No upgrade occurs on the terminal if the last digit in the build installed on the server matches the last digit in the build installed on the terminal.
14.1.4.x	2.3.2.10 to 14.1.4.x	Normal configuration then the terminal upgrades to the 14.1.4.x version.	Upgrade is automatic on the terminal.
14.1.4.x	2.3.2.9 and earlier.	Upgrade fails due to a defect in version 2.3.2.9 and earlier.	Must manually upgrade the terminal.

When you upgrade the file server to v14.1.4.1 or later, RAL marks all terminals for a reload, so that the terminals receive the same version. When later versions of RAL become available, you only need to upgrade the file server. It automatically marks the terminals for a reload, and upgrades them as part of that process.



During the upgrade process on the terminal, it appears that the terminal is not responding and at the desktop. RAL is in fact removing the old version and installing the new version using the /quiet parameter. It generally takes 2 to 3 minutes after the first RAL reboot for the new interface to appear and configure Aloha.

# Using Custom Configurations with RAL

Use the following sections to customize your RAL installation and environment. Topics include:

- Using RAL on a FOH/BOH computer.
- Changing the password length with RAL.
- Installing RAL using a command line.
- Running more than one RAL service on a network.
- Translating RAL.

## Using RAL on a FOH/BOH Computer

You can install RAL on a terminal in such a way that you can use the terminal as both a FOH/BOH machine and have the terminal act as the file server component.

### To configure a FOH/BOH computer for RAL:

1. Locate the **RALInstall.exe.config** file and use **Notepad**<sup>®</sup> to open the file. By default, RAL installs to the C:\Program Files\Aloha SupportReady\Aloha Admin Service directory.
2. Add the **following line** to the RALInstall.exe.config file:  
<add key="RALServer" value="1" />
3. On the toolbar, click **File > Save**.

This automatically installs the BOH file server component on the terminal instead of installing the POS terminal component.



RAL cannot act as both the server component and the POS terminal component on the same machine. If you install RAL using this key variable, you only get the server component.

You must install Aloha on the terminal and select 'Run FOH/BOH on same machine.'

The terminal number to which you assign the FOH/BOH machine does not appear in the RAL user interface, since RAL cannot confirm the RAL server machine.

---

## Changing the Administrator Password Length with RAL

RAL allows you to define the number of days at which it automatically changes the password for the 'Administrator' user account on each terminal, to comply with PCI-DSS requirements. This feature is also supported on Aloha Kitchen devices. [See "Managing the Administrator Windows User Account on Terminals" on page 15.](#)

When the password changes:

- RAL changes the Administrator windows user account password on each terminal.
- RAL does not change the EDC/RFS user account password unless it is shared with either a terminal or is the same account being used as the Administrator user account.
- The default number of characters for the new password is eight, unless you edit the value of this key.

### To change the number of password characters:

1. On the Aloha BOH file server, use **Notepad** to open **C:\Program Files\Aloha SupportReady\Aloha Admin Service\AIAdmSvr.exe.config**.
2. Locate **<add key="PasswordStrength" value="8" />** and change the **value of the key** to any number equal to or greater than the current value defined on the account policy (Minimum Password Length).
3. Stop, then restart, the **AIAdmSvr** service after you make this change.

## Installing RAL Using a Command Line

RAL version 14.1.x supports the installation of RAL using a command line. The following parameters are:

**/quiet** — Installs RAL either on the terminal or Aloha BOH file server without user intervention. You must use one of the following two parameters in conjunction with this one.

- OPTION=server
- OPTION=terminal

If you use 'server,' RAL installs the BOH component on the machine. The 'terminal' value installs the terminal component.

To use a custom install to add variables to one of the three configuration files that RAL uses, you have to pass the following variable and value:

- CONFIG=<path and name of configuration file>



***You must pass the **OPTION** and **CONFIG** variables in all CAPS; however, the value can be lowercase. If either parameter is in lowercase, the installer will ignore it.***

---

## Sample Installation Configuration File

```
<?xml version="1.0" encoding="utf-8" ?>
<configuration>
<appSettings>
<!-- add key="TermUI" value="TermUI" /-->
<!-- add key="Service" value="Service" /-->
<!-- add key="AdminUI" value="AdminUI" /-->
<!-- add key="TermUI.CopyRemotely" value="0" /-->
<add key="Service.BaseLocalDir" value="C:\Bootdrv\" />
<add key="Service.BeforeIberCfg1" value="SET TEST" />
<add key="AdminUI.ShowSplashScreen" value="1" />
<add key="AdminUI.ValidateUser" value="0" />
<add key="TermUI.SetGatewayInfo" value="0" />
/appSettings>
</configuration>
```

- You can find the variables used in the configuration file in Help > Help Topics from the task bar icon.
- You must preface all keys that are written to the service configuration file (AIAdmSvr.exe.config) with "Service,," as shown above.
- You must preface all keys that are written to the BOH user interface configuration file (AIAdSvrUI.exe.config) with "AdminUI,," as shown above.
- You must preface all keys that are written to the terminal configuration file (AlhAdmin.exe.config) with "TermUI,," as shown above.
- You can install all of the above configuration using a batch file. The following is an example batch file command line to install RAL on the server using a custom configuration is shown below:

```
ralsetup.exe /quiet OPTION=server CONFIG=D:\RALInstall.exe.config
```

## Running More Than One RAL Service on a Network

Use Store.xml when you have more than one server running the RAL service on your network switch. Though this configuration is not common, it has been used on some live sites and is useful in lab environments where you may have two servers, such as one for QS and one for TS on the same network. The structure of Store.xml appears below and can contain many stores. This example is a two store setup.

```
<?xml version="1.0" standalone="yes"?>
<AllStoreInfo xmlns="http://tempuri.org/AllStoreInfo.xsd">
  <Store>
    <Id>1</Id>
    <StoreId>1</StoreId>
    <StoreName>TS Store</StoreName>
  </Store>
  <Store>
    <Id>2</Id>
    <StoreId>2</StoreId>
    <StoreName>QS Store</StoreName>
  </Store>
</AllStoreInfo>
\
```

You must copy Store.xml to the following locations:

Server= C:\Program Files\Aloha SupportReady\Aloha Admin Service folder. (32 bit)  
 C:\Program Files(x86)\Aloha SupportReady\Aloha Admin Service folder. (64 bit)  
 Terminal= C:\Program Files\Aloha SupportReady\AlohaAdm folder.

Since RAL uses UDP, it must either be on a different network or communicate using different port numbers. You can manually edit the port numbers in the configuration files, but the use of Store.xml eliminates the need to edit these files. Once selected, RAL uses a base of five to determine the ports on which to listen and send. It multiplies the store number by five to determine the port numbers.

*Table 1: Example of Ports with Multiple Stores*

Port	Default	Store 1	Store 2
MulticastUDPSendPort	11001	11005	11010
MulticastUDPListenPort	11002	11006	11011
RemoteCopyPort	11003	11007	11012

For example, if you select Store 1, it will communicate on ports 11005, 11006, and 11007. Store 2 will communicate on ports 11010, 11011, and 11012.

When RAL starts on a FOH terminal, the Store Selection screen appears as shown in Figure 18. Touch the drop-down list, containing all of the stores defined in Store.xml, and select the store to which to connect the terminal.



Figure 18 Store Selection Screen

# Translating RAL

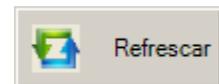
The Resource folder contains Strings.txt, which stores all of the label information for the RAL user interface. This file is read-only, but you can change the file properties to allow you to edit any label within the RAL user interface to a new language, if needed.

To change this, use the following procedure:

1. Stop the **ALAdmSvr service**.
2. Access **C:\Program Files\Aloha SupportReady\Aloha Admin Service\Resources**.
3. Right-click **Strings.resources** and **Strings.txt**, select **Properties**, and clear **Read only**.
4. Open **Strings.txt** using Notepad.
5. Translate the **text** to the right of the equal sign to the desired language or operational term. Use the `\n` to move the text to the next line.

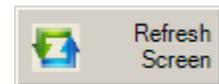
*Example: If you want to translate the Refresh button to Spanish:*

Change **btnRefresh=Refresh** to **btnRefresh=Refrescar**



*Example: If you want to change the Refresh button to say Refresh Screen, with Screen on the second line:*

Change **btnRefresh=Refresh** to **btnRefresh=Refresh\nScreen**



6. Save **Strings.txt**.
7. Right-click **Start > All Programs > Accessories > Command Prompt** and select **Run as administrator**.
8. Change the directory to **C:\Program Files\Aloha SupportReady\Aloha Admin Service\Resources**.
9. Type in the following **command**:  

```
resgen.exe strings.txt strings.resource
```
10. Press **Enter**. You should get the following message, if successful:  

```
Read in 110 resources from 'strings.txt'  
Writing resource file... Done.NCR RAL v14.1 FFG
```
11. Change the **properties** for each file back to 'Read only,' if successful.

On the desktop, double-click the **Aloha Service Admin user interface icon**. If successful, the RAL icon appears in the systray and you can open the user interface with your changes.



***Make a backup copy of Stings.txt and Strings.resources before beginning.***

***Make changes only to the text on the right side of the equal (=) sign.***

---

# General Info

## RAL Back-of-House File Locations

- The Program Files folder contains an Aloha SupportReady folder.
- The Aloha SupportReady folder contains an Aloha Admin Service folder.
- The Aloha Admin Service folder contains the RAL executables, resource, and configuration data.
- RAL stores the configuration data in AlAdmSvr.xml in the Data folder.
- Installation logs are written to the %IBERDIR%\TMP folder on the RAL BOH server.
- AlohaServerLog\_YYYYMMDD.txt (where YYYYMMDD is the system date of the information) contains information about RAL clients connecting to the Aloha Adm service.
- AlohaUILog\_YYYYMMDD.txt contains any errors detected by the Aloha Administrator user interface.

## RAL Front-of-House File Locations

- The C:\Program Files\Aloha SupportReady\AlohaAdm directory contains the RAL executables, logs, and configuration data.
- Log files are also located on terminals in the %Localdir%\Tmp folder, after RAL completes the initial configuration. The names for these files are in the format, DebRAL\_YYYYMMDD.xx, in which the terminal ID number replaces the 'xx' component.
- AlhAdmin\_YYYYMMDD.txt contains RAL information related to terminal configurations on the date specified in the YYYYMMDD format.

## RAL Install Log

RALInstallLog\_yyyymmdd.txt is located in the same folder/location from which you execute RALInstall.exe. This can be helpful in possible install issues.

## QueryMachine Return Codes

Querymachine.dll is the file that does the initial check on install to determine if the terminal on which you are installing RAL is a Radiant terminal.

- 1: = "This is not a radiant machine"
- 2: = "This is a radiant machine, but the platform was not determined"
- 3: = "This is a P1550"
- 4: = "This is a p1510"
- 5: = "This is a 1210"
- 6: = "This is a 1220"
- 7: = "Error in library"

## Special Environment Variables for RAL

**RALWorkgroup** — RAL automatically adds each terminal to a workgroup different from that of the server. This is useful for BOH servers that belong to a domain, but terminals need to belong to a workgroup. The workgroup value is configurable. It can read the unit number from the Aloha.ini file by using a value of %unitnumber%<text here>. For example, if the unit number is 15 and you want to set all terminals in a workgroup called 15Aloha, set the value to %unitnumber%Aloha.

**RALResetSite** — When this variable is defined, RAL adds a button to the Site Configuration screen called Reset Site. Use this feature when switching out databases. This is useful in lab environments when testing. It can change out the entire RAL data xml to work from one database to another without the need to reinstall or add/delete terminals.

## **RAL Return Codes in Log Files**

The RAL return codes are for debugging purposes. The list below explains what they mean.

Success = 0

RequestTypeInvalid = 1

NoStoreFound = 2

NoTerminalFound = 3

UDPIPAddressNotAvailable = 4

UDPIPRequestMultipleStores = 5

UDPIPRequestSingleStoreMultipleIP = 6

UDPIPRequestUserSelectedTerminalAlreadyInUse = 7

UDPIPRequestTerminalConfigurationSent = 8

UpdateTerminal = 9

# FAQ

## **Q) Can I install RAL on any computer?**

**A)** You can install the Back-of-House RAL service and Terminal Configuration utility on any computer. Earlier versions of the RAL POS Terminal installation launches only if it detects Radiant firmware during installation. RAL version 14.1.x and later removes the hardware restriction and can be installed on any terminal.

## **Q) If a terminal does not have the RAL application loaded on it, can I add it?**

**A)** Yes, the RAL installation is relatively small and you can load it on a flash drive or copy across the network. After you copy the RAL installation to a terminal, you can use a keyboard to launch the installation application from the Run command or Windows Explorer. You can also use the touch screen to launch the installation process, without having to attach a keyboard.

## **Q) Where can we get the RAL software?**

**A)** The RAL software is part of all base images installed on Radiant terminals. You can also download RAL from the Aloha Update site. It is not installed on Radiant servers due to the requirement of Aloha being installed.

## **Q) Is there a cost for RAL?**

**A)** No, RAL is available as part of the Aloha Support Ready suite at no charge.

## **Q) Do I need to know the network settings of the store receiving the loaner or replacement terminal?**

**A)** No, RAL has the ability to connect over a sub-layer of the networking hierarchy that allows it to broadcast requests for configuration to the RAL Aloha Admin service.

## **Q) What interaction from a store manager is needed after a terminal loaded with RAL arrives on site?**

**A)** The restaurant personnel must:

1. Place the terminal/kitchen device at its location, and connect power, network, and peripheral cables.
2. Select which terminal to reload in the Site Configuration screen.
3. Touch which terminal to reload on the FOH terminal, if more than one terminal is configured in the BOH RAL application and more than one terminal is marked for a reload.

If only one terminal is selected for reload, RAL automatically configures the new terminal without any further intervention from a store manager.

## **Q) How long does RAL take to configure a terminal?**

**A)** Depending on the network, it typically takes RAL about five minutes or less to configure, restart, and copy the necessary files, before the Aloha floating logo appears on a terminal or Aloha Kitchen loads on a kitchen device.

## **Q) What is the best way to send a loaner or replacement terminal with RAL?**

**A)** You should load RAL on the loaner or replacement terminal or kitchen device. The network settings and computer name is not important, as RAL configures these settings automatically.

## **Q) Is RAL capable of staging a new system?**

**A)** Yes, one of the benefits of RAL is its usefulness in many different scenarios. The staging personnel just configure the Aloha file server and load the RAL Aloha Admin service and Terminal Configuration utility. After you configure the environment settings for each terminal defined in Trm.dbf using RAL, load the RAL Aloha Admin application on each POS terminal, if it is not part of the terminal image. RAL on each terminal connects to the service and prompts the staging personnel for the store and terminal number. In most cases, staging personnel can unpack a terminal, turn it on, and have the Aloha floating logo appear without connecting a keyboard.

**Q) Will RAL work on a domain or workgroup?**

**A)** RAL will work on both domain and workgroup network configurations. You must define the domain credentials in the Set Domain Account Info function to allow a terminal to connect to a domain. RAL uses this information to connect the Aloha BOH file server to the domain, and to configure the terminals with the proper network settings for connection within the domain. Account information that is incorrect, has minimal privileges, or missing can prevent RAL from configuring the terminals and connecting to the Aloha BOH file server.

**Q) Can I configure a less vital terminal to replace a critical Aloha terminal?**

**A)** Yes, you can use an existing terminal that does not currently perform critical functions to replace Aloha terminals that run kitchen printers or perform other critical functions in the restaurant. This process reduces the risk of running without a critical Aloha component over a busy weekend.

**To exchange a terminal:**

1. Click **Exchange Terminals** on the Site Configuration screen.
2. Select the **terminals** to exchange from the drop-down lists.
3. Disconnect the functioning **terminal** from its current location and move it to the critical location, where the printer runs are located.
4. After connecting the terminal appropriately, restart the **terminal**. The RAL Aloha Admin application determines the terminals available for configuration.
5. Select the appropriate critical **terminal** number and RAL reconfigures the terminal with the appropriate settings for this terminal.

**Q) Why does the terminal return 'No network enabled NIC detected?'**

**A)** If you set the NIC on the terminal to use DHCP, but the terminal fails to find a DHCP server, Windows assigns a default fixed IP address to the terminal that begins with 169. If RAL detects an IP address beginning with 169, it fails to configure the terminal.

**To solve this problem:**

1. Verify the **network cable** is plugged in to the NIC.
2. Change the **IP address** to one that begins with a different octet. Consider changing the IP address to the NCR default value, 192.168.0.2, or similar.

**Q) What should I check if Aloha does not run after RAL completes its process?**

**A)** AlhAdmin\_YYYYMMDD.txt/DebralYYYYMMDD.nn contains important information regarding the status of the RAL configuration. Normal Aloha troubleshooting, like debouts, may also assist in determining the problem. Generally, if RAL completes and the FOH starts, this is not a RAL issue, but rather Aloha itself. Check the debout and RKS site for a resolution.

**Q) Can I turn on all of my terminals at one time, when configuring RAL for the first time, if the image for each terminal is the same?**

**A)** Yes.

**Q) When I use the Refresh button in RAL, nothing happens on the FOH. Why is that?**

**A)** The Refresh button in RAL is only to refresh the Site Configuration screen. It does not function to refresh the FOH terminals.

**Q) Does RAL have to reconfigure the entire terminal every time I make a change in the Terminal Configuration screen?**

**A)** RAL no longer reconfigures the terminal unless the following are changed: Aloha Path, Termstr, IP Address, Server name or there is an upgrade on the terminal to the later server version in which case RAL does a full reconfiguration. If you change other variables, the terminal logs off and back on, then RAL starts the FOH in what is called a partial reconfiguration.

**Q) Can I customize the user interface with different languages for the field labels?**

**A)** Yes, you can edit Strings.txt, found in \Program Files\Aloha SupportReady\Aloha Admin Service\Resources on the BOH file server to change the labels to a different language, then recompile Strings.resources using the ResGen.exe found in the same folder. [See "Translating RAL" on page 34.](#)

**Q) Can I port my gateway and DNS entries from the server to the terminals?**

**A)** Yes, RAL adds any entries in the gateway and DNS fields on the server to the terminal, if you use the <add key="SetGatewayInfo" value="1" /> in AlhAdmin.exe.config.

**Q) How does RAL work with Syncinclusion?**

**A)** With RAL version 2.3.2.4 and greater, RAL checks for the existence of the following files in the bin on the file server:

- Iber.exe or Iberqs.exe (depending on if it is TS or QS)
- RFSCIts.dll
- Iberstr.dll
- Iberrq.dll
- Syncinclusionlist.cfg
- RFSCIt8s.dll

If RAL finds these files, it copies only these six files to the Bin folder on the terminal as part of the terminal configuration. Iber(QS).exe handles the rest of the files once it starts.

# Troubleshooting RAL

This section discusses RAL errors and issues you may encounter and how to troubleshoot these issues.

RAL outputs debugging logs on both the server and terminals. Be sure to check these first for information. The following tables show the location and names of the debugging files:

## TERMINAL:

Location	File
C:\Program Files\Aloha SupportReady\AlohaAdm folder	AlhAdmin_yyyymmdd.txt
\Aloha\TMP folder	DebRAL_yyyymmdd.xx, where xx is the terminal number

## SERVER:

Location	File
\Aloha\TMP folder	AlohaServerLog_yyyymmdd.txt and AlohaUILog_yyyymmdd.txt

### **Installing RAL on the terminal does not give the POS terminal option, only the Back of House file server.**

This means that the installer program cannot find Radiant firmware on the terminal. This occurs if you try to install on a non-Radiant terminal. RAL will not work on these terminal types.

### **Locating the Debouts for Troubleshooting RAL with Kitchen Devices**

Like the POS terminals, RAL creates a DebRALyyyymmdd.nn, where nn is the terminal ID number. This file is located in the AlohaKitchen\TMP folder on the kitchen device.

### **Starting the Aloha Admin Service User Interface returns the error pop up "Error setting up NIC. Please restart the Aloha Admin Service."**

This error occurs when the AIAdmSvr service is not started. To correct, simply start the service. In all versions of RAL, the service is set to start automatically when Windows starts. We have found on some sites, for reasons unknown, the service attempts to start but if the prerequisite service (WMI) has not started yet, it cannot start. This is addressed in version 2.1.2.2, and later. In these versions, RAL checks and starts the service when you open the Aloha Admin Service user interface, if the service did not start on reboot automatically, similar to Aloha Manager.

### **"Please Select a Store/ Terminal which you wish to configure a terminal" appears.**

In RAL versions 1.1.3.225 and lower if you do not select the store from the drop-down list and select the Configure Terminal button, you receive this error. Simply select the store to use from the drop-down list.

### **Terminals no longer appear in the Aloha Admin Service user interface.**

This will only be an issue in version 1.1.3.225 and lower. By default when we load up the user interface, we do not have a store selected, thus no terminals will show up in the Site Configuration screen. To fix this, simply select the store from the drop down box. This has been changed in versions beyond 1.1.3.225 in that we no longer use the store drop down box, we now use the default store of ID 1.

**RAL appears to have completed the configuration of a terminal, but when it tries to load Aloha, you receive an error message stating that Iber(qs).exe could not be found.**

In older versions of RAL, 1.1.3.225 and lower, if you created a new user account on the terminal for use as the auto-login account, but did not create that same user account with administrator permissions on the file server, you have a permissions issue. To fix this, create the same user account on the Aloha BOH file server with administrator rights. In new versions of RAL, you can only select the account with which to log on to the FOH that is already created on the BOH file server with administrator rights. If the account is not in the administrator group on the Aloha BOH file server, then it does not appear in the drop-down list in the RAL BOH Configuration screen, and the terminal cannot use it.

Another cause could be that Use Simple File sharing is enabled on the server. Clear this option to correct.

**RAL is stuck on the Requesting Configuration screen.**

RAL requires that if you enable the firewall on either the server, terminal, or both, you configure the following exceptions to allow communication.

- UDP ports 11000, 11001, and 11002.
- If you use multiple RAL servers on a network, open the UDP ports that correspond with server and terminals for the site. [See "Running More Than One RAL Service on a Network" on page 32.](#)
- IP address 224.168.100.25 for UDP calls.

**When loading the user interface, the error message "The NUMTERMS variable (NUMTERMS=x) does not match the number of terminals (x) configured in Aloha Manager. Please adjust either the NUMTERMS value or number of order entry terminals before continuing" appears.**

Change the NUMTERMS variable on the Aloha BOH file server to match the number of order entry terminals defined in Aloha Manager.

**In the terminal configuration screen, 'Enable OrderPoint' is not available.**

Order Point must be installed on the BOH file server to activate this option, and RSSEngine.exe must reside in the %Iberdir%\BIN folder.

**Cannot install RAL on the BOH file server without fatal exception errors.**

RAL requires that you install Aloha since it must access Trm.dbf. Another cause could be a corrupt or improper syntax in RALInstall.exe.config.

**On capacitive touch screen terminals, RAL gets stuck at the Requesting Configuration screen.**

Upgrade to version 1.1.3.224, or later, to eliminate this issue. In earlier versions of RAL, when there were items in the startup group on the terminal, a prompt to select yes to continue with the terminal configuration would appear; however, the message appeared from behind the main RAL screen. You had to double-click the taskbar to get the second instance of the program to come to the forefront so you could respond to the message.

**Terminal is stuck "Waiting for system configuration to complete."**

- Confirm the user account each terminal uses to log in is included in the Bootdrv share properties on the Aloha BOH file server.
- Confirm there is an OK file in the \Data folder.

**You install the RAL server component on a FOH/BOH site running Windows XPe, but receive an error initializing NIC when you try to load it.**

Microsoft.Jet.Oledb is not properly installed. You can install the newest version available from Fox Pro at <http://www.microsoft.com/downloads/details.aspx?FamilyId=E1A87D8F-2D58-491F-A0FA-95A3289C5FD4&displaylang=en>.

You will then have to change the line in Program Files\Aloha SupportReady\Aloha Admin Service\AlAdmSvr.exe.config from <DBFConnectionProvider>Microsoft.Jet.OLEDB.4.0</DBFConnectionProvider> to <DBFConnectionProvider>VFPOLEDB.1</DBFConnectionProvider>.

**RAL cannot create a new user account on the FOH terminal.**

The terminal image is missing Net.exe and Net1.exe, which RAL needs to create a new user account on the terminal. Add these two files to the terminal, then reload RAL.

**RAL fails on the FOH terminal with the error "The root element is missing."**

Rename or delete C:\Program Files\Aloha SupportReady\AlohaAdm\AlhAdmin.xml on the failed terminal then copy AlhAdmin.xml from a working terminal to the failing terminal. Alternatively you can reinstall RAL to fix this. This is due to a blank or corrupt xml file.

**The user account created for EDC/RFS service or the terminal does not appear in the drop down list.**

Verify the user account is in the Administrator group. By default all new Windows user accounts appear in the user group only. You must add them to the Administrator group.

**You receive the following message in the log file when trying to load the terminals: Throwing unhandled exception: A message sent on a datagram socket was larger than the internal message buffer or some other network limit, or the buffer used to receive a datagram into was smaller than the datagram itself.**

Open AlhAdmin.exe.config on the terminal and AlAdmSvr.exe.config on the Aloha BOH file server and edit the key <add key="SizeOfBuffer" value="" />. The default value is 8192. We recommend you double this value, save, and exit. This can occur with a large number of terminals configured in the user interface, usually 16 or more.

**When trying to open the user interface, you receive the following message: "User Interface could not get NIC information. Exception logged in the log file. Please verify." The entry in AlohaUILog\_yyyymmdd.txt is as follows:**

```
User Interface could not get NIC information. Exception : Object reference not set to an instance of an object. Stack: at Radiant.AlohaPOS.RadiantAutoLoader.ALStartUp.Main()
```

Open AlAdSrUI.exe.config and locate the following key: <add key="CheckForConnectedNIC" value="1" />. Set the value to 0. Save and exit.

**When trying to install or uninstall RAL, you receive an error 1720; "There is a problem with this Windows Installer Package. A script required for this install to complete could not be run. Contact your support personnel or package vendor."**

You could have a corrupt WMI repository, you need to upgrade the Windows Installer, or you need to restart the Windows Installer service.

**Try the following to determine which one is causing the issue.**

1. Stop and restart the Windows Installer service. Try to reinstall or uninstall RAL.
2. If error persists, upgrade the Windows Installer from Microsoft. Once you upgrade, try to reinstall or uninstall RAL.
3. If problem persists, run the following:

**Windows XP and Windows Vista**

- a. Click **Start > Run**, and type **CMD.exe**.



In Windows Vista and later, you need to open an elevated Command Prompt window. To do so, click Start > All Programs > Accessories. Right-click Command Prompt, and select 'Run as administrator,' from the menu that appears.

---

- b. Type **net stop winmgmt** and press **Enter**.
- c. Using Windows Explorer, rename the folder **%windir%\System32\Wbem\Repository**.
- d. For example, **%windir%\System32\Wbem\Repository\_bad**. **%windir%** represents the path to the Windows directory, which is typically **C:\Windows**.
- e. Switch to the **Command Prompt** window, type **net start winmgmt**, and press **Enter**.
- f. Type **exit**.

**The NIC is set to LANA 0 but each time you load the user interface a message appears stating that LANA is not set to 0. Selecting Change does not fix the problem, nor does the Skip button.**

This is caused by the binding order in a dual NIC system, and the NIC being used by RAL is not at the top of the binding order list.

**To fix this issue:**

1. Select **Control Panel > Network and Internet > Network Connections > Advanced > Advanced Settings > Adapters and Bindings** tab.
2. Select the **NIC** you are using for RAL and verify that it is the first one in the list.

If not, select it and use the **Up** arrow button to move it to the first one in the list.

# RAL Password and Permissions Corrective Action Procedure

RAL is a powerful tool that helps to maintain some of the PCI standards that have been established for computers on your network. It features the ability to automatically change the passwords of FOH user accounts at specified time intervals, prevents local login of accounts that do not require the ability to log in locally, and it removes the need for site personnel and support staff to be aware of the passwords being used by these accounts.

These features tend to contradict our traditional views of Windows user management. They also significantly affect the methodology we apply when attempting to resolve FOH network configuration issues as they relate to Windows user accounts. This section discusses the standard procedure for resolving any issue relating to user, password, or permissions issues involving FOH terminal user accounts. One of the strengths of RAL from a support perspective is that RAL manages the vast majority of potential problems with a single procedure.



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***When a site is using RAL v14.1, and later, there is no reason to manually change the terminal user account passwords on any computer (FOH or BOH) unless you are performing this procedure. Making manual changes to the passwords on any FOH terminal user account causes the FOH login to fail. Depending on the timing of the change, it can take hours or days for the failure to occur.***

---

This section discusses the procedures you should perform if you are experiencing any of the following pertaining to the FOH using RAL v14.1, or later:

- Permission issues
- User account issues
- Password issues

## To resolve these issues:

### Step 1: Reboot all FOH terminals to resolve the issue.

After you reboot the terminals, check to see if the problem still exists. If it does, proceed with the additional steps. If the problem is corrected, the issue is resolved.



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RAL updates the passwords on the Aloha BOH file server at exactly the number of days specified in the RAL configuration; however, the FOH terminals do not update their RAL configurations until after they are rebooted. In the rare situation that a FOH terminal or the BOH server is rebooted after RAL has changed the passwords, but before the terminals are refreshed or EOD has processed, it is possible for password conflicts to occur on the FOH or between the FOH and the BOOTDRV share on the server. Rebooting all terminals will allow them to reload and correct this situation.

---

### Step 2: Enable user validation in the RAL user interface configuration.



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It is likely while the password conflicts exist, the terminals lock the terminal user accounts on the BOH. To correct this, open the Computer Management console, locate, and double-click the **terminal user account** and clear **Account is locked out** for each terminal user account. Because this may occur multiple times during the correction process, it is advised that you power down all terminals, during the corrective actions, so they do not attempt to connect to the BOOTDRV share.

---

- a. On the Aloha BOH file server, close the **RAL user interface** and stop the **AIAdmSvr service**.

- b. Access **C:\Program Files\Aloha SupportReady\Aloha Admin Service**.
- c. Open **AIAdSvrUI.exe.config** using Notepad.
- d. On the tool bar, select **Edit > Find...**, type **ValidateUser** in 'Find what,' and click **Find Next**.
- e. Change the **current value** from 0 to 1.



The full text of this line in the file should read like the line below after the change has been made:

```
<add key="ValidateUser" value="1" />
```

- f. Click **File > Save**.
- g. Close **Notepad**.

### Step 3: Remove the 'Deny log on locally policy' from the FOH user accounts defined on the BOH:

- a. Click **Start > Run**.
- b. Type **gpedit.msc**.
- c. Click **OK**.
- d. Access **Computer Configuration > Windows Settings > Security Settings > Local Policies > User Rights Assignment**.
- e. In the pane on the right, locate and double-click **Deny log on locally**.
- f. Select each **terminal user account** and click **Remove**.
- g. Click **Apply**.
- h. Click **OK**.

### Step 4: Change the FOH user account passwords to a known value on the BOH:

- a. On the BOH computer, click **Start > Run**.
- b. Type **compmgmt.msc**.
- c. Click **OK**.
- d. Access **Computer Management > System Tools > Local Users and Groups > Users**.
- e. In the pane on the right, right-click the **first terminal user** and select **Set Password**.
- f. Click **Proceed**.
- g. Type a **new password**.
- h. Confirm the **new password**.
- i. Click **OK**.
- j. Define a **new password** for all terminal users on the BOH.
- k. Close the **Computer Management Console**.

### Step 5: Update the FOH user accounts and passwords in the RAL user interface:

- a. Open the **RAL user interface** and type the newly created passwords in the configuration of each terminal.
- b. Start the **AIAdmSvr Service** on the BOH.
- c. Open the **RAL user interface**.
- d. Select the **first terminal** in the list.
- e. Click **Configure**.
- f. In 'Default User Information' of the Terminal Configuration screen, ensure the **correct user account** for the terminal is selected.
- g. Enter the **new password** in 'Password.'
- h. Click **Save**.

- i. Repeat **this procedure** for all remaining terminals.
- j. Close the **RAL user interface**.



---

Because you have re-enabled the user validation, RAL confirms the user name and password are correct before saving the configuration changes for each terminal. If you receive the message "The account does not appear to be set up correctly," this is most likely an indication that the password you entered does not match the password you set for the account using Computer Management in the previous step. Re-enter the password; however, if it continues to fail go back to the Computer Management console and set the password for the failing terminal user account again.

---

**Step 6: Re-enable the 'Deny log on locally' policy on the FOH accounts:**

- a. Click **Start > Run**.
- b. Type **gpedit.msc**.
- c. Click **OK**.
- d. Access **Computer Configuration > Windows Settings > Security Settings > Local Policies > User Rights Assignment**.
- e. In the pane on the right, locate and double-click **Deny log on locally**.
- f. Click **Add User or Group**.
- g. Enter the **user account name** for each terminal, separated by semicolons (;).
- h. Click **Check Names**.
- i. Click **OK**.
- j. Verify the **user account** for each terminal appears in the Local Security Setting list.
- k. Click **OK**.
- l. Close the **Group Policy** editor.

**Step 7: Disable user validation in the RAL user interface configuration:**

- a. On the BOH computer, open the **AIAdSrUI.exe.config** file using Notepad.
- b. On the tool bar, select **Edit > Find...**, type **ValidateUser** in 'Find what,' and click **Find Next**.
- c. Change the **value** from 1 to 0.
- d. Click **File > Save**.
- e. Close **Notepad**.

**Step 8: Reboot the FOH terminals to allow RAL reload:**

Any reboot method will work. Having the site press the **power button** on each of the terminals to power them down, then having them turn them back on is the recommended procedure in this case.

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**Feature History**

Supported Versions	Description
14.1.4.0	Exchange Terminals button now active in the user interface without the need for the system environment variable.
14.1.4.0	Opened the IP address and subnet mask fields to allow for segmented networks.
14.1.4.0	Added DNS1, DNS2, and gateway entry fields in the BOH Config screen.
14.1.4.0	Added support for Aloha Kitchen configuration.

