Net-Net® Interactive Session Recorder (ISR) Release Notes

Release Version 5.0

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Notices

About this Release Note

Overview

The *Net-Net Interactive Session Recorder (ISR) Release Notes 5.0* provides the following information:

- About the Net-Net ISR
- Net-Net ISR Release Notes
- Upgrading the Net-Net ISR

Net-Net ISR Releases

The current release of the ISR is Version 5.0.

The following Acme Packet Net-Net Session Director (SD) products are certified for use with the Net-Net ISR software:

- C-Series (Net-Net 3000/4000) SDs
- E-Series (Net-Net 2600) SDs
- Net-Net Application Session Controller (ASC)

Note: For more information on the Net-Net C-Series, E-Series, and ASC hardware, see Acme Packet's applicable hardware documentation.

Who is Acme Packet?

Acme Packet enables service providers to deliver trusted, first class interactive communications-voice, video and multimedia sessions-across IP network borders. Our Net-Net family of session border controllers satisfy critical security, service assurance and regulatory requirements in wireline, cable and wireless networks. Our deployments support multiple applications-from VoIP trunking to hosted enterprise and residential services; multiple protocols-SIP, H.323, MGCP/NCS and H.248; and multiple border points-interconnect, access network and data center.

Established in August, 2000 by networking industry veterans, Acme Packet is a public company traded on the NASDAQ and headquartered in Bedford, MA.

Related Documentation

The following table lists related documents.

Document Name	Document Description
Net-Net Interactive Session Recorder (ISR) Installation Guide	Provides an overview of the Net-Net ISR, hardware/software requirements and recommendations, storage considerations, pre-installation information, CIS and RSS installation procedures, post-install verification and configuration procedures, setting up and making a test call, and additional advanced topics about the Net-Net ISR.
Net-Net Interactive Session Recorder (ISR) User's Guide	Contains information about using the Net-Net Interactive Session Recorder (ISR) Dashboard from the User's perspective. Provides information about viewing, playing, deleting recordings, running reports, and managing user profiles (Super User, Account Administrator, and Tenant Administrator only).
Net-Net Interactive Session Recorder (ISR) Administrator Guide	Contains information about using the Net-Net Interactive Session Recorder (ISR) Dashboard for the Administrator level user (Super User, Account Administrator, and Tenant Administrator). Provides information about creating and managing accounts, routes, and users. Also provides information about configuring the Net-Net ISR, running reports, and viewing active calls.
Net-Net Interactive Session Recorder (ISR) API Reference Guide	Contains information about Methods for Recording, VoiceXML Commands, representational state transfer (REST) application programming interface (API), Recording File Types/Formats Supported, Return Codes, sendIPCRCommand.jsp Subdialog, Advanced Options, Troubleshooting.

Revision History

This section contains the revision history for this document.

Date	Revision Number	Description
August 3, 2012	Revision 1.00	Release 5.0 of the Acme Packet Net-Net ISR. Various new features including a new Net-Net ISR Dashboard, and a feature of associating realms to accounts.

Technical Assistance

If you need technical assistance with Acme Packet products, you can obtain it on-line by going to support.acmepacket.com. With your customer identification number and password, you can access Acme Packet's on-line resources 24 hours a day. If you do not have the information required to access the site, send an email to tac@acmepacket.com requesting a login.

In the event that you are experiencing a critical service outage and require live assistance, contact the Acme Packet Technical Assistance Center emergency hotline:

- From the United States, Canada, and Mexico call: 1 866 226 3758
- From all other locations, call: +1 781 756 6920

Please note that a valid support/service contract with Acme Packet is required to obtain technical assistance.

Customer Questions, Comments, or Suggestions

Acme Packet is committed to providing our customers with reliable documentation. If you have any questions, comments, or suggestions regarding our documentation, please contact your Acme Packet customer support representative directly or email support@acmepacket.com.

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Contents

1 Net-Net ISR Release Notes

Introduction

These Release Notes provide the following information:

- About the Net-Net ISR
- Supported Hardware/Software
- Net-Net ISR Release Process
- Features
- Issues Fixed
- Known Issues

About the Net-Net ISR

Acme Packet introduces the Net-Net Interactive Session Recorder (ISR), Version 5.0 to the Interactive Voice Response (IVR) and Telecom industries. Awarded 2008 Communications Solutions Product of the Year Award, the Net-Net ISR allows any telephony or IVR environment to handle full-duplex call recording (both pre- and post-transfer).

The Net-Net ISR reliably records any phone call in carrier, enterprise, or contact center. Supporting enterprise & multi-tenant architectures, the Net-Net ISR provides ad-hoc (partial call) recording allowing any call to be recorded at any point and for any duration. Call recording can be initiated automatically by SIP URI or conditionally by any authorized VoiceXML or web application. In addition, call data such as time of call, callerID, account number, etc. are stored in a recording database for clients to search and review. Once recording starts, recordings can continue after being transferred to an agent or employee thereby providing continuity for recordings & call data across IVR, office, and call center telephony deployments.

Using the Net-Net ISR, VoiceXML and representational state transfer (REST) application programming interface (API) developers now have the ability to record every call, a percentage of calls, specific VoiceXML dialogs as well as transfers to agent conversations. With simple VoiceXML and REST API code, the VoiceXML application controls recording for any call, at any point and for a specific period of time. In addition, every recording may be indexed by key VoiceXML values or identifiers (account#, unique call identifier, SIP URI, time of call, etc.).

The Net-Net ISR can scale from one call to thousands of concurrent calls and is a simple add-on to any SIP telephony network. An affordable software-based solution, the IP Call Recorder runs on standard Intel-based servers in VoIP and standard telephony environments.

All current Net-Net SBCs support the use of the Net-Net ISR in a network. Contact Technical Assistance for information about previous Net-Net ISR release support with SBCs.

Supported Hardware/Software

Hardware

This section describes the hardware Acme Packet has certified for load/capacity. Other hardware platforms may be compatible, but have not been certified for load.

CIS & RSS Certified Hardware

The third-party servers in this section have been certified for use with Acme Packet's Net-Net Interactive Session Recorder (ISR) software which is composed of two modular elements:

- **Control and Index Server (CIS)** - The CIS maintains metadata and indices; and provides browser-based administration.
- **Recording and Storage Server (RSS)** - The RSS, under the control of the CIS, records sessions and manages the storage and archival processes. It selects, starts, and stops recordings using Web services APIs.

Note: The specified processor choices and disk sizes of these third-party server recommendations represent the minimal options. Redundant environments require additional servers.

CIS Server

The following third-party server is certified for use with the Net-Net ISR and the CIS software.

HP DL360 G7 Server

Features of this server include:

- Suitable for Net-Net ISR applications up to 5000 sessions
- Form factor: 8 SFF (Small Form Factor) drive bays total
- Dual Six-Core Intel Xeon® processors, 24 GB RAM
- Two AC power supplies

Configuration Recommendation

The recommended configuration for the HP DL360 G7 Server is:

Hardware	Qty
HP ProLiant® DL360 G7 Server	1
HP DL360 G7 Intel® Xeon® X5660 (2.80GHz/6-core/12MB/95W)	2
HP 4GB memory (1 x 4GB @ 1333MHz)	6
HP 72GB 6G SAS 15K rpm SFF (2.5-inch) Dual Port Enterprise (RAID 1)	2
HP 300 GB 6G SAS 15K rpm SFF (2.5-inch) Dual Port Enterprise (RAID 6 or 1+0)	4
HP Smart Array P410i/1G FBWC Controller – Low profile PCIe	1
HP NC375T PCI Express Quad Port Gigabit Server Adapter	1
HP 750W CS HE Power Supplies	2
HP 1.83m 10A C13-UL US Power Cords (North American variant; acquire applicable power cord for your region)	2

RSS Server

The following third-party server is certified for use with the Net-Net ISR and the RSS software.

Note: The RSS certified drive specs call for a second drive to be used for recordings. For a procedure to mount a second drive, see the *Net-Net Interactive Session Recorder (ISR) Installation Guide*.

HP DL360 G7 Server

Features of this server include:

- Suitable for Net-Net ISR applications up to 500 sessions
- Form factor: 8 SFF (Small Form Factor) drive bays total
- Dual Quad-Core Intel® Xeon® processors, 8 GB RAM

Configuration Recommendation

The recommended configuration for the HP DL360 G7 Server is:

Hardware	Qty
HP ProLiant® DL360 G7 Server	1
Quad-Core Intel® Xeon® Processor E5620 (2.40GHz/4-core/12MB/80W)	2
HP 4GB memory (2 slots x 4GB @ DDR3-1333MHz)	2
HP 72GB 6G SAS 15K rpm SFF (2.5-inch) Dual Port Enterprise (RAID 1)	2
HP 300 GB 6G SAS 15K rpm SFF (2.5-inch) Dual Port Enterprise (RAID 1)	2
HP Smart Array P410i/1G FBWC Controller – Low profile PCIe	1
HP NC375T PCI Express Quad Port Gigabit Server Adapter	1
HP 750W Common Slot Gold Hot Plug Power Supply Kit (AC)	2
HP 1.83m 10A C13-UL US Power Cords (North American variant; acquire applicable power cord for your region)	2

Software

This section provides a list of the software that installs during the Net-Net ISR installation process.

Net-Net ISR Software

The following components are installed during the Net-Net ISR installation process:

- **Control and Index Server (CIS)** - Installs the following components:
  - VMware Enterprise vSphere™ Hypervisor (ESXi)
  - VMware vSphere™ Client
  - 2 Virtual Machines running Fedora 14
    - Net-Net ISR Dashboard, Version 5.0.0, Build 20120721
    - Net-Net ISR Index, Version 5.0.0 Build, 20120712
- **Record and Store Server (RSS)**
  - Net-Net ISR RSS, Version 5.0.0M0P0, Build 20120716.154023
  - Net-Net ISR API, Version 5.0.0M0P0, Build 2012.07.17_14.48
  - Archiver Service

For more information about installing the CIS and RSS software, see *Net-Net Interactive Session Recorder (ISR) Installation Guide*.

Net-Net ISR Dashboard Requirements

The following list recommends third-party applications you can use with the Net-Net ISR, Version 5.0 Dashboard.

The recommended third-party applications are:

- Web browser recommendations for Net-Net ISR Dashboard:
  - Microsoft® Internet Explorer 9 (IE9) with full regression specifically on IE Version 9.0.8112.16421 and with Quicktime® 7.7.1 Player Plug-in (http://www.apple.com/quicktime/) or Windows Media Player 10/11
  - Mozilla Firefox® 8.0 with Quicktime® 7.7.1 Player Plug-in or Windows Media Player 10/11
  - Google Chrome™ 16.0.912.63 with Quicktime® 7.7.1 Player Plug-in
  - Other browsers (please contact Acme Packet Customer Service before using other browsers)
- SIP softphone recommendations for testing:
  - X-lite by CounterPath Corporation - (http://www.counterpath.net/x-lite.html)
  - PhonerLite by Heiko Sommerfeldt - (http://www.phonerlite.de/index_en.htm)

Net-Net ISR Release Process

The Net-Net ISR Release process may consist of feature (F), maintenance (M), and/or patch (P) information. The numbering scheme for releases is outlined in the table below.

Upgrading from release to release must be done in sequential order (for example, from Release 4.0F3 to 5.0). For any subsequent releases (for example, F3, F4, etc.), you MUST continue to upgrade in sequential order (for example, from F1 to F2, from F2 to F3, from F3 to F4, etc.). For more information and procedures for upgrading your Net-Net ISR, see Chapter 2, Upgrading the Net-Net ISR.

The following table identifies the Net-Net ISR release process.

Releases	Description
F# (Feature Releases)	Feature software releases numbered sequentially (for example, F1, F2, F3, etc.). Information in these releases contain new features delivered in the Net-Net ISR. All new feature release information is documented in the Net-Net ISR Release Notes for that F# release, as well as in the Net-Net ISR documentation set.
M# (Maintenance Releases)	Maintenance software releases numbered sequentially (for example, M1, M2, M3, etc.). Information in these releases contain maintenance fixes in the Net-Net ISR. Acme Packet may deliver Maintenance release(s) in-between Feature releases (for example, F2M1, F2M2, etc.). All maintenance release information is documented in the Net-Net ISR Release Notes for that F#M# release. All maintenance information is rolled into the next F# release of the Net-Net ISR documentation set.
P# (Patch Releases)	Patch software releases numbered sequentially (for example, P1, P2, P3, etc.). Information in these releases contain issues fixed in the Net-Net ISR. Acme Packet may deliver Patch release(s) in-between Feature releases (for example, F2P1, F2P2, etc.) All patch release information is documented in the Net-Net ISR Release Notes for that F#P# release. All patch information is rolled into the next F# release of the Net-Net ISR documentation set.

Note: For information about the Net-Net ISR documentation set, see Related Documentation.

Features

This section describes the new features in each component of the Net-Net ISR Release 5.0. It also includes platform and security enhancements made in this release.

Topics include:

Platform Enhancements

The Net-Net ISR Dashboard, Version 5.0 platform enhancements are:

- Nginx upgrade from Version 1.0 to 1.2.
- Rails update from Version 2.3.11 to 2.3.14

Net-Net ISR Dashboard

Net-Net ISR, Version 5.0 introduces a new single Dashboard for configuration and administration of the Net-Net ISR platform. This Dashboard comprises a new user interface design that includes all of the features from previous Net-Net ISR releases, as well as new features. It is the only dashboard now available for the Net-Net ISR, and can be accessed via access-level passwords by Administrators and Users.

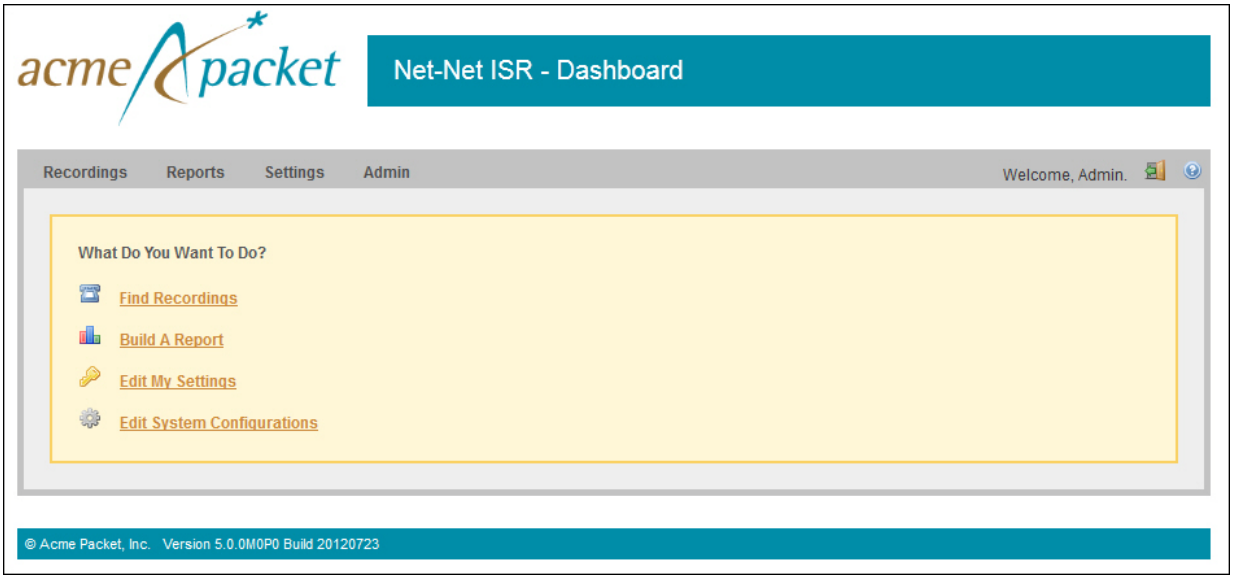
The new features of the Net-Net ISR Dashboard, Version 5.0 documented in this section are:

- Single Net-Net ISR Dashboard (17) (now accessible by an Administrator or User depending on their login access level)
- Unlock a Locked Out User (17)
- New Administrative Tab (17)
- Account Level Branding (18)
- User Profile Import Feature (importing CSV files) (21)
- Quick View of Users Sorted by Account (22)
- Redesign of “Viewing a Site” Page (23)
- Search Recordings by File Name (24)
- Redesign of Display for Live Sessions (24)
- Realm-based Recording Policy (25)
- Addtional searchable SIPREC Extension Data (30)
- Security Enhancements (32)
- Additional Dashboard Features (32)

Each of these features are described in the following paragraphs.

Single Net-Net ISR Dashboard

The Net-Net ISR Dashboard is redesigned in a single application to manage all of the features from previous releases, along with new features in Version 5.0. The Dashboard continues to allow you to easily manage recordings, accounts, routes, users, and sites. The following illustration shows the initial page that displays after logging into the Net-Net ISR Dashboard.



For more information about the new Net-Net ISR Dashboard, see the *Net-Net ISR Administrators Guide*, or the *Net-Net ISR Users Guide*.

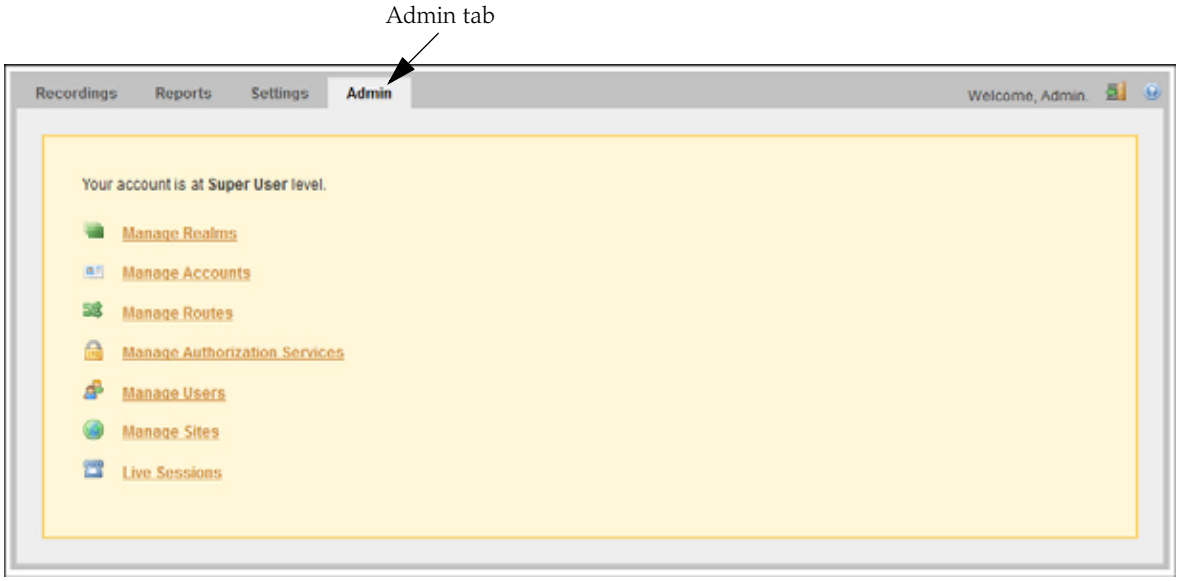
Unlock a Locked Out User

An Administrator can now unlock a locked out user that performed more than three login attempts. Contact Acme Packet for more information.

New Administrative Tab

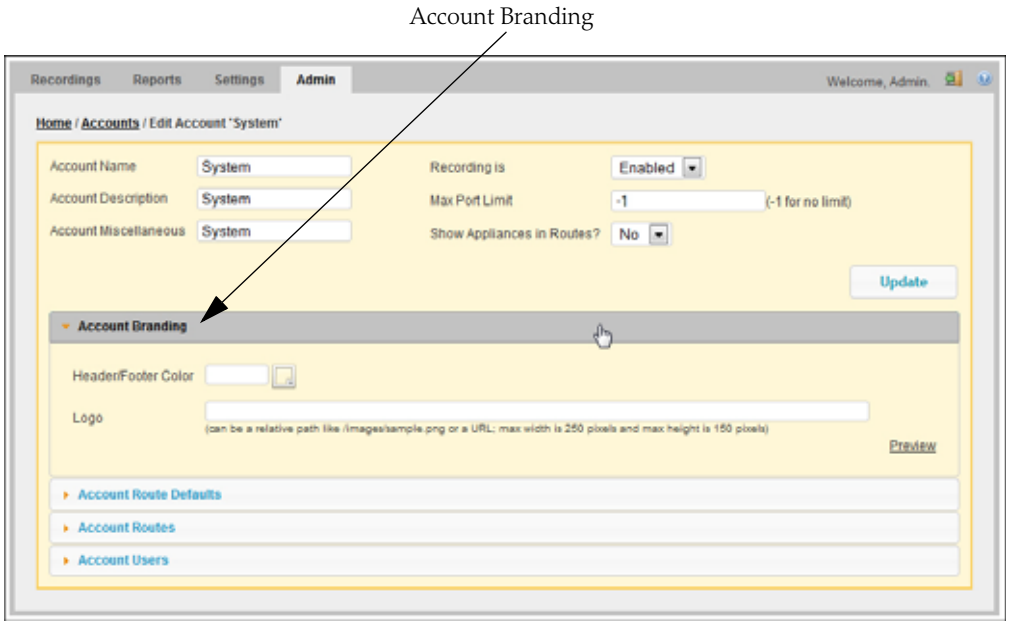
In the Net-Net ISR Dashboard, a new "**Admin**" tab now displays on the Main Menu. The Admin page displays the following list of options:

- **Manage Realms** - Allows you to add, edit, and delete realms associated with an account(s)
- **Manage Accounts** - Allows you to add, edit, and delete account configurations, as well as perform account branding and edit the realm associated with the account.
- **Manage Routes** - Allows you to add, edit, and delete route configurations associated with accounts.
- **Manage Authorization Services** - Allows you to add, edit, and delete authorization services associated with the session recording client (SRC).
- **Manage Users** - Allows you to add, edit, and delete users in the Net-Net ISR. Also allows you to set passwords, permissions, and privilege levels for each user.
- **Manage Sites** - Allows you to add, edit, and delete sites. Also allows you to configure, manage, and monitor recording servers, set up archival and Session Agent permissions, as well as view the number of ports currently in use on the Net-Net ISR.
- **Live Sessions** - Allows you to view live call sessions currently in progress on the Net-Net ISR. This feature is read-only.



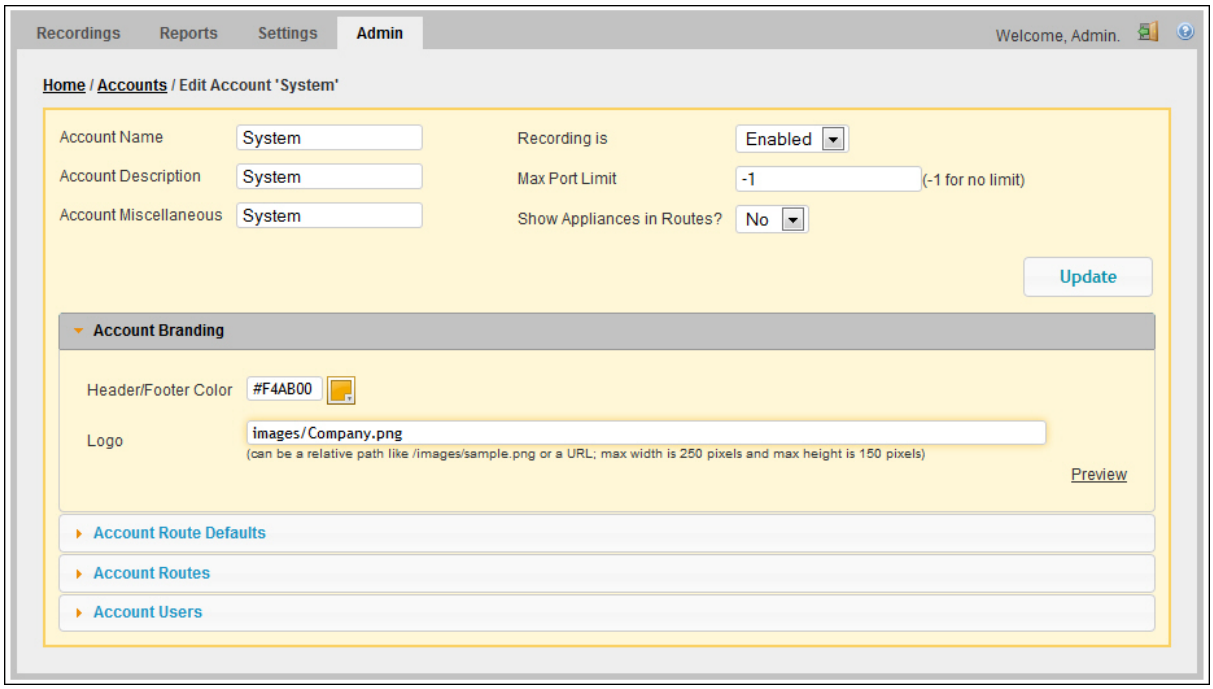
Account Level Branding

Version 5.0 of the Net-Net ISR includes a new "**Account Branding**" feature for each account. After selecting an account to edit at the path *Admin->Manage Accounts*, you can select "Account Branding" to customize the Net-Net ISR Dashboard's header and footer color, and specify a logo to display for each account.

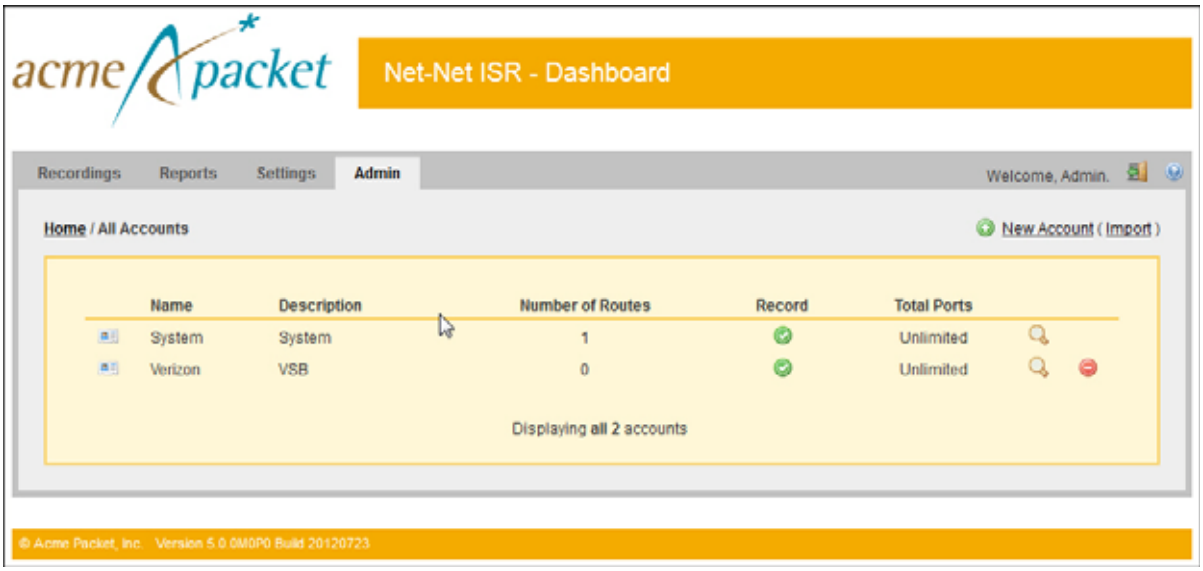


To apply branding to an account:

1. After logging into the Net-Net ISR Dashboard as an Administrator, click on the "**Admin**" tab.
2. Click "**Manage Accounts**".
3. Select an account from the "Accounts" page and click for that account.
4. Click "**Account Branding**" to expand the branding information.

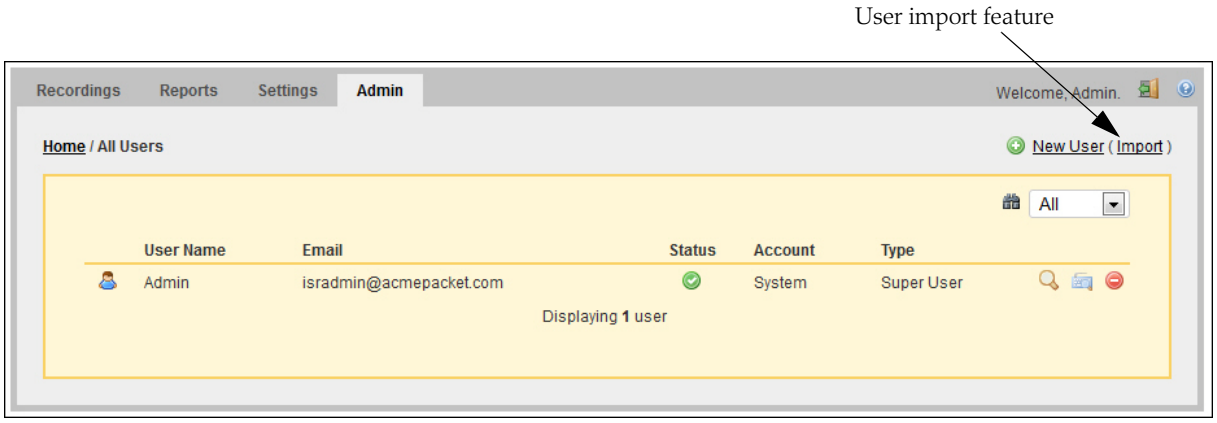


5. In the "**Header/Footer Color**" field, click on and select the company color to apply to the Header and Footer, as well as all the button names in the Net-Net ISR Dashboard.
   or
   Enter the Company's color code, in Hex format, in the text box. For example, #F4AB00.
6. In the "**Logo**" field, enter the file name of the Company logo you want to apply to the header of all the screens in the Net-Net ISR Dashboard. If required, you can specify the path name where the file is currently stored. For example, *images/Company.png.*
7. Click "**Preview**" to verify the color and logo changes before saving.
8. Click <**Update**> to save the changes. The color and logo you specify display on the screens in the Net-Net ISR Dashboard.


acme packet
Net-Net ISR - Dashboard
Recordings
Reports
Settings
Admin
Welcome, Admin.
Home / All Accounts
New Account (Import)
Name
Description
Number of Routes
Record
Total Ports
System
System
1
Unlimited
Verizon
VSB
0
Unlimited
Displaying all 2 accounts
© Acme Packet, Inc. Version 5.0 0M0P0 Build 20120723

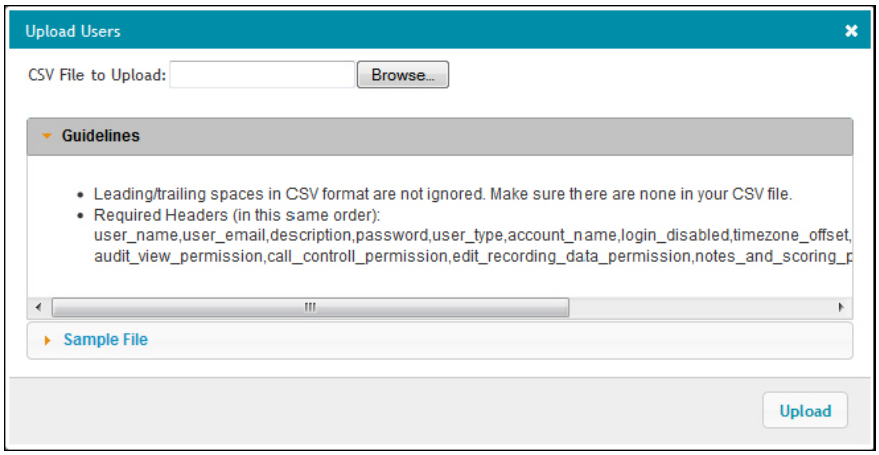
User Profile Import Feature (importing CSV files)

The Net-Net ISR, Version 5.0 now includes a feature for importing a User Profile. After creating a ".CSV" file that contains User profile information, you can import that profile into the Net-Net ISR database using the User import feature on the Users page. The following illustrations show the User import screens.

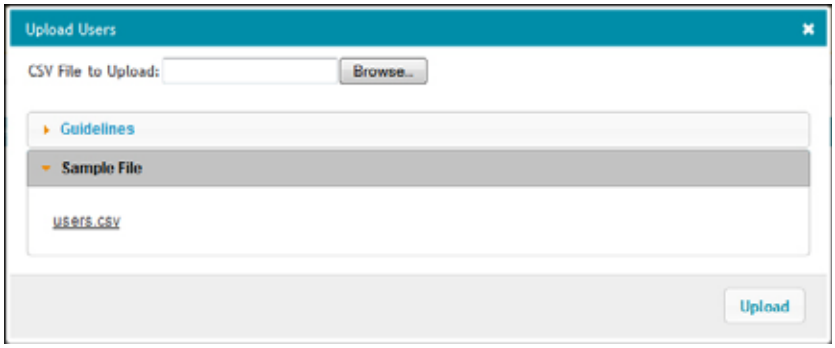


After clicking "**Import**" in the upper right corner of the page, the following dialog box displays, allowing you to browse and select the file to import. This box also provides the "Guidelines" required before importing the User profile, and a sample file for reference purposes.

Browse and Guidelines

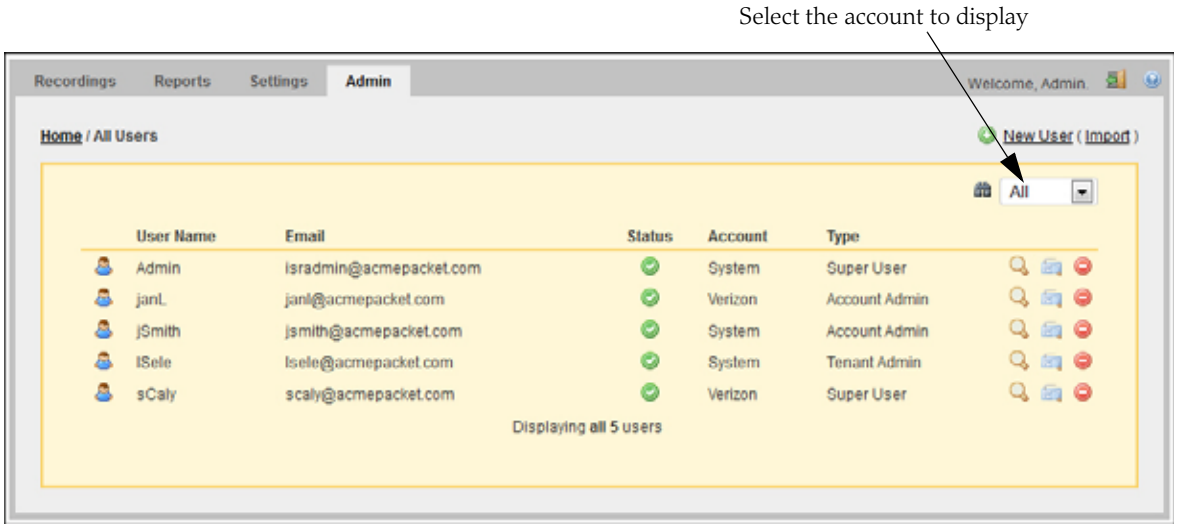


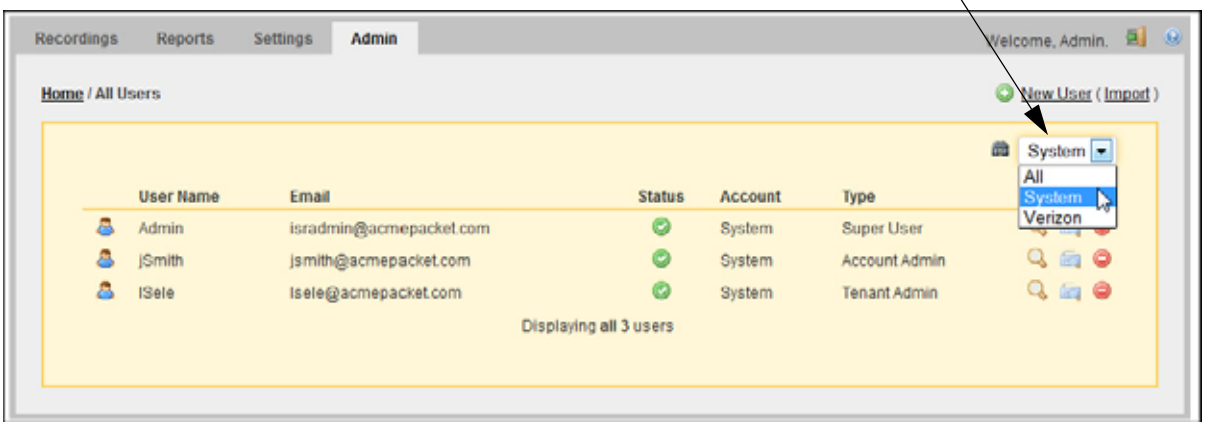
Sample File



Quick View of Users Sorted by Account

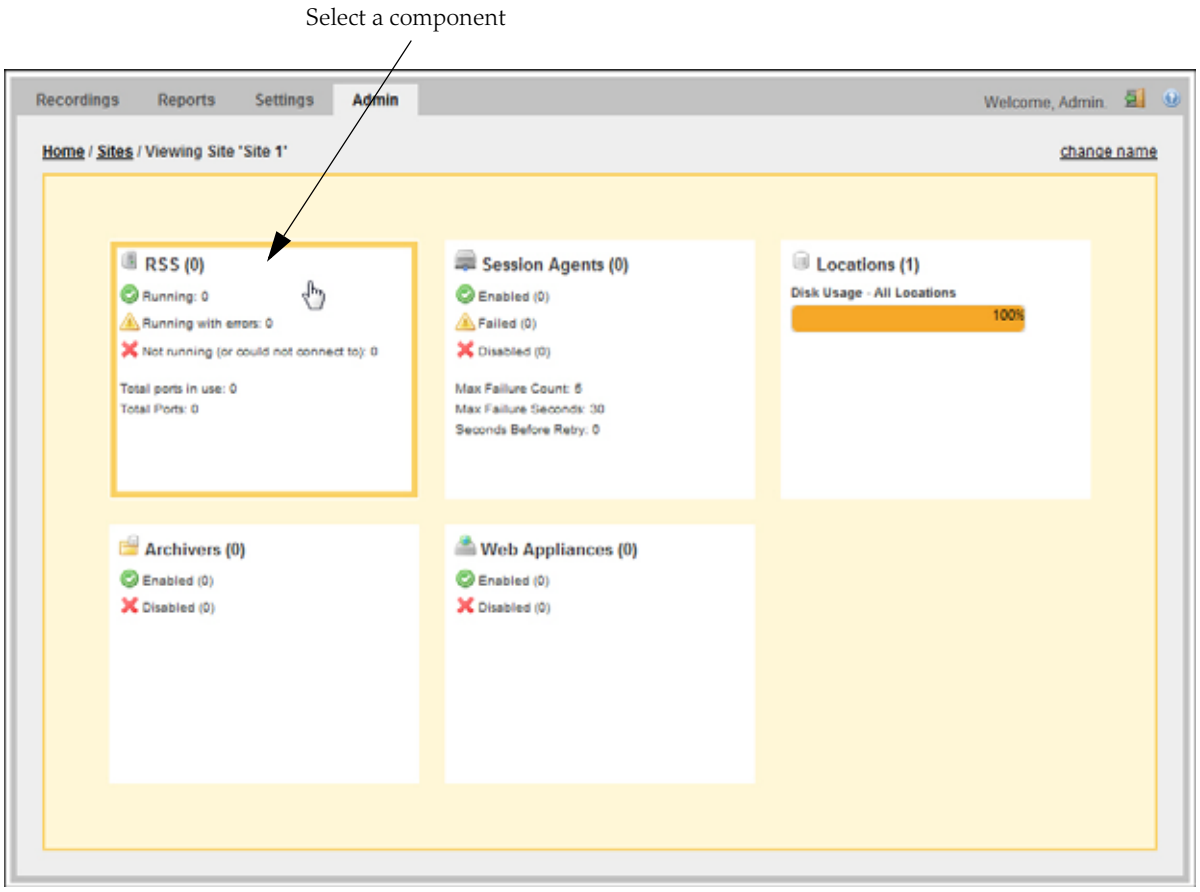
The User page can now display the Net-Net ISR users sorted by accounts. You can select which account to display from the drop-down list on the Users page.



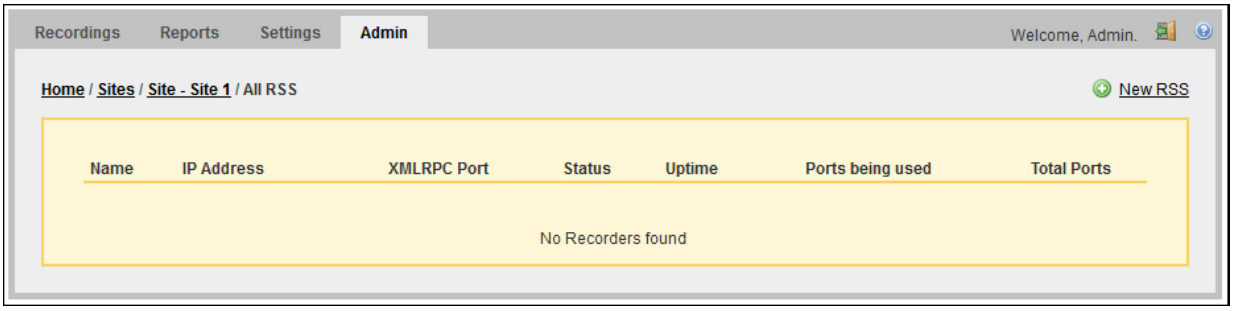


Redesign of "Viewing a Site" Page

The "Viewing a Site" page has been redesigned to display all component info on a single page. You can now click a component (RSS, Session Agents, Locations, Archivers, Web Appliances) to display additional information about each component.

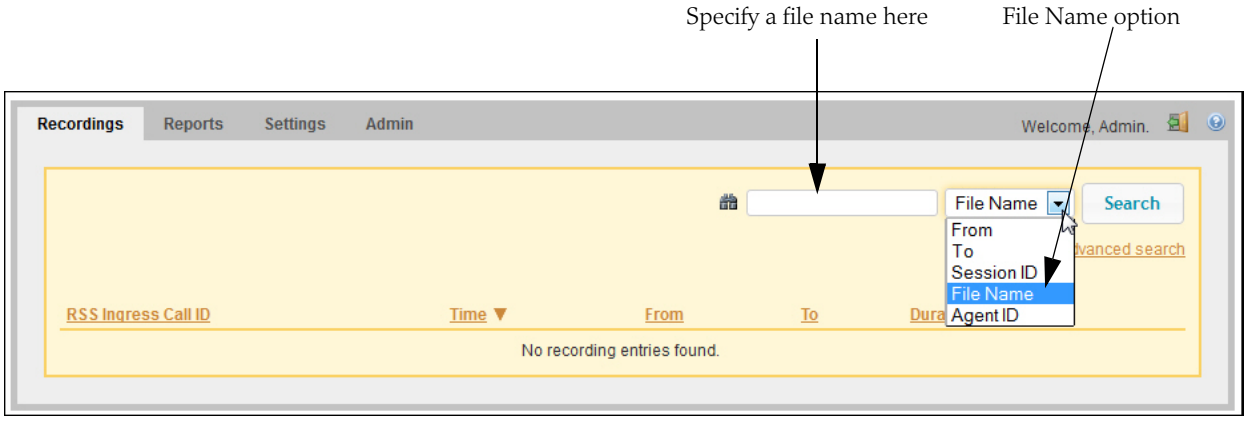


Additional information on component



Search Recordings by File Name

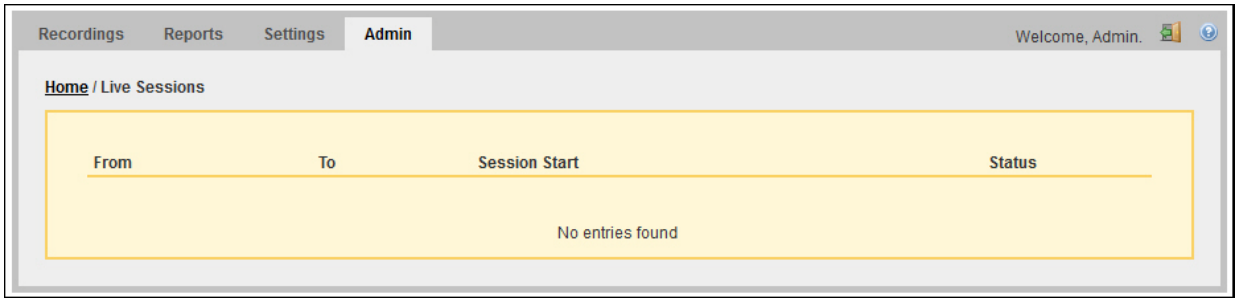
You can now search for recordings on the "Recording" page using a "File Name" option in the drop-down box. You can display all recordings in the Net-Net ISR database by file name, or you can specify a file name in the search box.



Note: For more information about searching for recordings, see the *Net-Net ISR Administrators Guide*.

Redesign of Display for Live Sessions

The "Live Session" page displays all active call recordings on the Net-Net ISR, and is now view-only. You can no longer manage the active recordings.



Note: For more information about Live Sessions, see the *Net-Net ISR Administrators Guide*.

Realm-based Recording Policy

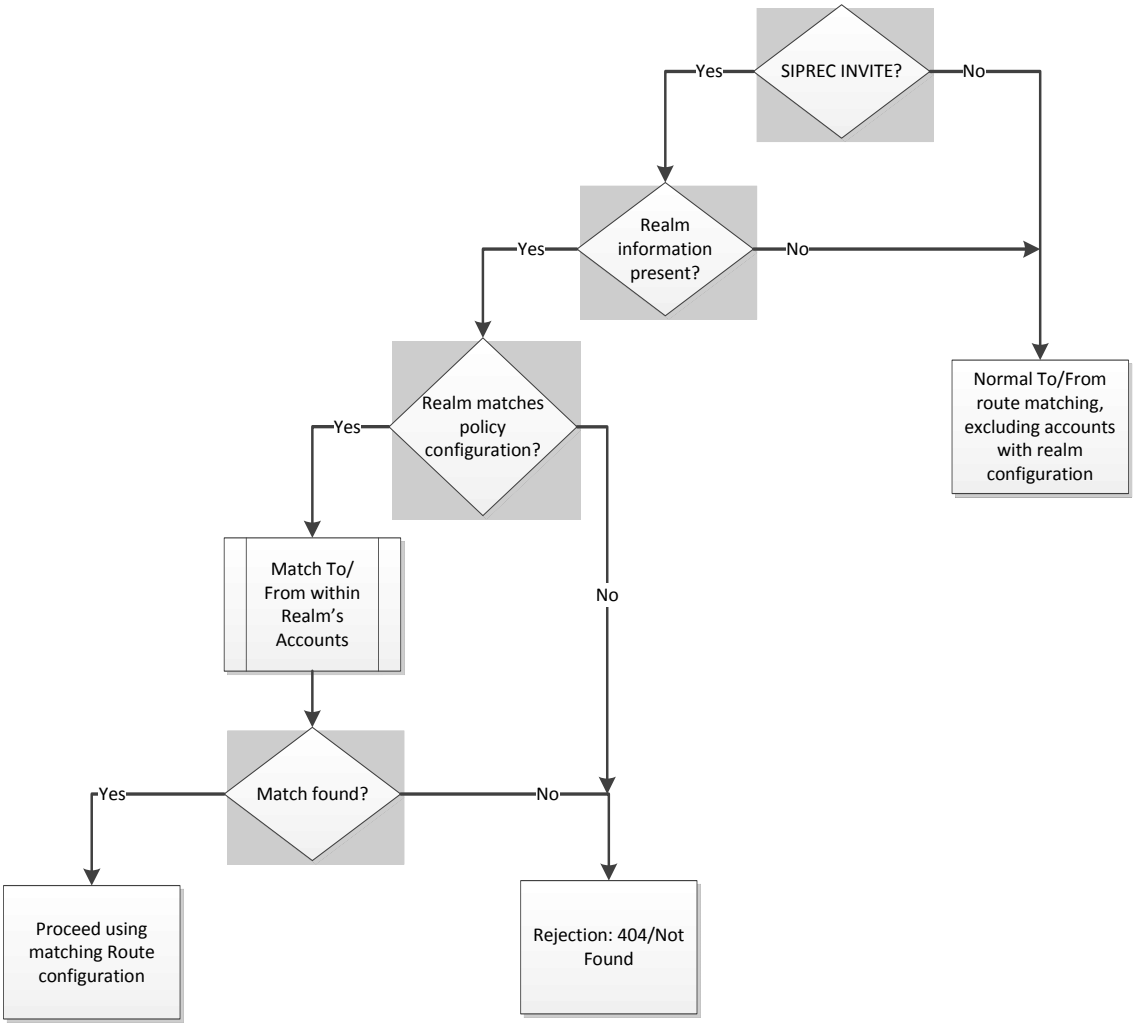
In the Net-Net ISR Dashboard, an Administrator can now add, edit, and delete realms. After adding a realm, you can then associate an account to that realm. An account can have multiple associated realms and a realm can have multiple associated accounts.

> **Note:** The configured realm must already exist in the Net-Net SBC before adding it to the Net-Net ISR.

How Realm-based Recording Works

The Net-Net ISR performs recording affiliation and route-matching based on the configured route pattern and the associated realm. The Net-Net ISR only inspects incoming SIPREC INVITEs for the inclusion of a realm label within the SIPREC extension data. If a realm label exists, it is used to search any configured routes associated with an account(s) in the matching realm. The RSS looks for a To/From match (similar to the way lookups are performed) in the realm's configured accounts and routes.

The following flow diagram illustrates how the Net-Net ISR perform realm-based recording.



When **adding** a realm, the Net-Net ISR checks for a wildcard "%" character in the "Realm Label". If the wildcard exists, an error message displays. If a wildcard does not exist, the realm is added.

Deleting a realm removes all associations to accounts in the Net-Net ISR database. The Net-Net ISR compares the deleted routes of the realm with the routes not in a realm. If there are routes of the same type and pattern in both locations, an error displays and the delete function fails.

In Realm **edit** view, the associated account(s) in the realm display. In the Accounts edit view, the realm(s) associated with the account display only after adding an associated realm(s) to the Net-Net ISR.

The following rules apply when associating an account(s) to a realm:

- You can associate multiple accounts to a single realm. Routes created on these accounts must have unique route patterns across the related accounts.
- Wildcard routes:
  - are treated like normal 'pattern' routes. They are unique across realms and accounts.
  - can have any priority.
  - if set with a higher priority than a 'distinct' route, the Dashboard displays a warning that the user is about to set a wildcard route higher than the list of lower priority routes, and prompts the user to confirm whether or not to continue.
- You cannot configure wildcard realms.
- Associating a realm with an account(s) is optional. Routes created across accounts with no realms must be unique. This allows the Net-Net ISR to support legacy (non-SIPREC) installations, as well as maintain compatibility with other SIPREC compliant Session Recording Clients (SRCs).

You can also create a Report comprising Realm information. The display includes the following column headings:

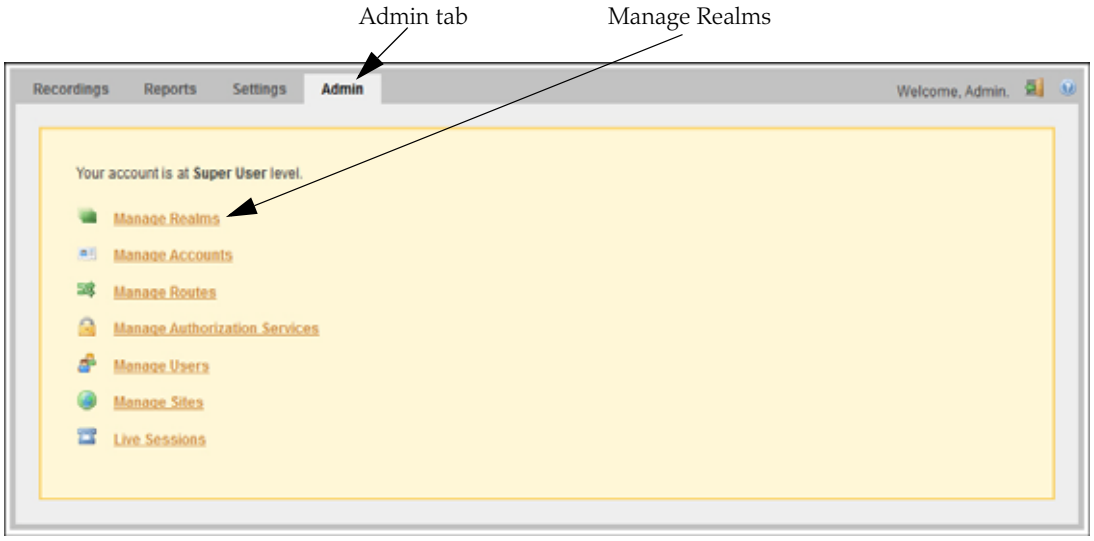
- Realm ID
- Account Name
- Route Pattern
- Priority
- Recording Status (enabled/disabled)
- Recording %

Note: For more information about creating reports, see the *Net-Net ISR Administrators Guide*.

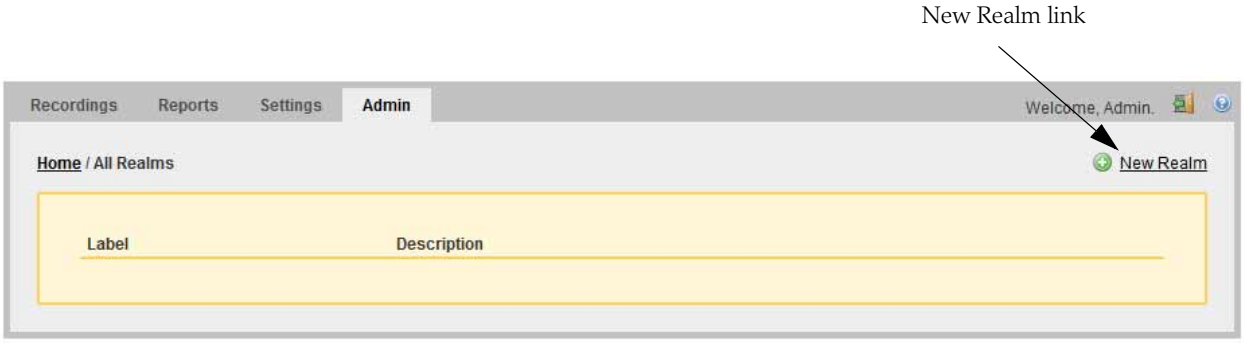
To associate an account(s) with a realm:

Note: Before associating an account to a realm, make sure the realm already exists in the Net-Net SBC configuration.

1. After logging into the Net-Net ISR Dashboard as an Administrator, click on the "**Admin**" tab.

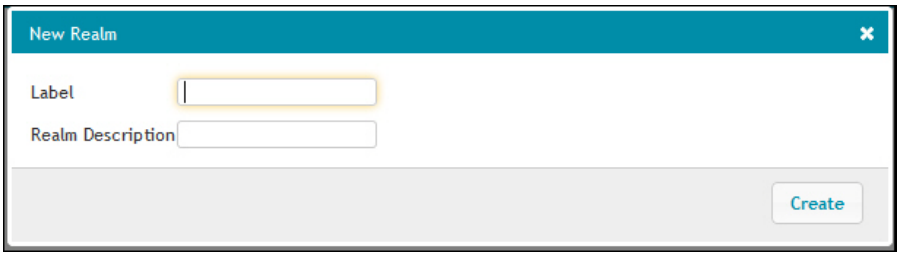


2. Click on "**Manage Realms**". The following page displays.

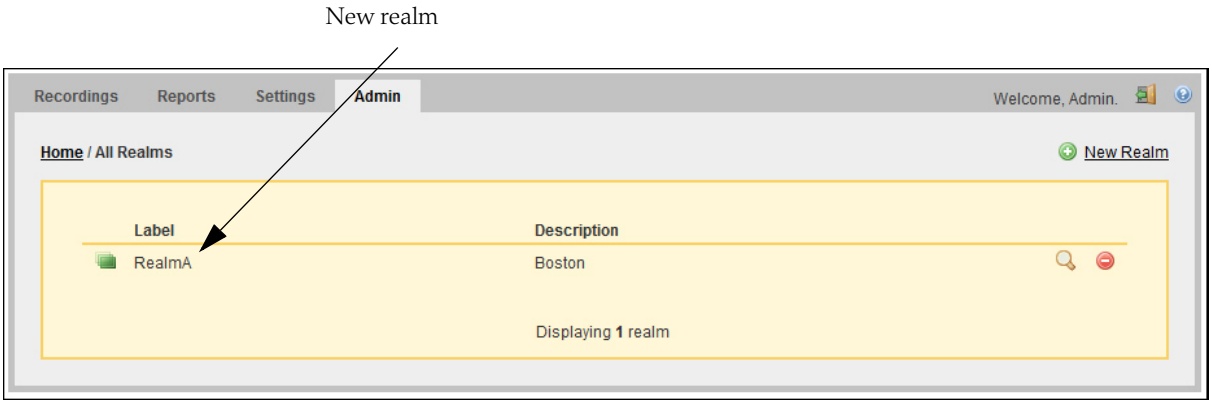


Column	Description
Label	Name of the realm currently stored in the Net-Net ISR database.
Description	Description of the associated realm.

3. Click on "**New Realm**" in the upper right corner of the page. The following dialog box displays.



4. In the "**Label**" field, enter the name of the realm you want to associate with an account. Valid values are up to 45 alpha-numeric characters.
5. (optional) In the "**Realm Description**" field, enter a description of the realm. Valid values are up to 255 alpha-numeric characters.
6. Click <**Create**>. The following display is an example of a new realm in the Net-Net ISR Dashboard.



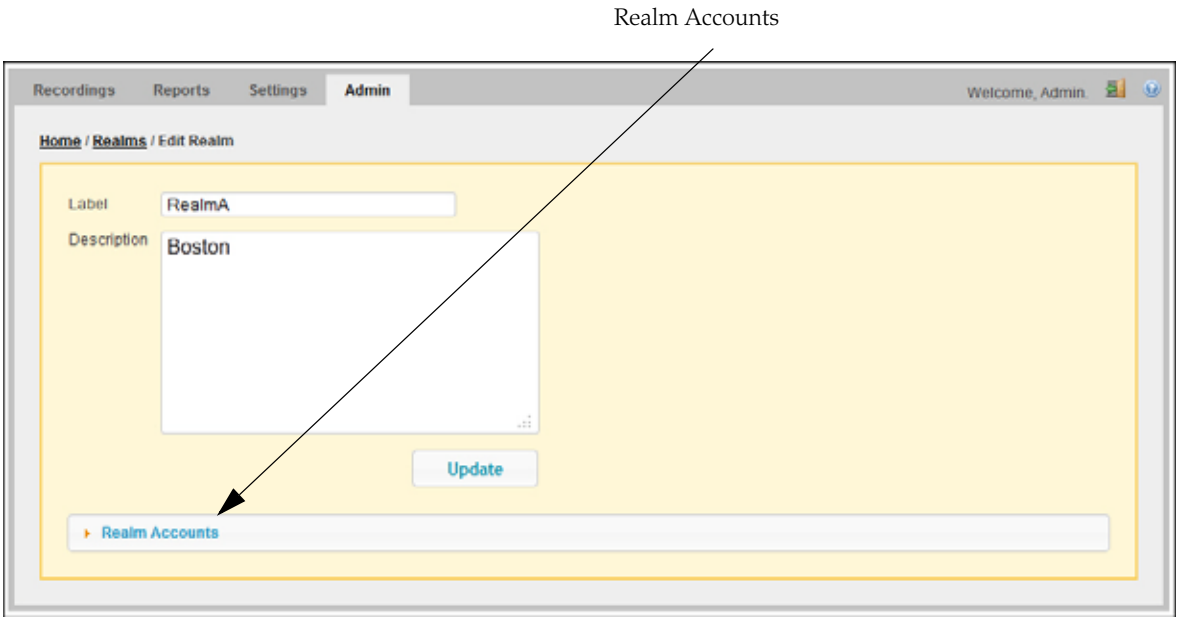
The realm ID increments as you add realms. A logging event is also triggered and stored in the audit log to be viewed if required.

You can edit a realm label and description by clicking on the applicable realm in the list OR by clicking the .

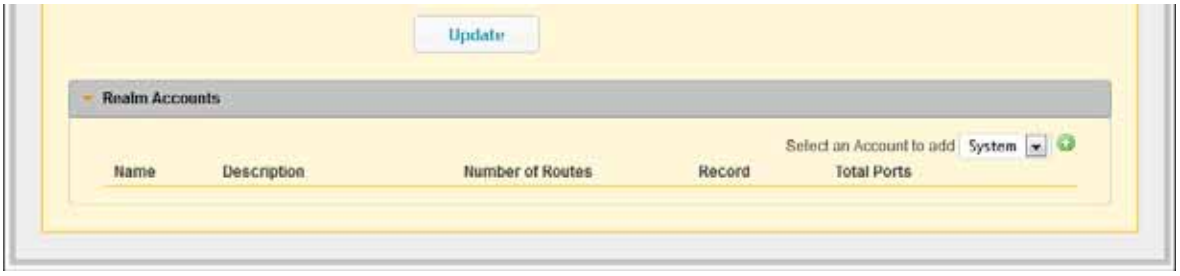
You can delete a realm by clicking the .

Note: For more information about editing and deleting realms, see the *Net-Net ISR Administrators Guide*.

7. On the Home/All Realms page, click on the realm you added or click for a realm. The following page displays with a "Realm Accounts" selection at the bottom of the page.



8. Click on the Realm Accounts to expand the page. The following displays.



9. In the "**Select an Account to add**" field, select an account to associate with the current realm in focus.

   Note: You must have previously established an account before you can associate that account with a realm.

10. Click . The following message displays:

    "Are you sure you want to add this account?"

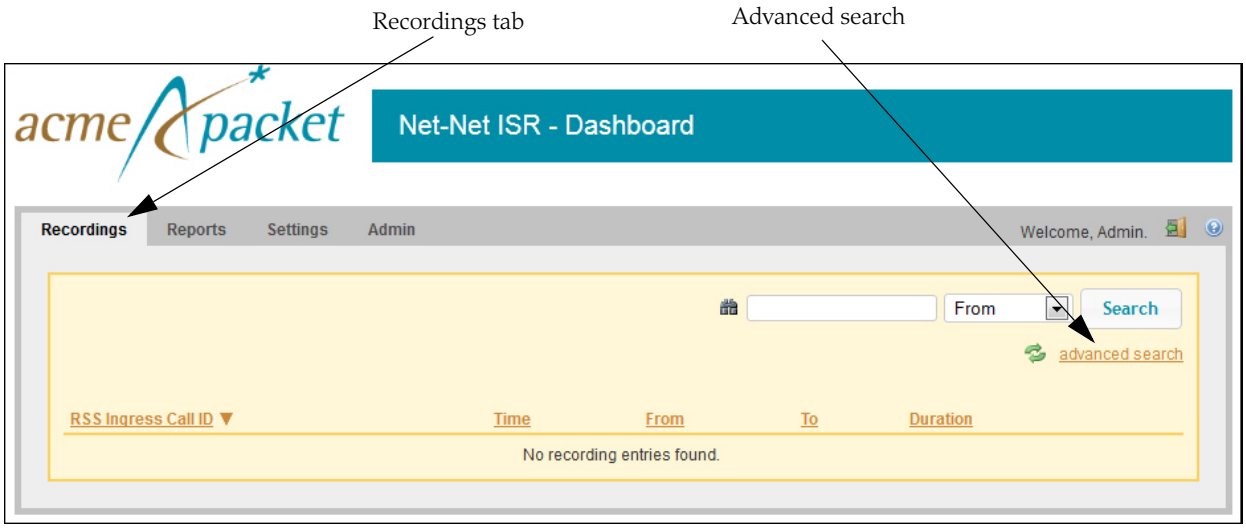
11. Click <**Yes**> to associate this account with the current realm.

Addtional searchable SIPREC Extension Data

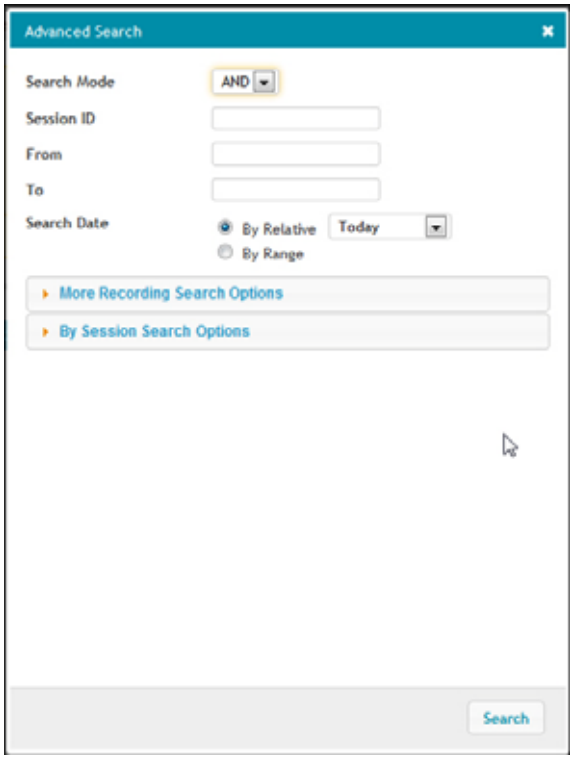
The Net-Net ISR now parses and stores the Request-URI, P-Asserted-ID, and Diversion headers (included in the recording sessions's SIPREC metadata), allowing these fields to be searchable. The search results display in the Net-Net ISR Dashboard.

To search for SIPREC metadata:

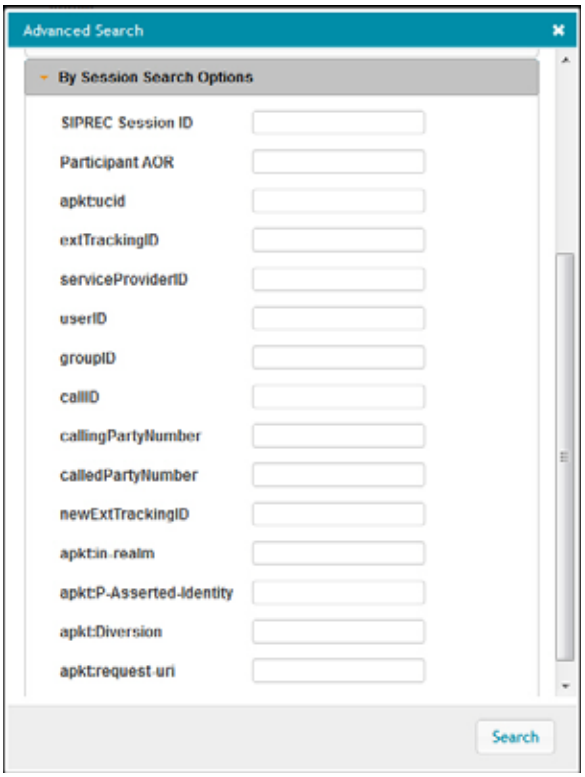
1. After logging into the Net-Net ISR Dashboard as an Administrator, click on the "**Recordings**" tab.



2. Click on advanced search . The following dialog box displays.



3. Click on "**By Session Search Options**" to expand the dialog box.



New in Net-Net ISR, Version 5.0

4. In the "**apkt:in-realm**" field, enter the name of the Net-Net ISR realm that received the SIPREC session (in-realm). Valid values are alpha-numeric characters.
5. In the "**apkt:P-Asserted-Identity**" field, enter the remote party's ID in the SIPREC session. The Net-Net ISR uses the P-Asserted-Identity header field to convey the proven identity of the originator of a request within a trusted network. Valid values are alpha-numeric characters.
6. In the "**apkt:Diversion**" field, enter the call forwarding phone number from the SIPREC session, to which the incoming call was diverted. Diversion is a call forwarding feature that lets an incoming call to a called party be redirected to a third party. Valid values are alpha-numeric characters.
7. In the "**apkt:request-uri**" field, enter the Uniform Resource Identifier (URI) in the header of the request message of the SIPREC session. The URI in the request message contains sufficient information to initiate and maintain the SIPREC communication session. Valid values are alpha-numeric characters.
8. Click <**Search**> to perform the search based on the SIPREC metadata setings.

Security Enhancements

The following security enhancements were implemented in the Net-Net ISR, Version 5.0:

- Optional configuration to force cookies through an encrypted (SSL/TLS) session For a procedure to enable serving pages with SSL, see Enable Serving Pages with SSL (to force SSL cookies) (40).
- Cache-control set to 'no-cache' to avoid possible storage of sensitive data in local browser
- Enforced stronger password controls
- Formed auto-complete disabled within login page
- Removed "hidden" URLs

Additional Dashboard Features

The following are additional Dashboard features:

- Event handler enhancements for displays in list view.
- Session Agent IP address validation now supports ports.
- User interface lock-out feature for users who unsuccessfully login using more than three attempts.

  Unsuccessful login message now includes the length of time a user has to wait before logging in again.

Net-Net ISR Index

The following are new features in the Index component for the Net-Net ISR, Version 5.0:

- To account for realms functionality and storage of the Request-URI, P-Asserted-Id, and Diversion headers, the following changes to the MySQL database have been made:
  - A "realms" table and a relational "accounts_realms" table were added along with appropriate attributes and triggers. For more information, see Realms in the Net-Net ISR Database Schema (33).
  - New searchable fields that display for "**apkt:in-realm**", "**apkt:P-Asserted-Identity**", "**apkt:Diversion**", "**apkt:request-uri**" have been added to the metadata_types table. For more information, see Addtional searchable SIPREC Extension Data (30).

Realms in the Net-Net ISR Database Schema

The **accounts_realms** table links the Accounts table (foreign key: account_id) and the new realms table (foreign key: realm_id). It also has triggers to insert an 'update' entry into the route_map_tracking_events table whenever a realm entry is added or removed. This ensures that the Route Map remains up-to-date when realms are added to or removed from accounts. The accounts_realm table in the database schema is as follows:

accounts_realm

Id	ID for this association
Account_id	Accounts.realm_id
Realm_id	Realms.realm_id

Net-Net ISR RSS

The following are new features in the RSS component for the Net-Net ISR, Version 5.0:

RSS Installation Option for USB Recovery Stick

You now have the option to create a recovery Universal Serial Bus (USB) stick during the installation of the RSS. This feature allows you to save the RSS host configuration information to a backup USB stick to restore at a later time if required. Use the following procedure to create a recovery USB stick.

To create a recovery USB stick:

1. Insert a USB stick into the USB drive of the RSS host.

   Note: This procedures erases the USB stick contents. Use a blank USB stick or a USB stick where the contents can be overwritten.

2. From the Administrator command-line, enter "**restore-stick-create**", and press <**Enter**>.

   ```
   Hostname> restore-stick-create
   ```

   The following prompt displays:

   Are you sure (y or n)?

3. Enter "**y**" and press <**Enter**>. The following messages display:

   Starting rescue-stick-create as a background operation. This operation takes approximately 10 minutes. A notice-level system log and trace message will indicate completion ("trace system notice").

4. Turn on System Trace Messages to "Notice" level by entering "**trace system notice**", and press <**Enter**>.

   ```
   Hostname> trace system notice
   ```

   When creation of the restore stick is successful, the following system notice displays:

   system[notice]: restore-stick-create operation complete

   You now have a recovery USB stick that contains all of the configuration for this RSS device.

Restoring an RSS host from a Recovery USB Stick

You can restore an RSS host configuration from a recovery USB stick as required.

To restore an RSS host from the recovery USB stick:

1. Insert the recoverty USB stick into the USB drive of the RSS host.

   a. Delete the file named "**rescue**" from the recovery USB stick on the "cxc_install" partition (the default partition is visible via Windows).

2. Restart the RSS host with the recovery USB stick still inserted.

   The recovery stick fully restores your RSS host to the snapshot taken when the recovery stick was created. The RSS Host reboots after restoration. After this reboot, the RSS host becomes fully operational.

RSS VRRP Configuration Option

The RSS component now has a Virtual Router Redundancy Protocol (VRRP) configuration option. Use the following procedure to configure VRRP on the Net-Net ISR.

To configure VRRP on the Net-Net ISR:

1. At the Net-Net ISR prompt, enter **config cluster vrrp**, and press <**Enter**>.

   ```
   NN-ISR> config cluster vrrp
   ```

2. Enter **show** to verify there are currently no VRRP interfaces configured, and press <**Enter**>.

   ```
   config vrrp> show
   ```

   The following displays:

   ```
   cluster
   vrrp
   ```

3. Enter **config vinterface <VRRP interface name>** to create the VRRP vinterface, and press <**Enter**>. For example, “vx1”.

   ```
   config vrrp> config vinterface vx1
   ```

   The following message displays:

   ```
   Creating 'vinterface vx1'
   ```

4. Enter set host-interface cluster box 1 interface eth 1 to add the Ethernet adapter 1 to the virtual vinterface, and press <**Enter**>.

   ```
   config vinterface vx1> set host-interface cluster box 1 interface eth1
   ```

5. Enter set host-interface cluster box 1 interface eth 2 to add the Ethernet adapter 2 to the virtual vinterface, and press <**Enter**>.

   ```
   config vinterface vx1> set host-interface cluster box 1 interface eth2
   ```

6. Enter **config ip media** to create and configure the IP address settings for this vinterface, and press <**Enter**>.

   ```
   config vinterface vx1> config ip media
   ```

7. Enter **set ip-address static <IP address of vinterface>**, to set the static IP address for the vinterface, and press <**Enter**>. For example, 172.30.58.109/24.

   ```
   config ip media> set ip-address static 172.30.58.109/24
   ```

8. Enter **config icmp** to enable the Internet Control Messsage Protocol (ICMP) for the vinterface, and press <**Enter**>.

   ```
   config ip media> config icmp
   ```

9. Enter **return** to return to the “config ip media” prompt, and press <**Enter**>.

   ```
   config icmp> return
   ```

10. Enter **config ssh** to enable a secure shell for the vinterface, and press <**Enter**>.

    ```
    config ip media> config ssh
    ```

11. Enter **return** to return to the "config ip media" prompt, and press <**Enter**>.

    ```
    config ssh> return
    ```

12. Enter **exit** to save the configuration settings, and press <**Enter**>.

    ```
    config ip media> exit
    ```

    The following prompt displays:

    ```
    Do you want to commit your changes before you exit (y or n)?
    ```

13. Enter **y** to commit the changes, and press <**Enter**>.

    The following prompt displays:

    ```
    Do you want to update the startup configuration (y or n)?
    ```

14. Enter **y** to update the startup configuration, and press <**Enter**>.

    The Net-Net ISR prompt displays.

    ```
    NN-ISR>
    ```

    Note: Configuration of RSS VRRP requires an RSS restart before they can take affect.

15. Enter **restart**.

    ```
    NN-ISR> restart
    ```

16. After the RSS has restarted, login to the Net-Net ISR with your login ID and password.

    The following prompt displays.

    ```
    NN-ISR>
    ```

17. Enter **show vx-bindings** to verify the vinterface is bound, and press <**Enter**>.

    ```
    NN-ISR> show vx-bindings
    ```

    The following output displays.

    ```
    vx-interface ethernet
    ------------ --------
    vx1          eth1
    ```

The vx-interface lists the vinterface created in Step 3 of this procedure. The Ethernet entry is the first interface added in Step 4 which has a link connection to the Router.

For more information about VRRP configuration, see the *Net-Net OS-E Object and Properties Reference Guide, Release 3.6*.

Additional RSS Features

The following are additional new features of the RSS component in Net-Net ISR, Version 5.0:

- Performance improvements in Real-Time Transport Protocol input/output (RTP I/O), RingBuffer, Session Initiation Protocol (SIP) Proxy, and SIP library.
- Support of feature "realm base routing policy". For more information, see Realm-based Recording Policy (25).
- Support of feature "Search and Retrieval of SIPREC SD Extension Data". For more information, see Addtional searchable SIPREC Extension Data (30).
- Support of G.722 codec negotiation.
- Support of Dynamics codec negotiation.
- Converter support:
  - G.722 Conversion to *.wav* format
  - 16KHz *.wav* file
  - Minor updates to handle multiple different *.rpdd* formats

Net-Net ISR API

The following are new features in the API component for the Net-Net ISR, Version 5.0:

- Modified REST and VXML API URLs (38)
- Relocated REST and VXML Logging Files (39)
- New REST API Commands (38)
- Realms in the Net-Net ISR Database Schema (33)
- Supports realms-based recording policy. For more information, see Realm-based Recording Policy (25).

Modified REST and VXML API URLs

The VXML and REST APIs have been consolidated into a single deployment package, **IsrApi.war**, with new URIs:

REST: <host:port>/IsrApi/rest/<command>
VXML: <host:port>/IsrApi/sendIPCRCommand.jsp?command=<command>

New REST API Commands

The REST API provides new methods that return a list of routes either per account or per realm. The getRoutesForAccount and getRoutesForRealm methods each take a single parameter, accountName and realmLabel, respectively. For getRoutesForAccount, all routes belonging to that account are selected from the route_config table. For getRoutesForRealm, all accounts associated with that realm are found using the accounts_realms table. Then, all routes belonging to each account are selected from the route_config table and compiled into a master list for the realm.

Required Input Parameters

Method	Parameter	Value	Description
getRoutesForAccount	accountName	<account Name>	The name of the account in which to search for routes.
getRoutesForRealm	realmLabel	<realm label>	The label of the realm in which to search for routes.

Return Values

Parameter	Value	Description
code	-1 | 0 to 27	Numbered result code. Zero (0) indicates success. All other responses indicate command failure.
message	<status text>	Refer to the *Net-Net ISR API Reference Guide* for valid Return Code values for this parameter. Return Code 27, "Missing Parameter - %parameter% parameter is required." is new in Net-Net ISR Version 5.0.
routes	<array of routes>	Array of routes corresponding to the account or realm entered. Each route is comprised of several elements, in the following order: • account_name • realm_label • route_pattern • priority • is_recording_enabled • percent_to_record If a route belongs to more than one realm, a separate element is returned for each.

REST Commands

The REST API command functionality now includes the "getFile" and "getFileInfo" commands:

- **getFile** - Previously only available as a VoiceXML API command, the REST API functionality now includes the getFile Command. Using getFile downloads the specified recording file, which can then be saved or opened.
- **getFileInfo** (optional 'inProgress' parameter) - The getFileInfo command has the ability to retrieve information about recordings in progress. This is done via the optional 'inProgress' parameter. If the parameter is not present or its value is not 'true', search is done only for completed files. If its value is 'true', search is done for currently recording files only.

Relocated REST and VXML Logging Files

The REST and VXML API logging have changed to a single log located in a new directory path:

/cxc_common/ISR/ApiLog/IsrApi.log

The following paragraphs describe the logging changes for each Net-Net ISR component.

Dashboard Logs

The following events are added to the Dashboard log at the INFO level:

- When adding a realm in the Dashboard is successful, the Net-Net ISR writes the following log entry to the Dashboard log:

  AdminController.create_realm - {user email} - Successfully created Realm with ID={realm id}: {realm label}

- When editing a realm in the Dashboard is successful, the Net-Net ISR writes the following log entry to the Dashboard log:

  AdminController.update_realm - {user email} - Successfully updated Realm with ID={realm id}: {realm label}

- When deleting a realm in the Dashboard is successful, the Net-Net ISR writes the following log entry to the Dashboard log:

  AdminController.delete_realm - {user email} - Successfully deleted Realm with ID={realm id}: {realm label}

- When adding a realm to an account is successful, the Net-Net ISR writes the following log entry to the Dashboard log:

  AdminController.add_realm_to_account - {user email} - Successfully associated Realm with ID={realm id}: {realm label} with Account with ID={account id}: {account name}

- When removing a realm association from an account is successful, the Net-Net ISR writes the following log entry to the Dashboard log:

  AdminController.remove_realm_from_account - Successfully disassociated Realm with ID={realm id}: {realm label} from Account with ID={account id}: {account name}

API Logs

A new log entry is added to IsrApi.log at the INFO level which indicates a realm(s) has been added to an account during getAccountList and updateAccountList. New log entries are also added for the new client API commands to retrieve lists of routes for an account or realm.

Additional API Features

The following are additional new features of the API component in Net-Net ISR, Version 5.0:

- Updated API methods **getAccountList** and **updateAccountList** to return realm information for the RSS's route map. For more information, see API Logs (40).
- Added a new result code and message:

  Code 27 - "Missing Parameter - %parameter% parameter is required."
- Updated SIPREC extension data within the APIs to handle multiple values for the same metadata type. For more information, see Addtional searchable SIPREC Extension Data (30).

Enable Serving Pages with SSL (to force SSL cookies)

In the Net-Net ISR, cookies are not forced through Secure Sockets Layer (SSL). If you want to force the SSL cookies, you must enable the SSL serving pages to do this. Use the following procedure for enabling this feature.

To enable serving pages with SSLto force SSL cookies:

1. Enable SSL in nginx:
   1a. Edit the nginx configuration file (*/opt/nginx/nginx.conf*) and uncomment the the following SSLconfig lines (remove the "#" sign):

   # listen 443;

   # ssl on;

   # ssl_certificate /opt/nginx-1.2.0/conf/server.crt;

   # ssl_certificate_key /opt/nginx-1.2.0/conf/server.key;

   # keepalive_timeout 60;

   1b. Confirm the locations of the SSLcertificate and key currently being used.

   1c. Save the changes in the editor, and restart nginx by entering the command:

   ```
   service nginx restart
   ```
2. After the restart, confirm access of the application using https in a browser.
3. Enable secure cookies in the Net-Net ISR Dashboard:
   3a. Edit */var/www/user_dash/config/initializers/session_store.rb*

   3b. Inside of 'ActionController::Base.session = {……}', add the new line

   ```
   ':secure => true',
   ```

   Note: Add a comma to the end of the line.

   3c. Restart nginx by entering the command:

   ```
   service nginx restart
   ```

Issues Fixed

This section describes the issues fixed in each component of the Net-Net ISR, Version 5.0.

Net-Net ISR Dashboard

The following table lists the Dashboard component fixed issues in Version 5.0.

Release	Description
5.0	• Non-java based user password encryption now enhances performance under load.
5.0	• Playback now stops when player dialog closed.

Net-Net ISR Index

There were no issues in the Index component for Net-Net ISR, Version 5.0.

Net-Net ISR RSS

The following RSS component issues were fixed in Net-Net ISR, Version 5.0.

Release	Description
5.0	• Cleaned up memory utilization in XML Parse library
5.0	• Session Description Protocol (SDP) on-line session version now properly increments on reINVITEs with SDP changes.
5.0	• Filename for Conference recordings is now parsing properly.
5.0	• Calls to the API for route group members now use the master route's ID.
5.0	• Port limit check issue due to the account burst limit removal from schema is now fixed.

Net-Net ISR API

The following API component issues were fixed in Net-Net ISR, Version 5.0.

Release	Description
5.0	• Updated APIs to handle the '+' character in filenames, UCIDs, Tos, and Froms.

Known Issues

This section describes the known issues in each component of the Net-Net ISR, Version 5.0.

Net-Net ISR Dashboard

The following is a known issue in the Dashboard for Net-Net ISR, Version 5.0.

Release	Description
5.0	• When using specific browsers and under specific recording data situations, the recordings list in the Dashboard may display improper formatting and may display some data on a second line (for example, the display of long file names).

Net-Net-ISR Index

There are no known issues in the Index component for Net-Net ISR, Version 5.0.

Net-Net ISR RSS

There are no known issues in the RSS component for Net-Net ISR, Version 5.0.

Net-Net ISR API

There are no known issues in the API component for Net-Net ISR, Version 5.0.

2 Upgrading the Net-Net ISR

Introduction

This chapter provides information and procedures for upgrading the Net-Net ISR when required. Upgrading your Net-Net ISR software is required between major releases (4.0, 5.0, etc.) and are also required for maintenance (M1, M2, etc.) and/or patch releases (P1, P2, etc.).

Topics include:

- Upgrading Your Net-Net ISR

Upgrading Your Net-Net ISR

This section provides the information and procedures required for upgrading the Net-Net ISR from the current release to subsequent releases (feature, maintenance, and/or patch releases). In Chapter 1, the sections, Features, Issues Fixed, and Known Issues describe specific information for this release.

This software release also contains specific notes in each Virtual Machine's (VM) host directory at */cxc_common/ISR/build*. A version of the VM is in the "*Annotation*" element in each VM's *.ovf* file.

> **Note:** Before performing the procedures in this section, verify your current operating release of the Net-Net ISR. You must upgrade the Net-Net ISR in subsequent order (for example, 4.0F2 to 4.0F2P1, 4.0F2P1 to 4.0F3, 5.0, etc.)

To upgrade your Net-Net ISR, you need to perform the upgrade in the following order:

- RSS
- CIS

Record and Store Server (RSS)

Use the procedures in this section to upgrade the Record and Store Server (RSS). Upgrade procedures include:

- Before You Begin
- Determining the RSS System Partitions
- (optional) Mounting a Different Partition
- Upgrading the RSS
- (optional) Accessing Files on the Inactive Partition

Before you Begin

Before you begin the upgrade of the RSS, the following must be met:

- Net-Net ISR must have the latest RSS software (prior to this upgrade) currently installed and working properly.
- New RSS file (supertar upgrade file) must be resident on your RSS host machine in the directory */cxc_common/releases/.* This file is:
  - *nnSE-a.tar.gz*
- Determine the system partition for which the RSS is currently running on. For a procedure, see Determining the RSS System Partition.

For information about transferring the above file to your RSS host, see the following procedures for upgrading the CIS.

Determining the RSS System Partitions

Before beginning the upgrade, you must determine the RSS system partition on which the Net-Net ISR is currently running.

To determine the RSS partition:

1. Startup the Net-Net ISR system.
2. At the "Login as" prompt, enter "**root**" and press <Enter>.
   ```
   Login as: root
   ```
   The password prompt displays.
3. At the "Password" prompt, enter "**sips**" and press <Enter>.
   ```
   root@<hostname>'s password> sips
   ```
   The following prompt and message display.
   ```
   Net-Net OS-E
   Copyright (c) 2004-2012 Acme Packet Inc.
   Username:
   ```
4. No username is required so press <Enter>.
   ```
   Username: (leave blank)
   ```
   The password prompt displays.
5. No password is required so press <Enter>.
   ```
   Password: (leave blank)
   ```
   The following message displays followed by the Net-Net ISR hostname prompt. *"Access granted since there are no configured users."*

   ```
   NN-ISR>
   ```
6. Enter "**show chassis-config**" and press <Enter>.
   ```
   NN-ISR> show chassis-config
   ```

The following is an example of the output that displays.

```
    boot-partition: system-2
 system-partitions: 2
management-console: vga
        ipmi-admin: enabled
```

The boot-partition field should indicate "**system-1**" or "**system-2**".

7. If you want to mount the partition other than the partition that displays in the output, see Mounting a Different Partition.

(optional) Mounting a Different Partition

You can mount another partition to use for the upgrade of the RSS if required.

To mount another partition:

1. At the NN-ISR prompt, enter "**show mounts**", and press <Enter>.
   ```
   NN-ISR> show mounts
   ```

   The following is an example of the output that displays.

```
drive    mount-point    drive-name     filesystem     drive-size percent-free
-----    -----------    ----------     ----------     ---------- ------------
system-1 /mnt/backup                                  0          0
system-2 /              /dev/root      reiserfs       7164       66
```

   The output above shows the active mounted system to be the "**system-2**" partition.

2. Enter "**mount system-#**", and press <Enter>.
   ```
   NN-ISR> mount system-1
   ```

   where "system-#" is the system you want to mount. If "system-1" is the active mounted system, then enter "system-2" for Step 2.

   This mounts the other partition to */mnt/backup/*. You can access the available RSS files on the newly mounted partition as required (for example, */mnt/backup/cxc/isrl.elf*).

Upgrading the RSS

After determining the RSS partition (or mounting another partition), you can upgrade the RSS as required.

Note: This upgrade procedure installs the new version of software to the inactive partition and then makes the partition active.

To upgrade the RSS:

1. At the NN-ISR prompt, enter a shell session by entering "**shell**" and press <Enter>.
   ```
   NN-ISR> shell
   ```

   The hostname prompt displays.
   ```
   <hostname> #
   ```

2. Copy the RSS supertar upgrade file to the RSS host's filesystem by entering the following:
   ```
   <hostname> # cp nnSE-a.tar.gz /cxc_common/releases/
   ```

3. Enter "**exit**" to exit the shell and display the NN-ISR> prompt.
```
<hostname> # exit
NN-ISR>
```
4. At the NN-ISR prompt, enter "**install file /releases/nnSE-a.tar.gz**", and press <Enter>.
```
NN-ISR> install file /releases/nnSE-a.tar.gz
```
   The upgrade process proceeds on the RSS using the file you specified. When the upgrade is complete, the RSS server reboots.
5. At the "Login as" prompt, enter "**root**" and press <Enter>.
```
Login as: root
```
   The password prompt displays.
6. At the "Password" prompt, enter "**sips**" and press <Enter>.
```
root@<hostname>'s password> sips
```
   The following prompt and message display.
```
Net-Net OS-E
Copyright (c) 2004-2012 Acme Packet Inc.
Username:
```
7. No username is required so press <Enter>.
```
Username: (leave blank)
```
   The password prompt displays.
8. No password is required so press <Enter>.
```
Password: (leave blank)
```
   The following message displays followed by the Net-Net ISR hostname prompt. *"Access granted since there are no configured users."*
```
NN-ISR>
```
9. Verify the active partition is correct by entering "**show chassis-config**", and press <Enter>.
10. The following is an example of the output that displays.
```
    boot-partition: system-1
 system-partitions: 2
management-console: vga
        ipmi-admin: enabled
```
    The RSS upgrade is complete.

(optional) Accessing Files on the Inactive Partition

If you changed active partitions before upgrading the RSS (using the procedure in Mounting a Different Partition) you can access the files on the inactive partition if required.

To access the files on the inactive partition:

At the NN-ISR prompt, enter "**set-chassis-config-boot system-#**", and press <Enter>.
```
NN-ISR> set-chassis-config-boot system-2
```
where "system-#" is the inactive partition you want to access.

Control and Index Server (CIS)

Use the procedures in this section to upgrade the Control and Index Server (CIS). Upgrade procedures include:

- Before You Begin
- Updating the Index VM Database
- Deleting the Prior Dashboard VMs (Administrator and User Dashboards)
- Importing the New Dashboard VM
- Verifying the CIS Upgrade

Before you Begin

Before you begin the upgrade of the CIS, the following must be met:

- Net-Net ISR must have the latest CIS software (prior to this upgrade) currently installed and working properly.
- New Virtual Machine (VM) files (unzipped) for the Dashboard must be resident on your Window host machine that is managing the VM with the VSphere Client. This file is:
  - *ISR Dashboard Version <#> build <#> OVF Template.zip*
- New MySql database script (unzipped) must be resident on your Window host machine in the Index VM directory. This file includes new database fields for the new release. This file is:
  - *ipcr_db_4_0_f3p0_to_5_0_0_upgrade.sql*
- Find and make note of the Dashboard public IP addresses. You enter these addresses when performing the procedures in Importing the New Dashboard VM.

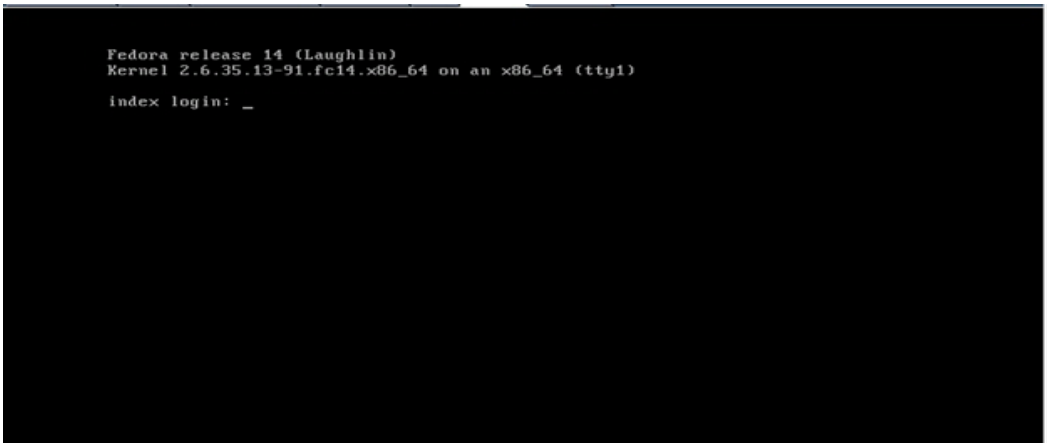
For information about transferring the above files to your Windows host, see the following procedures for upgrading the CIS.

Updating the Index VM database

To update the Index VM database:

1. Use a secure method of file transfer to copy the Index VM file, "*ipcr_db_4_0_f3p0_to_5_0_0_upgrade.sql*" to the Index VM directory on your Windows host.
2. Open an SSH (shell session), and login using ID "**root**" and password "**64^5377**".

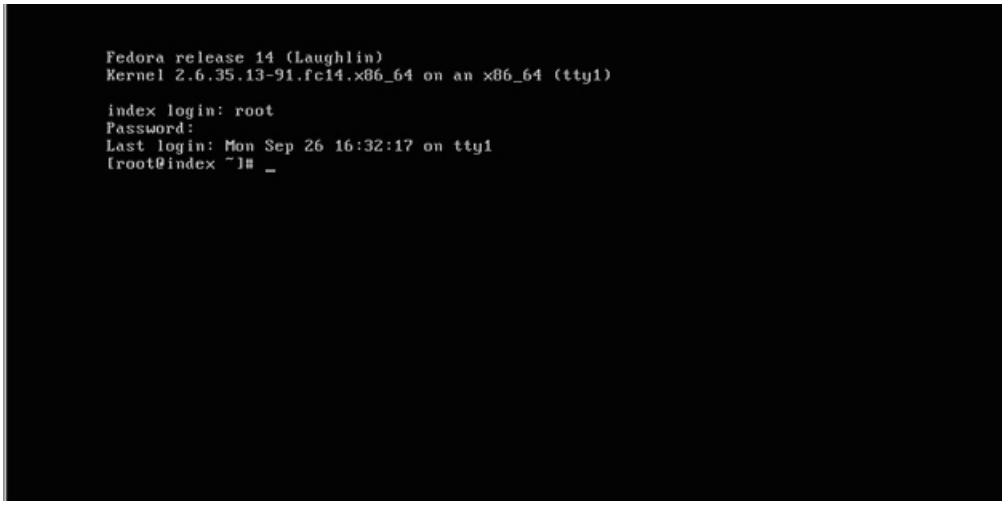
The following screen displays with the applicable VM prompt.



3. Log in to the VM with the following and press <Enter>:

   ```
   <VM> Login: root
   Password: 64^5377
   ```

   The following screen displays.



4. Backup your existing Net-Net ISR data by entering "**mysqldump -u ipcr_admin -pn3wf0und ipcr_db > /tmp/ipcr_db_<release #>_backup.sql**", and press <Enter>.

   ```
   [root@index]: mysqldump -u ipcr_admin -pn3wf0und ipcr_db
   /tmp/ipcr_db_4_0_backup.sql
   ```

Note: Depending on the size of the Net-Net ISR data, this process may take several minutes.

5. Go to the Index VM directory on your Windows host that contains the file "*ipcr_db_4_0_f3p0_to_5_0_0_upgrade.sql*".
6. Enter "**mysql -u ipcr_admin -pn3wf0und ipcr_db ipcr_db_4_0_f3p0_to_5_0_0_upgrade.sql**" to replace the existing Index VM on the CIS server with the new Index VM from your Windows host, and press <Enter>.

```
[root@index]: mysql -u ipcr_admin -pn3wf0und ipcr_db
ipcr_db_4_0_f3p0_to_5_0_0_upgrade.sql
```

The upgrade process proceeds to upgrade the Index VM database.

Deleting the Prior Dashboard VMs

To delete the prior Dashboard VMs:

1. Double-click the VMware vSphere Client icon. The following screen displays.

2. In the "**IP address / Name**" text box, enter the IP address or the domain name of the ESXi host. For example:

```
IP address / Name: 172.30.58.164
```

3. In the "**User name**" text box, enter the user name assigned to you by the system administrator of the ESXi host. For example:

   `User name: root`

4. In the Password text box, enter the password assigned to you by the system administrator of the ESXi host. For example:

   `Password: jre453i`

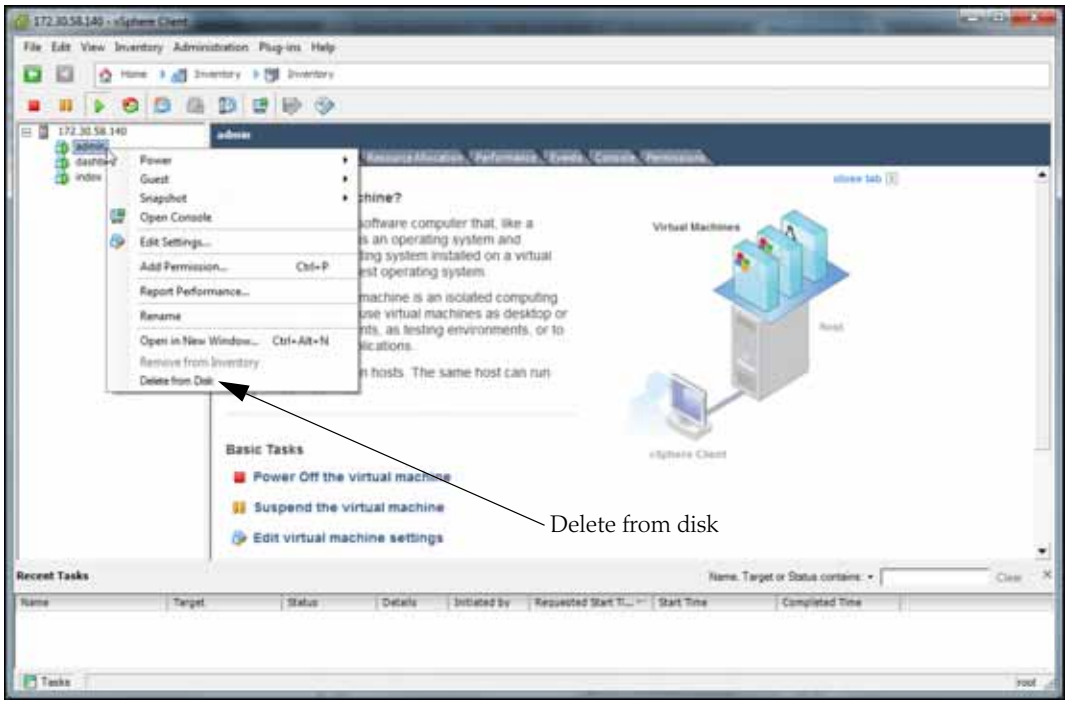
5. Click <**Login**>. The following Security Warning displays:

6. Place a check mark in the box that indicates:

   "*Install this certificate and do not display any security warnings for <ip_address>*".

   The IP address is the address of the ESXi host.

7. Press <**Ignore**>. The following window displays.



8. In the left column, click the IP address to display the VMs.

9. Using your mouse, right click the "**admin**" VM, and then select "**Delete from Disk**". A prompt displays for you to verify the deletion of the admin VM.

   "*Delete the virtual machine 'admin'?*"

10. Click <**Yes**>. The F3 Administrator Dashboard deletes from the CIS.
11. Using your mouse, right click the "**dashboard**" VM, and then select "**Delete from Disk**". A prompt displays for you to verify the deletion of the dashboard VM.

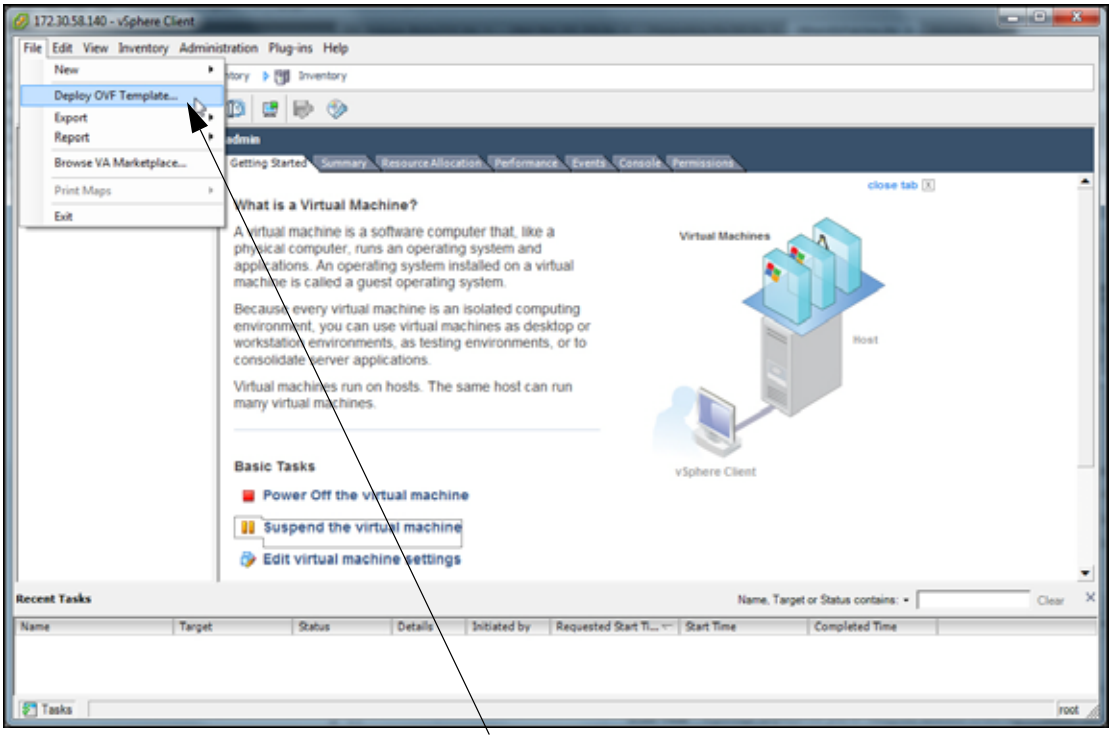
    "*Delete the virtual machine 'dashboard'?*"

12. Click <**Yes**>. The prior User Dashboard deletes from the CIS.

Importing the New Dashboard VM

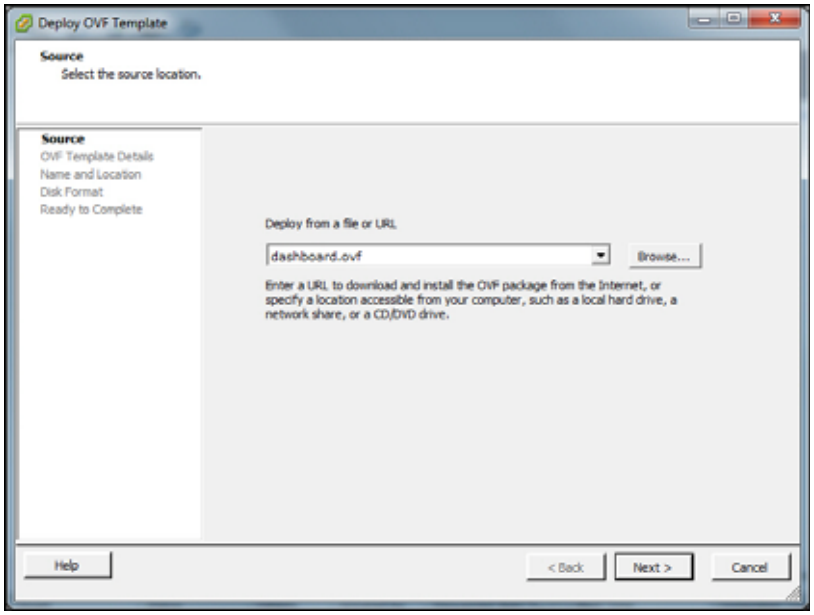
To import the new Dashboard VM:

1. In the VMware vSphere Client, select "**File->Deploy OVF Template....**"



Deploy OVF Template....

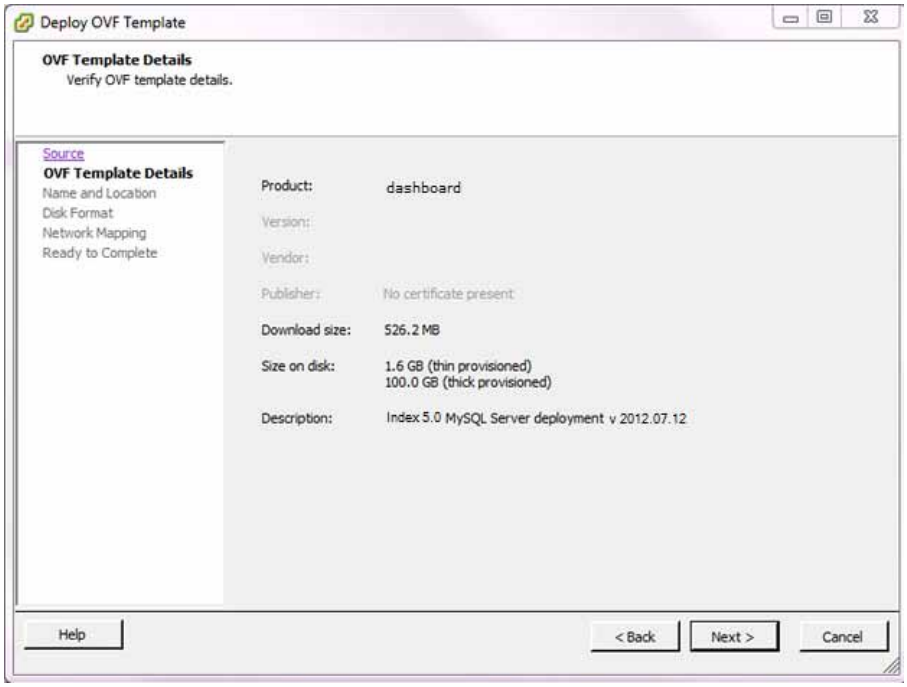
The following window displays.



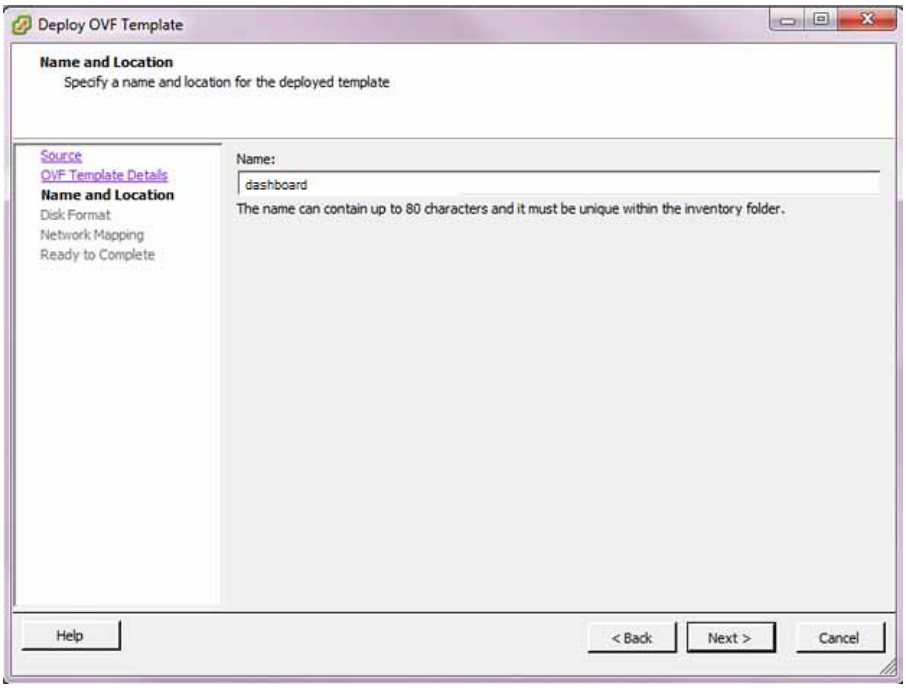
2. In the "**Deploy from a file or URL**" field, browse to the directory that contains the files you unzipped from the file , "*ISR Dashboard Version <#> build <#> OVF Template.zip*" on your Windows host machine.

   Note: For more information about transferring the required new files to your Windows host machine, see Control and Index Server (CIS).

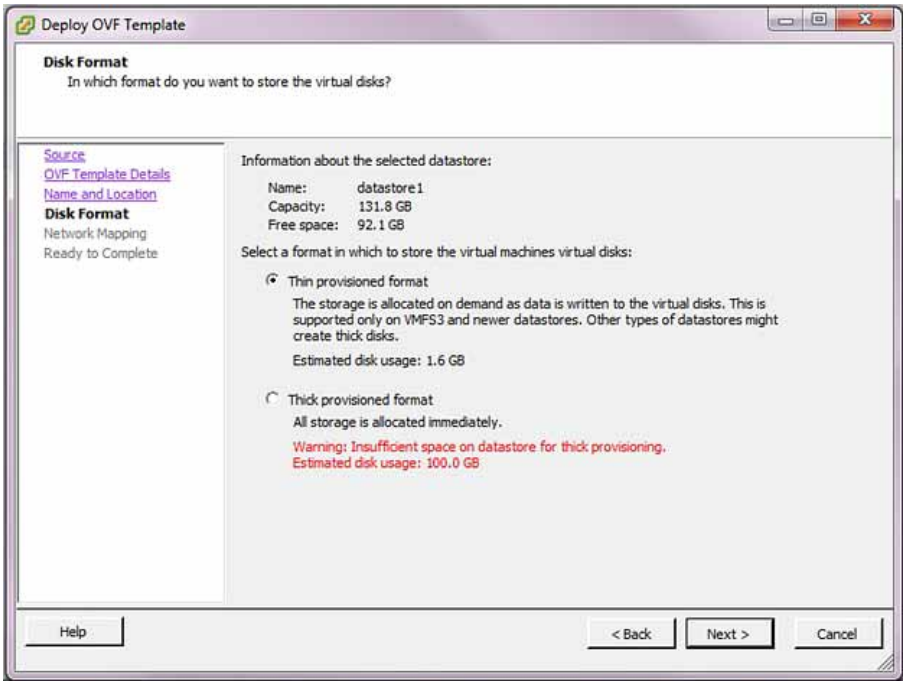
3. Select the "**admin.ovf**" file and click <**Next**>.
4. Click <**Next**>. The following window displays.



5. Click <**Next**> in the "OVF Template Details" window. The "Name and Location" window displays. This field is automatically populated with the name and location of the virtual machine you selected in Step 3.

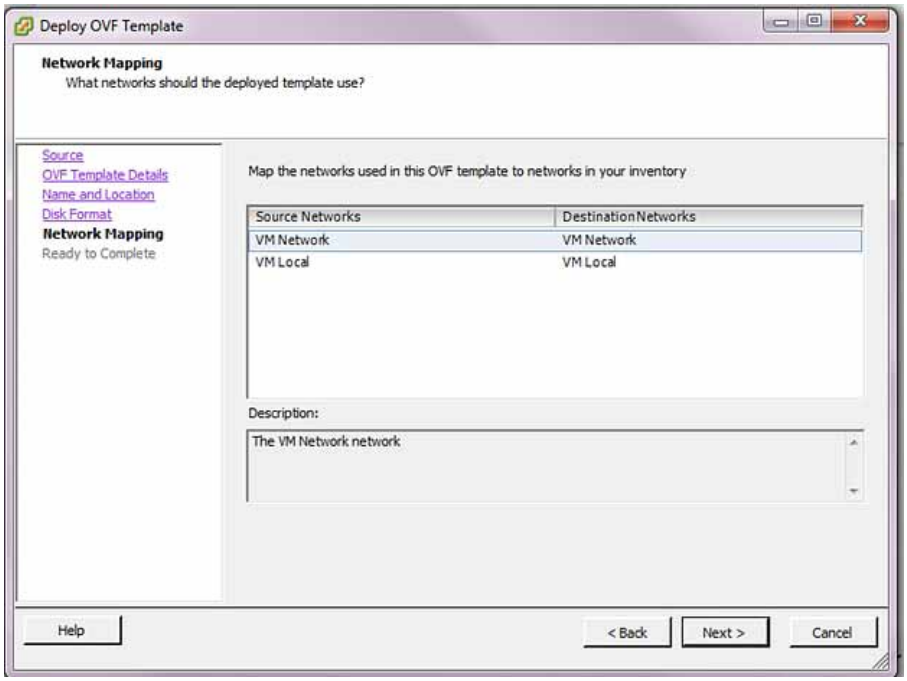


6. Click <**Next**>. The "Disk Format" window displays.

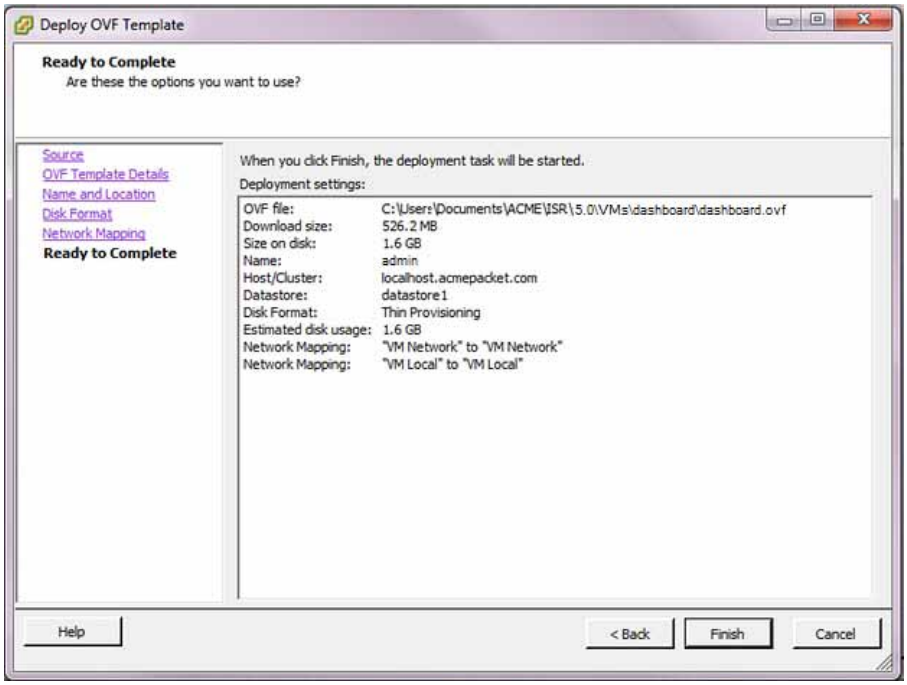


Note: If using CIS certified hardware, verify the datastore name is correct.

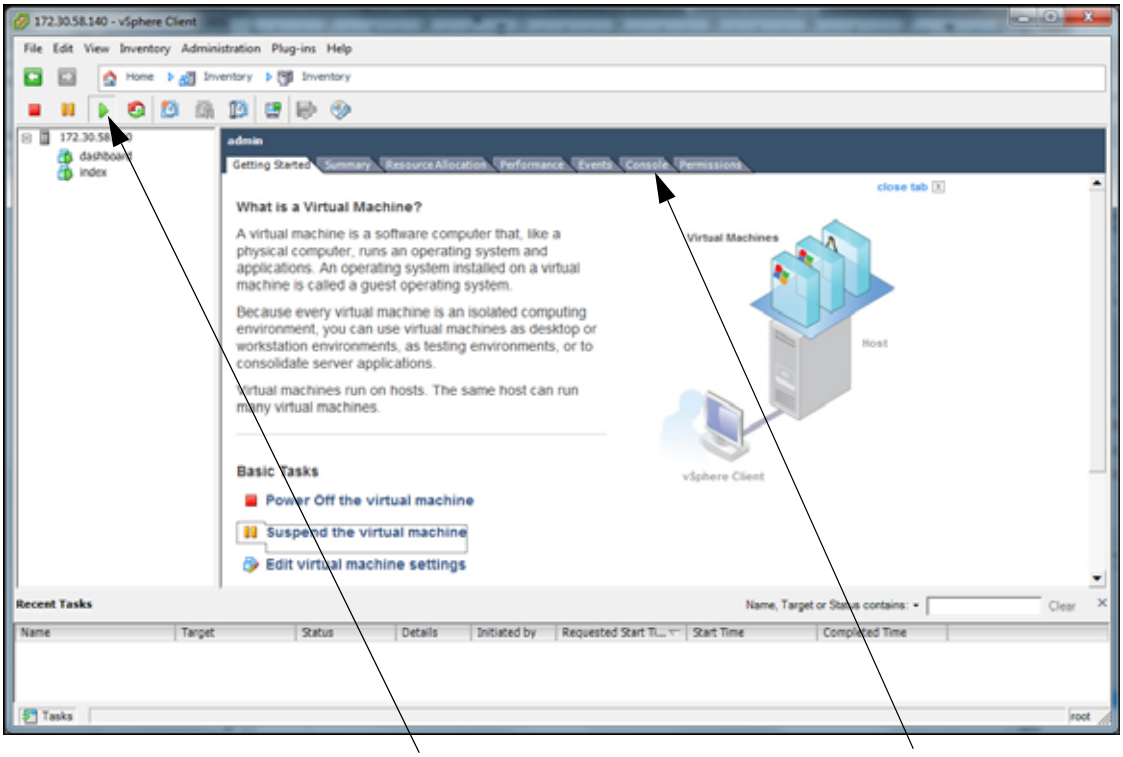
7. Select "**Thin provisioned format**" with disk usage of **1.6 GB** (default) and click <**Next**>. The "Network Mapping" window displays.



8. Verify that "VM Network" and the "VM Local" are in both the Source Network column and the Destination Network column.
9. Click <**Next**>. The following window displays.

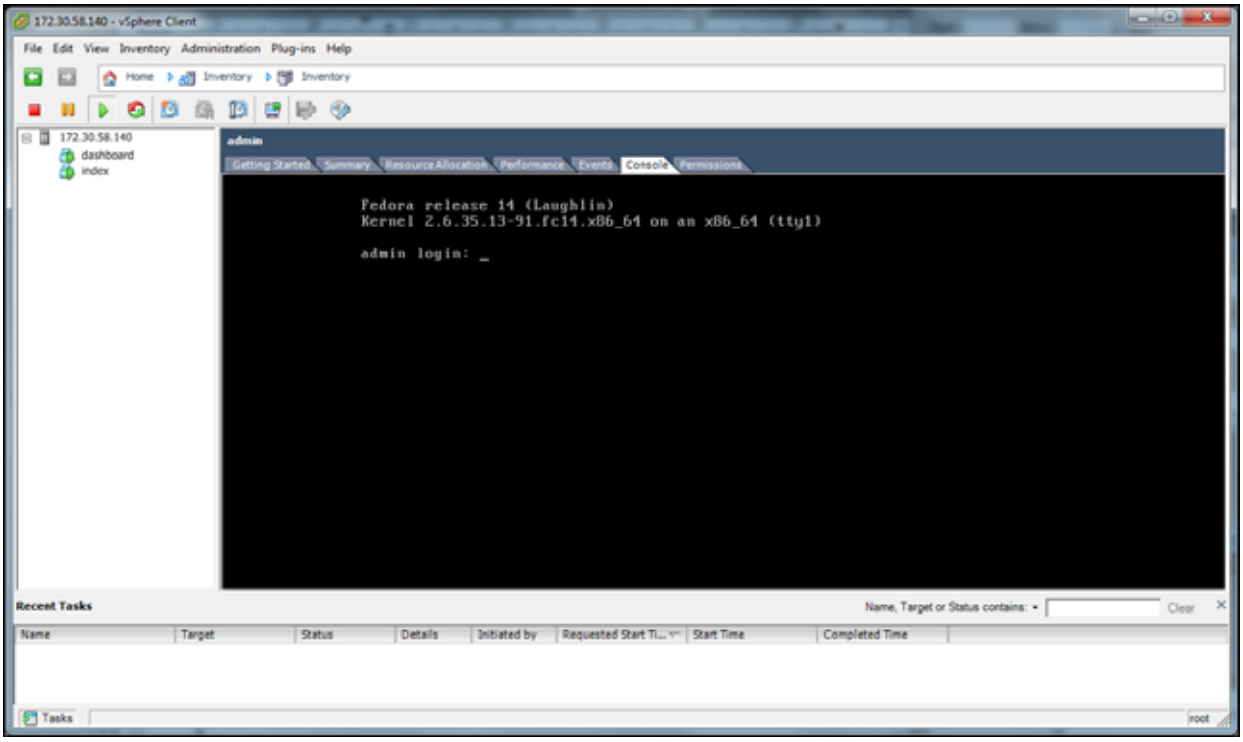


10. Verify all selections in the "Ready to Complete" window are correct and click <**Finish**>.
11. When the deployment of the *dashboard.ovf* is complete, close the "Deploy OVF Template" window by clicking the "X" in the upper right corner.
12. In the VMware vSphere Client window, select the "**dashboard**" VM from the left column.



13. Click the  (Power on button).
14. Click on the "**Console**" tab.

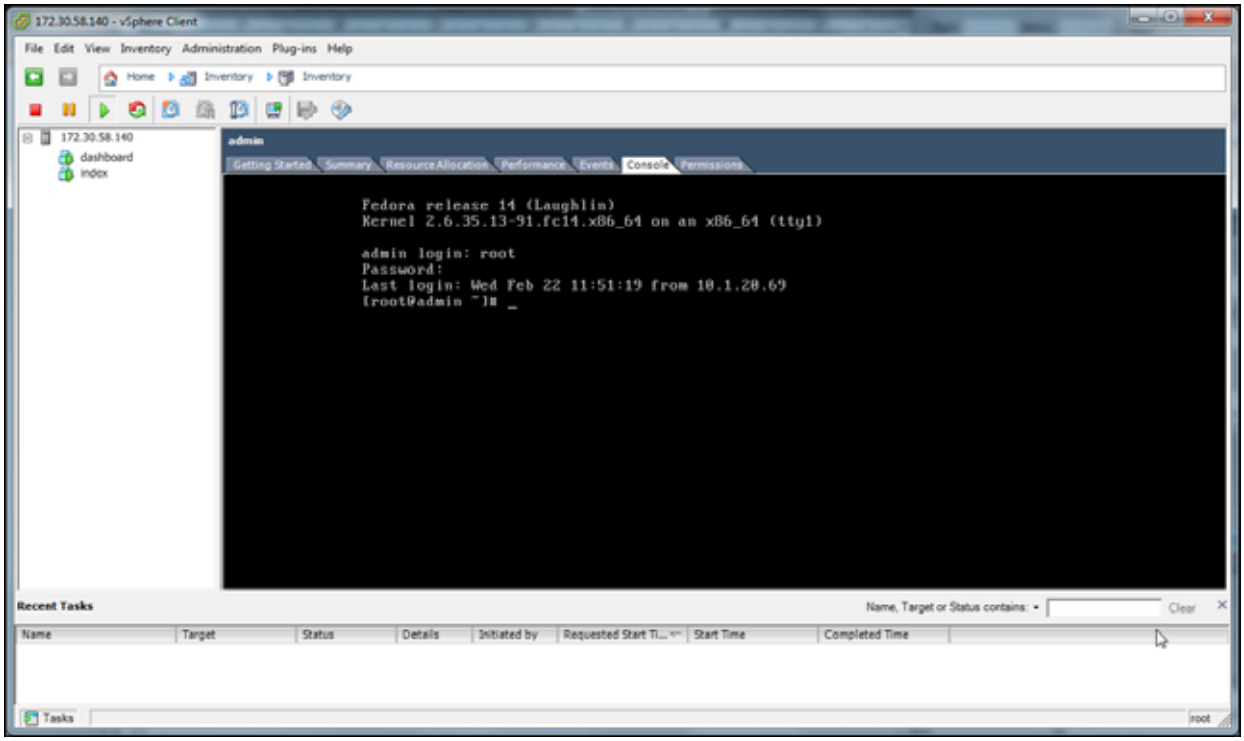
    Note: During the remaining procedures using the Console window, the mouse may be confined to the console pane. Press <**Alt**><**Ctrl**> to release it at any time. The following window displays.



15. Login using ID "**root**" and password "**64^5377**".

```
admin login: root
Password: 64^5377
```

The following screen displays.



16. To set the IP address of the admin VM, enter the following at the prompt and press <Enter>:
    `vi /etc/sysconfig/network-scripts/ifcfg-eth0`
17. Press <**i**> to enter insert mode.
18. Using the arrow keys to navigate the file, and edit the following lines:
    - IPADDR=<your admin IP address>
    - GATEWAY=<network gateway>
    - DNS1<network DNS>
    - DNS2=<network secondary DNS>

    Note: If you do not have a DNS configured in your network, insert a "#" berfore the line. For example,

    #DNS1=DNS1
    #DNS2=DNS2

19. Press <**Esc**>, then type "**:wq**", and press <Enter>.

    This saves your changes and displays the Admin VM prompt.
20. To start the network services, enter the following and press <Enter>.
    `service network start`
21. To enable network services to automatically start on reboot, enter the following and press <Enter>:
    `chkconfig network on`

    Importing the new Dashboard VM is complete.

Verifying the CIS Upgrade

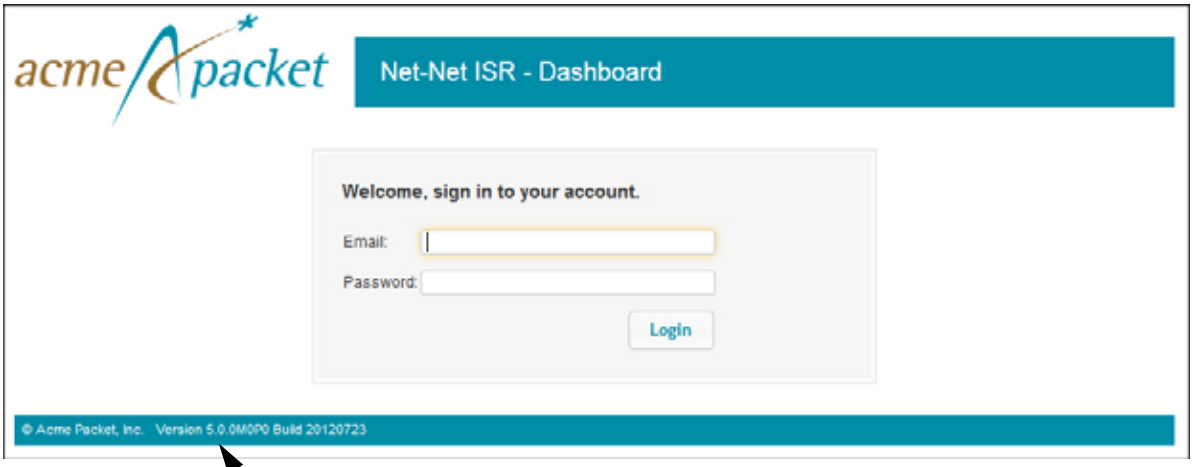
You can log into the Net-Net ISR Dashboard to verify that the upgrade was successful.

To log into the Net-Net ISR dashboard:

1. Open your Internet Web browser (see compatible browser requirements at Net-Net ISR Dashboard Requirements (14)).
2. Enter the following IP address of your Net-Net ISR in your network:

   `http://172.455.34.22`

   The Login page displays.



Version Number

3. In the "**Email**" and "**Password**" fields, enter the your applicable email and password, respectively. The default email and password are:

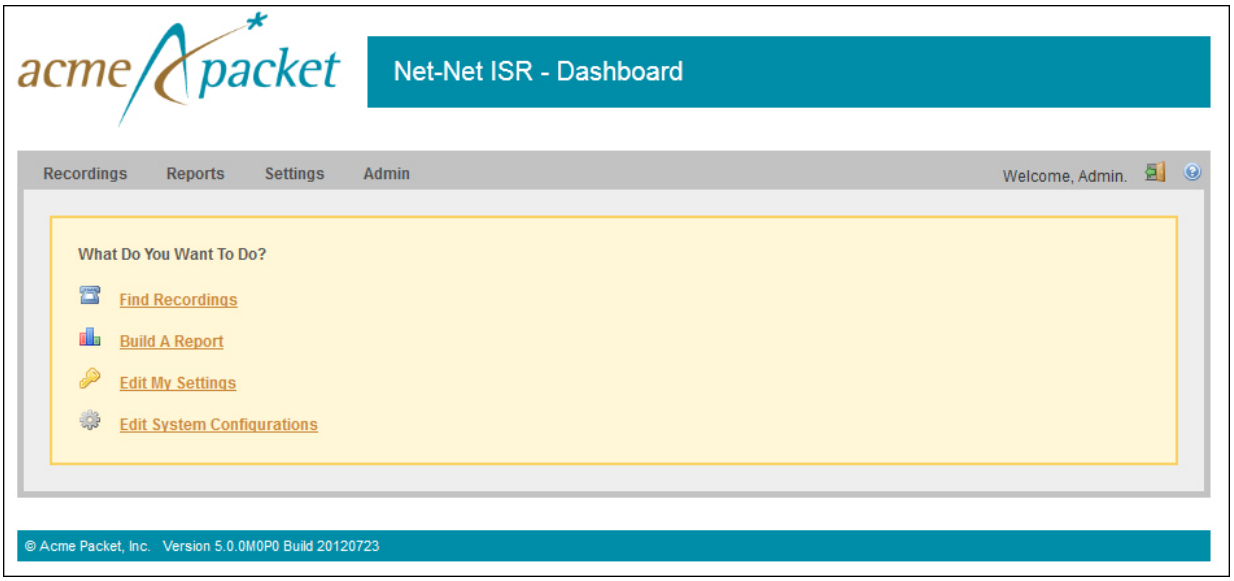
   Email: isradmin@acmepacket.com
   Password: admin123

   Note: If you changed your password from the default in your prior software, then enter that password in the "Password" field. The password from the prior software has been saved to your new version software. You can skip Step 4 and proceed to Step 5.

   If you did not change the default password in your prior software, then you have the option of changing it in the new version of software. On your initial login, you are prompted to change your password.

4. Respond to the prompts as applicable to change your password.
5. Verify that the Net-Net ISR version number is visible in the blue bar at the bottom of the window.

The following page displays after logging in.



You can now use the Dashboard as required.