1340 Integrated Network Controller (INC)

WEB GUI PM USER GUIDE

Release 20.0

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Preface

Purpose

This manual describes the features of the Integrated Network Controller WEB Graphical User Interface (GUI) as they appear to a “console” level user of a Integrated Network Controller system.

Audience

This document is intended for network planners, administrators, maintenance engineers, and craft personnel who require an in-depth knowledge of the Integrated Network Controller WEB GUI.

Related Documents

The following documents provide additional information about the Integrated Network Controller system:

— Integrated Network Controller *Application Installation Guide.*

Electronic Documentation

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Introduction

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Chapter Contents

Description

The Integrated Network Controller is being used as a monitoring and preventative maintenance system. Specifically, Integrated Network Controller will provide users the ability to view collected PM on specified ports thereby allowing them to track problems within circuits and prevent degradation of service to end-customers.

Terms and Usage

In order to be clear in the use of terminology, the following section describes the terms that will be used to define various parts of the system. The use of different structures and constructs in a GUI based system can vary widely. This section is designed to provide clarity and consistency in the use of system specific terms.

Alarm Central - Shows a running record of alarms that are currently in the system.

CLI - Common Language Identifier - a code used to define a circuit or NE.

Facility/Port/AID - These terms are used interchangeably on various forms.

Filters - These items allow the user to display only the data designated (i.e. From “Date” - To “Date” will show only data records that were created between the given dates). Filters may be text boxes that allow users to enter data into, or drop down lists with pre-populated choices.

Form - A screen that contains specific data (i.e., Work List form, Display Problem PM form, etc.)

Function Tabs - The Function Tabs are designed to allow easy access to the information that is managed by the Integrated Network Controller system.

Main Display Area - Displays the results of any query launched from the Launch Area.

Launch Area - This area will display filters (specific to the tab and drop down menu chosen) that allow the user to easily search for data

Navigation Drop Down List - The list displayed when a specific line item in a report is selected. These lists allow the user to easily navigate from one form to another or move pertinent data from one form to another.

NE - Network Element - INC managed network elements, i.e. Alcatel-Lucent DACS IV, Tellabs 5500, Alcatel-Lucent 1631 LMC, Alcatel-Lucent DDM 2000 OC3, and Fujitsu FLM 150.

Options - These are selectable items that will display the data in a specified way.

PQV - Performance Quality Value - A value between 0 and 100 derived from the collected PM. This value represents the absolute quality based upon seconds that had performance problems. The value is displayed as a percentage of seconds in a twenty four hour period that there were **no** problems.

Service View - A physical aid associated with a facility databased in the Integrated Network Controller system

Getting Started

2

Chapter Contents

Logging In

In order to login to the Integrated Network Controller system, the user must obtain the appropriate URL from their system administrator. Once the URL is executed, the Integrated Network Controller Login screen will be displayed.

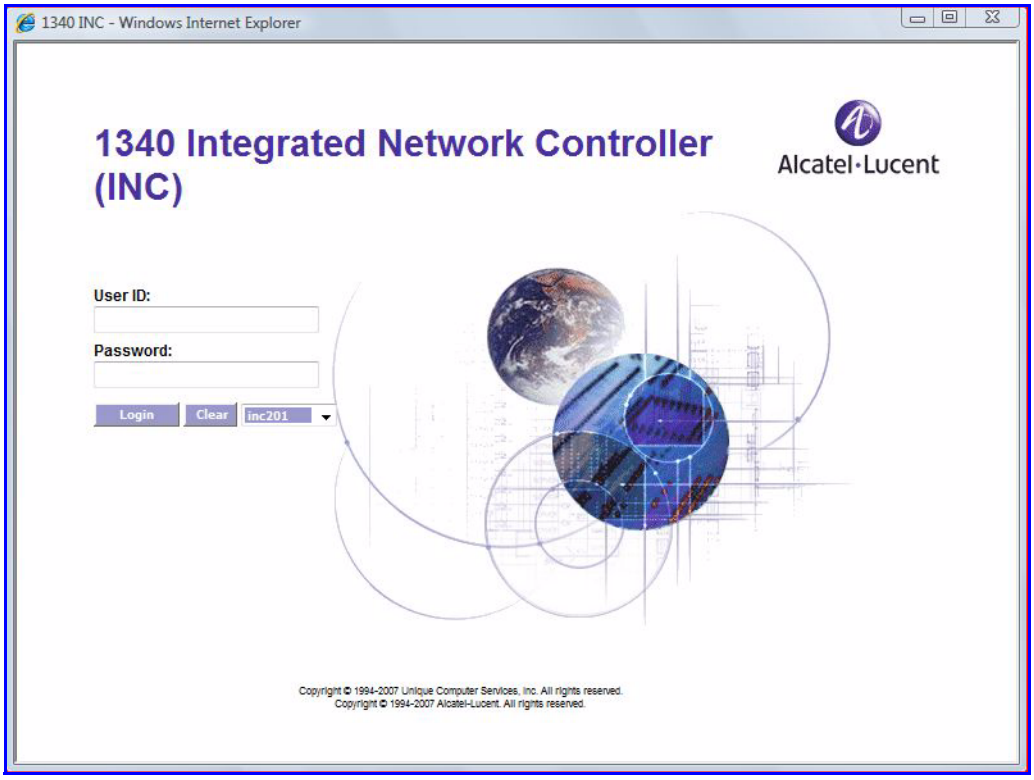


Figure 2-1. **Login Form**

Fields:

- User ID: Unique Login ID of the user attempting to log in
- Password: The password of the user attempting to log in

Buttons:

- Login - Selected after the User ID and Password fields have been populated and the proper interface has been selected
- Clear - Clears the User Id and Password fields

- Interfaces - A drop down list that contains the names of the systems that the user may log in to. These interfaces are defined in a file described in the Integrated Network Controller System Installation and Administration Guide

Once the User ID and Password fields have been populated, and an interface has been chosen from the drop down list, the user will select the Login button. The screen will display the message “Initializing session please wait...” after which the Main Screen will be displayed.

Timecheck

The Timecheck screen will be displayed if the time between the WEB GUI Server and the INC core are different or if the time between the WEB GUI Server and the user workstation are different (or both).

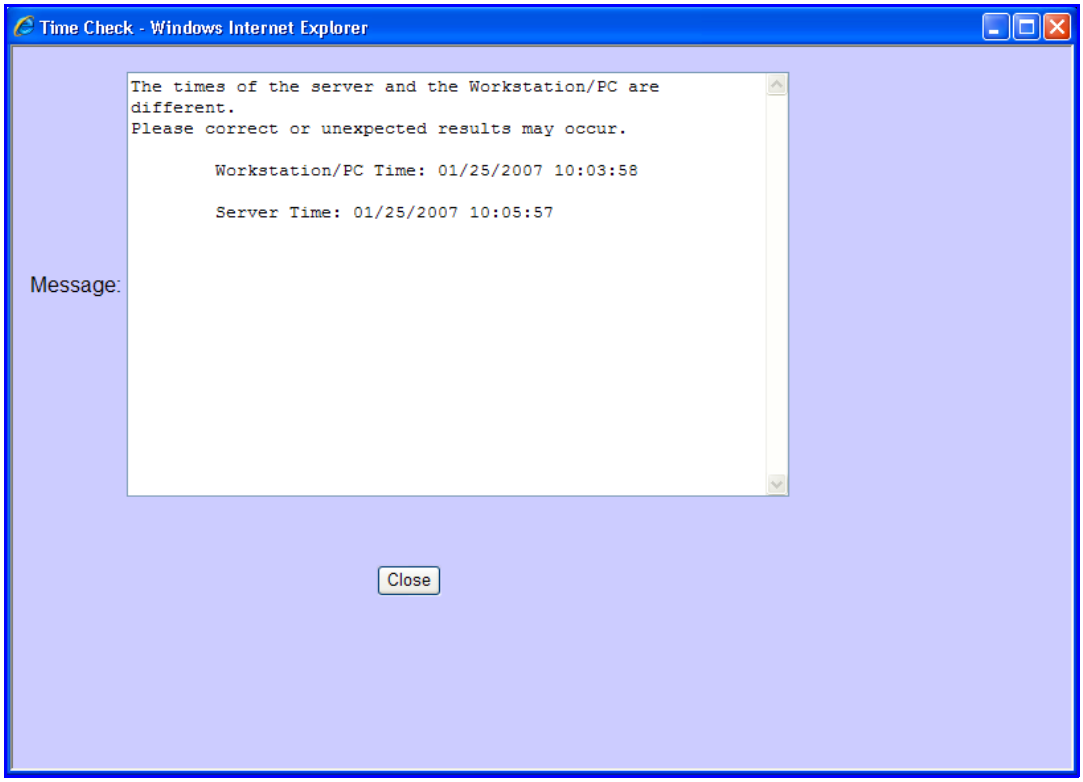


Figure 2-2. **Timecheck**

Message of the Day

There is a capability within the Integrated Network Controller system to display a “message of the day”. This message is contained in a file as part of the *UNIX* ® file system and can be updated and changed, as appropriate. If the file is present, the Integrated Network Controller will display the message upon successful login. If no file exists, the Integrated Network Controller main screen will be displayed. Please see your *UNIX*® administrator for a description and location of this file.

Figure 2-3. **Message of the Day**

Main Screen:

The main screen is the “home” from which all other Integrated Network Controller usage is begun. It is made up of four primary areas.

Alarm Central: Shows a running record of alarms that are currently in the system.

ID Area: This area will display the Login ID of the user, the INC machine they are logged into, and the date and time

Function Tabs: Located along the top of the main screen, the Function Tabs are designed to allow easy access to the information that is managed by the Integrated Network Controller system.

Title Bar: Directly below the function tabs, this area is used to display menu choices

Launch Area: Located below Alarm Central. This area will display filters (specific to the tab and drop down menu chosen) that allow the user to easily search for data.

Main Display Area: Displays the results of any query launched from the Launch Area.

Figure 2-4. **Main Screen**

Alarm Central

Alarm Central is designed to give users a view of the current state of alarms in the Integrated Network Controller system.

Figure 2-5. **Alarm Central**

When a **new** alarm is asserted, the icon of the associated alarm type (FAC, EQU, etc.) will begin blinking. When the icon is selected, a new window will be displayed showing the pre-populated filters and the current alarm data. Once the alarm has been displayed, the icon will continue to show the alarm color (non-blinking) until the alarm is cleared. If an icon is selected of a type which has no current alarms, the Launch Area filter will be pre-populated with the selected type and the Main Display Area will be blank.

The area below Alarm Central is the ID Area and will display the Login ID of the user, the INC machine they are logged into, and the date and time.

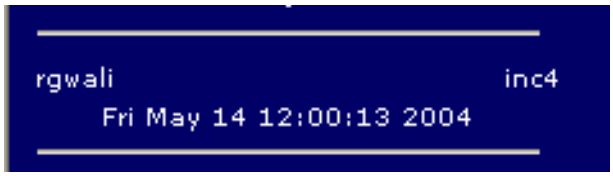


Figure 2-6. **ID Frame**

Function Tabs

Function Tabs: The Function Tabs are designed to allow easy access to the information that is managed by the Integrated Network Controller system.

Figure 2-7. **Function Tabs**

When the cursor is moved over any of the tabs, the system will display the list of choices that are associated with that tab via a drop down list.

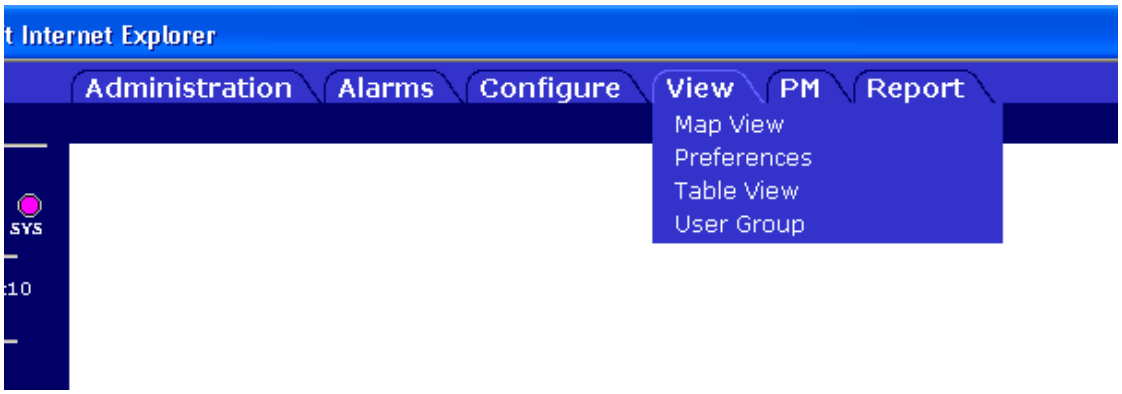


Figure 2-8. **Function Tab Dropdown List**

When the tab is **selected**, the drop down list items will be displayed in the title bar.

Figure 2-9. **Function Tab after Tab Selection (Title Bar)**

When any single menu item is selected, the Launch area will become populated with the associated filters and selection criteria fields.

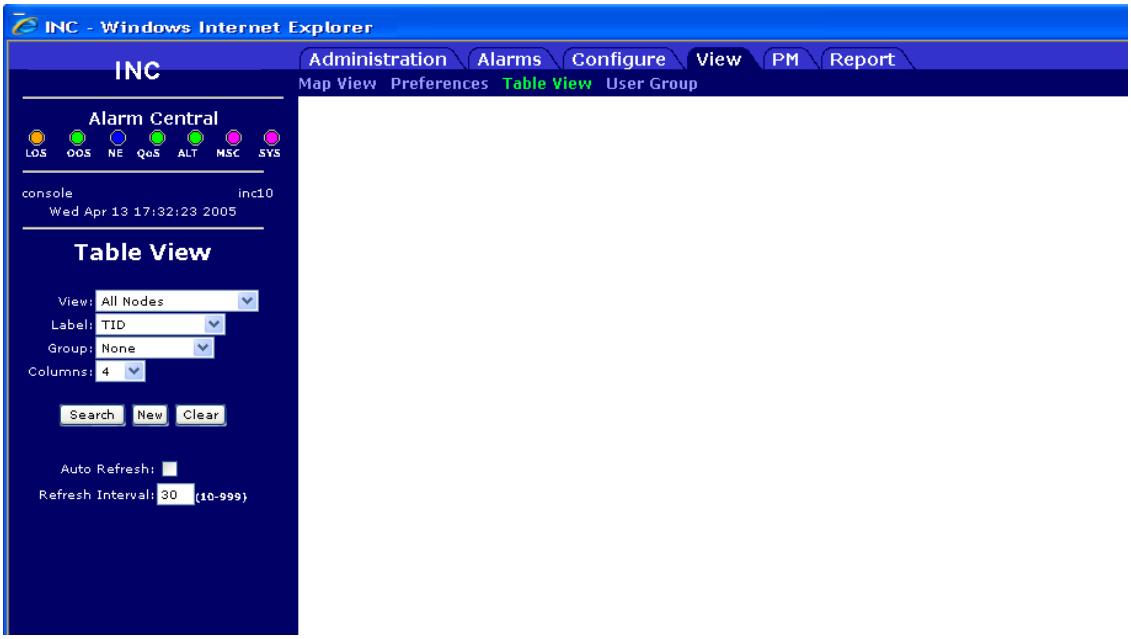


Figure 2-10. **Menu Item Selection**

General Usage

There are several constructs that are used throughout the Integrated Network Controller system that merit description:

<SEARCH>, <NEW>, <ADD>, <SUBMIT>, <UPDATE>, <DELETE>, <CLEAR> and <CLOSE> buttons

These buttons may be located in the Launch Area, or on reports or forms:

The <Search> button executes the query as outlined using the selected filters and populates the main display area

The <New> button executes the search in a new window, leaving the original window displayed

The <Add>and <Submit> buttons will place information into the Integrated Network Controller database.

The <Update> button is used to re-enter information into the Integrated Network Controller database after it has been edited by a user.

The <Delete> button is used to remove information from the Integrated Network Controller database.

The <Clear> button displays the default values in the filter fields (if a default value exists), and clears any manually entered values from the filter fields. If the <Clear> button is selected on a window that was displayed via the <NEW> button, the fields return to the values originally used to open the <NEW> window.

The <Close> button closes the form or current window

More Options/Less Options

The “More Options” / ”Less Options” is a toggle value located in the Launch Area for various reports. It is displayed when there are a significant number of filters or options to choose from.

The “More Options” item allows the user to select more filters to narrow their search

The “Less Options” item allows the user to select less filters to broaden their search

Auto Refresh/Refresh Interval

Some forms allow for an automatic refresh of the data that is currently displayed. When the Auto Refresh checkbox is selected, the associated form will be automatically updated. The Refresh Interval is the value (in seconds) that will elapse before the next update. To change the Refresh Interval, the Auto Refresh box must be de-selected and then re-selected.

Line Selection from Reports

When the cursor is positioned over a line in a report, the line will turn from it's current color to gray. When a specific line item is selected, the line will turn from gray to blue. This line will stay selected until a different line item is chosen. This allows the user to navigate from one report to another without losing the source of the navigation.

NE List

Many forms include an NE drop down list as a filter. In some instances, this list contains hundreds of data-based NEs, making it cumbersome to manually search the list for the NE the user wishes to search for.

On the forms listed below, the user may manually type the TID/NEID (based on which label has been defined in the Preferences form), into the NE field.

- Alarm
- NE Management

As characters are entered into a popup box, the drop down list will automatically go to NE's in the list that match the characters entered.

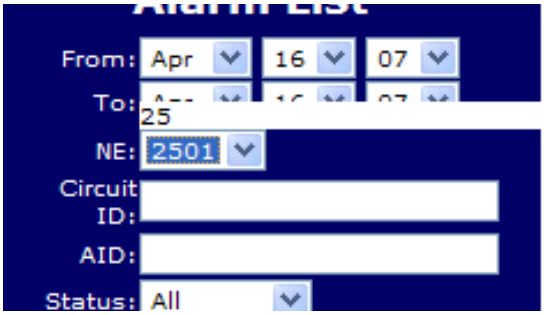


Figure 2-11. **Drop Down List Filter**

If a character is typed into the popup field that does not match any of the values in the list, the popup box will turn red.

Service View Wizard

The Service View Wizard allows the user to display all available service views (facilities). This icon (seen at the end of the Service View field) appears on any Integrated Network Controller forms and reports where the service view will act as an input field or a filter option.

Figure 2-12. **Service View Wizard icon**

The Service View Wizard allows the user to choose a specific user, NE, and level, of service views (aids) to be displayed. A specific Service View can then be chosen (highlighted) and selected (via the <Select> button). The selected view will then be automatically populated in the appropriate input field or filter field. The <Cancel> button will close the Service View Wizard.

NOTE:
An asterisk (*) indicates that there is more than one service view defined for the listed digroup.

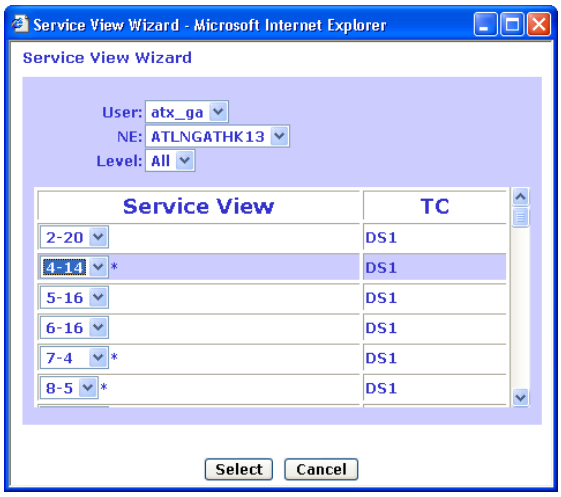


Figure 2-13. **Sample Service View Wizard Report**

Lines per Page

At the bottom of displayed reports is a count of how many lines populate the report, and how many pages of data are contained in the report. The “Lines Per Page” and “Pages Per List” values are user defined and can be set in the View Tab via Preferences -> Miscellaneous.

The left and right single arrows allow the user to go to the previous or next page, respectively, and the double arrow (->>) or (<<-) allow the user to go forward or backward, respectively, in increments of the value defined by the “pages per list” variable. The page the user is currently viewing will be highlighted, and the other pages will be underlined. The user may also display a specific page by entering the page number in the Page text box and selecting the <GO> button.

Selection of the <ALL> button will display all entries in the report, with an associated slide bar, if necessary.

NOTE:
If the user selects <ALL>, they must re-select the <Search> button in the Launch area of the GUI in order to return to a “paged” display.

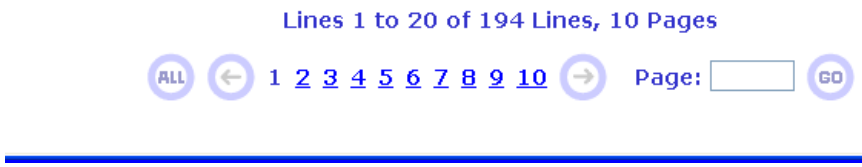


Figure 2-14. **Lines per Page**

Customize Table/CSV/Print Table

These icons are located in the upper left corner of the Main Display Area on retrieved reports and are described in detail on the following pages. The icons from left to right are: Customize Table, Create a CSV Output File, and Print Table.

Figure 2-15. **Customize Table/CSV/Print Table Icons**

Customize Table

This form allows the user to specify:

1. The fields that will be displayed in a retrieved report (via the left and right arrows)
2. The order in which the fields will be displayed (via the up and down arrows)
3. The sort order of the fields (in ascending or descending order)
4. Restoration of the default settings for the table specified (via the <DEF> button)

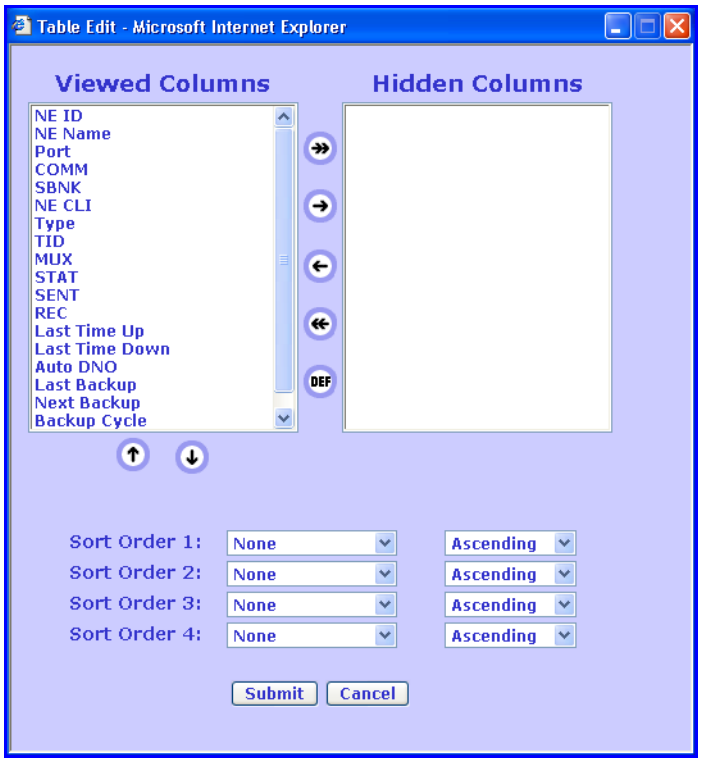


Figure 2-16. **Customize Table**

CSV

Appearance of the output from this selection is dependent upon the setting in the View -> Preferences-> Miscellaneous tab setting under the CSV layout choice. When the “Text” value is chosen, the output will be displayed as a comma-separated-values list (as shown). This file can then be saved and imported into a report generating application, or a spreadsheet. When the EXCEL value is chosen, the ouput will be displayed in a Microsoft® Excel spread sheet.

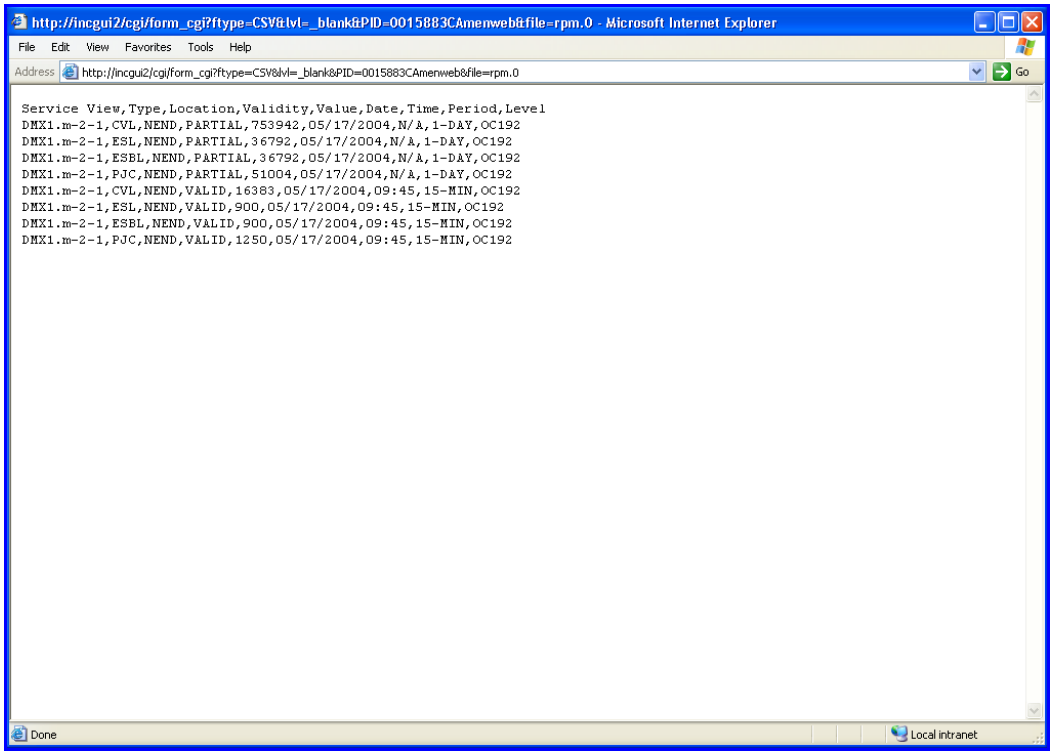
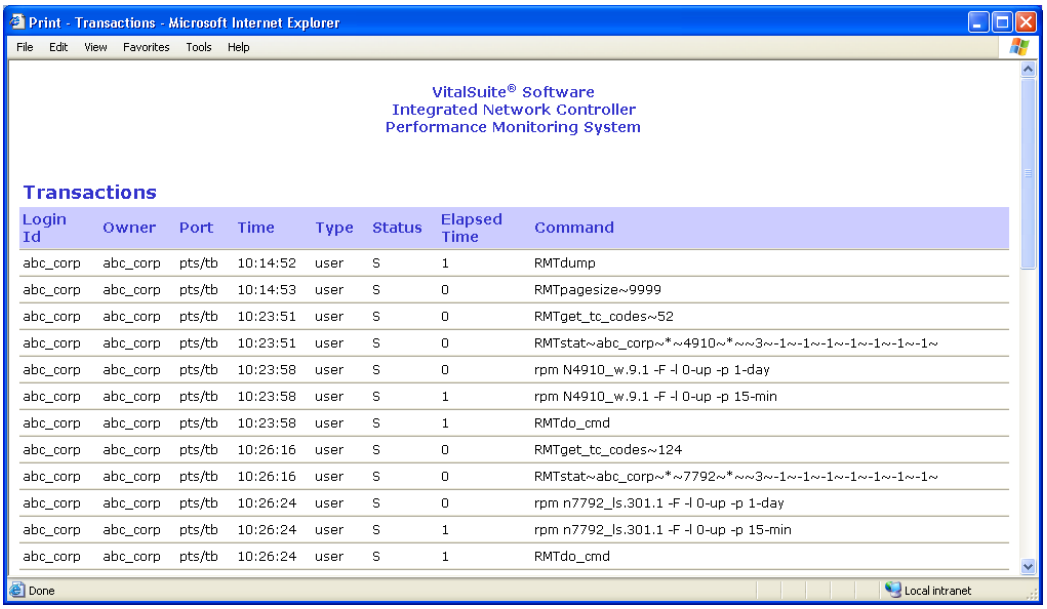


Figure 2-17. **CSV Output**

Print Table

Displays the retrieved data in a tabular format suitable for printing (similar to Print Preview).



Login Id	Owner	Port	Time	Type	Status	Elapsed Time	Command
abc_corp	abc_corp	pts/tb	10:14:52	user	S	1	RMTdump
abc_corp	abc_corp	pts/tb	10:14:53	user	S	0	RMTpagesize~9999
abc_corp	abc_corp	pts/tb	10:23:51	user	S	0	RMTget_tc_codes~52
abc_corp	abc_corp	pts/tb	10:23:51	user	S	0	RMTstat~abc_corp~*~4910~*~~3~-1~-1~-1~-1~-1~-1~-1~
abc_corp	abc_corp	pts/tb	10:23:58	user	S	0	rpm N4910_w.9.1 -F -l 0-up -p 1-day
abc_corp	abc_corp	pts/tb	10:23:58	user	S	1	rpm N4910_w.9.1 -F -l 0-up -p 15-min
abc_corp	abc_corp	pts/tb	10:23:58	user	S	1	RMTdo_cmd
abc_corp	abc_corp	pts/tb	10:26:16	user	S	0	RMTget_tc_codes~124
abc_corp	abc_corp	pts/tb	10:26:16	user	S	0	RMTstat~abc_corp~*~7792~*~~3~-1~-1~-1~-1~-1~-1~-1~
abc_corp	abc_corp	pts/tb	10:26:24	user	S	0	rpm n7792_ls.301.1 -F -l 0-up -p 1-day
abc_corp	abc_corp	pts/tb	10:26:24	user	S	1	rpm n7792_ls.301.1 -F -l 0-up -p 15-min
abc_corp	abc_corp	pts/tb	10:26:24	user	S	1	RMTdo_cmd

Figure 2-18. **Print Table**

This will automatically be followed by a display of printer choices local to the user's PC

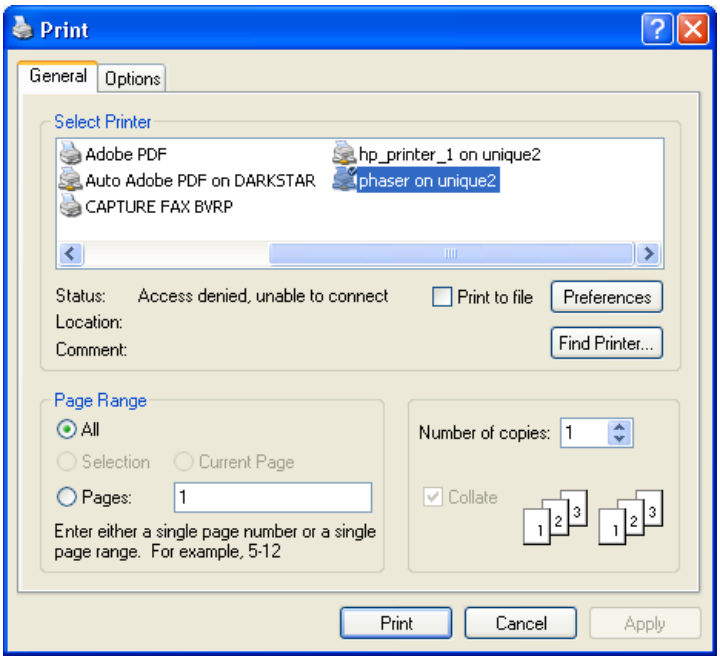


Figure 2-19. **Print Choices**

New Window

The New Window icon, shown in the figure below, allows the user to execute a search in a new window, while maintaining the data and display in the window from which it was launched.

Figure 2-20. **New Window icon ("search in current window" mode)**

When selected, the icon will change to show that the user is now in "new window" mode.

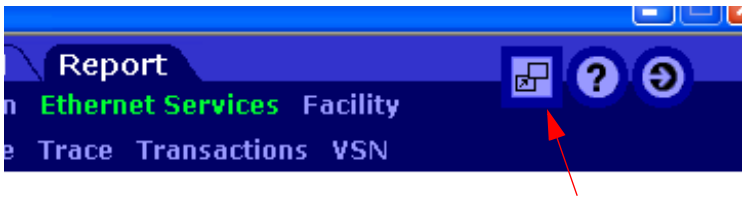


Figure 2-21. **New Window icon ("search in new window" mode)**

NOTE:
The new window selection will only affect the tabs and menu items. That is, if the user is currently in the Reports tab, then selects the New Window icon, only searches that are **not** menu items in the Report tab will be executed in a new window.

Collapse/Reopen

The Collapse/Reopen icon, shown in the figure below, allows the user to collapse the Filter area of pop-up windows so as to allow a larger area to be displayed in the main frame.

Figure 2-22. **Collapse/Reopen icon**

Help

The Help icon is represented by the question mark (?) symbol.

Figure 2-23. **Help**

Selection of the Help (?) icon will display the following choices:

- About - Will display the current GUI release version and copyright information.
- Contact - Allows a user to send an e-mail message to the Integrated Network Controller support team.
- *xxx* Help - The Help choice will vary based on the feature set available to the user of the Integrated Network Controller software (i.e. Console, User, Network Ethernet, ATM/FR, etc.)

Additionally, if users would like to have their own documents listed in the Help menu, they can contact their system administators to set up INC to do so.

Logging Out

The logout function is represented by the arrow symbol located in the upper right hand corner of the Main Screen and may be selected whenever the user chooses to log out of the system.

Figure 2-24. **Logout**

Selection of the logout icon will display the following message.

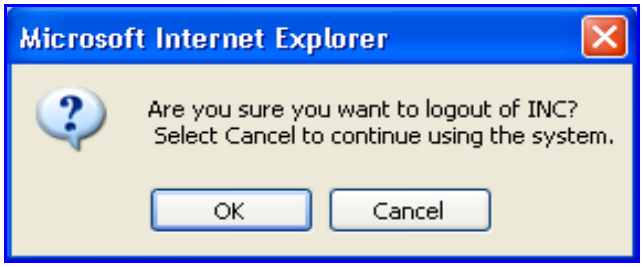


Figure 2-25. **Logout Verification**

NOTE:
If unsaved changes have been made to preferences or network data, the user will also be prompted to save or cancel those changes when logging out.

Administration

3

Chapter Contents

Administration Tab

The Administration Tab allows the user to access management functions of the Integrated Network Controller system.

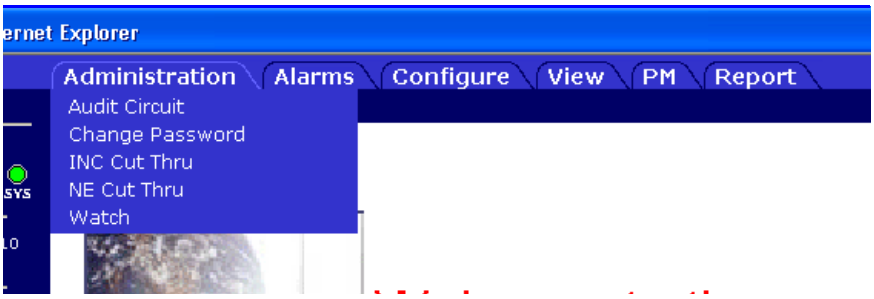


Figure 3-1. **Administration Tab**

Audit Circuit Connections

The Audit Circuit Connectons form allows the user to verify that the connections in the NE are synchronized with the connections in the INC database.

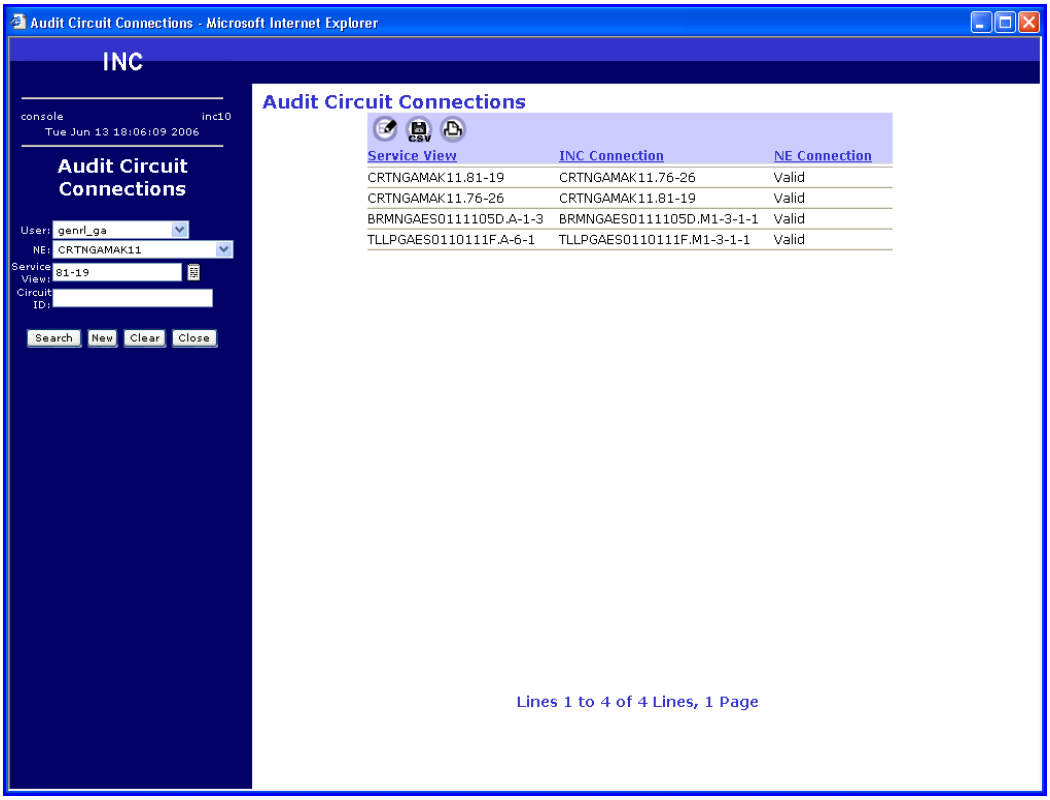


Figure 3-2. **Audit Circuit Connections**

Filters:

- User - User who owns the connection being audited.
- NE - NE on which the connection the user wishes to audit is located.
- Service View - Service View of the connection the user wishes to audit.
- Circuit ID - Circuit ID of the connection user wishes to audit is located.

Column Definitions:

- Service View - Service View of the Audited Circuit

- INC Connection - Displays the port that the service view is connected to in the INC database
- NE Connection - Displays the port that the service view is actually connected to
    - Valid - This value indicates that the NE and INC are synchronized
    - *Different Value* - Indicates that the values in the INC Connection column is incorrect (not synchronized with the NE)
    - non-NMS - indicates the connection (shown parenthetically) is not currently defined in INC
    - Not Connected - the port is currently not connected at the NE

NOTE:
INC does not audit testhead NEs because they do not support cross connections

Change Password

The Change Password form allows users to change *their own* password.

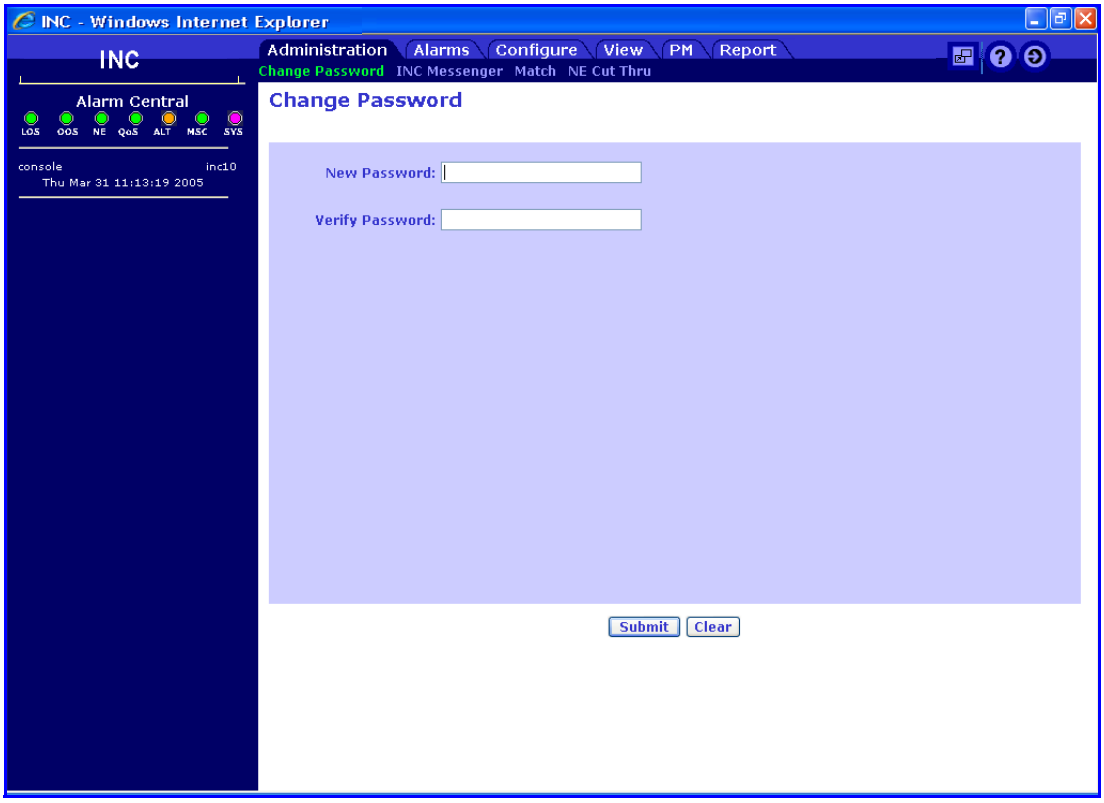


Figure 3-3. **Change Password**

Buttons:

- Submit - processes the password change request
- Clear - clears the form of any input

INC Cut Thru

The INC Cut Thru form allows the user access to INC specific commands via the GUI. When a command is typed into the Command text box and submitted (via the <Submit> button), an output screen will be displayed listing the command responses.

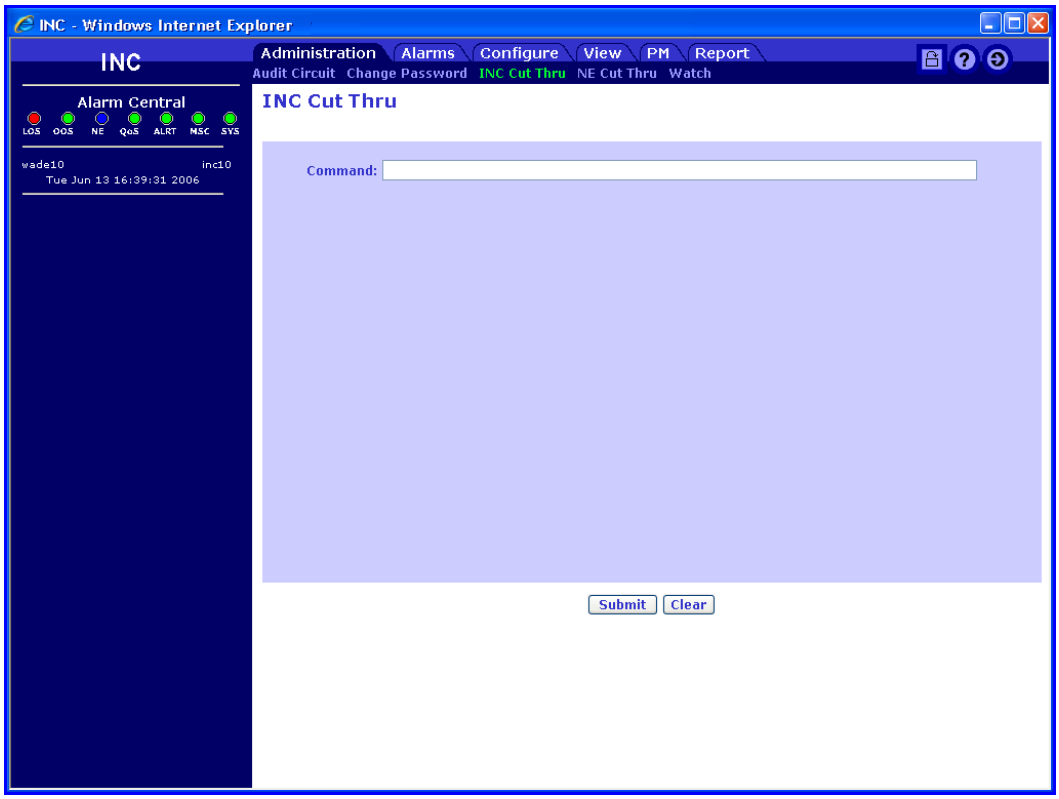


Figure 3-4. **INC Cut Thru form**

INC Messenger

The INC Messenger feature allows GUI users that are logged in to converse with other GUI users that are logged in. . Use of this feature will be driven by a command privelege administered via the Alias Management form. If the privlege is turned off for a console alias or user alias, they will still be able to send and receive messages, but they will not be able to initiate an IM session.

The following list defines what users will be available (assuming they are logged in) to each type of login.

Console - users defined in User Group (View -> User Group) and associated aliases, other console logins, and console aliases

Console aliases - users defined in User Group (View -> User Group) and associated aliases, other console logins, and console aliases.

Users - Aliases of themselves, console logins, and console aliases

User Aliases - other aliases of the same user, the user they are an alias of, console logins amd console aliases.

NOTE:
Users will **not** be able to IM other users or aliases of other users.

When selected, the INC Messenger form will be displayed

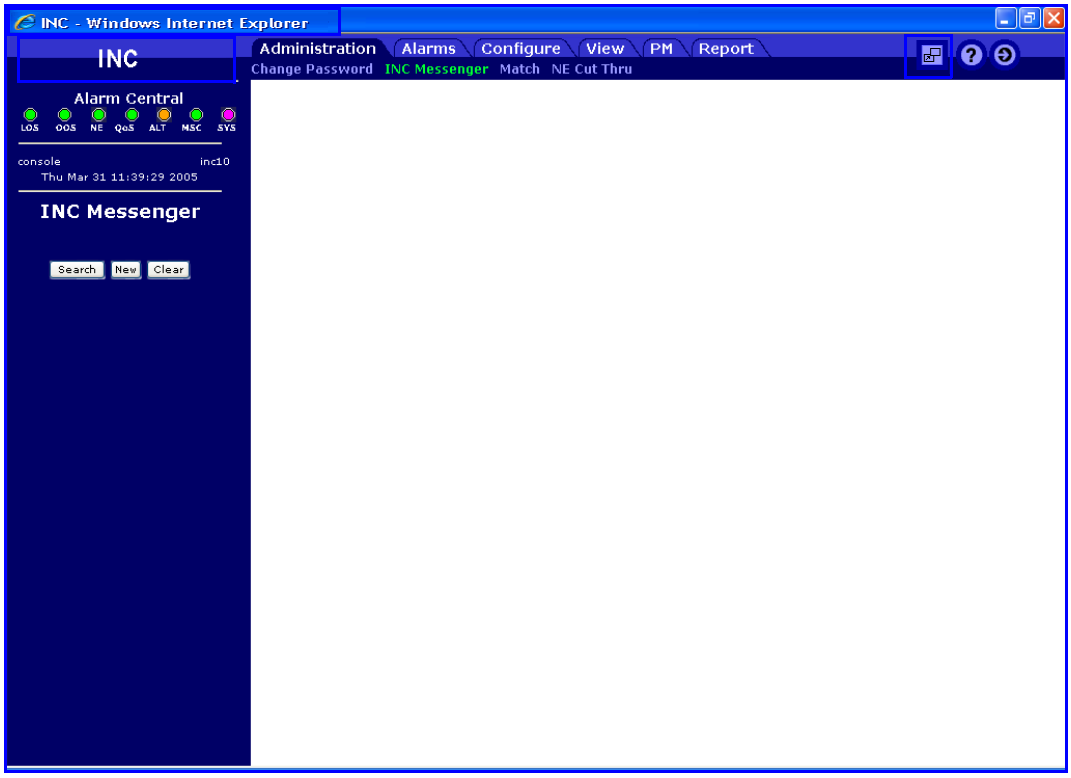


Figure 3-5. **INC Messenger**

When the <Search> button is selected, the INC Messenger Buddy Reports will be displayed.

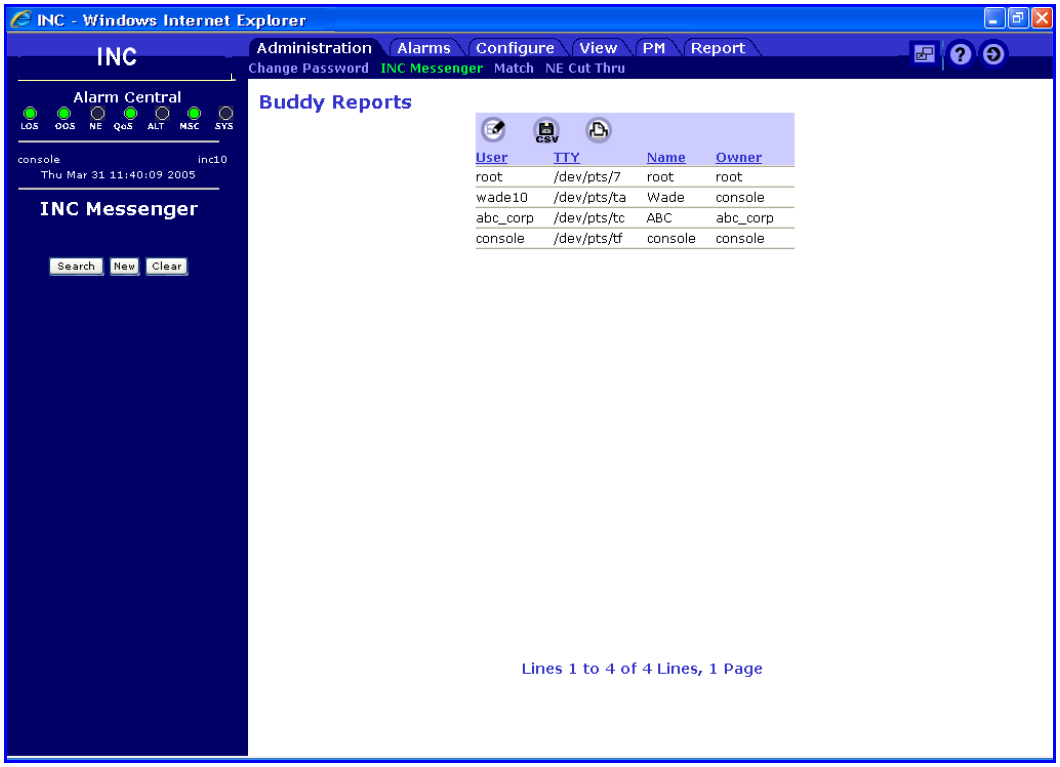


Figure 3-6. **INC Messenger Buddy Reports**

Column Definitions:

- User: Login ID.
- TTY: Port number used to distinguish multiple logins for a single login id.
- Name:Name of the user, as defined in the Alias Mgmt form or User Information form.
- Owner: Meaningful for aliases. If console, owner = console, if user, owner = user. However, if a console alias, owner = console, if a user alias, owner = aliased user.

Once a “buddy” has been selected, the IM chat window will be displayed. The title bar shows the User and TTY port of the user you are “IM-ing”. The text line displays the senders login id, the time of the message and the text being sent.

NOTE:
The senders input will be displayed in red, the receiver’s responses will be displayed in blue.

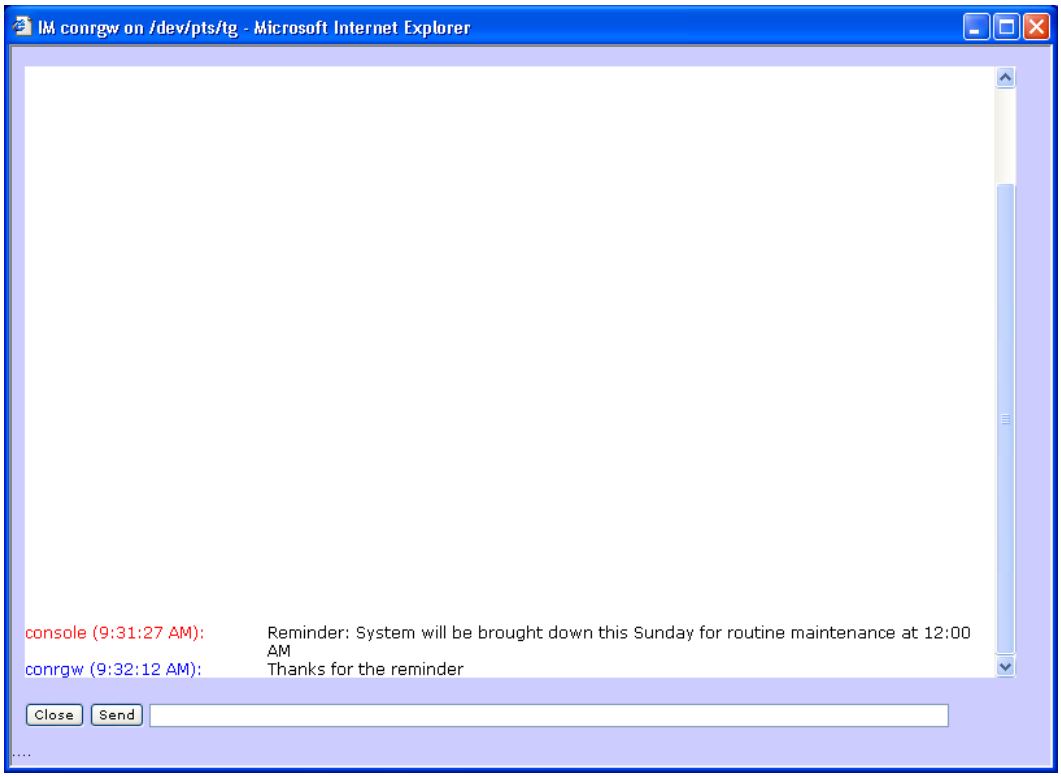


Figure 3-7. **INC Messenger Chat Screen**

Buttons:

- Close - closes the form
- Send - transmit a typed message to the selected user

NE Cut Thru

The NE Cut Thru allows cut-thru (pass-thru) access to any NE for command I/O in the native language of the selected network element.

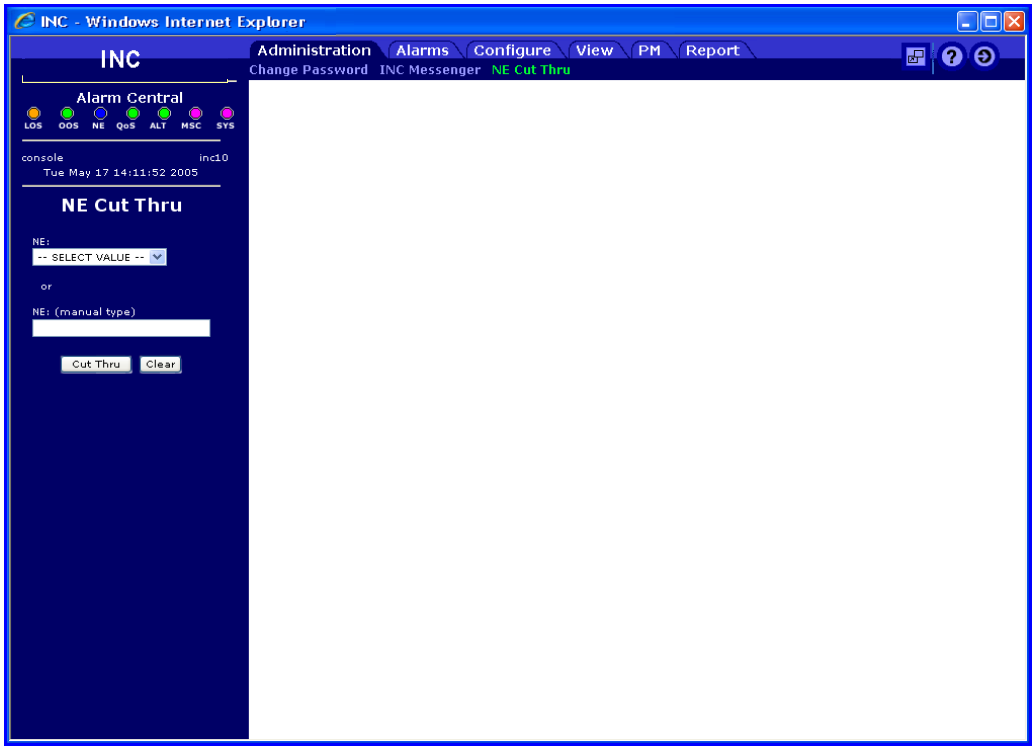


Figure 3-8. **NE Cut Thru**

Filters:

- NE - Allows the user to cut-thru to the NE specified. This list will be made up of NE's that are associated with their selected user partition(s), and are currently UP.
- NE (manual type) - Allows the user to cut-thru to any NE by typing in the correct TID or NEID

Buttons:

- Cut Thru - Opens up the NE Cut Thru Command/Response form

- Clear - clears the selected values in the launch area

Once the user selects the Cut-Thru button, the NE Cut Thru Command/Response form is displayed allowing users to enter commands and receive responses from the selected NE.

The Launch Area contains a box titled “NE Commands” which is a list of default commands for the type of NE being cut thru to. Each line contains a command that may be selected and transmitted to the NE. When a command is chosen and followed by selection of the <Select> button, the “Selected Command” text bar will become populated with the actual command syntax to be issued to the network element. If AIDs or additional parameters are needed in a command, the associated text box will become sensitive and the user may type the AIDs or parameters required for the command.

The Main Display Area will now contain a message stating “You are now in Cut Thru to NE-ID *xxxx*” (where *xxxx* is the ne-id of the node that will be receiving the commands). Once a command has been chosen and the <Send> button has been selected, the Main Display Area will display the command and any associated response to the command. Each command that is sent to the NE will also be automatically saved in the “Command History” drop down box. The user may then select a command from that box using the <Select> button, edit the command (if desired) and issue it to the NE via the <Send> button located below the Main Display Area.

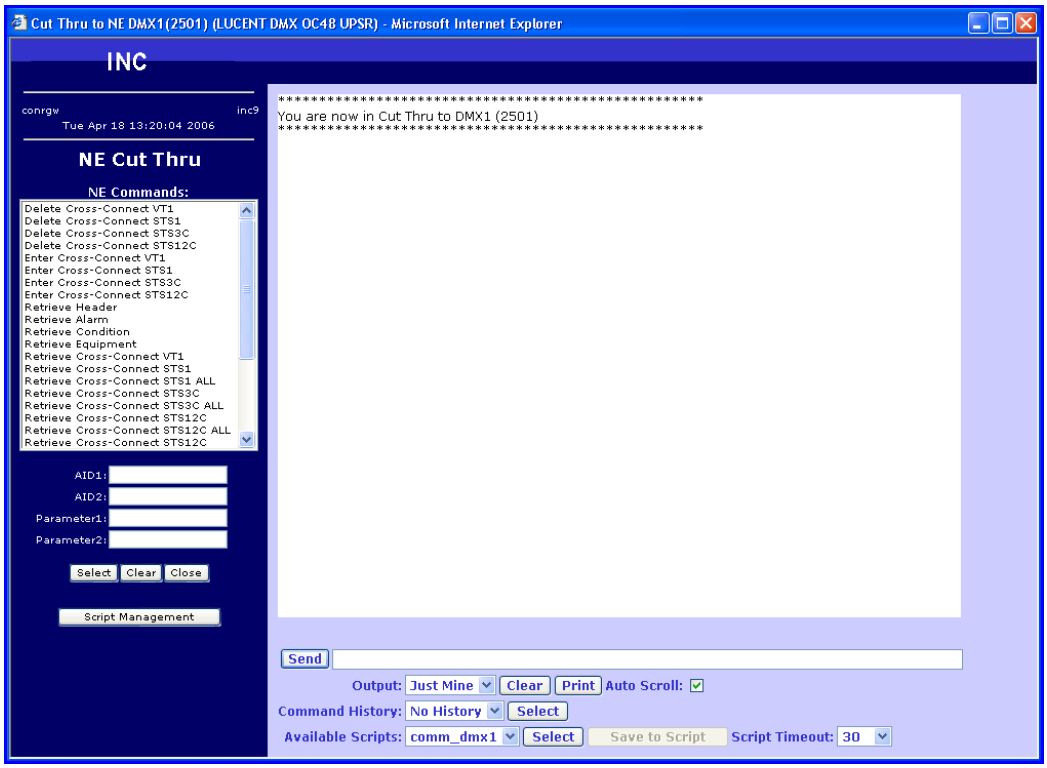


Figure 3-9. **NE Cut Thru Command/Response Form**

Launch Area

The “NE Commands” box contains a list of TL1 commands that may be sent to the network element that INC is communicating with (cut thru to).

The “Documents” area is a list of documents that can be selected and viewed by the user. These documents are based on the type of NE being cut thru to and reside in a directory on the INC GUI Server. They are placed there at the user’s discretion. If there are no documents present, then there will be no “Documents:” header displayed in the launch area. Please see the Integrated Network Controller *Application Installation Guide* for information on the setup of this capability.

Text Fields

These boxes will contain the words “Enter Value” when AIDs or additional parameters are needed in a command, allowing the user to type the AIDs or parameters required.

- AID 1
- AID 2
- Parameter 1
- Parameter 2

NOTE:
These labels are user definable and can be set up via a file on the INC GUI Server. Please see the Integrated Network Controller *Application Installation Guide* for information on the setup of this capability.

Buttons - Launch Area

- Select - Populates the “Selected Command” text bar with the chosen command
- Clear - de-selects chosen values from the NE Commands box and the AID and Parameter fields
- Close - Closes the Cut-Thru form
- Script Management - *See Script Management on page 3-15*

Drop Down Lists - Main Display Area

- Output -
    - All - Allows the user to see **all** messages to and from the network element displayed in the Main Display Area
    - Just Mine - Displays only those commands and corresponding responses sent by the user

NOTE:
The value that is selected for Output will be saved as a user preference so that each time the user logs in, the Output field will be set to their previously selected choice.

- Command History - contains a record of all commands sent during the current cut-thru session
    - Select (Command History) - Populates the “Send” text bar with the chosen command
- Available Scripts - contains a list of all currently defined scripts
    - Select (Available Scripts) - Populates the “Send” text bar with the selected script
- Script Timeout - number of allowable seconds between execution of each command in the script. The default value is 30 seconds. Expiration of the timeout value will cause the script to fail.

Buttons - Main Display Area

- Send - Sends the selected commnand or script to the NE
- Clear - Clears the display screen
- Print - Prints the display screen to a selected system printer
- Auto Scroll - allows the user to turn auto scrolling on (selected), or off (unselected). If auto scrolling is turned off, the user must use the scroll bar to scroll.
- Save to Script - The Script Management form **must** be open for this button to be sensitive. Selection of this button will turn control over to the Script Management form and will populate the Script Contents area with the currently **selected** command. This allows the user to build and save scripts easily.

Script Management

The script management feature provides the ability to manage scripts containing TL1 commands. Scripts can be created, edited, and deleted from the Script Management form.

Console can edit and delete console scripts. Console aliases can edit and delete their own scripts and have read access to console scripts and other aliases' scripts.

Existing scripts are listed in the Scripts text box. Users may name their scripts as they are created via the Script Name text box.

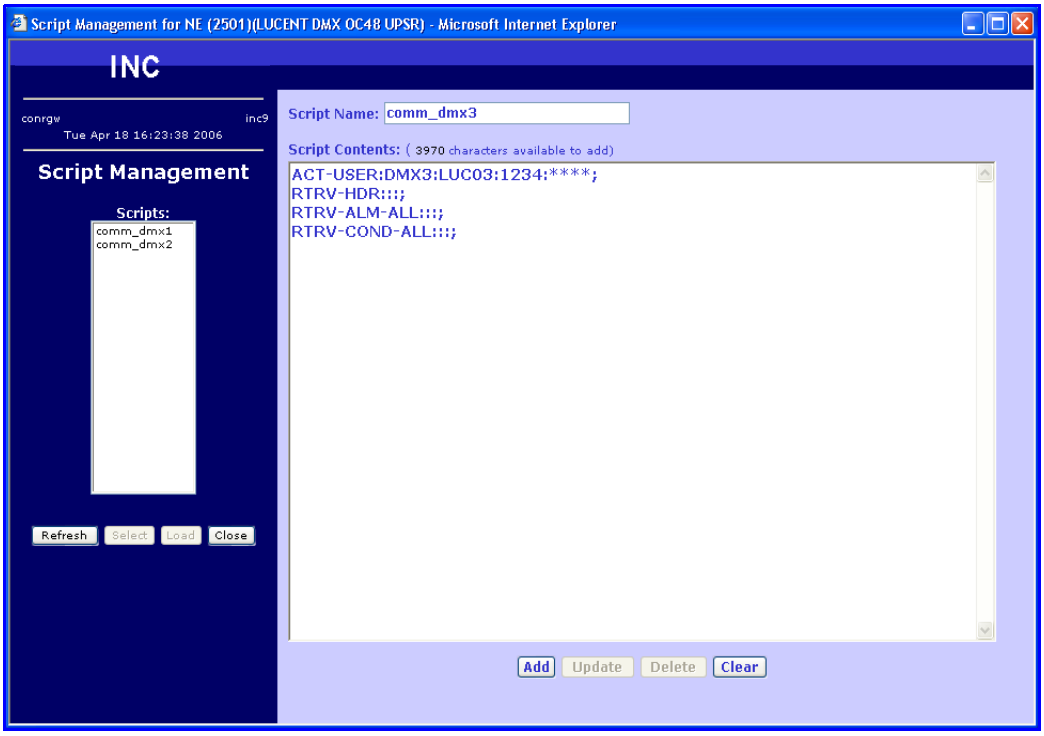


Figure 3-10. **Script Management Form**

Buttons - Launch Area

The buttons on the Script Management Form perform the following functions:

- Refresh - refreshes the Scripts list
- Select - selects the highlighted script in the list and populates the Script Contents area of the form

- Load - copies the contents of the highlighted script to the Script Contents field. This allows users to use existing scripts as templates for new scripts.
- Close - closes the form

Buttons - Main Display Area

- Add - creates the script
- Update - updates the selected script
- Delete - deletes the selected script
- Clear - clears the Script Contents portion of the form

Creating Scripts

Enter TL1 commands in the Script Contents field in either of the following ways:

- Type commands in the Script Contents field

OR

- Select a command from the NE Commands list and select the <Select> button to populate the command line, followed by the <Save to Script> button

When the script is complete, **THEN**

- Select the <Add> button on the Script Management form

Four different parameters can be passed to a script as follows:

- $1 is replaced by the value entered in AID1
- $2 is replaced by the value entered in AID2
- $3 is replaced by the value entered in Parameter1
- $4 is replaced by the value entered in Parameter2

An example of a line in a script with parameters for substitution is as follows:

```
ent-crs-sts1::$1,$2:;
```

When the script with this substitution line is selected from the Available Script list, the AID 1 and AID 2 fields will display the “Enter Value” message, indicating that the user must enter the values desired for the script to run.

Comments can be entered on lines using the following rules:

- '#' is at beginning of a line

- there is white space preceding the '#'
- '#' is preceded by semicolon ';'

An example of a line in a script with a comment is:

```
rtrv-crs-vt1::all:; # Get all VT1 cross-connects
```

Executing Scripts

On the NE Cut Thru Form:

- Select a script from the Available Scripts dropdown list
- Choose the <Select> button to populate the command line
- If desired, enter a value in the Script Timeout field to set the number of seconds to wait for each command in the script to complete. The default value is 30 seconds. Expiration of the timeout value will cause the script to fail.
- Choose the <Select> button to populate the command field
- If any substitutions are required, fill in the desired values
- Select the <Send> button to execute the script

Editing Scripts

- Select a script from the Scripts list
- Choose the <Select> button to populate the Script Contents area
- Edit as required
- Select the <Update> button

Deleting Scripts

- Select a script from the Scripts list

Choose the <Delete> button

WFA User/Pwd

The Change WFA UserID/Password form can be used to associate IMS and WFA user ids and passwords with the logged in “console” alias. This form is only available to “console” aliases and only if the WFA Eticket feature is enabled. These user ids/passwords will be used for all WFA ticket transactions initiated by the “console” alias from the INC GUI. These transactions include: Create Ticket, Update Ticket, Sync Ticket, and Close Ticket. Prior to INC Release 16.0, the IMS/WFA user ids/passwords were only assigned at the INC system level. Hence, all WFA ticket transactions initiated from the INC GUI in prior releases were tagged in WFA with the INC system user id (i.e. irrespective of which INC user initiated them). It should be pointed out that any autonomous INC-WFA transaction (i.e. posting of informational remarks for a ticket, autonomous ticket sync etc.) will still use the INC system level IMS/WFA user ids/passwords.

The IMS user id/password is used for authentication purposes on the CORBA AAI trasnsport infrastructure. This infrastructure is used to route the XML ticket request messages to the appropriate WFA region. The WFA user id/password is embedded within the XML messages and is used to authenticate the request at the appropriate WFA.

If the user wants to disassociate these user ids/passwords, they can clear the form and submit the change request.

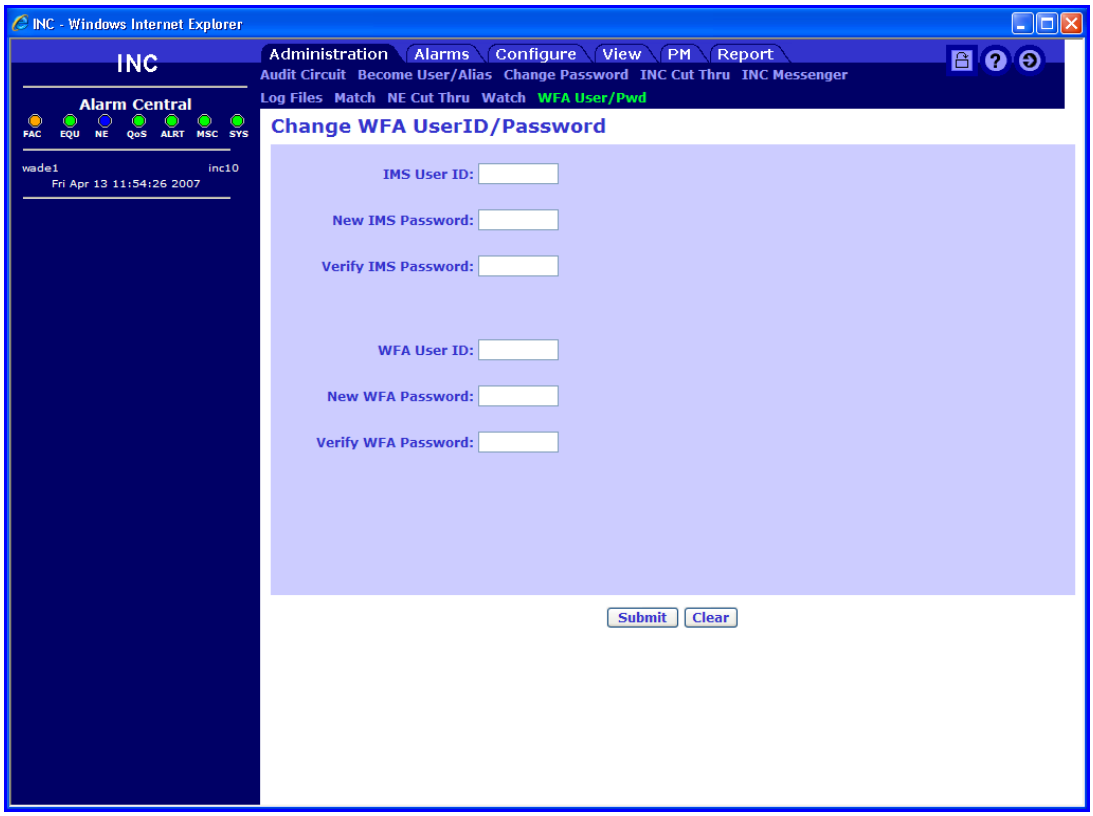


Figure 3-11. **Change WFA UserID/Password**

Buttons:

- Submit - processes the password change request
- Clear - clears the form of any input

Alarms

4

Chapter Contents

Alarms Tab

The Alarms Tab allows the user to execute searches of the alarm database via different categories, using a variety of filters.

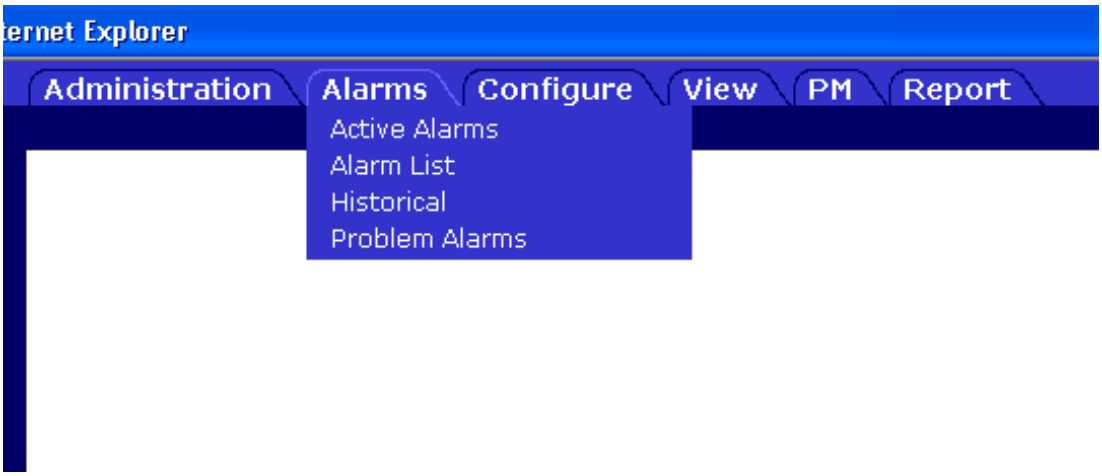


Figure 4-1. **Alarms Tab**

Active Alarms

The Active Alarms report displays all alarms that are currently active in the Integrated Network Controller system. Use of the Auto Refresh feature allows the list to be updated dynamically. Alarms will then be added to, and removed from the list as assert and clear messages are received. The list can be sorted by column and the sort selection is maintained when the list automatically updates. The Severity of alarms displayed follows the Preferences selected by the user (in the View ->Preferences tab - Alarm Age/Filter tab).

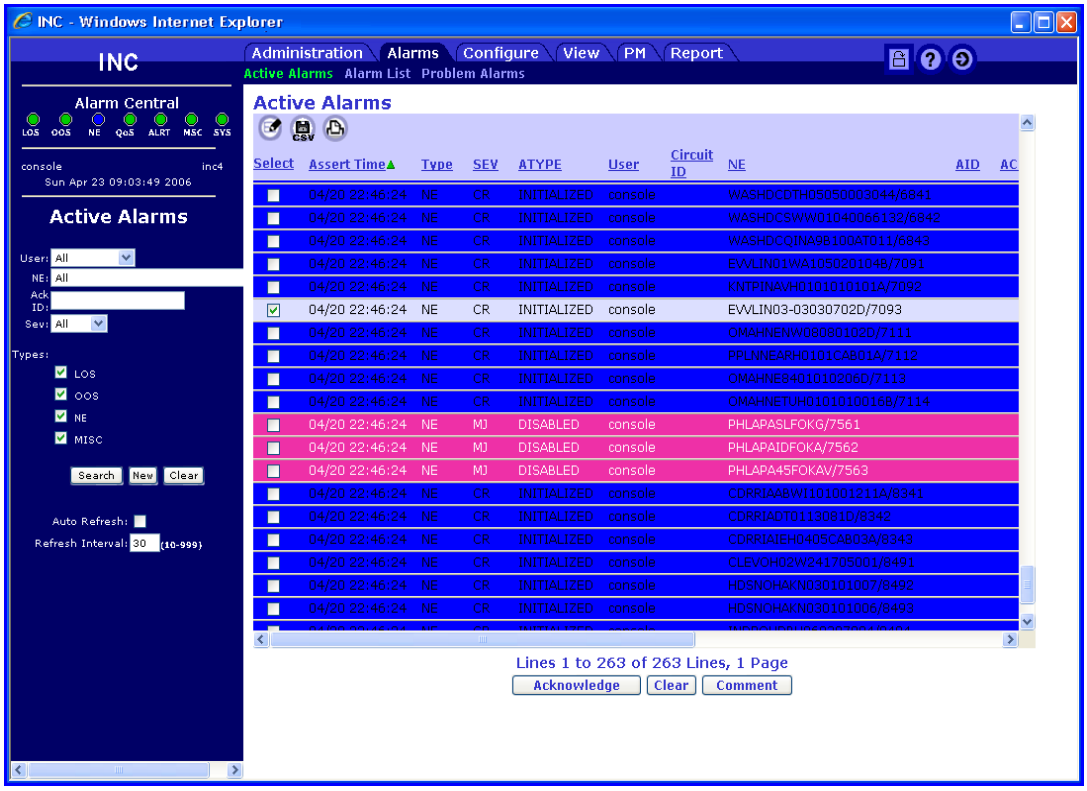


Figure 4-2. **Active Alarm List**

Filters:

- User: Displays alarms for the selected user
- NE - Displays information for the Network Element specified
- Ack ID - Displays alarms acknowledged by that user.
- Sev - Displays only alarms of the specified severity level
- Types -Displays only the types selected

- FAC - Facility
- EQU - Equipment
- NE - Network Element
- MISC Miscellaneous

Column Definitions:

- Select - a select checkbox that allows a user to select a single alarm to execute operations on. Selection of the checkbox will make the buttons below the list sensitive.

NOTE:
Selection of the “Select” column heading will select all alarms in the list.Assert Time - The time that the alarm asserted

- SEV - The severity of the alarm as indicated on the alarm message
- ATYPE - The type of alarm
- Circuit ID - Circuit Identifier
- NE - The network element that contains the alarm
- AID - The physical AID that is in alarm
- Note - Indicates whether there is a NOTE report for this alarm
- ACK - Indicates the Integrated Network Controller user that has acknowledged the alarm
- WL - Indicates that the alarm is currently on the Work List and the state it is in
- Level - The level of the alarm as indicated on the alarm message, ex. OC
- SA - Identifies the alarm as service affecting or non-service affecting
- Description - Displays a textual description of the alarm
- Duration - The amount of time the alarm has been active (in Hours:Minutes:Seconds)

Navigation Drop Down List:

- Acknowledge - Allows the user to acknowledge the selected alarm
- Add Circuit to WL - Adds the entire circuit to the Work List
- Add to WL - adds this specific port to the Work List
- Clear - Allows the user to clear the selected alarm
- Comment - Allows the user to enter a comment to be displayed with the selected alarm
- Create Ticket - Allows the user to create a trouble ticket that will be forwarded to the WFA/C system. This menu item will only appear on circuits with no current trouble ticket defined in the WFA/C system.

- Detail - Displays the Alarm Detail for the selected alarm. This form also allows the user to navigate to additional forms via a drop down list. This drop down list can be displayed by using the left mouse button and clicking on the first line of the Alarm Details.

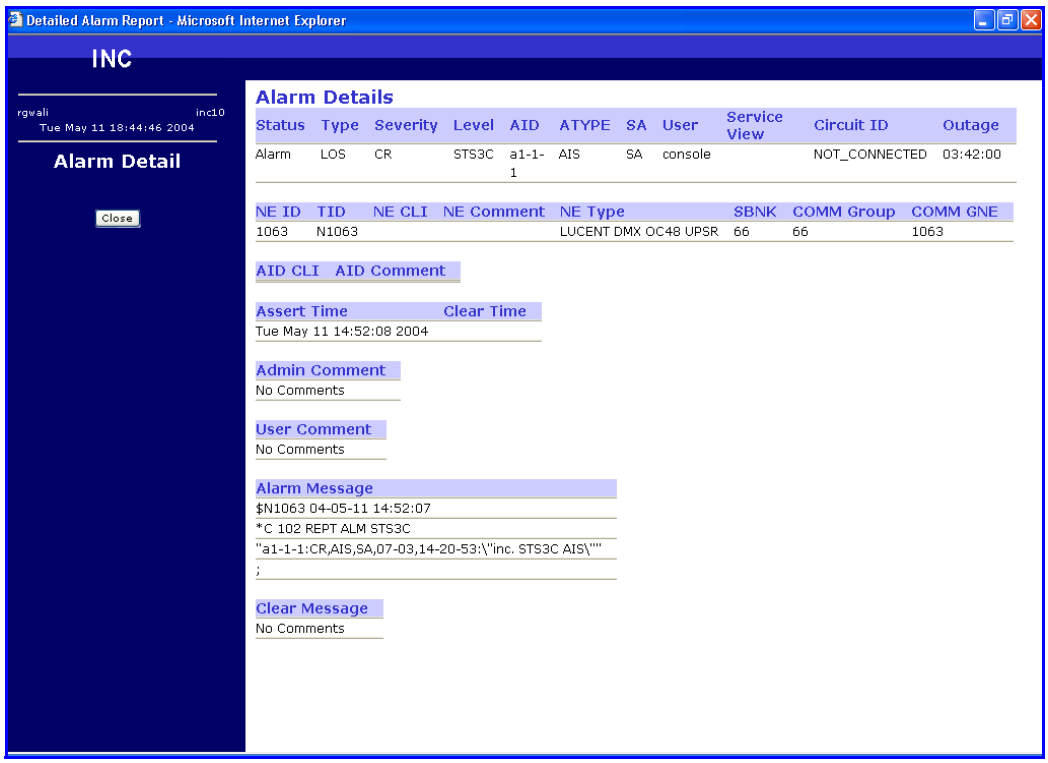


Figure 4-3. **Alarm Detail Report**

The Alarm Detail Report also displays a navigation drop down list (when the first line is highlighted by placing the mouse over it and selecting the left mouse button). The following choices are available:

- Acknowledge - Allows the user to acknowledge the selected alarm
- Add Circuit to WL - Adds the entire circuit to the Work List
- Add to WL - adds this specific port to the Work List
- Clear - Allows the user to clear the selected alarm
- Comment - Allows the user to enter a comment to be displayed with the selected alarm
- CLI Report - Displays the CLI Report for the selected alarm
- Connect Report - Displays the Connect Report for the selected alarm

        - Maintenance - Allows the user to change the maintenance state of the alarm
        - Notes - Displays the Note form for the specified circuit
        - Retrieve PM - Displays the retrieved PM on the selected facility
        - Trace - Displays the Circuit Trace for the selected facility
    - Maintenance - Allows the user to change the maintenance state of the alarm
    - Trace - Displays the Circuit Trace for the selected facility

Buttons:

- Acknowledge - allows the user to acknowledge the selected alarm
- Clear - allows the user to clear the selected alarm
- Comment - allows the user to add a comment to the selected alarm

Alarm List

The Alarm List allows the user to filter alarms so that only specific alarms will be displayed.

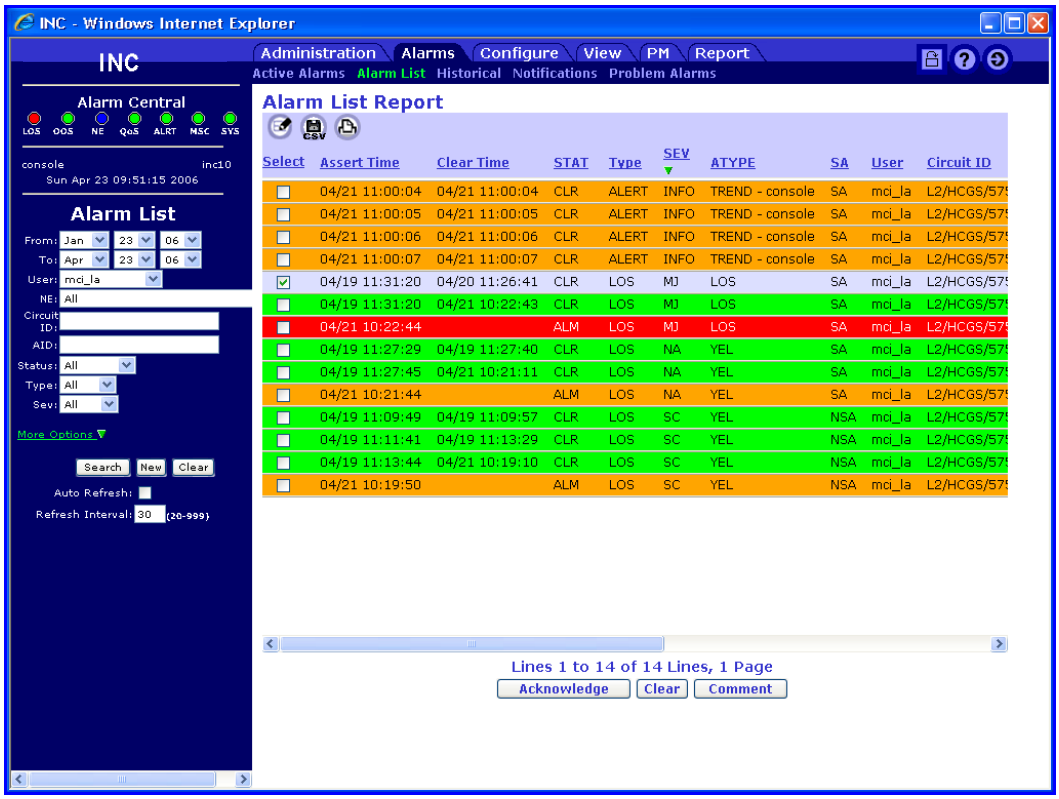


Figure 4-4. **Alarm List**

Filters:

- From/ To - The range of dates and times for which the user would like to see alarm data
- NE - Displays information for the Network Element specified
- To NE - Displays alarms between two nodes (NE and To NE)
- Circuit ID - Circuit ID
- AID - Access Identifier
- User - The user for whom the Problem Alarm data is being displayed
- Status - Alarm status
- Type - Displays only the types selected

  - All - All types of alarms
  - FAC - Facility
  - EQU - Equipment
  - NE - Network Element
  - QoS - Quality of Service
  - Alert
  - MISC - Miscellaneous
  - SYS - System
- Sev - Alarm severity (All, Critical (CR), Major (MJ), Minor (MN), or Other)
- Outage - Minimum outage to search on
- SBNK - Subnetwork ID
- Comm - NE Communication Group that the NE belongs to (Find all alarms on NE *x* that are in group *y)*
- Ack Id - Acknowledged by a specific user (show all alarms ack'd by this user)
- Level - Alarm Level (T1, STS1, etc.)

Column Definitions:

- Select - a select checkbox that allows a user to select a single alarm to execute operations on. Selection of the checkbox will make the buttons below the list sensitive.

NOTE:
Selection of the "Select" column heading will select all alarms in the list.Assert Time - The time that the alarm asserted

- Assert Time- Time that the alarm occurred
- Clear Time - Time that the alarm cleared (if appropriate)
- STAT - Status of the alarm (In Alarm, Cleared)
- Type - Category of the alarm (Integrated Network Controller type)
- SEV - Severity of the alarm (From NE)
- ATYPE - Condition type as reported by the NE
- SA - Service Affecting (SA) or Not Service Affecting (NSA)
- USER - partition that the port/aid/facility in alarm belongs to
- Circuit ID - Circuit Identifier (if the port is connected and *has* a Circuit ID)
- NE - Network Element that the alarm is being reported on
- AID - Access Identifier that the alarm is being reported on

- Level - Level of the alarm (T1, STS1, etc.)
- SBNK - Subnetwork Identifier (if the port/aid/facility belongs to a subnetwork)
- ACK - User who has acknowledged the alarm
- WL - Indicates whether the circuit in alarm is on the Work List and the state it is in on the Work List (S = Study, I = Investigate, R = Repair, and C = Chronic, $=Paid)
- Outage - amount of time that the port/aid/facility has been in alarm
- Description - a text description associated with the alarm
- Note - This field is only displayed if the system is provisioned for the WFA/C Ticket feature. Please see the Integrated Network Controller Installation Application Guide for information on provisioning this feature.

Navigation Drop Down List:

- Acknowledge - Acknowledge the selected alarm
- Add Circuit to WL - Add entire circuit to the Work List
- Add to WL - Adds the selected port to the Work List
- Circuit Analysis Tool - Displays the Circuit Analysis Tool
- Clear - Clear the selected alarm
- Comment - Allows the user to enter a comment for the selected alarm (displayed in the Alarm Detail Form)
- Create Ticket - Allows the user to create a trouble ticket that will be forwarded to the WFA/C system. This menu item will only appear on circuits with no current trouble ticket defined in the WFA/C system.
- Detail - Displays the Alarm Detail form

- Maintenance - Navigates to the Update Maintenance State form allowing users to change the maintenance state of a facility or NE.

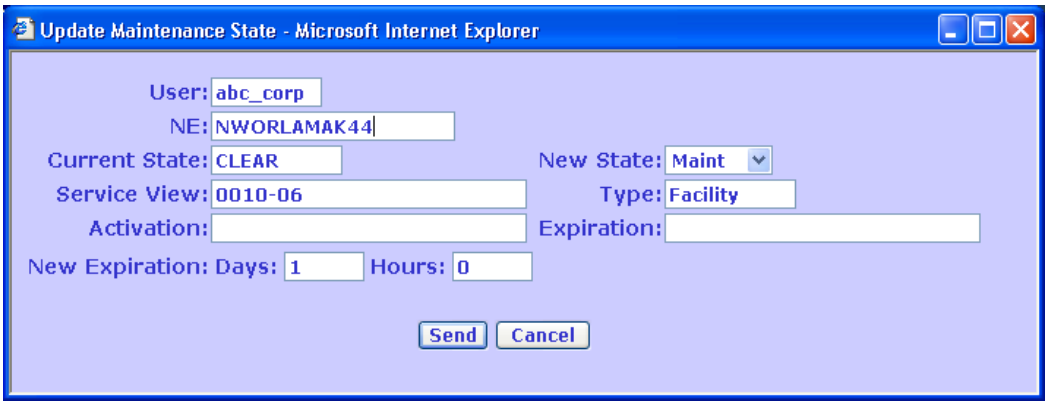


Figure 4-5. **Update Maintenance State form**

- Notes - Displays the NOTE report for the selected circuit.

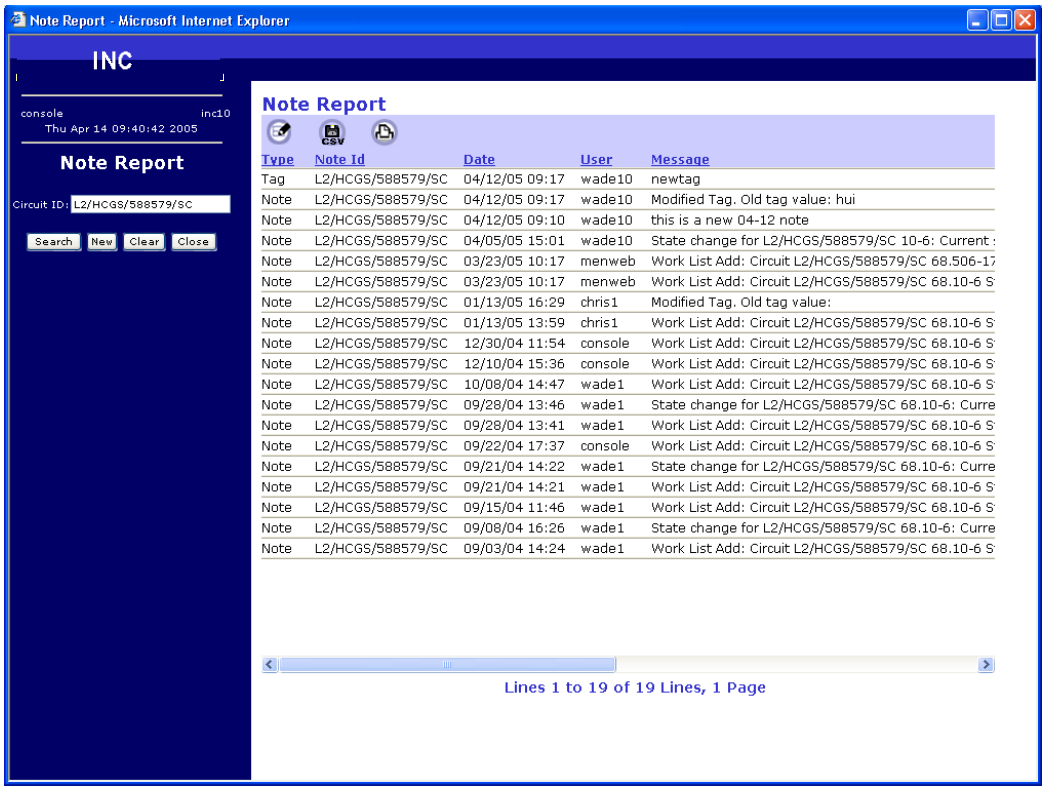


Figure 4-6. **Note Report**

The Note Report allows the user to filter on a specific Circuit ID so that they may see only the notes that pertain to that circuit and also navigates to two additional forms:

- Add Note - Allows the user to add a note.

NOTE:
Notes are never purged and cannot be edited

- Update Tag - Allows the user to update the tag on a note

NOTE:
There is only one tag per circuit ID which represents the current state of the circuit. i.e. TKT123, TESTOK, etc.

Column Definitions:

- Type - Type of NOTE (Tag, Note)

- Date - Date that the NOTE was entered
- User - Who entered the NOTE
- Message - Text body of the NOTE

- Trace - Displays the Facility Trace form for the selected line

Buttons:

- Acknowledge - allows the user to acknowledge the selected alarm
- Clear - allows the user to clear the selected alarm
- Comment - allows the user to add a comment to the selected alarm

Historical

The Historical Alarm Report provides the user with historical information for alarm data. Specifically, it displays the NE, FAC, EQU, QoS, ALERT and MISC alarms by date and type when the Level of the report requested is Summary, or by user and type for a single day when the Detail report is requested.

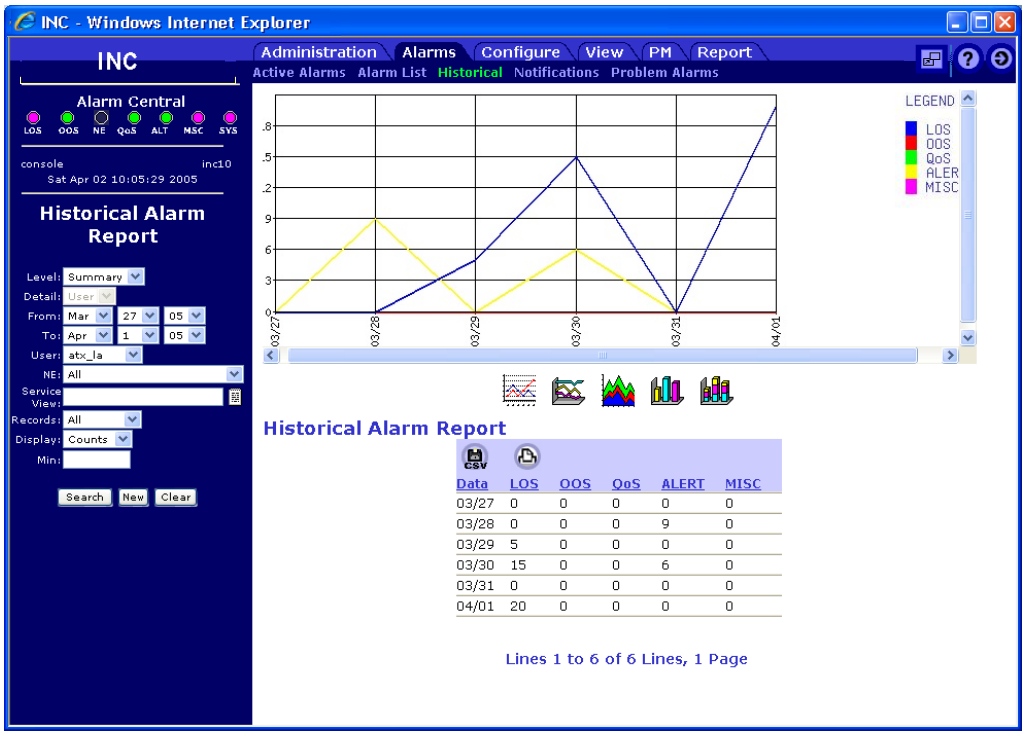


Figure 4-7. **Historical Alarm Report**

Filters:

- Level - The level of report being requested (Summary or Detail)
- Detail - The type of daily report (User or NE) being requested. Only valid if Level is set to Detail
- From/To - The range of dates and times for which the user would like to see alarm data. When the level is detail, only the From value is sensitive.
- User - The user for whom the Historical Alarm data is being displayed
- NE - Displays information for the specified Network Element
- Service View - Displays only the Service View specified

- Records - The type of records to be displayed (all or only non-zero)
- Display - Counts or Outage
- Min - Display only those values that are *at least* this

The data will be displayed in both graphical and tabular format. The columns in the table may be sorted by selecting the column heading that the user wants to sort on. The icons located above the table allow the user to display the data in different formats (Line Chart (default), Plot Chart, Area Chart, Bar Chart, and Stacked Bar Chart.)

Columns Definitions

The columns displayed in the Historical Alarm Report will vary based upon the values **saved** in the Preferences -> Alarm tab (Historical Alarm Filters).

New Alarm List

The New Alarm List allows users to get all current alarms that have occurred since the last “New” alarm search was done, thus clearing the flashing icons located in the Alarm Central area of the GUI.

This is equivalent to running the Alarm List report with the Status value set to New. If the user runs this report directly from the Alarm Tab, the Search is done automatically (that is, there is no need to select the <Search> button).

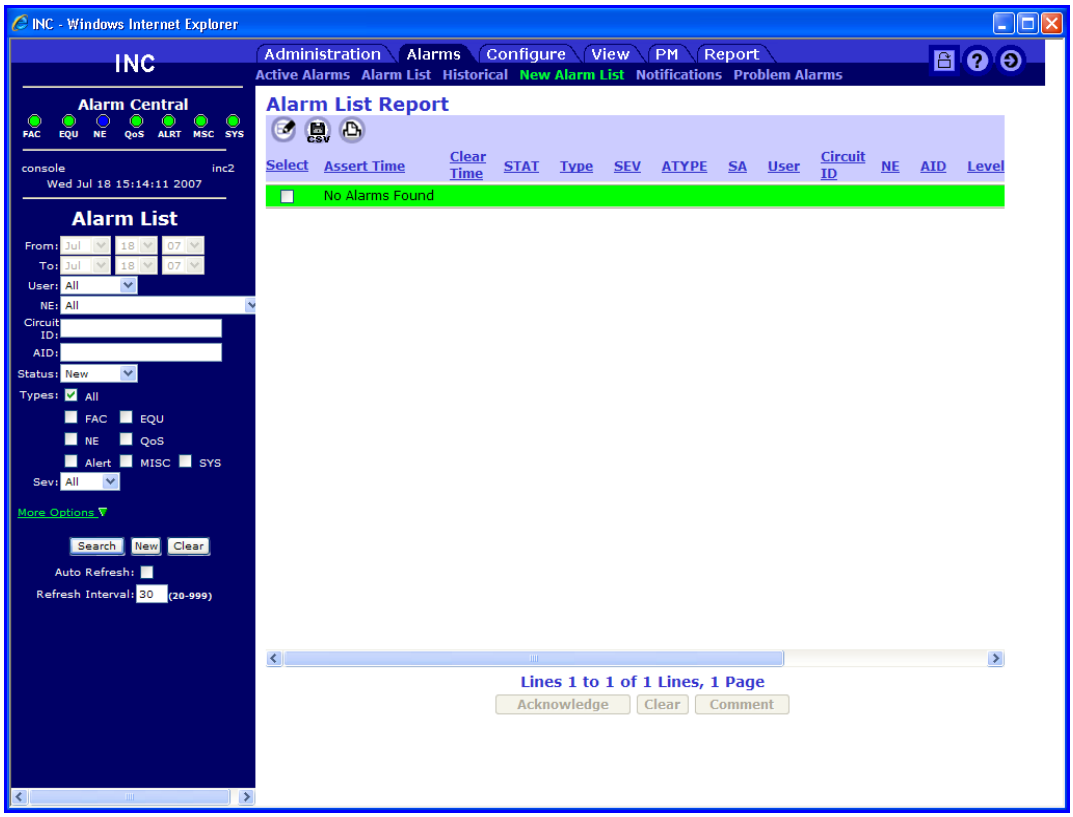


Figure 4-8. **New Alarm List**

Problem Alarms

The Problem Alarms form is a historical report showing alarms that have cleared on a chosen day and the statistics associated with each alarm while it was active for each alarm category.

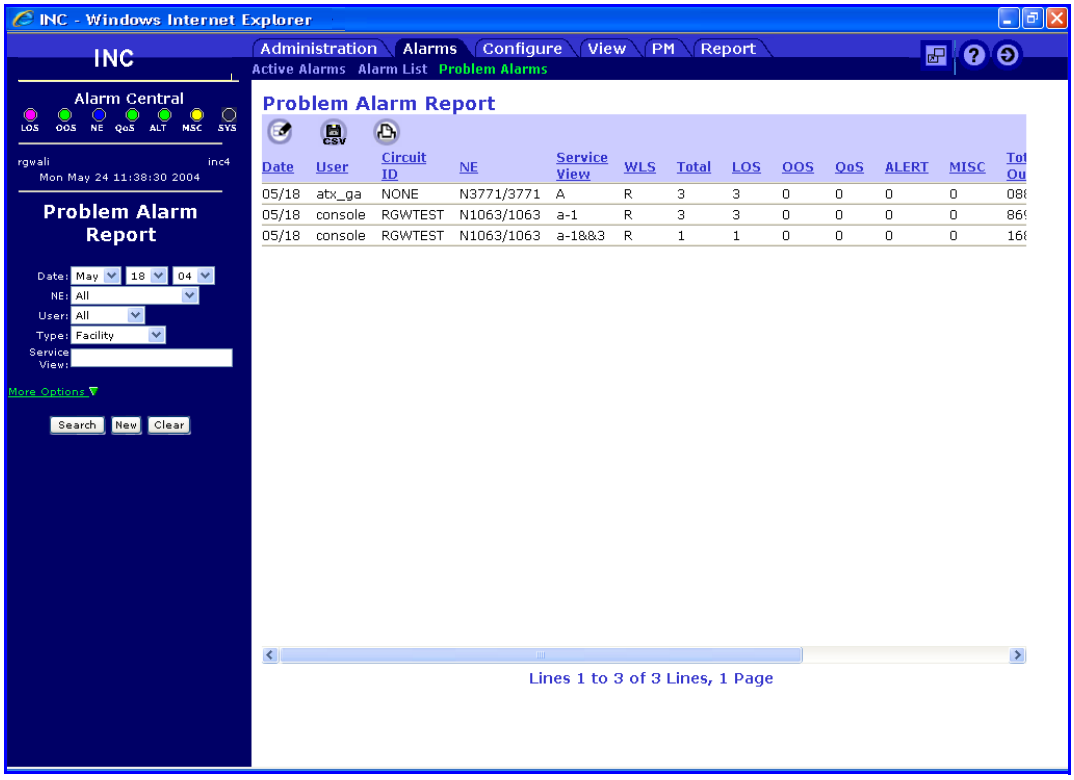


Figure 4-9. **Problem Alarm Report**

Filters:

- Date- The date for which the user would like to see alarm data

NOTE:
When the “More Options” value is chosen, the user may enter a range of dates.

- NE - The Network Element for which the user would like to see alarm data
- User - The user whose Problem Alarm data is being displayed
- Type - Display only the selected type of alarms (Default is Facility)
- Service View - Displays only the Service View specified

- Count - Display only the ports whose total alarm count is ***at least*** this number
- Outage - Displays the alarms whose total outage is ***at least*** this number of seconds
- Lines - Display only this number of lines

Column Definitions:

When Type = Facility

- Date - The date that the alarm cleared
- User - The user partition to which the circuit in alarm was assigned
- Circuit ID - The circuit identifier
- NE - Network Element that the alarm was reported on
- Service View - Facility that the alarm was reported on
- WLS - Indicates whether the alarmed circuit is on the Work List and the state that it is in (S = Study, I = Investigate, R = Repair, C = Chronic, T=Trouble, and $=Paid)
- Total - Total number of alarms in all categories for a particular circuit

Columns that are listed after the Total column will vary based upon selections made in the View -> Preferences tab on the Alarm Age/Filters tab.

When Type = NE

- Date - The date that the alarm cleared
- NE - Network Element that the alarm was reported on
- Count - Number of time the alarm has occurred
- Outage - Cumulative time between the assert of the alarm and the clear of the alarm (in hours:minutes:seconds)

When Type = NON-Facility

- Date - The date that the alarm cleared
- NE - Network Element that the alarm was reported on
- AID - Access Identifier - for system health alarms, this is typically a process that has had a failure
- Count - Number of time the alarm has occurred
- Outage - Cumulative time between the assert of the alarm and the clear of the alarm (in hours:minutes:seconds)

Navigation Drop Down List:

- Add Circuit to WL - Adds entire circuit to the Work List

- Add to WL - Adds the port to the Work List
- Alarm List - Displays the Alarm List for the selected port
- Historical - Displays the Historical Alarm Report for the selected NE and Service View
- Notes - Displays the NOTE report for the selected facility
- Trace - Displays the selected circuit on the Facility Trace form

Configure

5

Chapter Contents

Configure Tab

The Configure Tab allows the users access to the various configuration functions available within the Integrated Network Controller system.

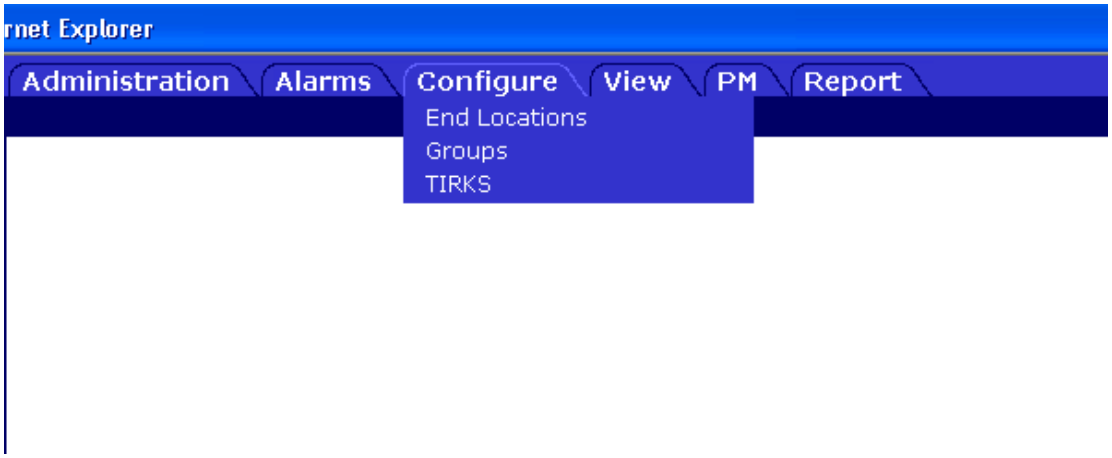


Figure 5-1. **Configure Tab**

NE Management

The NE Management form provides the capability to view, modify and delete, network elements. The NE Management form can be accessed in the following ways.

- Menu Bar - Configure - NE Management
- NE Pop-Up Menu - NE Management
- NE Summary Report Navigation Drop Down List - NE Management

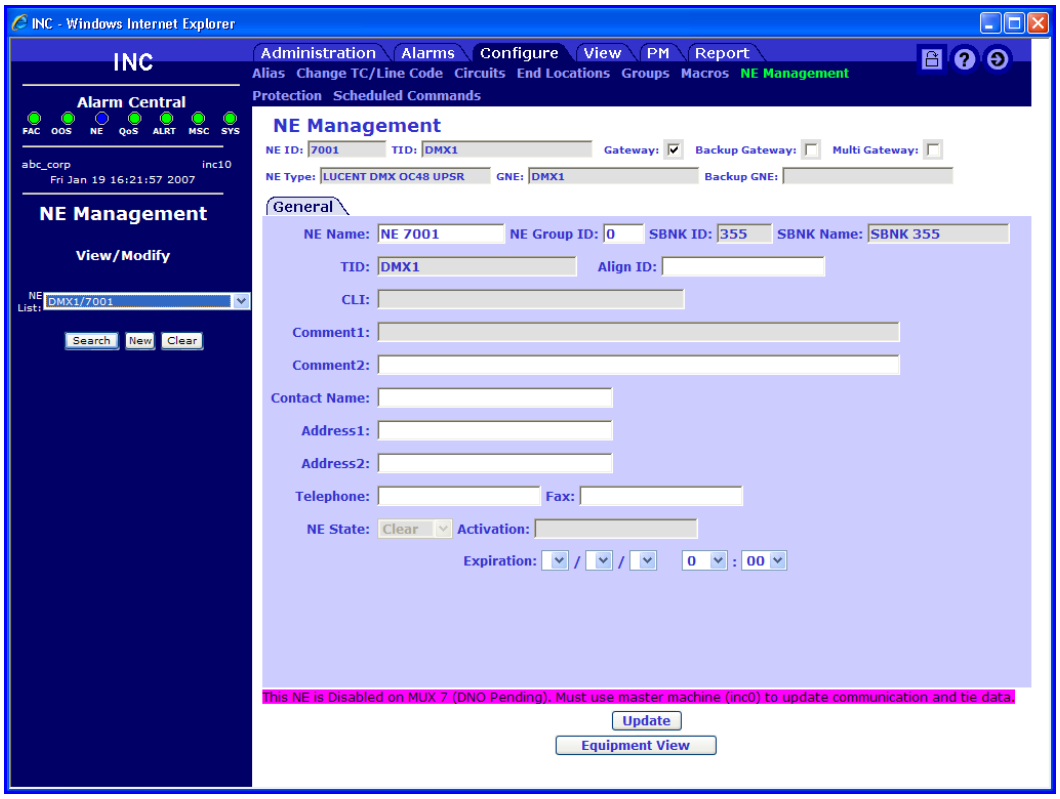


Figure 5-2. **NE Management Form**

Filters (View/Modify)

- NE List - A drop down list of TIDs (Target Identifiers) of Network Elements currently defined in INC. When an NE is selected from the list, the form will be populated with the asscociated NE data.

- NE ID - Allows the user to enter the Network Element Identification number of any NE currently defined in INC. A message will be displayed if a number is entered for an NE that is not defined in the INC database.

Fields:

- NE ID - Allows the user to enter the Network Element Identification number of any NE currently defined in INC. A message will be displayed if a number is entered for an NE that is not defined in the INC database.
- TID - Target Identifier of the selected NE
- Gateway - The Gateway checkbox is sensitive if the NE type is a SONET network element. Selecting the Gateway checkbox indicates the NE ID is the Gateway Network Element (GNE) through which INC will communicate with all other network elements in the same communications group.
- Backup Gateway - The Backup Gateway checkbox is sensitive if the NE type is a SONET network element. Selecting the Backup Gateway checkbox indicates the NE ID is the Backup GNE through which INC will communicate with all other network elements in the same communications group in the event the Primary GNE communications link is down.

- Multi-Gateway -

It is possible to provision two active gateway NEs to an NE communication group. A group of network elements that are connected together by a communcations network is called a communication group (Comm Group) in INC. For example, SONET network elements may communicate to each other using OSI protocols over the SONET DCC. The NE that INC connects directly to, in order to communicate with that NE and the other NEs on the network is called the Gateway network element (GNE) in INC. It is possible, however, in INC, to identify a second Gateway network element to the same network. Communications to the other NEs (also referred to as RTs or Remote Terminal), can then be made through either GNE. This provides for redundancy and increased communications integrity.

In the following example, four NEs are networked together, and INC is directly connected to **NE1** which is the GNE for the entire communication group. Communications to **NE2**, **NE3** and **NE4** is via **NE1**. If a fault occurs at point **X**, then INC loses communication to **NE3** and **NE4**. If a second GNE link is established to **NE4**, as identified by the dashed line, however, then INC can communicate to **NE3** and **NE4** using the second GNE link.

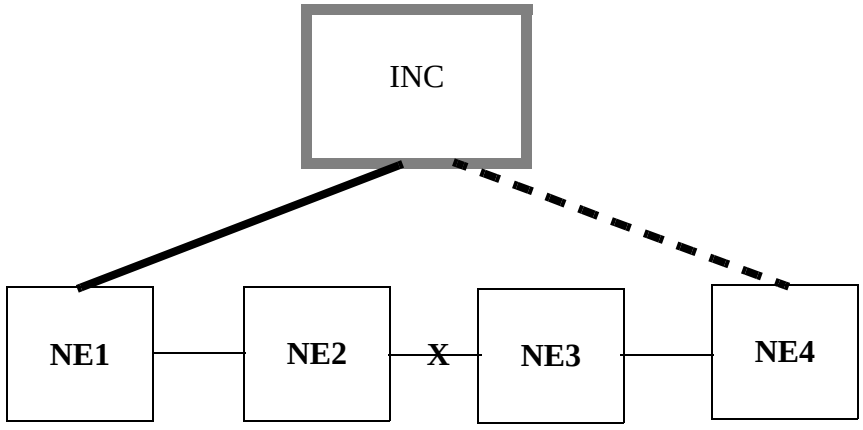


Figure 5-3. **Multi-GNE Diagram**

To identify an NE as a Multi Gateway NE, go to the Communication tab of the NE Management form. You must first disable the NE, and wait for communications to be taken down. Then select the Multi Gateway checkbox in the upper right corner. When you do so, then the gateway communications information becomes active. For example, for LAN communications, you now enter a Port and a Remote System Name or IP. After you Update this information, and re-enable communications this NE becomes a Multi Gateway NE.

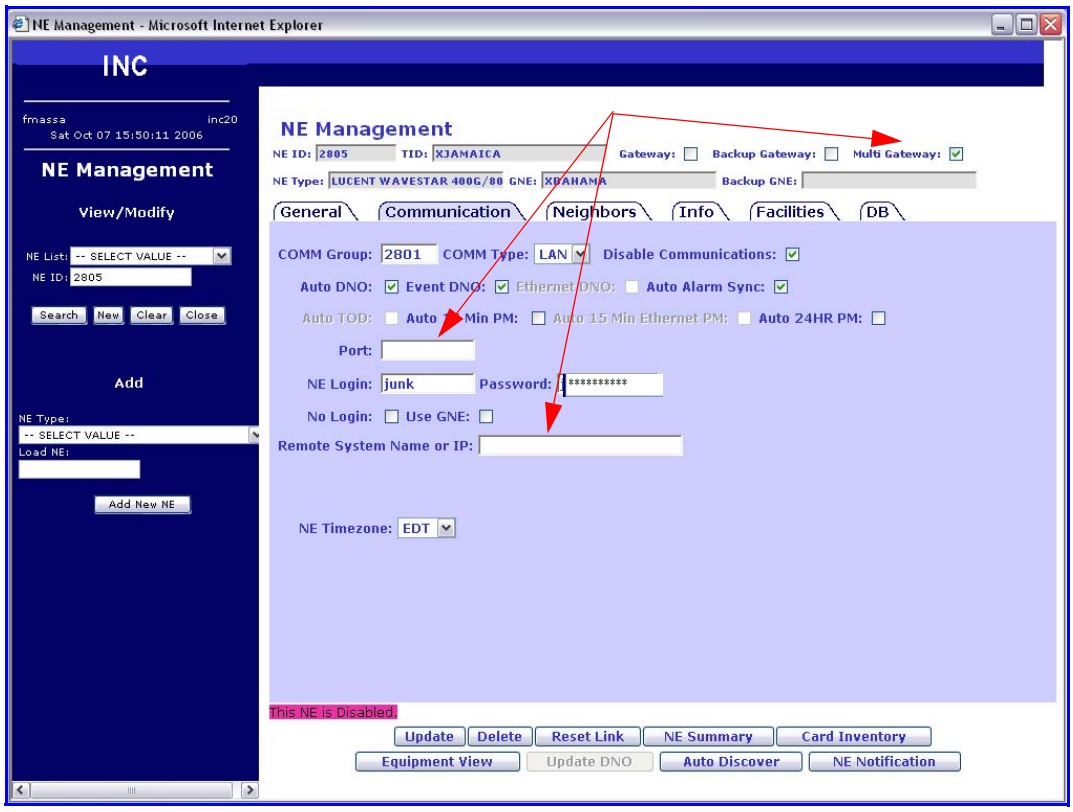


Figure 5-4. **Multi-GNE Selection**

When the Multi Gateway is provisioned, the NE Management form will display the other Gateway in the Multi GNE field for the Gateway and Multi Gateway NEs.

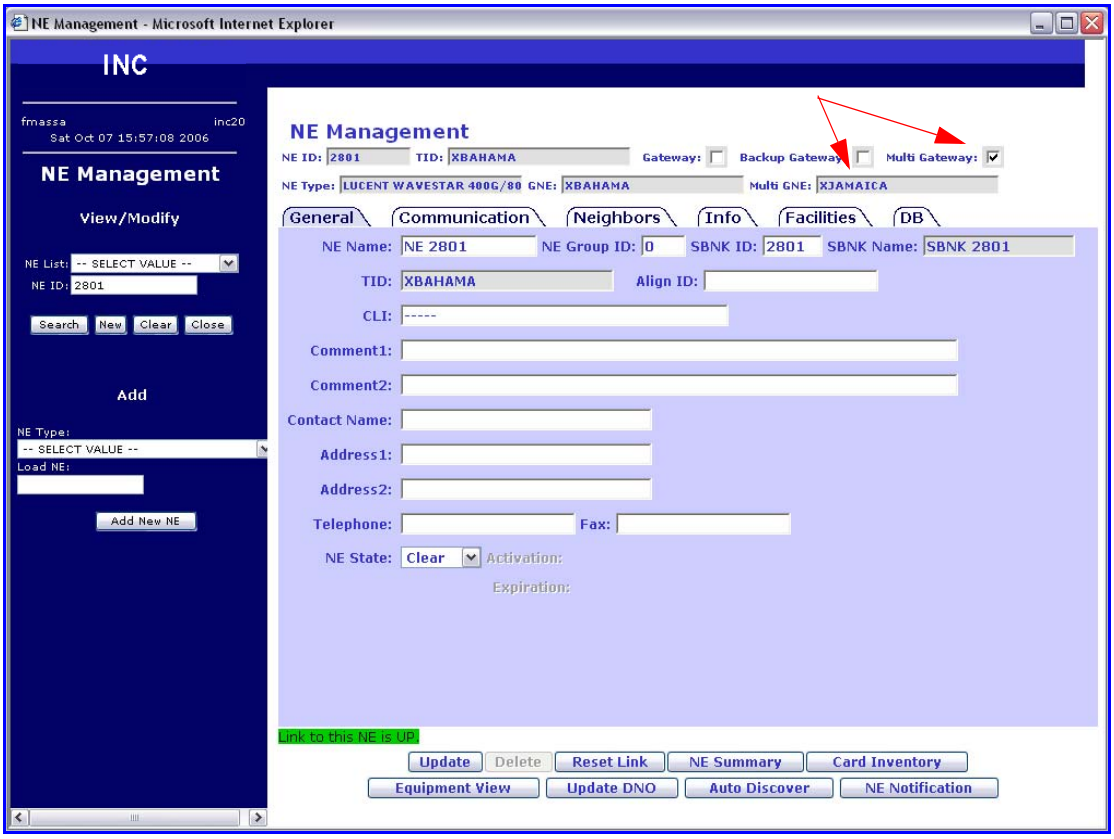


Figure 5-5. **Multi-GNE example**

Backup Gateway vs Mutli Gateway

It is also possible to provision an NE as a Backup Gateway. This is an older protection strategy that is still supported by INC. A backup gateway is a protection gateway network element that is used only if communications to the gateway network element fail. In this case only one of the NEs, either the Gateway or the Backup Gateway is communicating to INC. If communications to the Gateway fail, then INC uses the Backup Gateway to communicate to the Comm Grp. In the above example, if **NE1** is the Gateway NE, and **NE4** is identified as the Backup Gateway, and if INC is communicating through the Gateway **NE1**, and a fault occurs at point **X**, then no switchover occurs, and communications to **NE3** and **NE4** are lost. An NE

cannot be both a Multi Gateway NE and a Backup Gateway and you cannot create a Backup Gateway to a Multi Gateway.

- NE Type - The type of network element that the displayed information pertains to.
- GNE - Displays the TID of the GNE for the selected NE.
- Backup GNE - Displays the TID of the Backup GNE (if one is defined)

Buttons:

The following describes the functions of the buttons at the bottom of the NE Management Form:

- Update - used to update the INC database with modified information for a network element. Some fields on the NE Management form may not be updated unless the NE is disabled.
- NE Summary - displays the NE Summary Report. When selected, the report will display all nodes in the same subnetwork and communications group.
- Card Inventory - displays the Card Inventory Report for the selected NE
- Equipment View - Displays a picture of the selected NE. The picture will reflect circuit packs as found in the card database, if a successful DNO query has been executed, or, the cards displayed will reflect those facilities assigned to the user in INC if a DNO query has not been performed. Pack details may be displayed by selecting a card (via the left mouse button) and choosing the Card Details drop down menu item. This will display information such as circuit pack type, alarm states, CLEI codes, etc. The view may be expanded or reduced using the Size drop down filter.
- Update DNO - performs the DNO function for the selected NE
- NE Notification - displays the NE Notification form.

NOTE:
Fields described on the NE Management form and it's associated tabs are driven by a number of factors (feature files, NE Type, etc.). Not all fields described are visible at all times. Contact your system administrator for additional information.

General Tab

Contains basic network element specific information pertaining to the selected NE. Default user and default service view provide information used when assigning facilities.

- NE Name - 14 Character field used for NE icon label
- NE Group ID - 1-12000 All NEs with same NE group ID can be grouped into 1 icon
- SBNK ID - 1-12000, All NEs within a ring should have the same SubNetwork ID
- SBNK Name - Name associated with a SBNK ID on the Subnetwork/Group Management form
- TID - Target ID 1-20 characters. Each NE must have a unique TID within INC the database
- APS ID
    - Nortel OC48 - unique ID for each NE in a ring, value 0-15
    - Nortel Optera DWDM - All shelves within an optera have the same ID - values 0-15
- Band - this selection applies to DWDM NEs
- Align ID - user defined value used in conjunction with the Align function. Used when this field is populated and the Align ID sort is used on the Node Align form.
- CLI - 40 character field used to identify the NE
- Node Type - drop-down list of nodes types
- CLI Comment - 20 character field for free-form text input
- Node Address1 - 20 character field for free-form text input
- Node Address 2 - 20 character field for free-form text input
- Comment1 - 70 character field for free-form text input
- Comment2 - 70 character field for free-form text input
- Contact Name - 29 character field for free-form text input
- Address1 - 29 character field for free-form text input
- Address2 - 29 character field for free-form text input
- Telephone - 20 character field for free-form text input
- Fax - 20 character field for free-form text input
- Default User - default partition name used when assigning facilities
- Default Service Name - default service name used when assigning facilities
- NE State
    - Clear - Allows all alarms to display on GUI
    - Block - Blocks all alarms from the GUI and not stored in alarm data base

    - MBlock - Blocks Miscellaneous (non-assigned) alarms from the GUI and not stored in the alarm data base
- Activation - date in which Block or MBlock is activated
- Expiration - date in which Block or MBlock will expire
- Default Assignments to 'Surveillance Only' - selection of this box allows the console user to control a customer's provisioning access to assigned facilities. Facilities can be assigned to a customer as "config" (which gives a customer access to all INC provisioning and monitoring features), or as "surveil" (which restricts the customer to surveillance of the facility only). The customer surveillance feature is built upon the Subpartition feature, previously only available to Command Line Interface (CLI) users. What was previously subpartition 8 is now reserved as the surveillance partition. All facilities, not part of other partitions by default, are assigned to this partition called the SurvOnly partition. Within this partition, a facility can be configured for Config usage or Surveil. This feature is an optional feature which is enabled on all GUI forms by the USE_SURVEIL_PARTITION system define, and is disabled by default. Unless overridden at assign time, or changed by the Subpartition form, all assigned facilities will assume the state as set by the NE (on the NE Management form). There are options on the provisioning management forms for assign and populate to set, or un-set, the surveillance state of a particular facility. The choices are Default (assume the default setting of the NE), Yes (set the facility to surveillance only) or No. The Subpartition Management form provides the ability to change the surveillance state of already assigned facilities. Facilities can be assigned to different partitions (1 through 7) and/or to a different usage state (Surveill or Config). A Subpartition Report is provided to display the information in each partition (1-7) and the surveillance partition. In addition, the facility report status column will also flag facilities which are set for surveillance only
- Associate Equipment Alarms with Default User - when selected, equipment alarms for this NE will be assigned to the default user

Communication Tab

Used to display/enter the various information used to establish and maintain communication between INC and the network element.

Fields:

- COMM Group - the communications group ID. All network elements that INC communicates with via the same communications path are in the same COMM Group. If the new NE is an RT (remote terminal) of an existing ring then the COMM Group ID must be the same ID as the GNE.
- COMM Type:
    - LAN: If the NE is going to be a new GNE (Gateway or Backup Gateway) then the COMM Type field becomes sensitive. Selecting the COMM Type 'LAN' will prompt the user with a Port #, Login, Password, and Remote System Name/IP Address.
    - SERIAL: The user will be prompted for a Baud Rate via a drop down list with the choice 1200, 2400, 4800, 9600, or 19200.
    - FIBER: The user will be prompted for a Datakit Path (DK Path).
    - X25: Selecting the COMM Type 'X25' will prompt the user with a Port #, Login, Password, SVC/PVC and Address.
- Disable Communication - this checkbox is used to place communication to the NE in a sleep state. INC will not attempt to communicate with the NE while in the disable mode.
- Auto DNO and/or Event DNO - if these checkboxes are selected then INC will automatically perform a DNO query based on the amount of time the NE link was down or if an event occurs such as a card switch.
- Ethernet DNO - if this checkbox is selected, can only be enabled when Auto DNO is enabled. INC will automatically run DNO when changes to Ethernet provisioning information is detected.
- Auto Alarm Sync - if this checkbox is selected, INC will automatically synchronize alarms when either of the following occur:
    - The link to the NE is restored after being down for a specified period of time.
    - The NE state is changed from Block to Clear
- Port:
    - For an NE with COMM Type=LAN, the Port # field contains the socket used to access the NE via the Remote System Name or IP address. For accessing an Alcatel-Lucent DCS II via a LAN connection, enter Port #=23 in this field.
    - For an NE with COMM Type=X25, the Port # field contains the x25 port being used to access the NE via an X25 packet network. An example of an X25 port number is X251215. Valid port numbers can be found in the Console Command

Line Interface document, located in the chapter labeled “Equipping Network Elements and INC ports.” The Address field is used to enter the X121 address (NTN) of the NE.

- Mux Number - Only applicable in a multi-box environment. Back-end system that manages this NE.
- NE Login - The login ID created in the network element that INC will use to log in to the NE.
- Password/Verify Password - The password associated with the NE Login
- No Login - If the network element does not require a login, this option should be selected
- Use GNE - If this option is selected, INC will use the NE Login and Password entered for the GNE of the same COMM group.
- Remote System Name or IP - the system name or IP address of the NE

Communication Tab - NE Specific Information

The format of the communications tab will vary depending upon the type of network element being defined.

For example, if X.25 is chosen as the COMM Type, the user may supply a second SVC or PVC Address.

Conversely, a second Remote System Name/IP address may also be defined depending on the type of network element being databased.

NE Password Hiding

This feature provides an optional system wide setting used to hide network element passwords. If enabled, no network element passwords will appear on INC forms, reports, and log files.

If this feature is enabled, network element password input on the NE Management form - Communication Tab, will require two fields for validation (Password and Verify Password)

Users should be aware that if this feature is enabled, then network element passwords will not be visible to any users. This could be an issue in the effort to troubleshoot a connectivity problem with a network element.

Neighbors Tab

The Neighbors Tab is used to enter and display the neighbor (tie) information for SONET network elements. This information defines the network topology and associates network elements that are connected optically.

Column Definitions:

- From Port/Slot - The facility on the currently selected NE that is to be tied
- To NE - The NE ID of the NE that the facility is being tied to
- To NE Type - The “To NE” is this type of network element
- To Port/Slot - The facility on the “To NE” that the facility is being tied to. This contains a drop down list of possible selections

Info Tab

The Info Tab contains status information pertaining to the selected NE. These fields are information only and are not editable.

Facilities Tab

The Facilities tab contains statistical information about the specified network elements facilities

NOTE:
Additional tabs may be present for ATM/FR or Metro Ethernet users. Refer to the Integrated Network Controller ATM/FR Supplement or the Integrated Network Controller Metro Ethernet Supplement for further information regarding those tabs.

TIRKS®

The *TIRKS®* system is an inventory record keeping and provisioning system for inter-office trunk facilities. The Integrated Network Controller system processes *TIRKS®* WORD documents to decode circuit information. Once this information has been parsed, these circuits can be placed into the Integrated Network Controller system database.

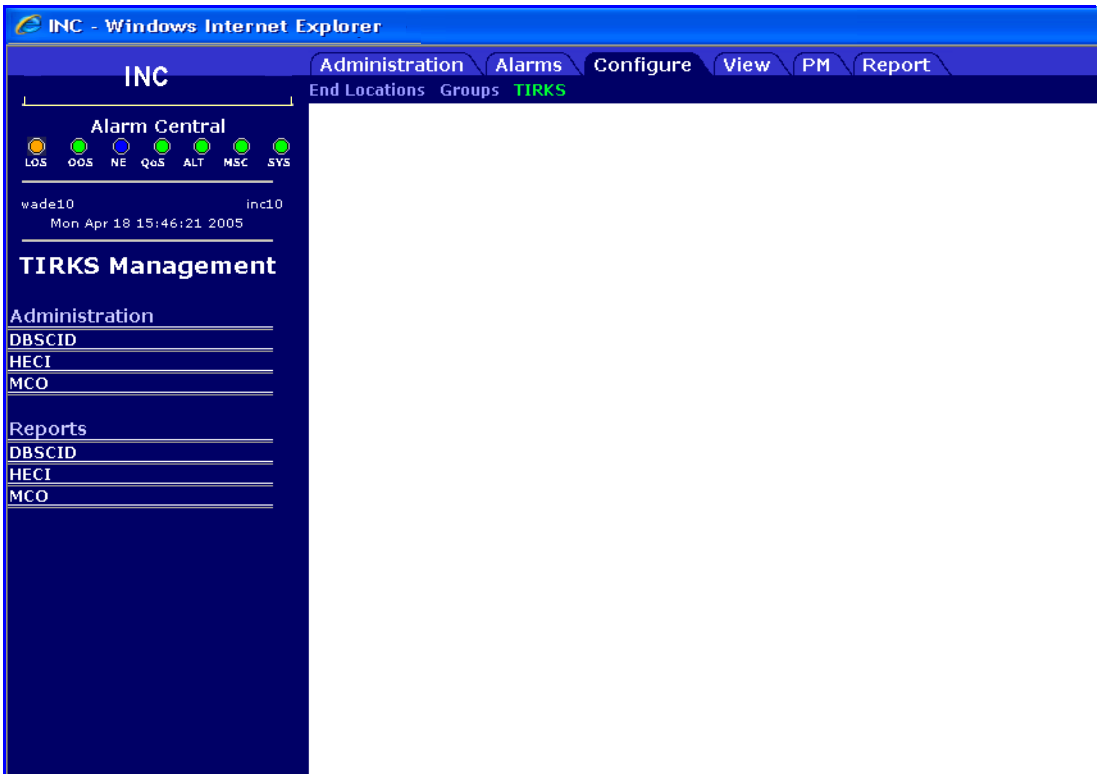


Figure 5-6. ***TIRKS®* Management**

Administration

DBSCID

The *TIRKS*® DBSCID Administration form allows the user to associate a DBSCID TID with an actual Integrated Network Controller TID.

There are three options available when a user is inputting information to this form:

- If no record exists for the inputted DBSCID value, then the DBSCID file will be updated to include the newly defined record
- If a DBSCID record exists, and the Override checkbox is **not** selected, the entry will be denied
- If a DBSCID record exists, and the Override checkbox is selected, the entry will be modified accordingly

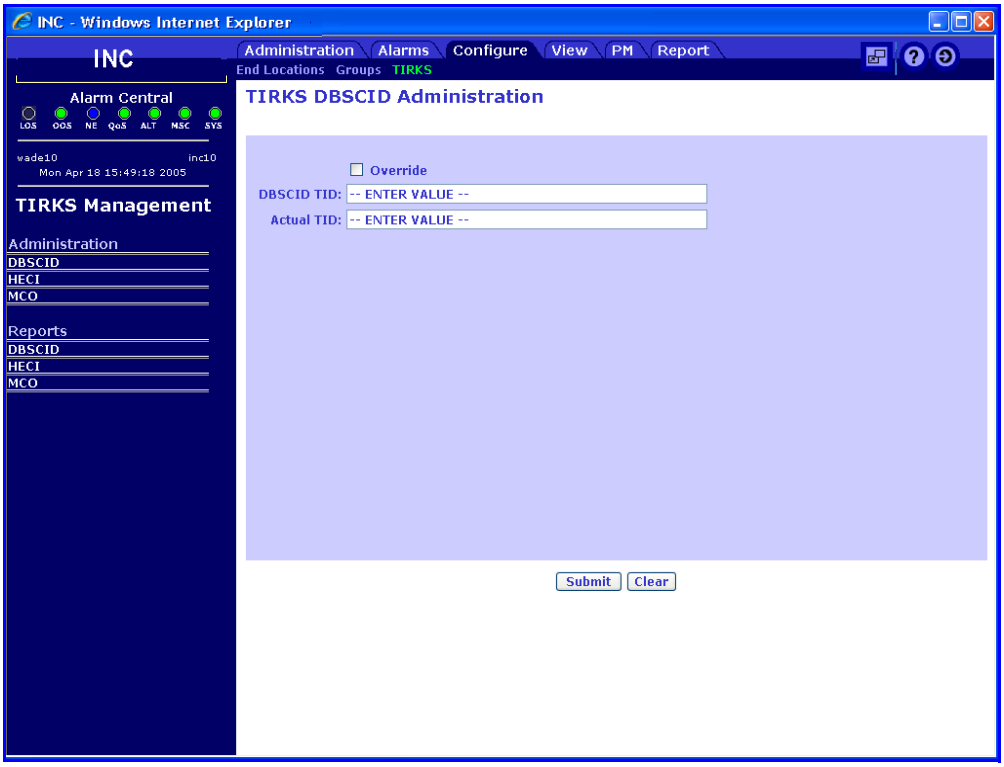


Figure 5-7. ***TIRKS*® DBSCID Administration**

Input Fields:

- DBSCID TID - DBSICD value from the *TIRKS*® Word document
- Actual TID - Integrated Network Controller TID

NOTE:
The DBSCID value is the “key” value and cannot be changed. Only the Actual TID associated with a selected DBSCID TID can be modified.

HECI

The *TIRKS*® HECI Administration allows the user to associate a port type to a particular NE type.

There are three options available when a user is inputting information to this form:

- If no record exists for the inputted HECI value, then the HECI file will be updated to include the newly defined record
- If a HECI record exists, and the Override checkbox is **not** selected, the entry will be denied
- If a HECI record exists, and the Override checkbox is selected, the entry will be modified accordingly

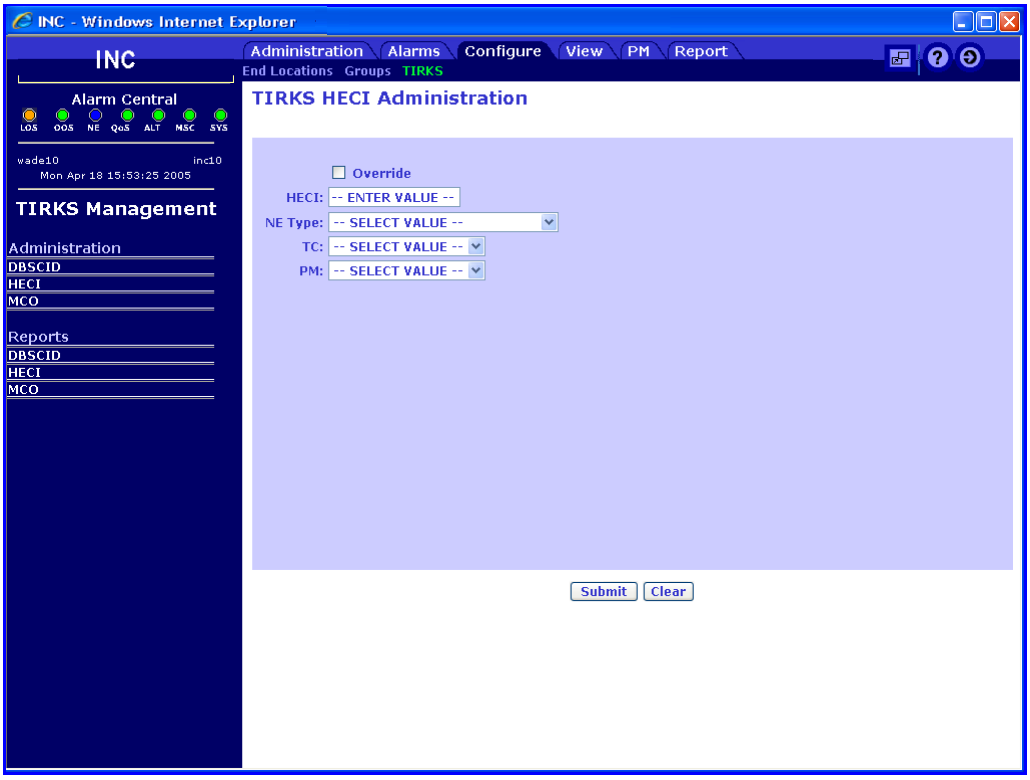


Figure 5-8. ***TIRKS*® HECI Administration**

Input Fields:

- HECI - an 8 character value that defines a port type for an associated NE type
- NE Type -Network Element type

- TC - Trunk Conditioning code
- PM - Performance Monitoring collection attempted (YES or NO)

NOTE:
The HECI and NE Type values are the “key” value and cannot be changed. Only the TC and PM values associated with a selected HECI and NE Type can be modified.

MCO

The *TIRKS* ® MCO Administration form allows the user to define a user partition in which to store the associated circuit information.

There are three options available when a user is inputting information to this form:

- If no record exists for the inputted MCO value, then the MCO file will be updated to include the newly defined record
- If a MCO record exists, and the Override checkbox is **not** selected, the entry will be denied
- If a MCO record exists, and the Override checkbox is selected, the entry will be modified accordingly

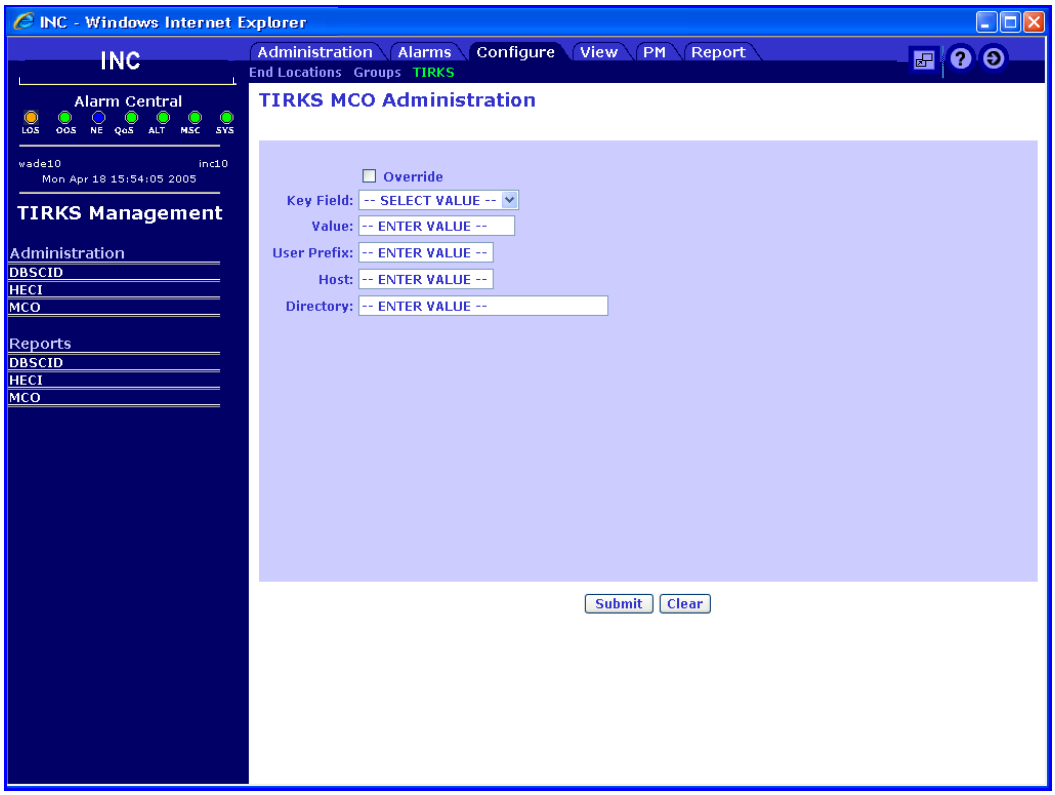


Figure 5-9. ***TIRKS*® MCO Administration**

Input Fields:

- Key Field - MCO or MCN

- Value, Prefix - fields that, along with the Key field value, are used to derive the appropriate partition in which to place the associated circuit data.
- Host - the Integrated Network Controller machine that the *TIRKS*® WORD document is placed on when read from the lp interface
- Directory - the specific directory in which the the *TIRKS*® WORD document is resident on the Integrated Network Controller machine

NOTE:
The Key Field and Value entries ar the “key” values and cannot be changed. Only the User Prefix, Host and Directory associated with a selected Key Field and Value can be modified.

Reports

TIRKS® DBSCID Report

The *TIRKS*® DBSCID report is used to display the mapping from a *TIRKS*® WORD document DBSICD TID to an actual Integrated Network Controller system TID.

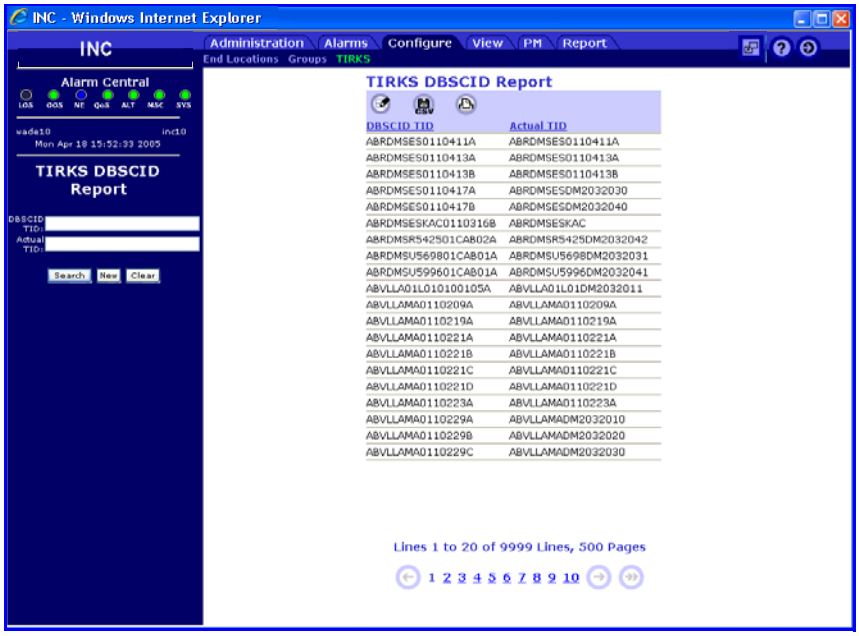


Figure 5-10. ***TIRKS*® DBSCID Report**

Filters:

- DBSCID TID - Target Identifier from the *TIRKS*® WORD document used to map to a Integrated Network Controller TID
- Actual TID - Target Identifier defined in the Integrated Network Controller database

Navigation Drop Down List:

- Modify - Displays the *TIRKS*® DBSCID Administration form pre-populated with the values from the selected report entry to allow modification.
- Remove - Removes the selected entry from the report

TIRKS® HECI Report

The *TIRKS*® HECI Report is a list of the various port types and their associated information, that are supported through the *TIRKS*® interface.

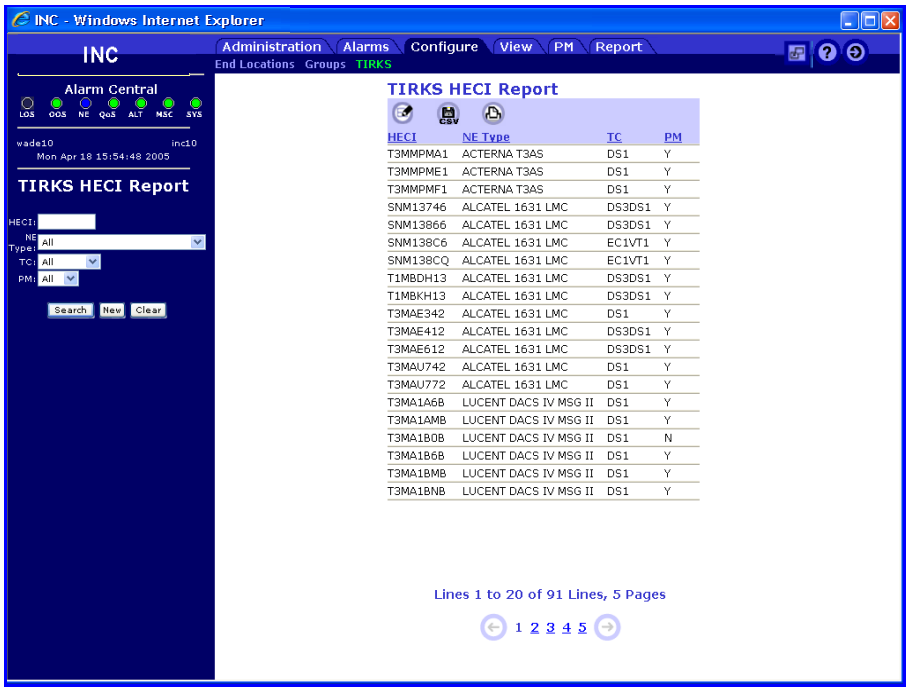


Figure 5-11. ***TIRKS*® HECI Report**

Filters:

- HECI - a unique identifier that identifies a port type
- NE Type - a list of Network Elements supported in the *TIRKS*® interface
- TC - a list of Trunk Conditioning types support in the *TIRKS*® interface
- PM - an indication of whether Performance Monitoring is enabled on the port

Navigation Drop Down List:

- Modify - Displays the *TIRKS*® HECI Administration form pre-populated with the values from the selected report entry to allow modification.
- Remove - Removes the selected entry from the report

TIRKS® MCO Report

The *TIRKS*® MCO report is used to display the user partition the circuit will be assigned to in the Integrated Network Controller database and the directory and machine in which the *TIRKS*® WORD document will be placed for processing.

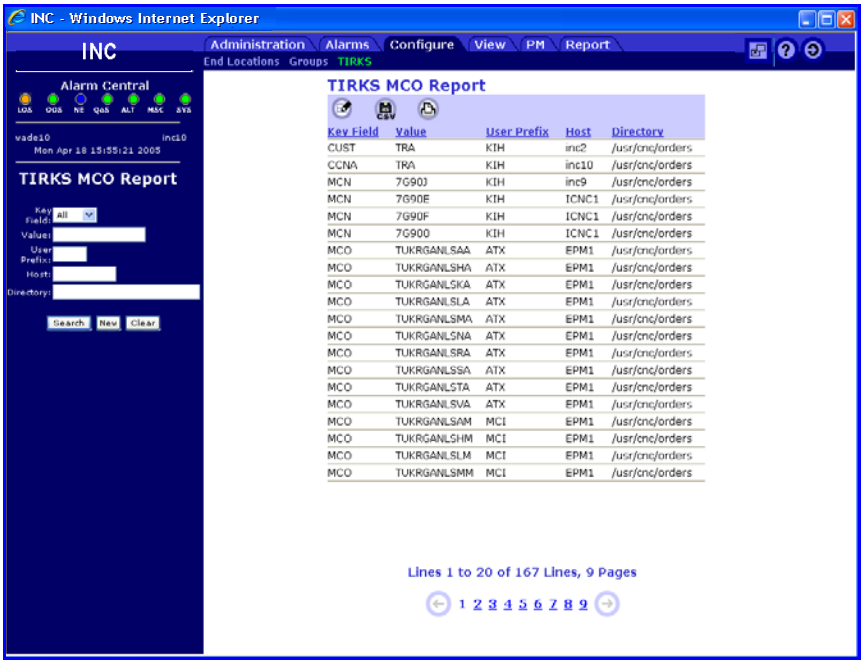


Figure 5-12. ***TIRKS*® MCO Report**

Filters:

- Key, Value, User Prefix - These fields are used to derive the appropriate partition in which to place the associated circuit data. Each field may be searched on seperately
- Host - the Integrated Network Controller machine that the *TIRKS*® WORD document is placed on when read from the lp interface
- Directory - the specific directory in which the the *TIRKS*® WORD document is resident on the Integrated Network Controller machine

Navigation Drop Down List:

- Modify - Displays the *TIRKS*® MCO Administration form pre-populated with the values from the selected report entry to allow modification.
- Remove - Removes the selected entry from the report

View

6

Chapter Contents

View Tab

The View Tab allows the user to set their system display and alarm retrieval preferences, as well as define the user information that will be available to them.

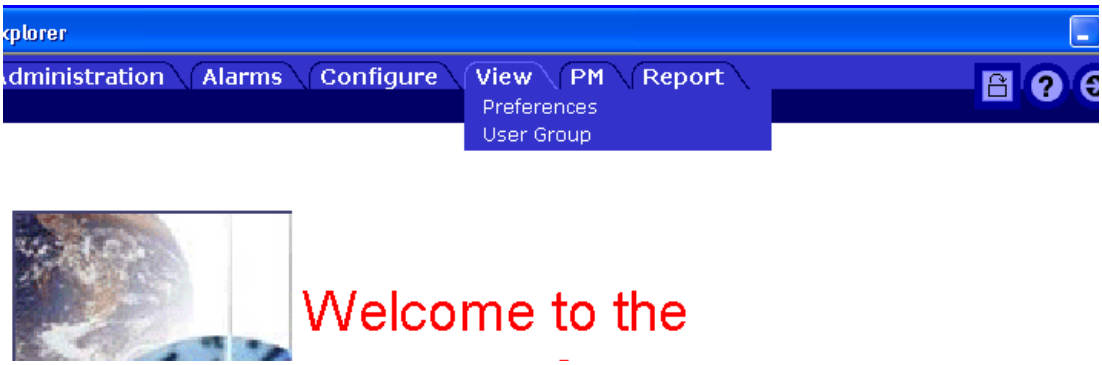


Figure 6-1. **View Tab**

Preferences

The Preferences tabs allow the user to define their choices for various GUI display and behavior items.

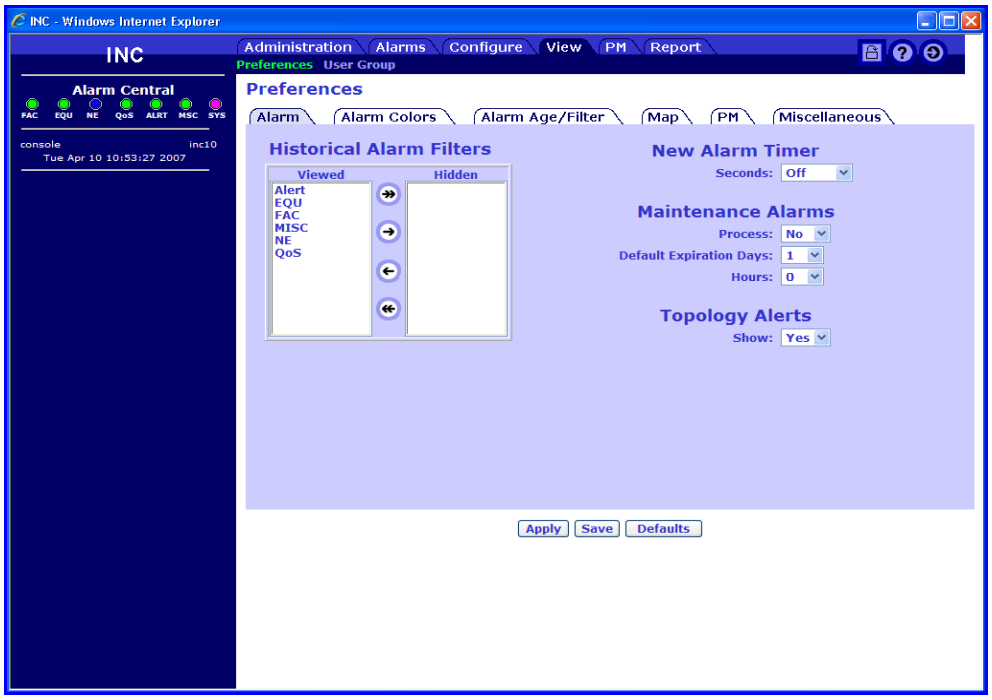


Figure 6-2. **Preferences**

Buttons:

- Apply - Applies changes that have been made on the Alarm Colors and Miscellaneous tabs locally (for the current session), but does not save the changes to the database permanently. When logging out, the user will be asked if changed preferences should be saved permanently.
- Save - Saves changes to the database permanently

NOTE:
On the Alarm, Alarm Age/Filter, and PM tab, any changes made must be Saved (Select the <Save> button) for the changes to take effect in the current session. Selecting <Apply> will **not** make the changes effective in the current session.

- Default - Returns filter values to their default value

Alarm Tab

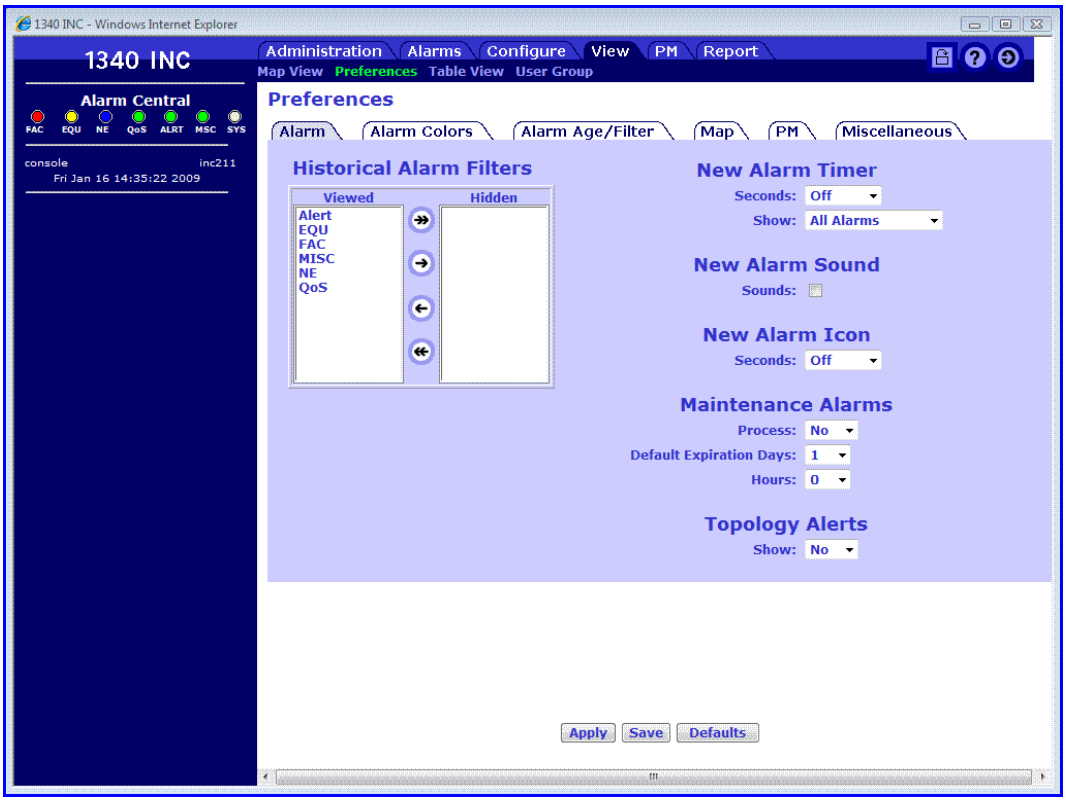


Figure 6-3. **Alarm Preferences Tab**

Historical Alarm Filters

The Historical Alarm Filters control the output of the Problem Alarms Report. Select the desired alarm types and select the Save button. The Problem Alarms Report will now reflect the selected filters.

New Alarm Timer

The New Alarm Timer allows the user to determine how often (in seconds), newly occurring alarms will pop up on their display. In addition, the user can elect to show all alarms or only alarms for items on the WL via the Show drop down list.

New Alarm Sound

When selected, the New Alarm Sound indicates that a user will hear an audible alarm sound when a new alarm is asserted or cleared.

Alarms are categorized by type (EQU,FAC,NE (Link), QoS, Alert, Misc, and SYS), as well as by severity (CR, MJ, MN, Other). Each alarm also has two states (Assert and Clear). Via sound files (that must be stored as .wav form files), the user can associate a specific sound with each type/severity and assert/clear occurrence.

The .wav files must be stored in /usr/cnc/web/app/sounds on the 1340 INC GUI server. There are default .wav files for both alarms and clears (called alarm.wav and clear.wav respectively) that are included as part of the 1340 INC installation. However, if a user would like to use other .wav files, the files must be named using the following format in order to associate each alarm with the correct .wav file.

Type_Severity_alarm.wav or *Type_Severity_clear*.wav

So, if a user wanted a specific sound for a Critical Equipment alarm, the file would be named EQU_CR_alarm.wav. Likewise, a clear would be named EQU_CR_clear.wav.

When more than one alarm/event occurs simultaneously, alarms are “bundled” and passed to the GUI all at once. In this case, the sound file associated with the alarm of the **highest severity** will be heard. When this occurs, therefore, alarms/events of lower severity will not be represented via their associated audible notification. It is recommended that use of the audible alarm feature be used to supplement visual/alarm indicators, not as a replacement.

New Alarm Icon

The New Alarm Icon setting allows the user to see an alarm icon associated with an NE, when a new alarm is asserted on that NE. The drop down list allows the user to choose the amount of time (in seconds) that the icon will stay on. When an alarm is asserted in INC, the icon will appear on the top right hand corner of the NE icon on the Map or Table View. The NE drop down menu from the NE in alarm will then have the choice “Alarm List (New)” allowing the user to display alarms that have been asserted since the previous view.

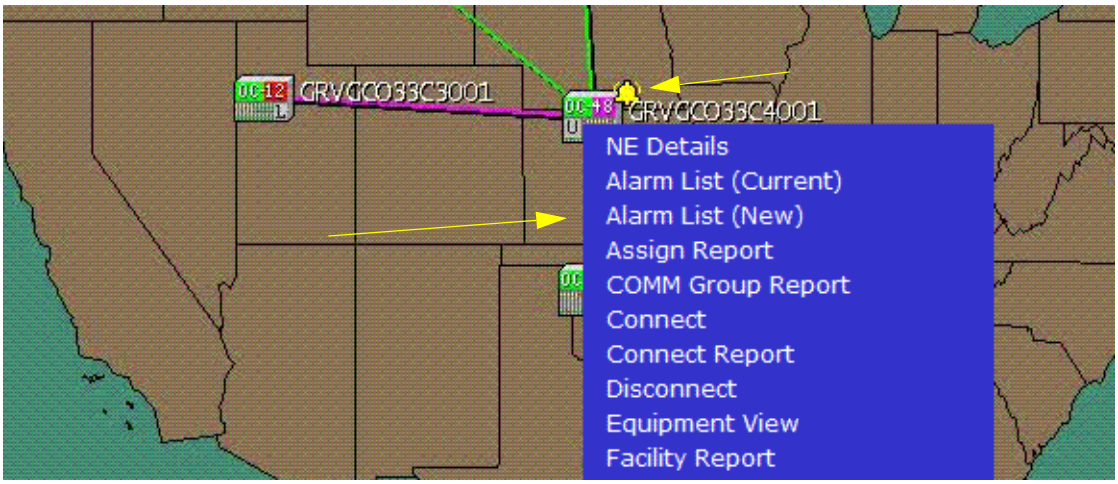


Figure 6-4. **New Alarm Icon**

Maintenance Alarms

The Maintenance Alarms filters allow the user to process or not process alarms which have been put into the maintenance state. The default expiration fields (Days and Hours), are used when the user selects an active alarm and places it into the maintenance state. These values will keep the facility in the maintenance state for the defined duration.

Topology Alerts

Allows the user to choose to have alarm assert messages automatically displayed on their GUI.

Alarm Colors Tab

Figure 6-5. **Alarm Colors Tab**

Alarm Color

Alarm colors can be changed by the user. To change an alarm color, select the color to be changed, then select the color choice from the drop down list.

Alarm Text Color

When changing alarm colors, the alarm text color may also need to be changed so that the text is readable.

Alarm Age/Filter Tab

Figure 6-6. **Alarm Age/Filter Tab**

Process/Filter Alarms

The Alarm Age/Filter option allows the user to process or not process alarms and delay the display of an alarm. For example, if the user selects NO for the Process FAC alarms, the FAC icon on the Alarm Central display will change to black. Any black alarm icon in the Alarm Central region indicates that alarms are not being processed for the associated alarm category.

The FAC, EQU, NE Status, Miscellaneous and Sys Health alarm categories have an Age drop down list which has a range of 0 through 600 seconds. These alarm types have assert and clear alarm messages which are received from the network element. When the alarm asserts (comes into the GUI), the corresponding alarm icon will change to the appropriate alarm color. When the alarm clears, the alarm icon will change to the clear color. Choosing any number of seconds above 0 will cause the GUI to wait for that number of seconds after the alarm asserts before displaying the alarm. If the clear message is received within the selected number of seconds, the alarm icon will never change to the alarm icon color. If no clear message is received within the selected number of seconds, the alarm icon will change to the alarm icon color.

Each alarm category has a Filter choice box. If this value is set to YES, then the alarm category selected will use the additional Alarm Filters located in the Alarm Include Filters section of the form. If an individual alarm category, for example EQU, has the Filter choice set to NO, then the user will see **all** EQU alarms. If the value is set to Include, then the category will be filtered based upon the Alarm Include Filters. If the value is set to Exclude, then the category will be filtered based upon the Exclude Alarm Filters, and if the Filter value is Both, then the category will be filtered through Include and Exclude filters.

NOTE:
These filters are used to filter new alarms to the GUI. Users can still see all alarms, regardless of the filter settings, via the Alarm List form.

Alarm Include Filters

If the user sets the Filter choice to YES for a specific category, then that category **only** will use the filters in the Alarm Filters section. The user **will receive** any alarm that matches the "**YES**" selections in this section. Additionally, if the user enters a value in the Level Filter text box (i.e. T3), they will also see those level alarms displayed. Any alarm other than the category selected will display all SAs and NSAs, all Severities, and all Levels of their respective alarm categories.

Alarm Exclude Filters

This form allows the user to select specific alarms, by level and by atype (alarm type) that they **do not** want to see on their alarm list display. Alarms will still be added to the database, but will not be viewed on the GUI. The user may select up to 50 alarms to be placed on the exclude list. The wild card character '*'can be used in either the Level or ATYPE field (* alone matches all strings, *ABC matches anything ending in ABC, and ABC* matches anything beginning with ABC).

For these Filter settings to take effect, the <Save> button must be selected, the <Apply> button will not place the choices into effect.

Map Tab

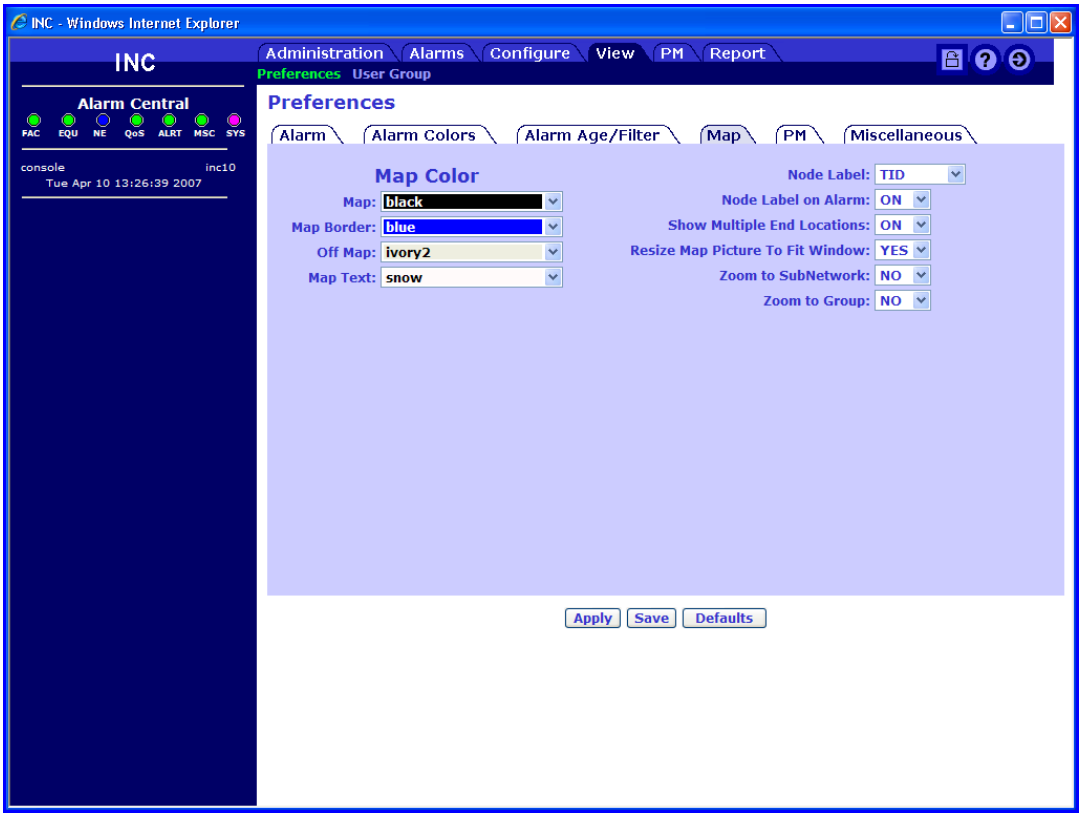


Figure 6-7. **Map Tab**

Map Color

This is divided into the Map, Map Border, and Off Map sections. Each value can be set to the color of the user's choosing.

Node Label

This allows the user to choose which label type (NEID, TID, etc.) is displayed on the Map View. It does **not** affect the lables on the Table view.

Node Label on Alarm

This allows the user to show the selected node label type when the node is in alarm, even if the Show Labels choice is not selected on the Map View form.

Show Multiple User Nodes

This field allows the user to display more than one user node for each NE, if applicable.

PM Tab

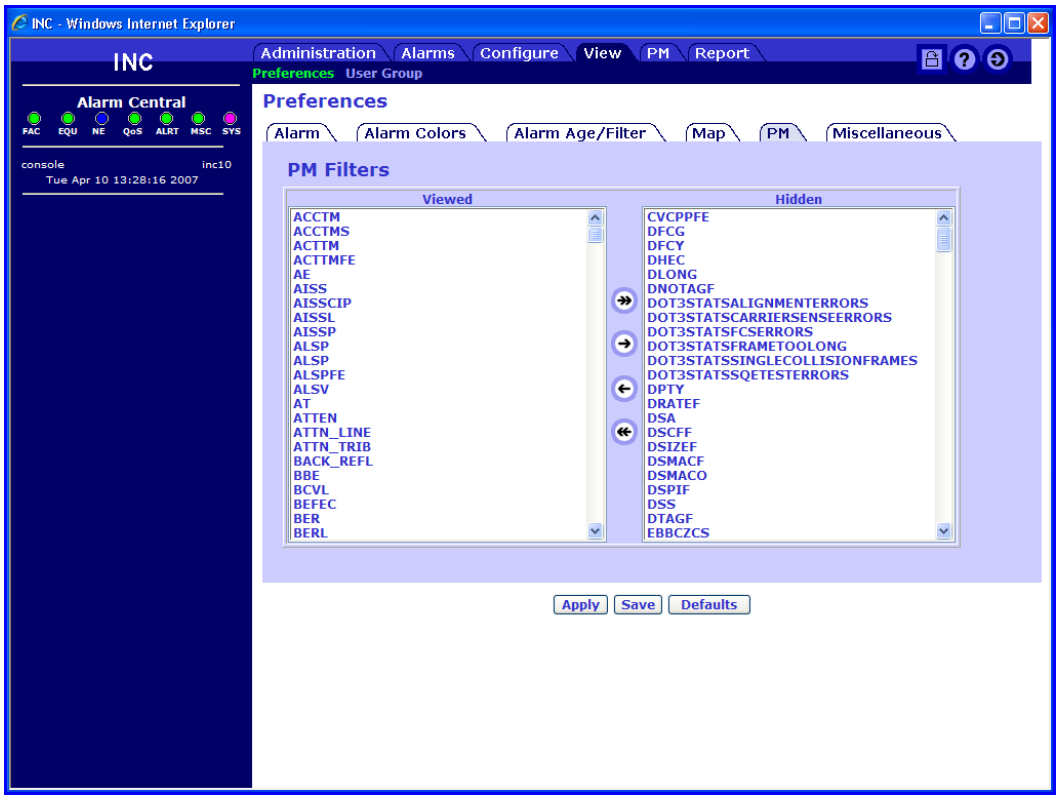


Figure 6-8. **PM Tab**

PM Filters

The PM Filters affect the output of the Problem PM and Display PM reports. The user should select the desired filters and select the Save button located on the bottom of the form. After the Save has completed, the Problem PM and Display PM reports will refelect the selected filters.

Miscellaneous Tab

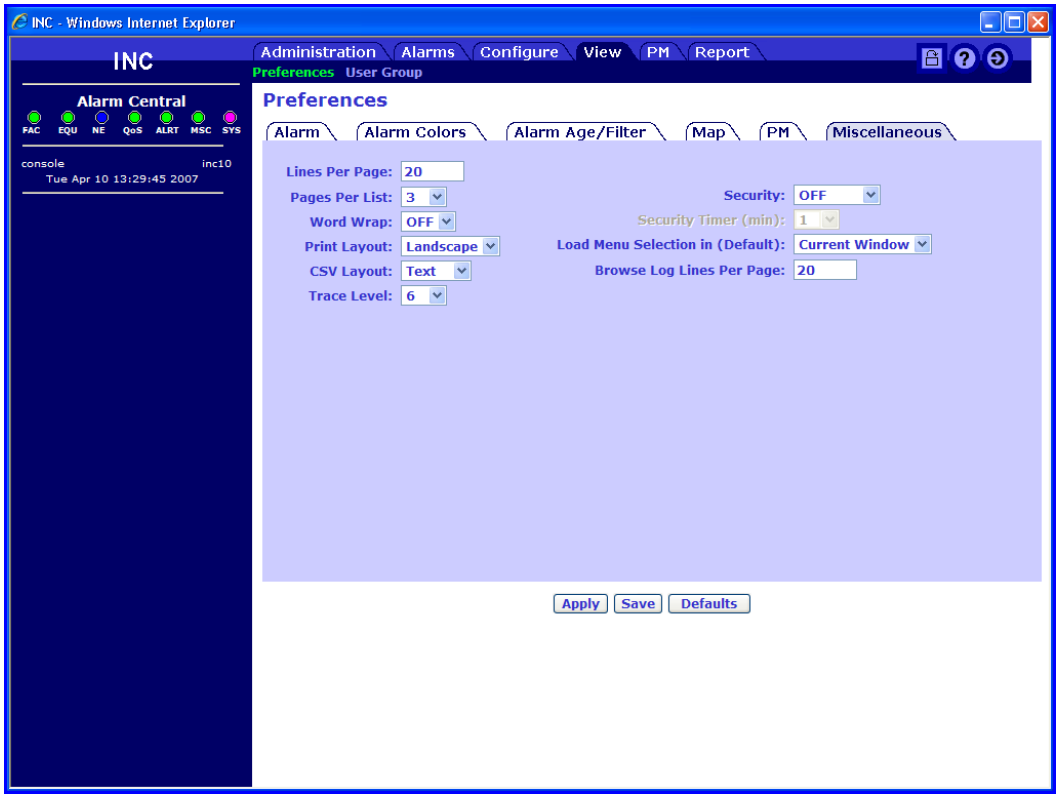


Figure 6-9. **Miscellaneous Tab**

Lines per Page

A count of how many lines the user wants to see per page on displayed reports

Pages per List

A count of how many pages of data the user wants grouped at one time in a report

Word Wrap

Shortens the length of lines in displayed reports such that information is continued on the next line.

Print Layout

Dictates how the graphics are sized for printing. The user must set their Page Setup locally for printing to match preferences

CSV Layout

This preference allows the user to either choose Text, which will write the output to a comma seperated value file, or EXCEL which will write the output directly to a Microsoft® Excel spread sheet.

Trace Level

Used to turn up tracing to allow debugging of a GUI software trouble.

Security

The GUI has an automatic logout feature. If set to ON, this function will automatically logout the user after a specified period of inactivity

Security Timer

This is the value (in minutes) that a session must be inactive in order for the Security Lock (automatic logout) to take place.

User Group

The User Group tab provides the means for selecting the users whose information will be available to the current user.

Users:

Allows the user (via arrow buttons) to view or hide specific users and associated user data.

- Viewed - the list of those users whose data can be viewed by the current user.
- Hidden - is the list of those users whose data cannot be viewed by the current user.

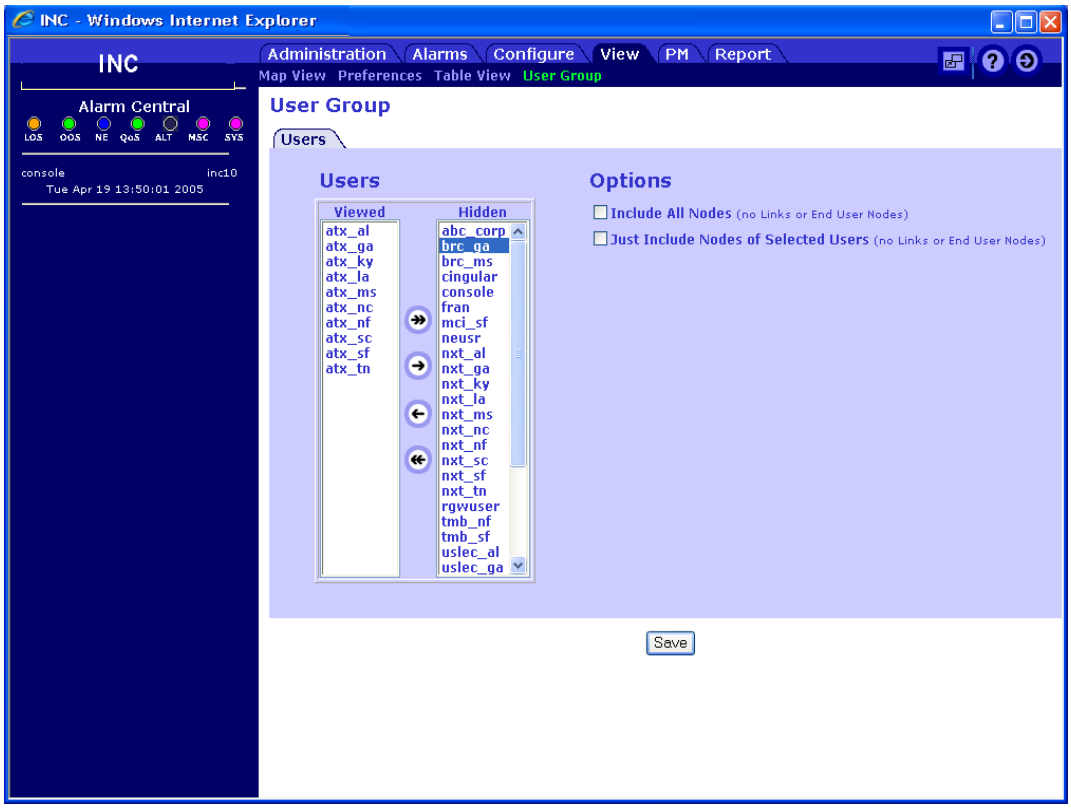


Figure 6-10. **User Group - Users Tab**

Options:

- Include All Nodes - if selected, the system view (map view or table view) will show all nodes of all users defined in the system, even if the user is in the Hidden column

- Just Include Nodes of Selected Users - this is the default value. If selected, only the users in the Viewed column will be displayed in the system view (map view or table view).

Buttons:

- Save - saves the changes permanently to the database.

PM

7

Chapter Contents

The PM Tab

The PM Tab gives users the ability to schedule, retrieve, and display Performance Monitoring data that is managed by the Integrated Network Controller system.

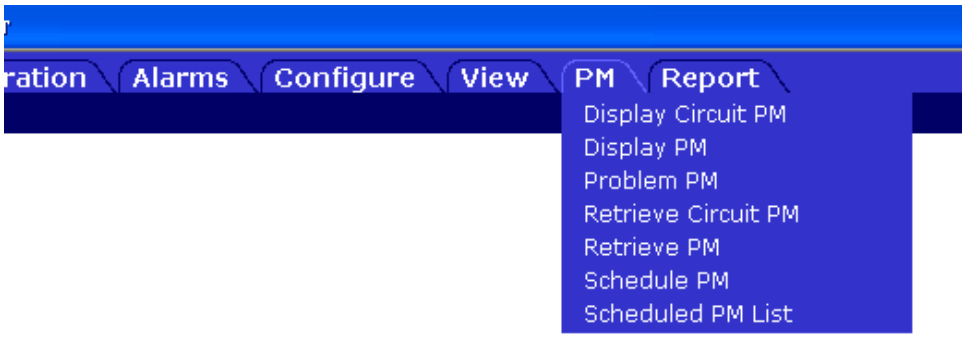


Figure 7-1. **PM Tab**

Display Circuit PM

Display Circuit PM displays PM data that is gathered for all ports along the entire path of a selected circuit. The specific counts displayed will be dictated by the monitor types (MONTYPES), selected in the Prefences -> PM tab.

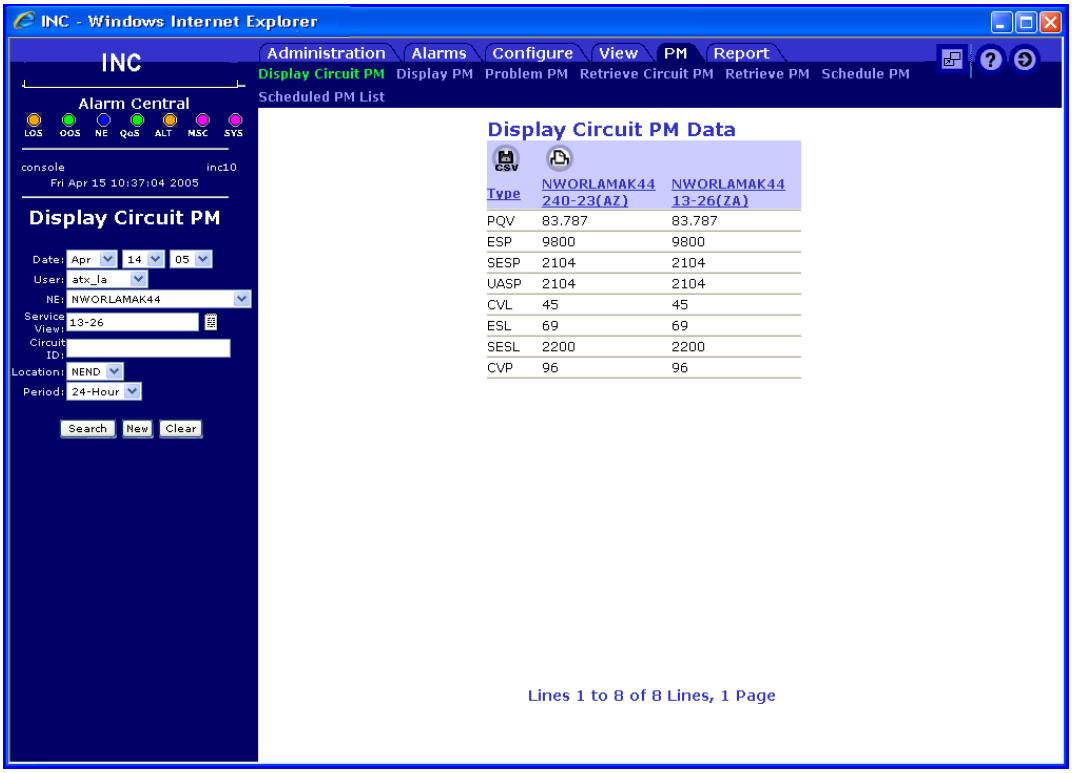


Figure 7-2. **Display Circuit PM**

Filters:

- Date - The date that the user would like PM to be collected for
- User - The user whose PM data is being requested
- NE - Network Element whose data is being requested
- Service View - Displays the Service View. This may be specified via selection from the Service View Wizard
- Circuit ID - Circuit Identifier
- Location - NEND (Near End), or FEND (Far End)

- Period - Collection period for which the user wishes to retrieve PM data (24 hour only)

Column Definitions:

The columns displayed will be the TYPE of PM data that was collected on the specified circuit as well as the counts on each port that makes up the circuit. The ports will also be labelled as (AZ) or (ZA) indicating their respective locations.

Display PM

Display PM retrieves the PM data for the specified user and service view and displays the information in both graphical and tabular format.

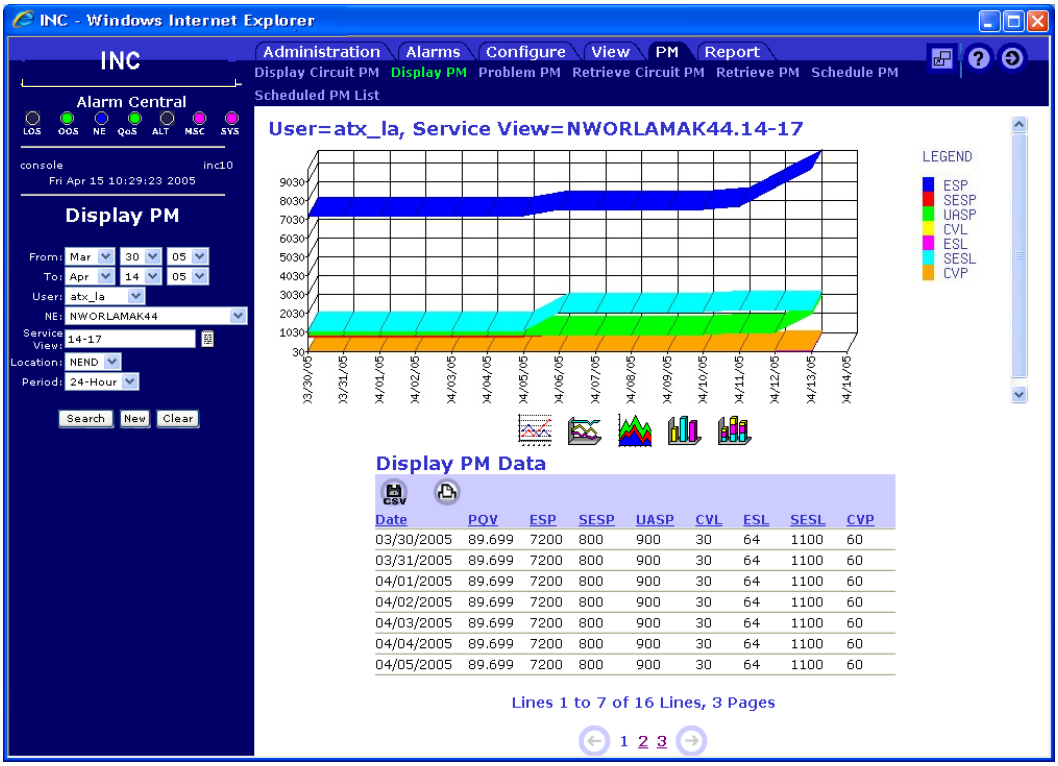


Figure 7-3. **Display PM**

Filters:

- From/To - The range of dates and times for which the user would like to see PM data
- User - The user whose PM data is being displayed
- NE - Network Element on which to execute the search
- Service View - Displays only the Service View specified
- Location - NEND (Near End), or FEND (Far End)

- Period - Collection time period for which the counts will be displayed

The data will be displayed in both graphical and tablular format. The columns in the table may be sorted by selecting the column heading that the user wants to sort on. The icons located above the table allow the user to display the data in different formats (Line Chart (default), Plot Chart, Area Chart, Bar Chart, and Stacked Bar Chart).

Column Definitions:

The columns displayed in the Display PM report will be a function of the NE type on which the PM data was collected and will contain the counts for the various PM counters available for the period specified.

Multi-Problem PM

The Multi -Problem PM form is used to display multiple failures on configured ports (i.e. T1s on a T3) and will show common failures on higher level facilities that have been accumulated from different Front End Processors (FEPs). The “watermelon striping” display is used to visually differentiate groups.

Filters:

- Area - allows the user to select the area where the PM circuits are located
- Report Type - Summary or Detail. The Summary report will display the NE, Service View, PM Type, and number of Affected circuits (# Affected). The Detailed report shows all of the information listed below.
- # Affected - allows the user to filter the report based upon the number of problem ports on a circuit. Only the circuits with the number of problem ports requested (# Affected) and above will be displayed. The default value is two (2).

Column Definitions:

- Server - The server that the circuit is provisioned on (a circuit may span more than one server).
- User - The user partition to which the circuit is assigned
- NE - Network Element that the circuit is connected on
- Service View - Facility/Port that the problem PM was collected on
- Circuit ID - Contains the circuit identifier
- PQV - Performance Quality Value. A value between 0 and 100 derived from the collected PM. This value represents the absolute quality based upon seconds that had performance problems. The value is displayed as a percentage of seconds in a twenty four hour period that there were **no** problems.
- PM Type - Level at which the performance monitoring data was collected (T1, T3, etc.)
- LOC - Near End (NEND) or Far End (FEND)
- TR # (Trouble Report) - This is the trouble ticket identifier.
- TR Cat (Trouble Report Category) - This identifies the type of trouble ticket defined in the system (i.e., AD - Auto Detect, CR - Customer Report, etc.)
- TR Status (Trouble Status) - The current dispatch disposition of this ticket.
- TDays - Total number of days in the previous 30 days that the circuit has been less than the To (high) PQV. Displayed as a relation, i.e. 15/15 is fifteen out of the last fifteen, 12/28 is twelve out of the last 28, etc. This calculation will not be performed if there are more than 300 lines in the report.

- CDays - Consecutive days (previous to today) that the circuit has been less than the To (high) PQV. This calculation will not be performed if there are more than 300 lines in the report.
- Note - Indicates if a note exists on this circuit

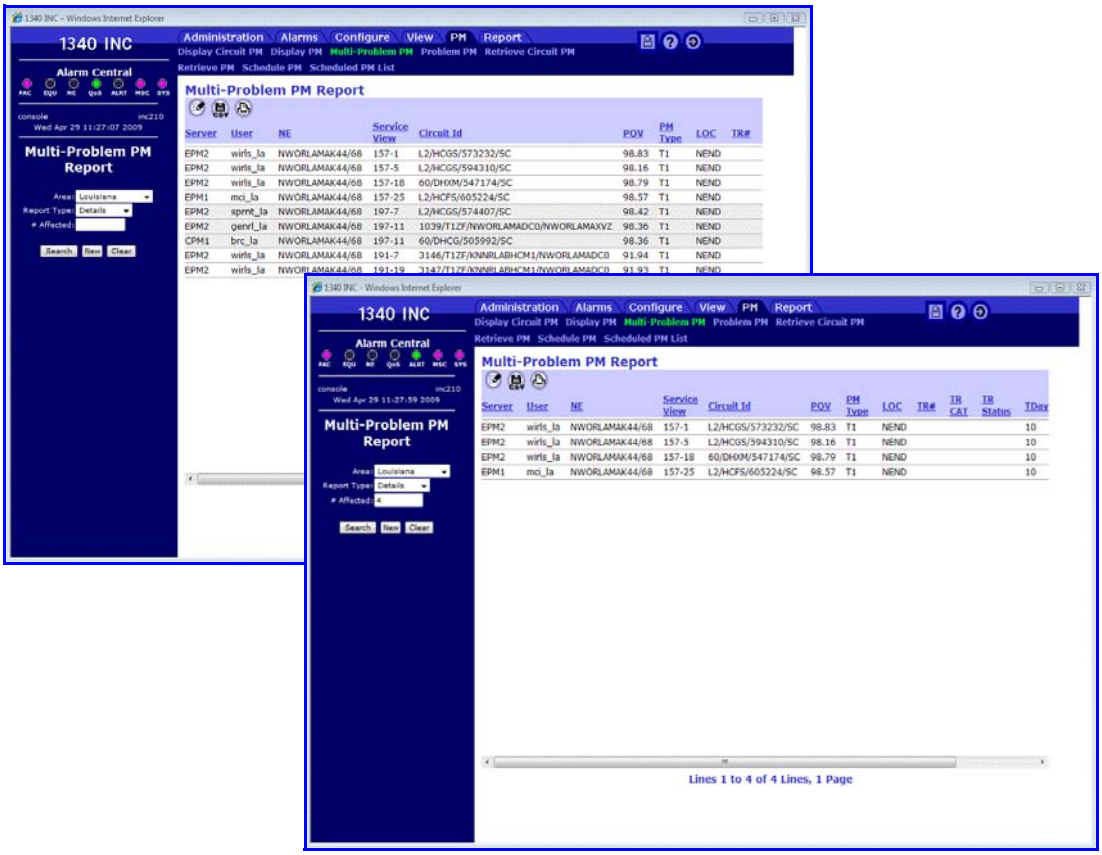


Figure 7-4. **Multi-Problem PM - Details (Area = Louisiana ... all and # Affected filter set to 4)**

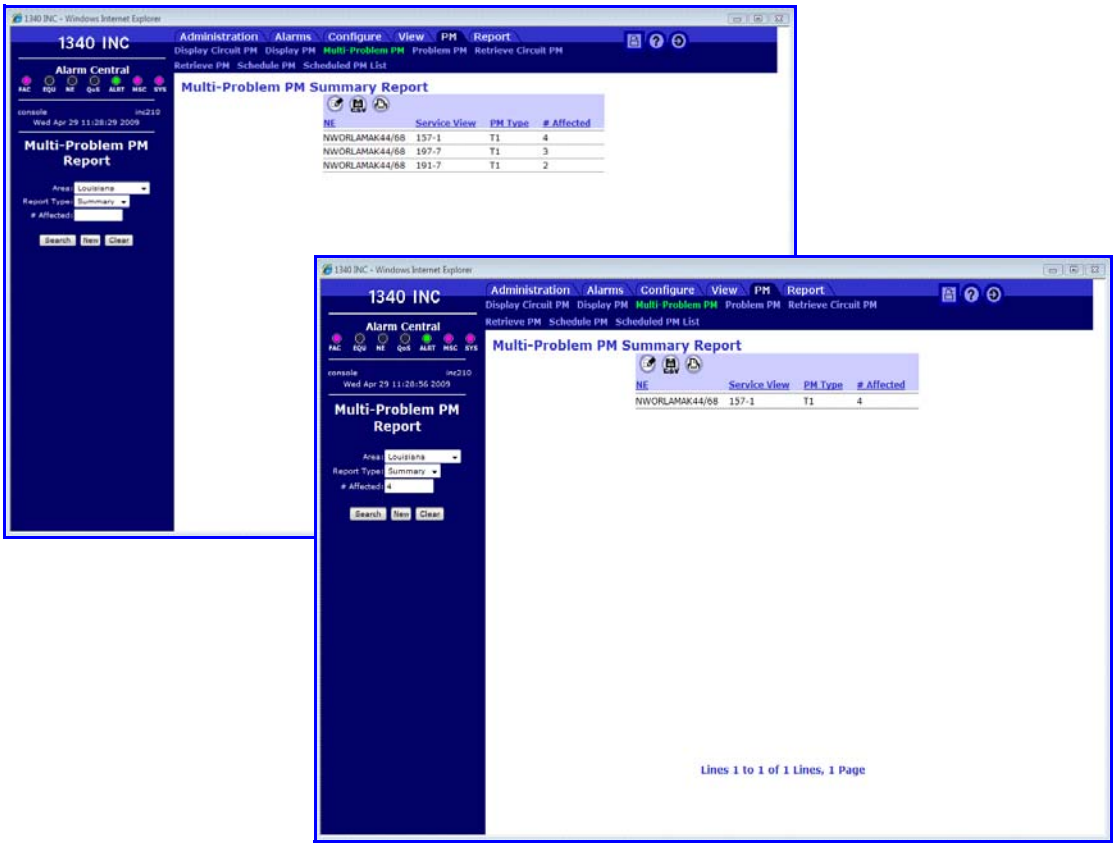


Figure 7-5. **Multi-Problem PM - Summary (Area = Louisana...all and # Affected filter set to 4)**

Problem PM

The Problem PM form is used to identify facilities which have been scheduled for periodic PM collection and have non-zero counts.

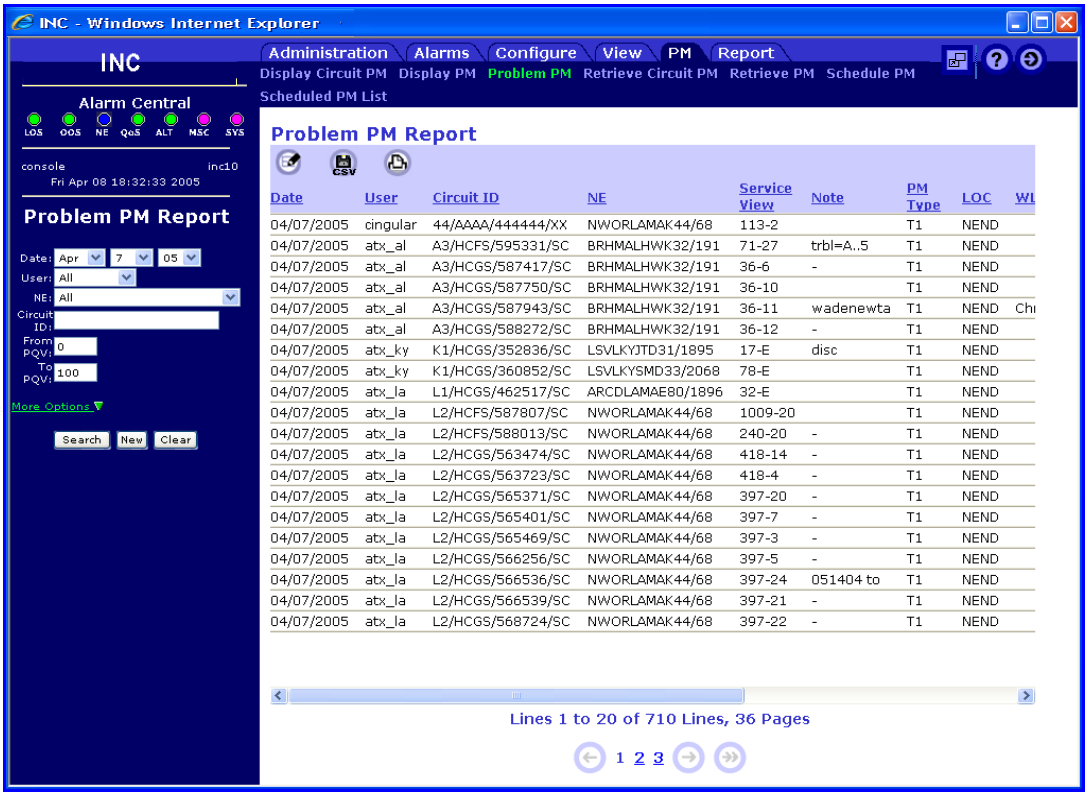


Figure 7-6. **Problem PM**

For each facility/port, all counts (where at least one of the counts retrieved is non-zero) are indicated in a separate column showing the monitor type. A special Performance Quality Value is calculated to provide a quantitative assessment of the quality of the facility using specific monitor types. The PQV is based upon the following formula:

100 * ((86400 - (ESP+SESP+UAS)) / 86400)

This formula uses the errored seconds, severely errored seconds and unavailable seconds, subtracted from and divided by, the number of seconds in a day and multiplied by 100 to get the percentage of seconds in a day that service was unaffected. The PQV is calculated only for specific element types and only where those monitor types are available for that facility.

Filters:

- Date - The date for which the user would like to see collected PM data displayed for problem ports

NOTE:
When the "More Options" value is chosen, the user may enter a range of dates.

- NE - Displays PM data on only the Network Element specified
- Circuit ID - displays only the information for the circuit ID specified
- User - The user whose Problem PM will be displayed
- From PQV - The lowest PQV to be displayed
- To PQV - The highest PQV to be displayed

NOTE:
The wildcard character " * " can be used to filter on a Circuit ID or substring. That is, if the user wishes to find a Circuit ID that contains the characters AB, they can enter either *AB or AB* into the Circuit ID field to find <*anything*> AB or AB <*anything*>, respectively.

- Service View - Displays only the Service View specified
- Location - Location on which PM is collected (Near End, Far End, or Both)
- Count - Display only the ports whose collected PM values are ***at least*** this number
- Circuit Level - Value can be either YES or NO.
    - If the value is set to YES, only one (1) segment per circuit which meets the filtering criteria (the one with the lowest PQV) will be displayed
    - If the value is set to NO, then all segments that meet the filtering criteria will be displayed
- Failed Only - Will display only records on which PM collection failed. If this is set to YES, there will be an additional column displayed that will show the reason for the failure. This column will contain the 4 character code and the denial string from the NE. The codes are NE specific and are documented in the TL1 Manuals for each NE.

NOTE:
The PM configuration file can be set up to automatically deschedule a port for PM collection based upon the NE type and the 4 character denial code. Contact your system administrator to configure this file.

Column Definitions:

- Date - The date that the PM information displayed was collected
- User - The user partition to which the circuit is assigned

- Circuit ID - Contains the circuit identifier
- NE - Network Element that the circuit is connected on
- Service View - Facility/Port that the problem PM was collected on
- Note - Displays the TAG value entered in the NOTES form
- PM Type - Level at which the performance monitoring data was collected (T1, T3, etc.)
- LOC - Near End (NEND) or Far End (FEND)
- WLS - Indicates whether the circuit has been added to the Work List and the state that it is currently in (I = Investigate, R=Repair, S=Study, C=Chronic,T=Trouble,or $=Paid). If this column is blank, the circuit is not on the Work List.
  - — Investigate - An information only state. A problem has been reported or detected on this facility and the problem is being investigated.
  - — Repair - An hourly PM Collection state. The facility is under repair (ticket entered).
  - — Study - An hourly PM Collection state. The facility is being studied for problems. Typically, this state is used after the ticket is closed. On the hour, Integrated Network Controller collects PM and calculates the current PQV based on the PM gathered on the last hour. An alarm outage interval, for the same hour, is also maintained.
  - — Chronic - An information only state. The facility has exhibited chronic problems.
  - — Trouble - An information only state indicating that a customer has called in a problem but the problem could not be found and verified.
  - — Paid - An information only state. This indicates that a payment has been made for loss of use on this facility for the current month.
- PQV - Performance Quality Value. A value between 0 and 100 derived from the collected PM. This value represents the absolute quality based upon seconds that had performance problems. The value is displayed as a percentage of seconds in a twenty four hour period that there were **no** problems.
- #Bad - The number of segments on the circuit that are less than the To (high) PQV
- TDays - Total number of days in the previous 30 days that the circuit has been less than the To (high) PQV. Displayed as a relation, i.e. 15/15 is fifteen out of the last fifteen, 12/28 is twelve out of the last 28, etc. This calculation will not be performed if there are more than 300 lines in the report.
- CDays - Consecutive days (previous to today) that the circuit has been less than the To (high) PQV. This calculation will not be performed if there are more than 300 lines in the report.
- Max - The greatest value of the PM values collected

NOTE:
Columns that are listed after the Max column will vary based on the NE type and the types of performance monitoring data being collected. Display of these columns is set in the View -> Preferences drop down menu under the PM tab.

- TR # (Trouble Report) - This is the trouble ticket identifier.
- TR Cat (Trouble Report Category) - This identifies the type of trouble ticket defined in the system (i.e., AD - Auto Detect, CR - Customer Report, etc.)
- TR Status (Trouble Status) - The current dispatch disposition of this ticket.

NOTE:
The TR fields are only displayed if the system is provisioned for the WFA/C Ticket feature. Please see the Integrated Network Controller Installation Application Guide for information on provisioning this feature.

Navigation Drop Down List:

- Add Circuit to WL - Used to add an entire circuit to the WL
- Add to WL - Used to add a port to the Work List.
- Alarm List - Displays the alarm list for the selected facility
- Audit Circuit - Displays the Audit Circuit form for the selected circuit
- Circuit Analysis Tool - Displays the Circuit Analysis Tool
- CLI Report - Displays the CLI report for the selected entry
- Create Ticket - Allows the user to create a trouble ticket that will be forwarded to the WFA/C system. This menu item will only appear on circuits with no current trouble ticket defined in the WFA/C system.
- Close Ticket - Allows the user to close a previously created trouble ticket. This close request will be forwarded to the WFA/C system. This menu item will only appear on circuits for which a trouble ticket was previously created in the WFA/C system.
- Deschedule PM - Displays the Schedule PM form with the value from the chosen report entry pre-populated
- Display PM- Displays the PM data collected over the previous 7 days (by default). This information can be viewed up to the previous 45 days.

- Graph PQV - Displays the historical graph of the PQVs on the selected circuit. The data is displayed in both graphical and tabular format. Note that this graph can be printed directly to a system defined printer via the Print icon.

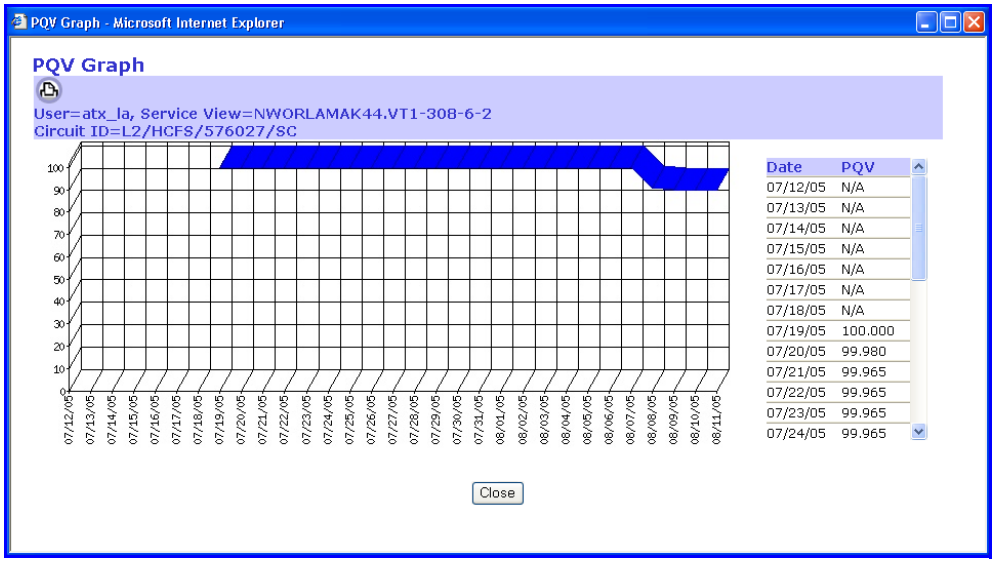


Figure 7-1. **Graph PQV**

- NE Cut Thru - Opens up the NE Cut Thru form on the selected NE
- Notes - Displays the Note report for the selected circuit
- Update Tag - Brings the user to the Update Tag text window
- Retrieve Circuit PM - Displays the Retrieve Circuit PM for the selected circuit
- Retrieve PM - Retrieve and display PM for the selected circuit
- Sync Ticket - Synchronizes the INC ticket status to the most recent WFA/C dispatch status
- Trace - Display the selected circuit on the Circuit Trace form
- Update Ticket - Allows a user to add comments to a previously created trouble ticket for this circuit in the WFA/C system.

Retrieve Circuit PM

The Retrieve Circuit PM form is used to retrieve **all** collected 24 hour PM on a specific circuit, regardless of what monitor types (MONTYPES) are set in the PM preferences tab.

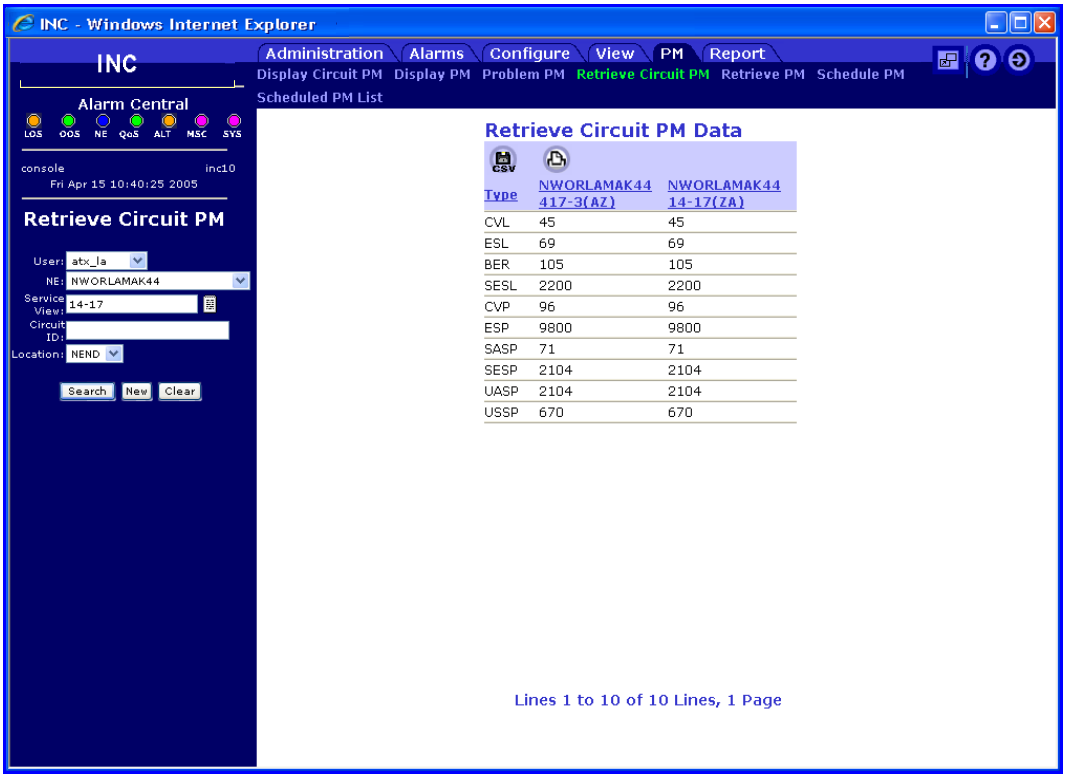


Figure 7-7. **Retrieve Circuit PM**

Filters:

- User - The user for whom the PM data is being requested
- NE - Network Element whose data is being requested
- Service View - Displays the Service View. This may be specified via selection from the Service View Wizard
- Circuit ID - Circuit Identifier
- Location - Near End (NEND) or Far End (FEND)

Column Definitions:

The columns displayed will be the TYPE of PM data that was collected on the specified circuit, as well as the counts for each type on each port that makes up the circuit.The ports will also be labelled as (AZ) or (ZA) indicating their respective locations.

Retrieve PM

The Retrieve PM form is used to query network facilities when a degradation of service is reported or suspected within the network.

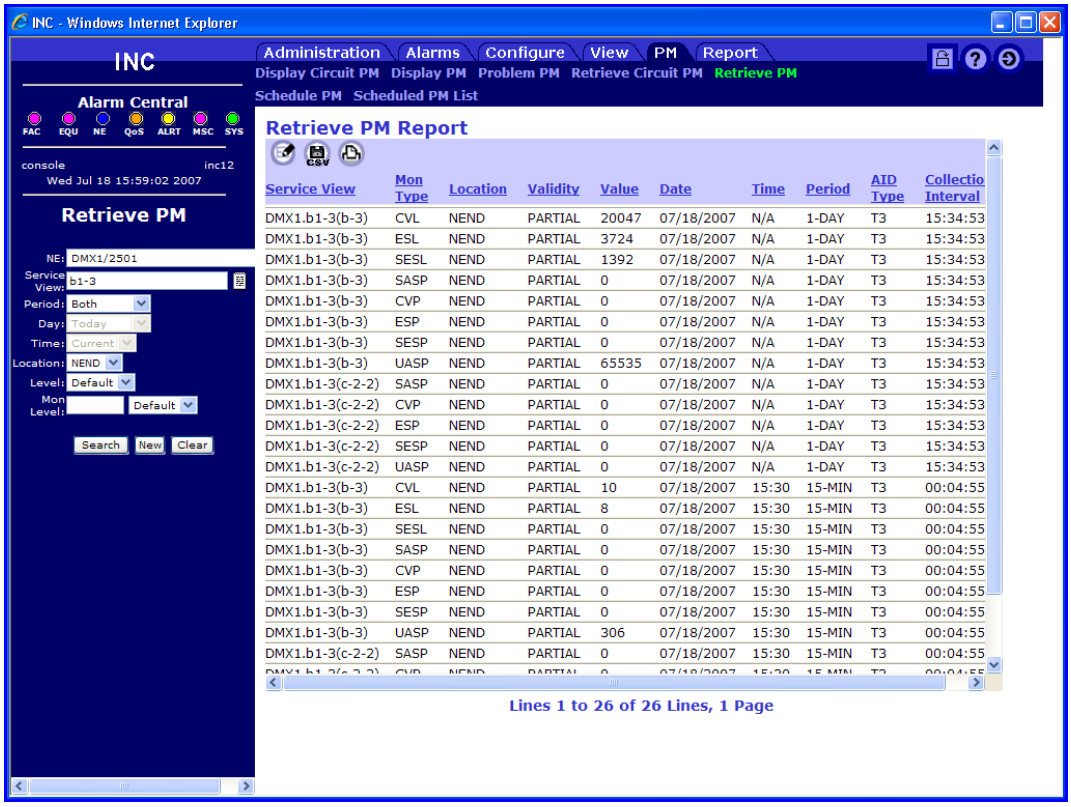


Figure 7-8. **Retrieve PM**

Filters:

- User - The user for whom the PM data is being displayed
- Service View - Displays only the Service View specified
- Period - Collection period that the user wishes to retrieve PM data (15 minute, 1 day, or both)
- Day - Day that the user wishes to see the PM values collected for (Today, Yesterday)
- Time - Used in conjuction with the 15 minute period, this allows the user to select a specific 15 minute period

- Level - Allows the user to receive PM on a different carrier level (i.e. OC3) for the Service View specified
- Mon Level - Allows the user to choose a value and qualifier that the system will filter displayed PM counts on. The value must be entered manually, and the qualifier chosen from the drop down list. For example, 1500 UP will only show PM counts of 1500 and greater. If the Default value is left in the qualifier list, no filtering will be done on the counts. The Mon Level may also be a negative number greater than -10,000 (i.e. -9999, -9998, etc.) as some PM counts (temperature, decibels, etc.) can have negative values.

NOTE:
If a network element that does not produce PM data is selected by the GUI user a warning message will appear informing the user that the chosen NE is not PM capable.

Columns Definitions:

- Service View - Service view that was retrieved
- Mon Type - Type of PM data that was retrieved
- Location - Near End (NEND) or Far End (FEND)
- Validity - Valid (data collected for an entire requested period (24 hour or 15 minute), or Partial (data collected for a portion of the requested period)
- Value - Number of PM violations retrieved
- Date -Month/Day/Year that the retrieval was executed
- Time- Time that the retreival was executed
- Period - PM period collection (15 minute or 1 day)
- AID Type - TC level of the AID being retrieved
- Level - Carrier level of the circuit (T1, T3, etc.)
- Collection Interval - Displays the amount of time “into” the requested interval that the amount represents. This value will be 0-24 for 1 day PM retrievals, and 0-15 for 15 min PM retrievals

Navigation Drop Down List:

- Deschedule PM - Displays the Scheduled PM List. Allows the user to select an NE and Service View on which to deschedule PM collection
- Display Circuit PM - Displays the Display Circuit PM form for the specified NE and Service View
- Display PM - Display the stored PM data for the selected circuit
- Graph PQV - Displays the graph of the last 30 days of PQVs on the selected circuit
- Retrieve Circuit PM - Displays the Retrieve Circuit PM report for the selected NE and Service View

- Trace - Displays the selected circuit on the Circuit Trace report

Schedule PM

The Schedule PM form is used to schedule and deschedule automatic performance monitoring data retrieval of 24 hour counts of the specified facility. Performance Monitoring data is information about the health of facilities that are associated with SONET network elements. A SONET network element constantly monitors the integrity of its facilities for various network events such as errored seconds and also maintains 24 hour counts of those events. Using the Schedule PM option, Integrated Network Controller will automatically retrieve the previous day 24 hour PM counts for the specified facility.

The Schedule PM Form allows the user to select a specific user, service view and period for which PM will be collected. Select the desired facility from the list and it will populate the Schedule PM form. If PM retrieval is desired at the OC-3, OC-12,OC-48, or OC-192 level, use the Override drop down list on the form. Select the Location (NEND, FEND, or BOTH). After all desired options have been selected, click the <Submit> button. To Deschedule PM collection, select the Deschedule option, populate the form with the appropriate information, and select the <Submit> button.

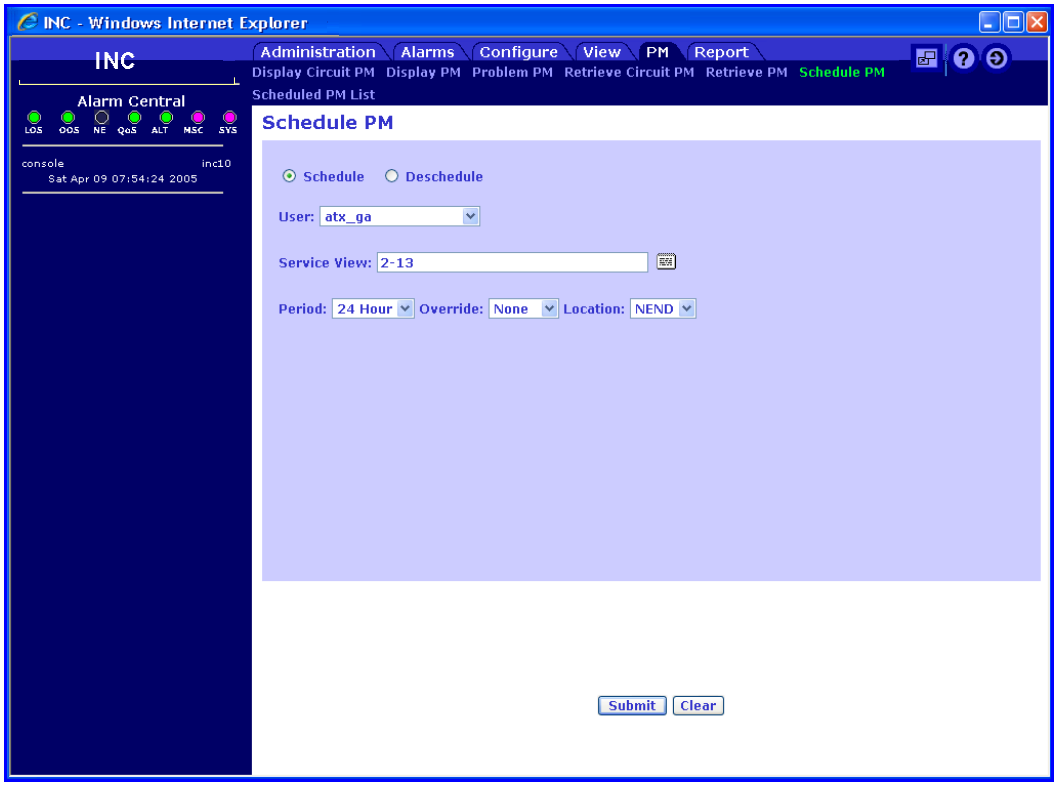


Figure 7-9. **Schedule PM**

Fields:

- User - The user for whom the PM data collection is being schedule
- Service View - Displays only the Service View specified
- Period - Collection period that the user wishes to retrieve PM data for (24 hour)
- Override - Used to select a PM collection on a specific Optical Carrier level (OC3, etc.)
- Location - Near End, Far End, or Both

Schedule PM List

The Schedule PM List the list of any facility which is a part of the PM schedule.

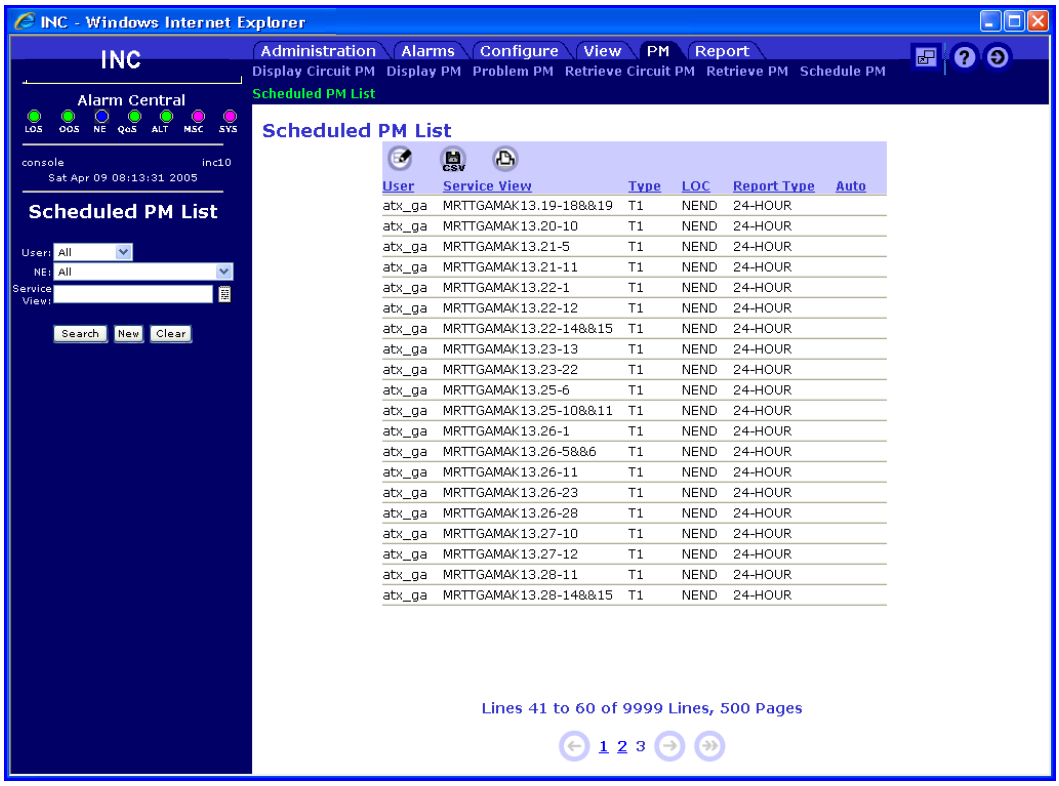


Figure 7-10. **Scheduled PM List**

Filters:

- User - The user for whom the Scheduled PM data is being displayed
- NE - The Network Element on which PM will be collected
- Service View - The Sevice View for which PM collection is scheduled

Columns Definitions:

- User - The user for whom the data was requested
- Service View - Service View that was retrieved
- Type - Type of PM data that was retrieved

- LOC (Location) - Near End (NEND) or Far End (FEND)
- Report Type - Indication of the time period that PM data was collected
- Auto - An indication of whether automatic PM collection has been scheduled for this user and service view

Navigation Drop Down List:

- Deschedule - Navigates to the Schedule PM List with the Deschedule option selected and the associated information populating the form
- Display PM - Displays the stored PM data for the selected circuit

Reports

8

Chapter Contents

The Report Tab

The report tab allows the user to quickly generate and access the various reports managed by the Integrated Network Controller system.

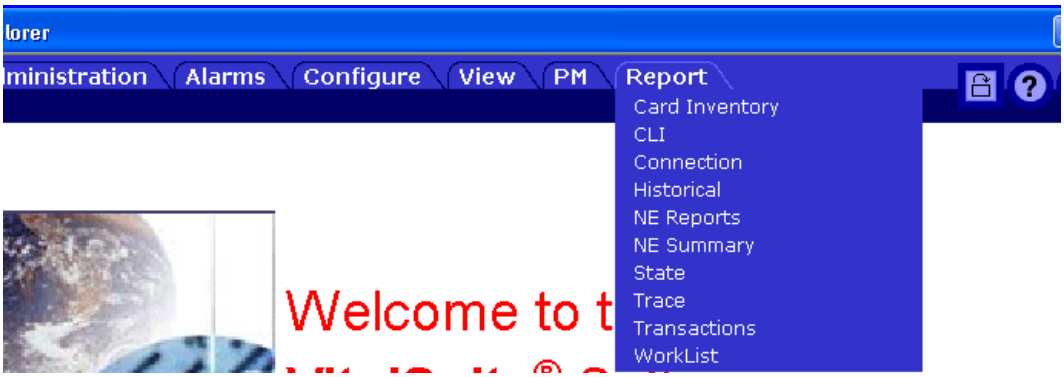


Figure 8-1. **Report Tab**

Card Inventory

The Card Inventory report is used to display card specific information for a specified NE Type, Subnetwork, Network Element, or AID.

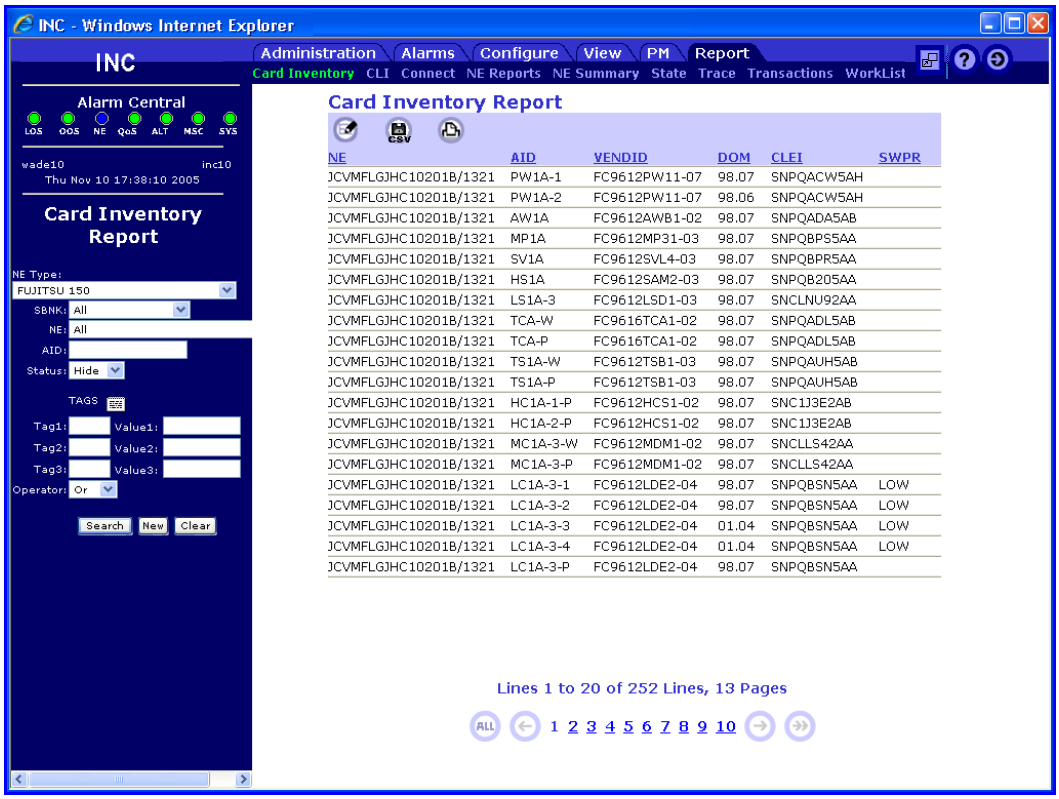


Figure 8-2. **Card Inventory Report**

Filters:

- NE Type - Type of Network Element to be displayed
- SBNK - Displays card data only for the specified subnetwork
- Comm - Allows the user to search on a specific Communications group
- NE - Displays CLI data on only the Network Element specified
- AID - Allows the user to search on a specific access identifier
- Status - Allows the user to Hide or Show the status of each card in the report

- TAGS (Tag Wizard) - Selection of the tag wizard will allow the user to select further filtering options (tags), based upon the column headers for a specific NE Type. The Operator field allows the user to select the AND or OR operator for additional filtering.

Columns Definitions:

Only the NE and AID columns are generic to this report. Additional column information displayed will be based upon the card type requested. Consequently, only the NE and AID columns can be “edited” via the Customize Report icon located at the top of the report.

Circuit Analysis Tool

The Circuit Analysis Tool is a report that displays Trace information as well as real time PM, circuit and LC/FF/PM audits. Additionally, the display will indicate the trunk conditioning codes and alarm conditions on the circuit.

The form is divided into two sections. The top portion is the graphical trace of the selected circuit.

The table below each NE in the trace displays:

- the From (AZ) and the TO (ZA) sides of the connection
- the trunk conditioning (TC) for the AZ and ZA
- alarm conditions (using the alarm color for each severity level set on the Preferences form)
- the Xcon Audit results (if selected)
- Facility Audit results
- Current 24 hour PM data (if selected)

NOTE:
For the selected audit data (Xcon, LC/FF/PM), the table display will be red to indicate a mismatch, yellow to indicate that no data was available.

NOTE:
The cross connect audit and PM retrievals are real time. The additional data is retrieved from the 1340 INC database.

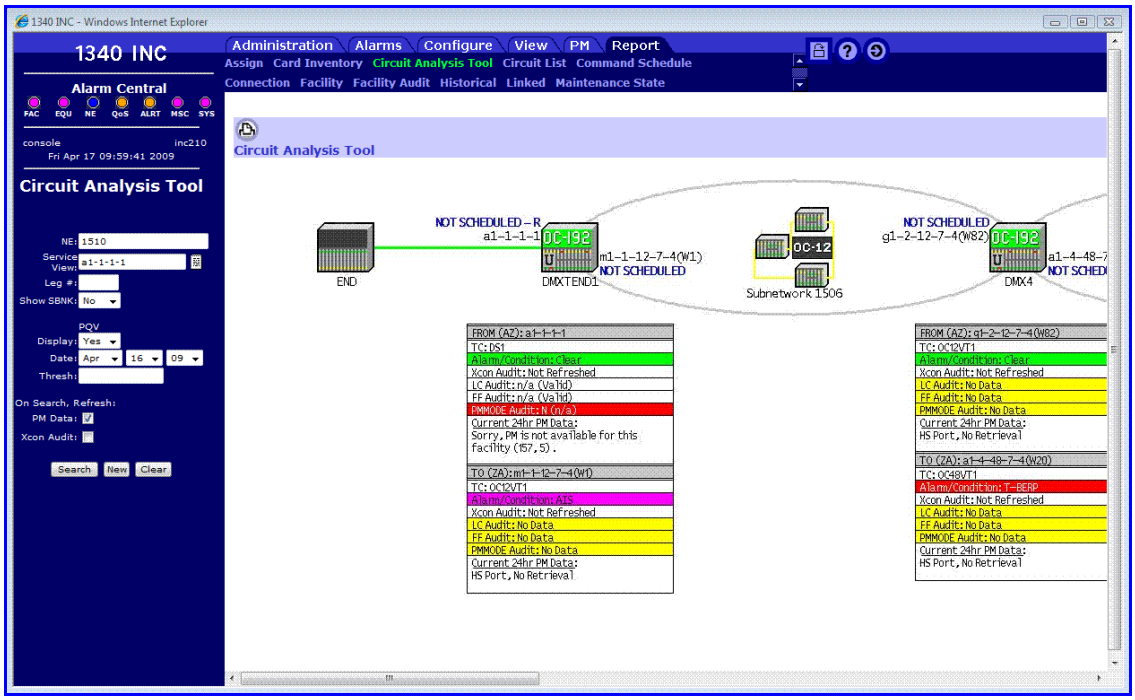


Figure 8-3. **Circuit Analysis Tool**

Filters:

- NE - Allows selection of the NE the circuit being traced is on
- Service View - Selection of the aid being traced
- PQV
    - Display - Show the PQV on the graphical display.
    - Date - User definable date from which to display PQV data.
    - Thresh - A user definable value from 1 to 100.
- On Search Refresh
    - PM Data - Allows the user to execute a PM audit when the form is refreshed.
    - Xcon Audit - Allows the user to execute a cross connect audit when the form is refreshed.

Navigation Drop Down List:

- Add Circuit to WL - Allows the user to add all ports of the circuit to the WorkList
- Add FROM to WL (AZ) - Adds From side port of NE to WorkList
- Add TO to WL (ZA) - Adds To side port of NE to WorkList
- Alarm List (NE) - Displays the alarm list for that network element
- Alarm List (Circuit) - Displays the alarm list for that circuit
- Audit Circuit - Displays the Audit Circuit form for the selected circuit
- Disconnect - Displays the Disconnect form for the selected circuit
- Display Circuit PM - Displays the Display Circuit PM form for the selected circuit
- Display FROM PM (AZ) - Displays the stored PM of the FROM side of the circuit
- Display TO PM (ZA) - Displays the stored PM of the TO side of the circuit
- Equipment View - Displays the Equipment View for the selected NE
- Graph FROM PQV - Displays a historical graph of the last 30 days of the FROM side PQV values
- Graph TO PQV - Displays a historical graph of the last 30 days of the TO side PQV values
- Linked Report - Displays the Linked Facility Report for the selected NE
- Loop From (AZ) - Displays the Operate Loopback form for the selected NE's From side
- Loop To (ZA) - Displays the Operate Loopback form for the selected NE's To side
- NE Cut Thru - Opens the NE Cut Thru form for the selected NE
- NE Usage - Displays the Node Usage report for the selected NE
- Notes - Display the NOTE report for the selected circuit
- Retrieve Circuit PM - Displays the Retrieve Circuit PM form for the selected NE
- Retrieve FROM PM (AZ) - Displays 15 minute and 24 hour PM for the FROM side of the selected NE
- Retrieve TO PM (ZA) - Displays 15 minute and 24 hour PM for the TO side of the selected NE

Circuit List Report

The Circuit List report is used to search for and display specific circuits based upon the filters selected.

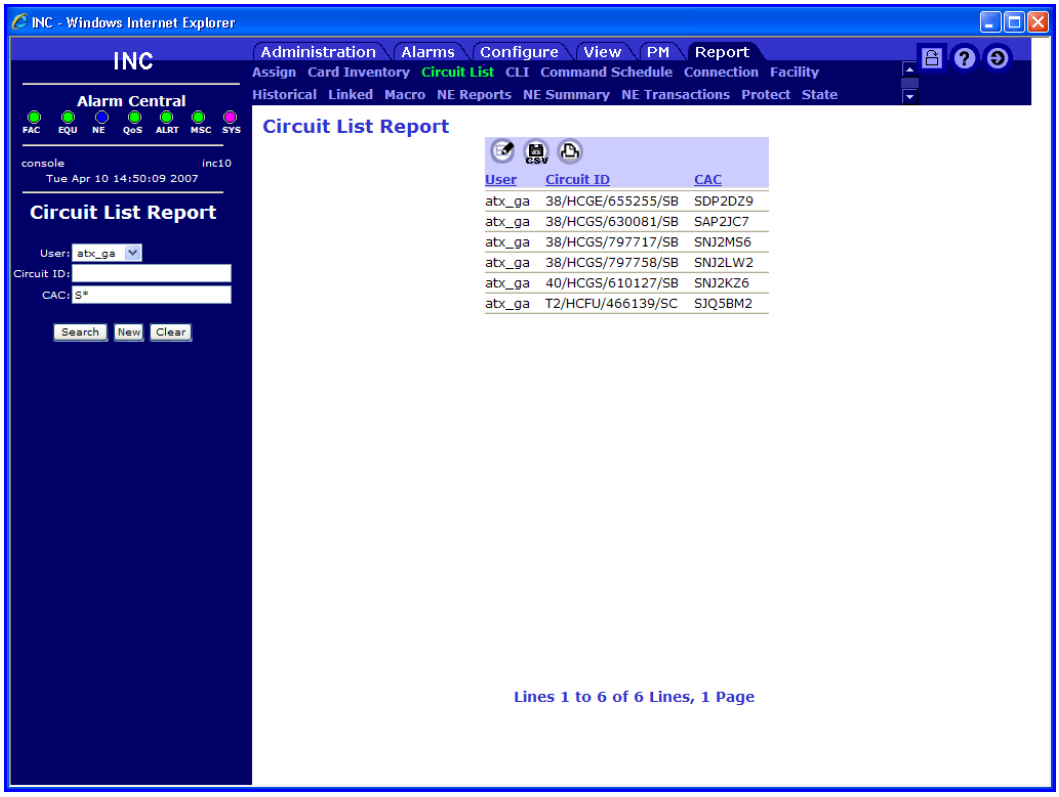


Figure 8-4. **Circuit List Report**

Filters:

- User - user whose circuits are to be displayed
- Circuit ID - Circuit ID to be displayed
- CAC - CAC code to be displayed

NOTE:
The use of the wildcard character * can be used to narrow the search for circuits. It should be noted that the search is faster when the * is used at the end of the search string (i.e. SNK*) as opposed to the beginning of the search string (i.e. *BM2).

Columns Definitions:

The columns User, Circuit ID and CAC are displayed based upon the selected filters.

Navigation Drop Down List:

- Add Circuit to WL - Add entire circuit to the WorkList
- Audit Circuit - Displays the Audit Circuit Connections form for this circuit
- Circuit Analysis Tool - Displays the Circuit Analysis Tool form for this circuit
- Display Circuit PM - Display the Display Circuit PM form for this circuit
- Retrieve Circuit PM - Display the Retrieve Circuit PM form for the selected circuit
- Trace - Displays the Facility Trace for the selected circuit

CLI

The CLI report allows the user to search for specific circuits based upon a number of filtering options (usually the circuit's CLI code (Circuit ID), or comment field) as well as navigate to additional forms once the desired circuit is found.

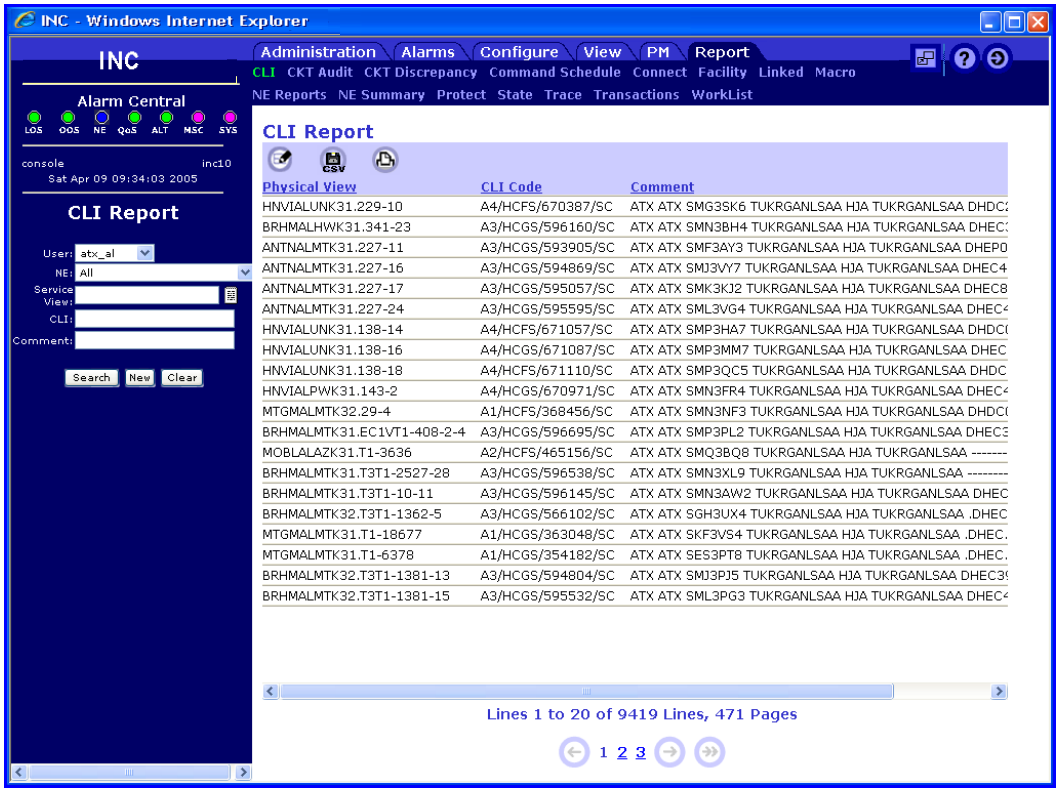


Figure 8-5. **CLI Report**

Filters:

- User - Displays data only for facilities assigned to the user specified
- NE - Displays CLI data on only the Network Element specified
- Service View - Allows the user to search on a physical view
- CLI - CLI string or portion of the CLI string to be searched for
- Comment - Comment or portion of the comment that is being searched for. The comment field by default is made up of the ACNA, CCNA, CAC, MCO, OCO, and CKR values, but may be edited (via the Edit button).

NOTE:

The CLI and Comment filters may be populated with any portion of the string being searched for. The search is case insensitive for either field, but spaces are not allowed in the CLI field search. It should also be noted that the CLI Report cannot be run with the default value of ALL in the USER and NE fields due to the large quantity of data that would likely be returned. One of the fields (User, NE, CLI, or Comment) must be populated with specific search data.

Columns Definitions:

- Physical View - NEID.AID identifier
- CLI Code - CLI code or Circuit ID
- Comment - Comment field. The comment field by default is made up of the ACNA, CCNA, CAC, MCO, OCO, and CKR values.

Navigation Drop Down List:

- Add Circuit to WL - Add entire circuit to the WorkList
- Circuit Analysis Tool - Displays the Circuit Analysis Tool form for this circuit
- Display Circuit PM - Display the Display Circuit PM form for this circuit
- Display PM - Displays the PM for the selected service view
- Retrieve Circuit PM - Display the Retrieve Circuit PM form for the selected circuit
- Retrieve PM - Displays the Retrieve PM Report for the selected service view
- Trace - Displays the Facility Trace for the selected circuit

Connect

The Connect Report allows the user to query Integrated Network Controller for circuit connections by user, network element, circuit id, service view, or type. Any combination of filters is acceptable.

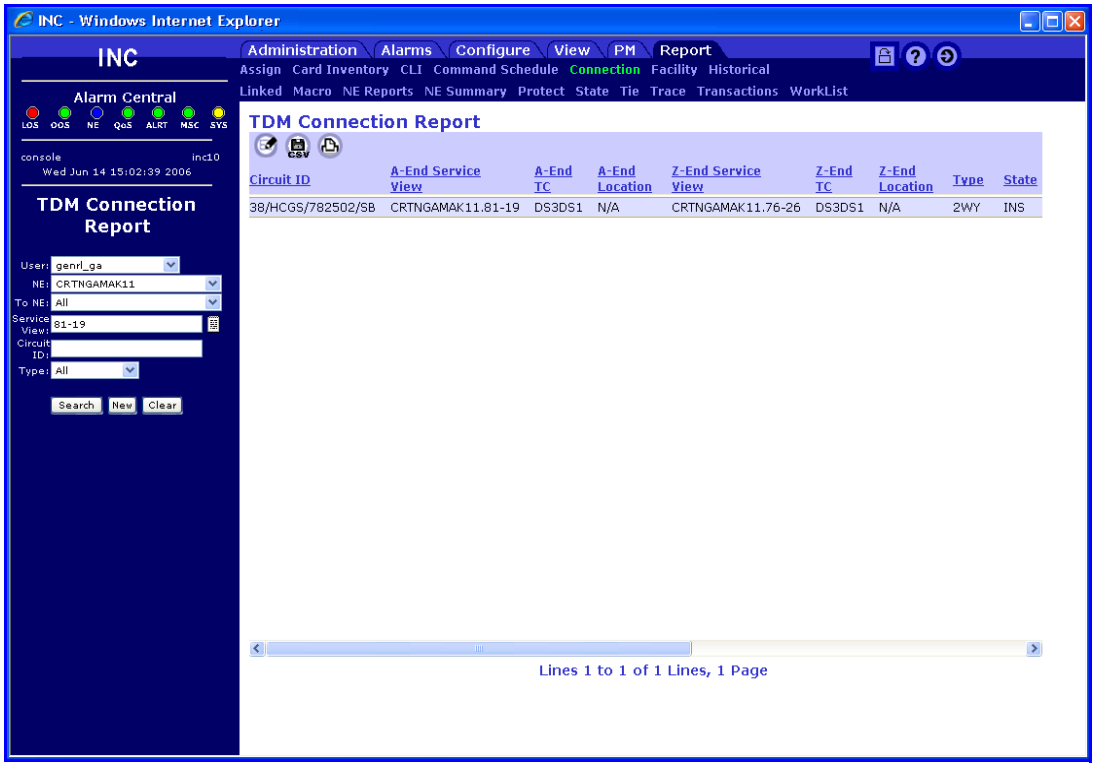


Figure 8-6. **Connect Report**

Filters:

- User - Displays connect data only for the user specified
- NE - Displays connect data on only the Network Element specified
- To NE - Displays circuits from the “NE” filter to this NE only
- Service View - Allows the user to search on a physical view
- Circuit ID - Circuit Identifier
- Type - The following TYPE options are available:

- All: Displays all connections on the chosen NE. Both ports will be on the same NE.
- SubNetwork: Displays all “subnetwork” connections i.e. ring connections, from low speeds on the chosen NE. The ports reported are the endpoints of the ring circuit.

Columns Definitions:

- Circuit ID - The Circuit Identifier
- A-End Service View - Service view of one end of the connection
- A-End TC - Trunk Conditioning on one end of the connection
- A-End Location - An end node of the connection
- Z-End Service View - Service view of one end of the connection
- Z-End TC - Trunk Conditioning on one end of the connection
- Z-End Location - An end node of the connection
- Type- Type of connection
- State - Status of the connection (Pending, Active, In Service)
- Pending - Time the connection was put into the Pending state
- Activation - Time the connection was put into the Active state
- In Service - Time the connection was put into the In Service state
- Order Number- Order number of the connection request (if applicable)
- Customer - Customer the connection is being executed for
- Who - User that put the connection up

Navigation Drop Down List:

- Circuit Analysis Tool - Displays the Circuit Analysis Tool
- Disconnect - Displays the Circuit Management Disconnect form
- Notes - Displays the Note Report
- Trace - Displays the Circuit Trace form for the selected line

Facility Audit Report

INC will perform audits of the Line Code, Framing Format and PM Mode information supplied by the TIRKS feed against what is provisioned at the NE. The Line Code and Framing Format are applicable to both T1 and T3 circuits. The PM Mode indicates whether PM is enabled or disabled on each of the facilities of the NEs and also applies to T1 and T3 circuits.

When circuits are received by INC, this circuit provisioning information is extracted from the incoming WORD DOC and is stored in the INC database. A list of facilities associated with the incoming circuits is generated and during a period of time, defined by a system variable, an automatic audit takes place. The automatic audit compares the information in the INC database to information retrieved from the NE, and stores this in an audit database. In addition, an autonomous attempt is made, by INC, to correct PM Mode information at the NE, based on the information collected in the INC database.

NOTE:
The automatic audit and match processing is run asynchronous with the circuit feed. Results may not be available immediately after a circuit is fed to INC. The audit is also run only according to the time defined in a system variable, and is settable on a system basis.

The information in the audit database, and the results of any audit/sync, is displayed with a new report. The report can be filtered according to many criteria, and audit/match actions can be performed from the report. This report is available from:

- Directly off of the Reports Menu
- Navigation from a Trace Form
- Navigation from the Circuit Report

The report form displays:

- Individual facilities, and for each, the circuit ID and user, according to a set of filters defined by the report. The report can in turn be filtered by individual facility, by circuit ID, or by NE.
- The INC DB information for LC/FF and PM Mode. This information is derived from the circuit feed information. The information is NA if it was not able to be extracted, or if the circuits were put in place before this feature was in place.
- The LC/FF and PM Mode as retrieved from the NE for any successful audit.
- The most recent Audit or Match results. If the most recent audit or match failed (e.g. messaging problems between the INC and the NE), then the reason for failure is provided.

Manual Audit and Match actions for individual facilities are available from the report form. Action choices are available on each row (when a row is selected) of the report for Audit or Match. The results of the action are passed back, and the form data is refreshed to show the new data.

The Facility Audit Report is available to console and console aliases only when the TIRKS feature is enabled. This report applies only to DS1/DS3 facilities associated with TIRKS circuits that have been fed into INC.

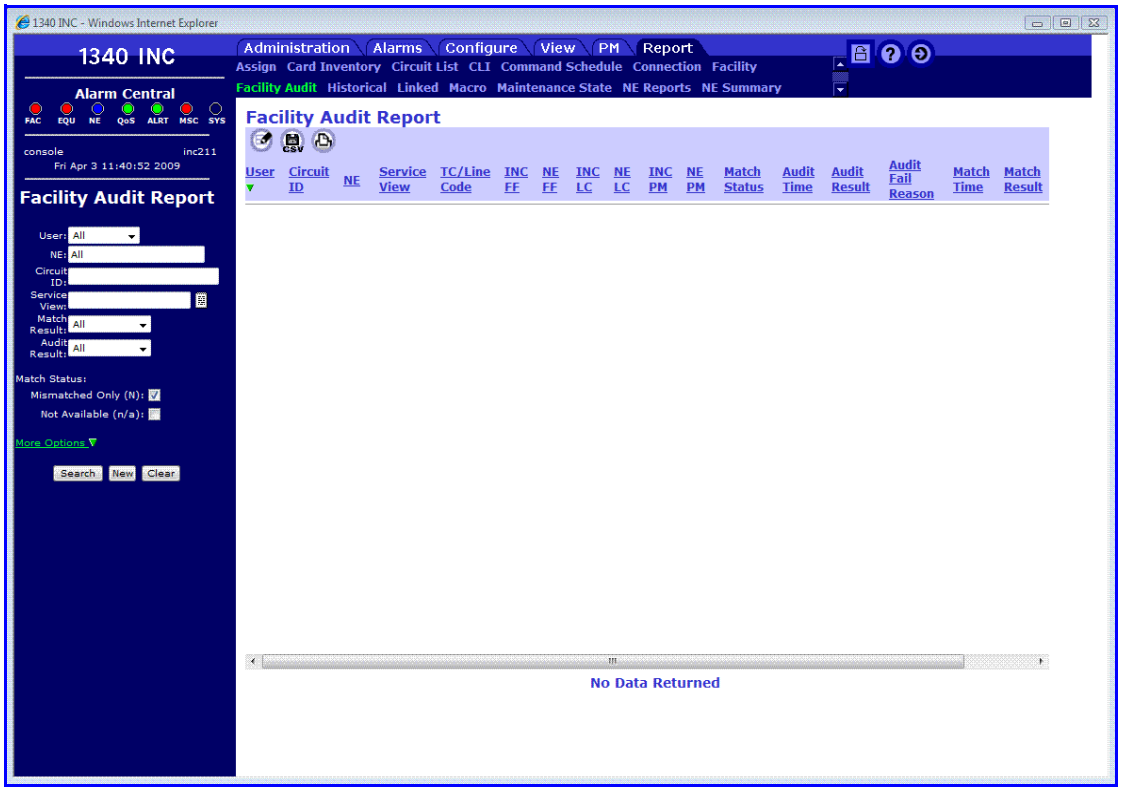


Figure 8-7. **Facility Audit Report**

Filters:

- User - Displays the audit report for selected users
- NE - Displays the audit report for selected NE
- Circuit ID - Displays the report for all facilities along the end-to-end patch for the selected circuit
- Service View - Displays the report for the specified AID
- Match Result :
    - Completed - Only report on facilities for which the match action completed successfully

- Denied - Only report on facilities for which the match action did not complete successfully
- NA - Only report on facilities for which the match results are not available (i.e. match was never run)

- Audit Result -
  - Completed - Only report on facilities for which the audit action completed successfully
  - Denied - Only report on facilities for which the audit action did not complete successfully
  - NA - Only report on facilities for which the audit results are not available (i.e. audit was never run)
- Match Status
  - Mismatched Only checkbox -
    - Unchecked - Report on all facilities irrespective of the INC/NE line code/ framing format/PM Mode match status (i.e. matched, un-matched or unknown)
    - Checked - Only report on facilities where the INC/NE line code/framing format/PM Mode do not match or the match status is unknown
  - Not Available checkbox -
    - Unchecked - Do not display ports if the match status is unavailable
    - Checked - Show all ports that 1340 INC cannot verify matches on
- From Audit Time - date and time at which the user would like the audit to begin
- To Audit Time - date and time at which the user would like the audit to end

Columns Definitions:

Columns will be populated based upon the filters chosen.

Navigation Drop Down List:

- Audit LC/FF/PMMode - Executes an Audit for the selected facility
- Synch LC/FF/PmMode - Synchronizes the LC/FF/PmMode values for a facility between the NE and INC.

NE Reports

The NE Reports form provides the user with a list of reports that can be retrieved to display INC information relating to the databased network elements. To access any of these options select the desired report. These reports are used in conjunction with the Map View and Table View functions.

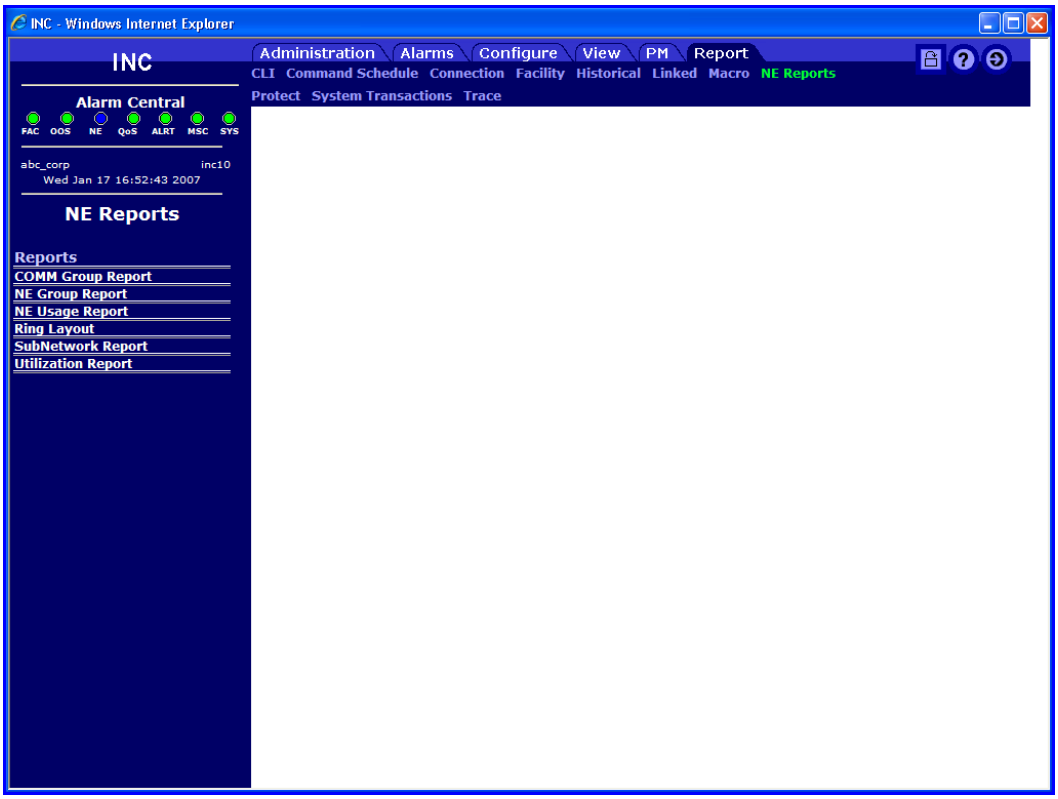


Figure 8-8. **NE Reports**

Comm Group Report

The Comm Group Report displays all network elements that belong to the same communications group. Each network element which is defined as an add-drop-multiplexor is associated with a communication group. The communication group is established from Integrated Network Controller to an interface (NMS-to-GNE, NMS-to-NMA or NMS-to-NMS) or from Integrated Network Controller to a gateway network element (GNE). Every network element within the given ring or every network element beneath the interface, for example, a GNE Interface, uses the same unique communication group ID.

An example would be if Integrated Network Controller were directly connected to a GNE. The GNE could have a COMM Group ID of 13. All network elements beneath the GNE would also carry a COMM Group ID of 13.

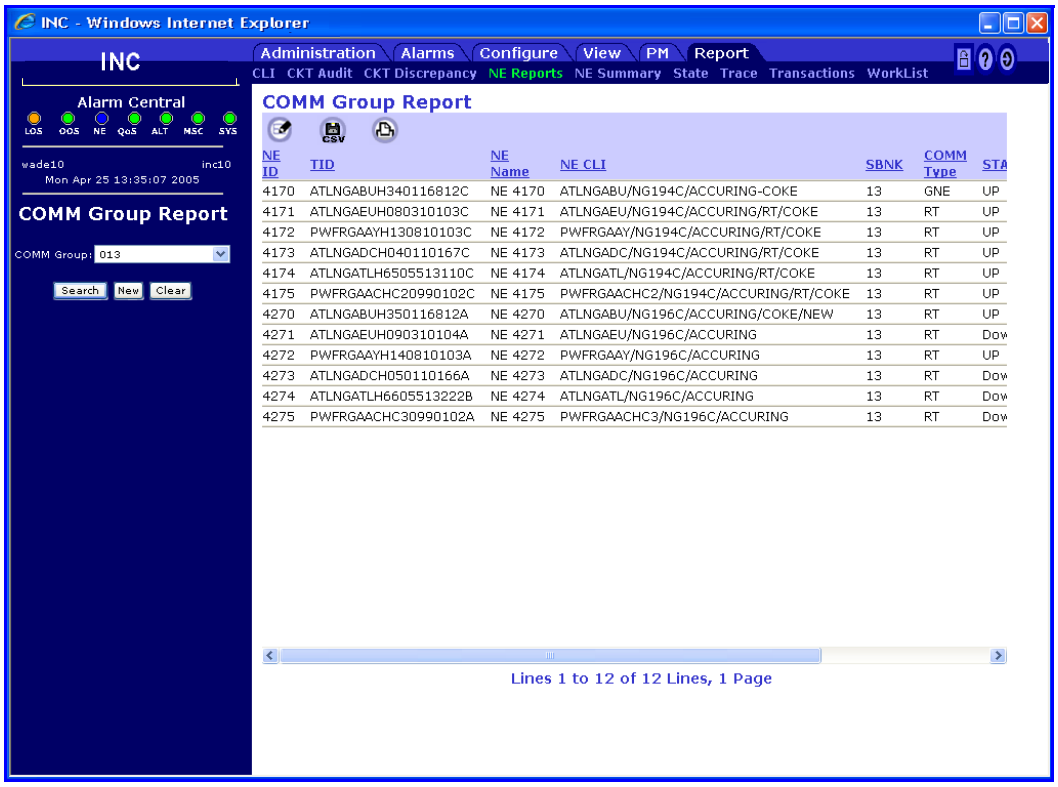


Figure 8-9. **Comm Group Report**

Columns Definitions:

- NE ID - Network Element Identifcation
- TID - Network Element Target Identifier

- NE Name - Network Element name
- NE CLI - Defined CLI code for the network element
- SBNK - Subnetwork that the network element belongs to
- Comm Type - GNE (Gateway Network Element) or RT (Remote Terminal)
- STAT - Indication of the communication status of the NE
- Alarm - Highest severity alarm on the network element
- NE Type - Vendor and model of the network element

Navigation Drop Down List:

- Alarm Report - Displays the Alarm report for the selected NE
- CLI Report - Displays the CLI report for the selected NE

NE Group Report

The NE Group Report allows the user to search on a particular NE Group to see all of the nodes that make up that group. The report consists of a list of all NEs which have been defined as being a part of the given NE Group.

The alarm column will contain an alarm code representing the highest severity alarm that currently exists in that network element. The SBNK column shows the subnetwork ID of the NE if it is an ADM or DCS if it is a digital cross-connect system.

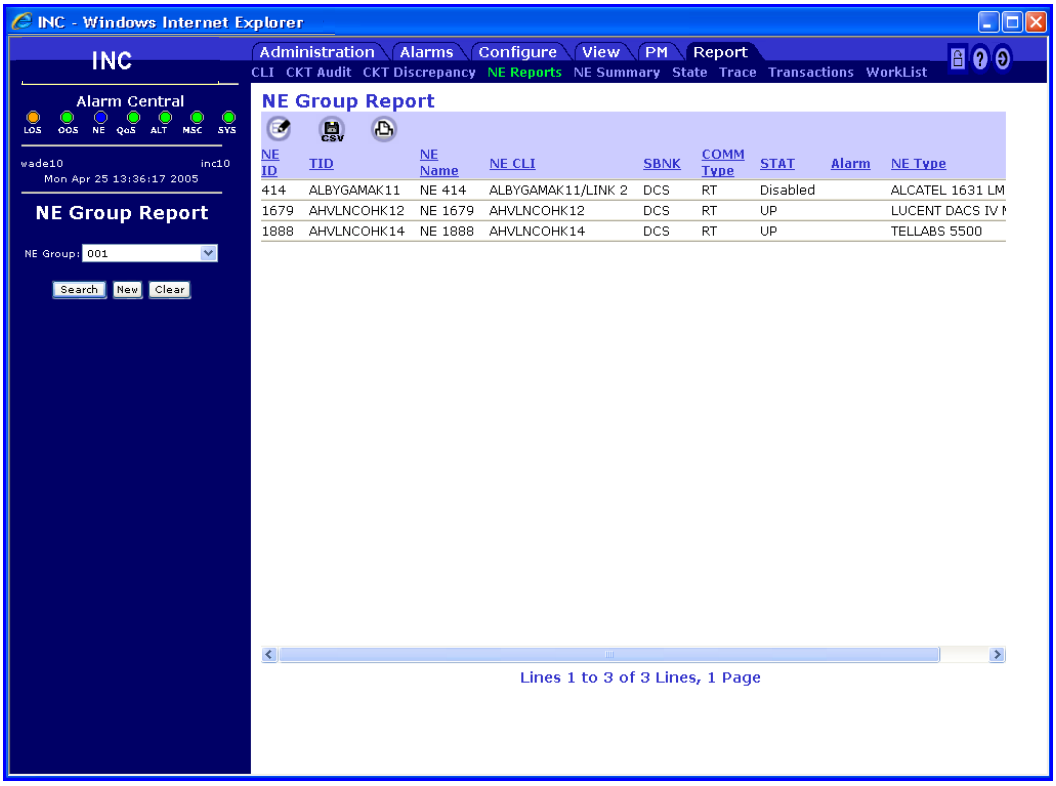


Figure 8-10. **NE Group Report**

Columns Definitions:

- NE ID - Network Element Identifcation
- TID - Network Element Target Identifier
- NE Name - Network Element name
- NE CLI - Defined CLI code for the network element

- SBNK - Subnetwork that the network element belongs to, or DCS if the NE is a Digital Cross Connect System
- Comm Type - GNE (Gateway Network Element) or RT (Remote Terminal)
- STAT - Indication of the communication status of the NE
- Alarm - Highest severity alarm on the network element
- NE Type - Vendor and model of the network element

Navigation Drop Down List:

- Alarm Report - Displays the Alarm report for the selected NE
- CLI Report - Displays the CLI report for the selected NE

NE Usage Report

The NE Usage Report will display information about the high speed facilities in the chosen network element. This information will be displayed in a color coded format depicting whether a channel is connected to a low speed facility (Green), not connected (Yellow), connected as Pass Thru (Blue), or not provisioned in the Integrated Network Controller data base (Gray). The information may be filtered by NE, Ring number, Bay number, or Shelf number.

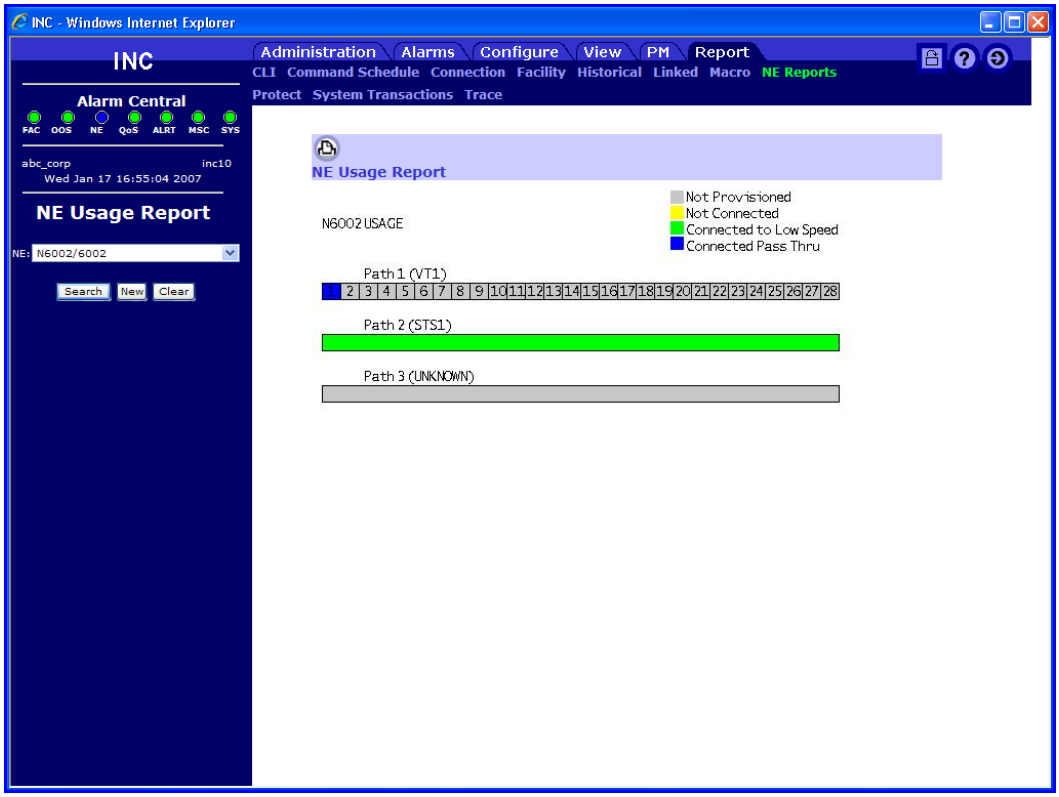


Figure 8-11. **NE Usage Report**

Filters:

- NE - Network Element for which the NE Usage Report is being displayed
- Ring # - ring number for which the NE Usage Report is being displayed

NOTE:
In the case of DMX network elements, this value will be in the form of an AID (Access Identifier)

- Bay # - bay number for which the NE Usage Report is being displayed
- Shelf # - shelf number for which the NE Usage Report is being displayed

Subnetwork Report

The Subnetwork Report allows the user to search on a particular subnetwork to see all of the nodes that make up that subnetwork. The report consists of a list of all NEs which have been defined as being a part of the given subnetwork.

In the example below, the list contains seven NEs which make up subnetwork 50. NE-id 1800 is the GNE (Gateway Network Element) and the remaining NEs are RTs (Remote Terminals).

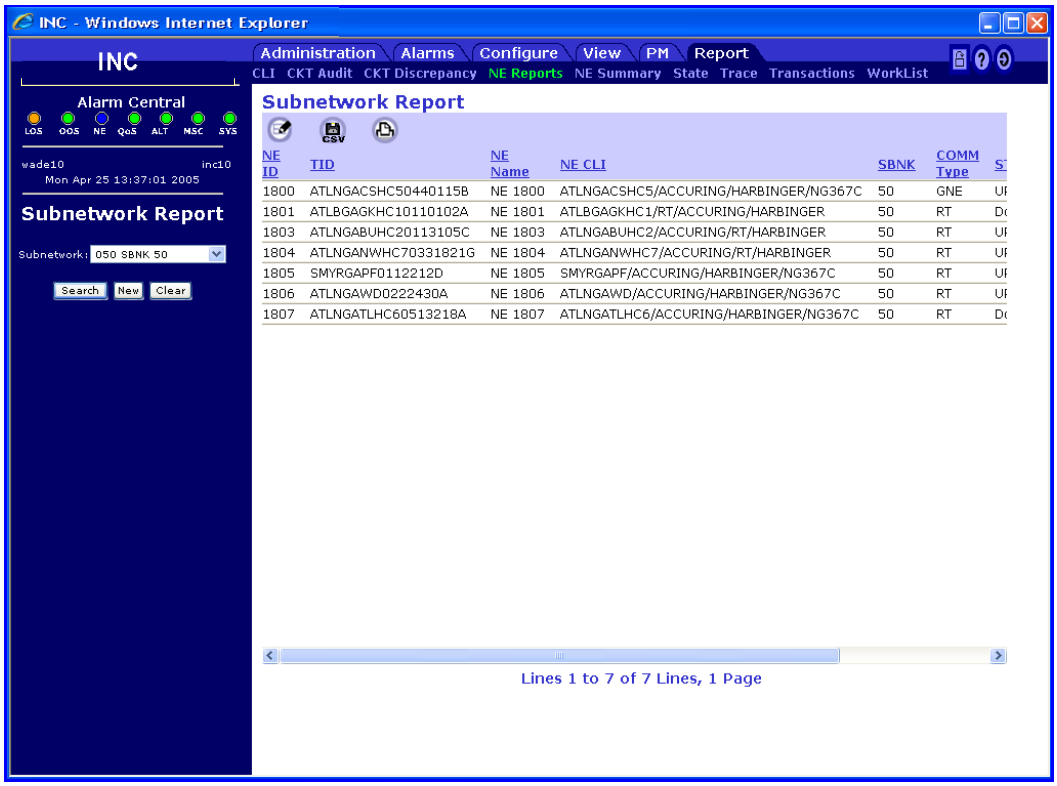


Figure 8-12. **Subnetwork Group Report**

Columns Definitions:

- NE ID - Network Element Identifcation
- TID - Network Element Target Identifier
- NE Name - Network Element name
- NE CLI - Defined CLI code for the network element

- SBNK - Subnetwork that the network element belongs to
- Comm Type - GNE (Gateway Network Element) or RT (Remote Terminal)
- STAT - Indication of the communication status of the NE
- Alarm - Highest severity alarm on the network element
- NE Type - Vendor and model of the network element

Navigation Drop Down List:

- Alarm - Displays the Alarm report for the selected NE
- CLI - Displays the CLI report for the selected NE

NE Summary

The NE (Network Element) Report provides summary information for network elements. The report gives the GUI user the ability to filter on COMM groups, Subnetwork groups, or individual NEs, NE types or NE link status.

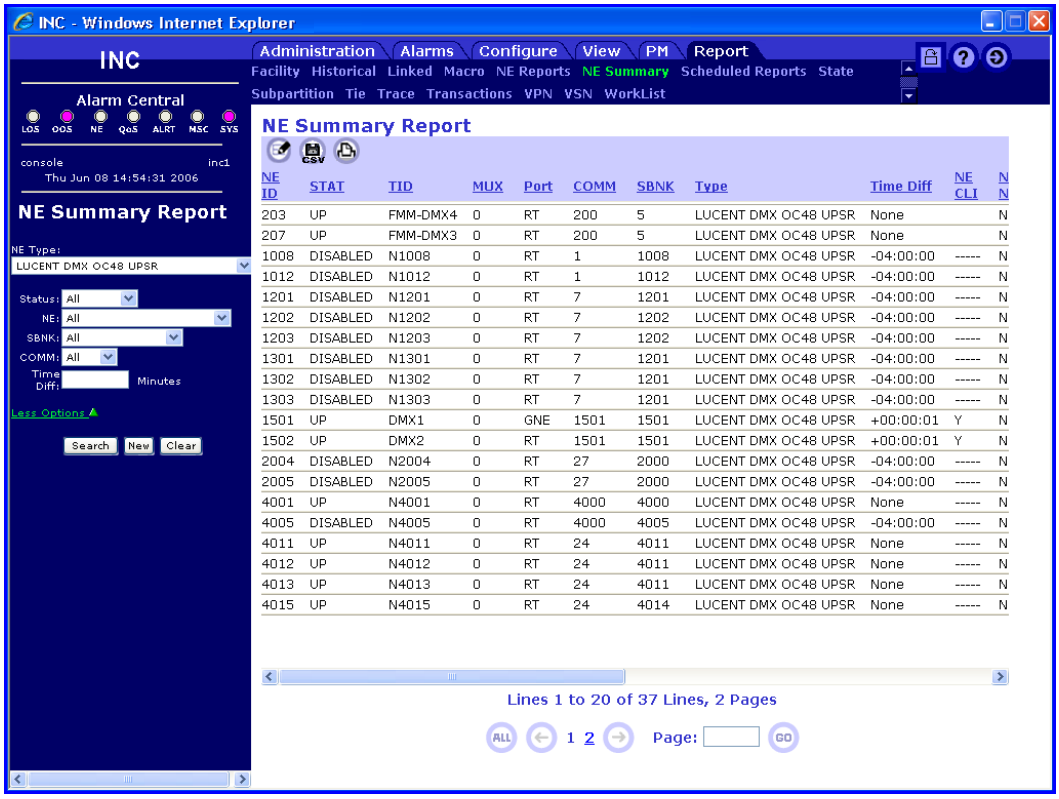


Figure 8-13. **Network Element Summary Report**

Filters:

- NE Type - Allows the user to display only specific types of network elements
- Status - Allows the user to search for NE's that are either Up, Down, Disabled, or All
- MUX # - Search for a specific mux number
- NE - Search for a specific Network Element
- SBNK - Allows the user to search for a specific subnetwork
- COMM - Allows the user to search for a specific communications group.

- Time Diff - The difference in time between INC and the NE (INC time - NE time). The value will be displayed in the report as a positive or negative number accordingly (from the perspective of the NE). That is, if it is 10:00 PM at INC and 9:00 PM at the NE, the column displayed in the report will be -01:00:00. If it is 9:00 PM at INC and 10:00 PM at the NE, the report column will contain the value +01:00:00 When a value is entered in the filter field (in minutes), the report will display all NEs whose time **difference** is greater than that number of minutes different than INC (greater than or less than). If no value is entered, the report will show the time difference between INC and the NE or NONE if there is no difference. This time difference processing allows INC to adjust appropriately when collecting PM.

Columns Definitions:

- NE - Network Element Identifier
- NE Name -Network Element Name
- Port - Type of port the NE is connected on
- COMM - Communications Group
- SBNK - Subnetwork
- NE CLI - CLI code for the NE
- Type - Network Element Type
- Time Diff - The difference in time between INC and the NE (INC time - NE time).
- TID - Target Identifier of the NE
- MUX - In multibox format, the backend that the NE is databased on
- STAT - Status of the NE (UP, DOWN, DISABLED)
- SENT - Number of messages sent to the Network Element
- REC - Number of messages received from the Network Element
- Last Time Up - Most recent time that the NE was communicating with Integrated Network Controller
- Last Time Down - Most recent time that the NE was not communicating with Integrated Network Controller
- Auto DNO - Displays whether automatic DNO is enabled or disabled on the NE
- Last Backup - Most recent previously run backup
- Next Backup - Expected time the next backup will run
- Backup Cycle - Interval in days that between database backups

Navigation Drop Down List:

- Alarm List - Displays the Alarm List Report for the selected NE

- NE Cut Thru - Opens the NE Cut Thru form for the selected NE

NE Transactions

The NE Transaction Report is a list of TL1 commands that have been sent to an NE. Integrated Network Controller allows a user to filter and search for specific transaction information.

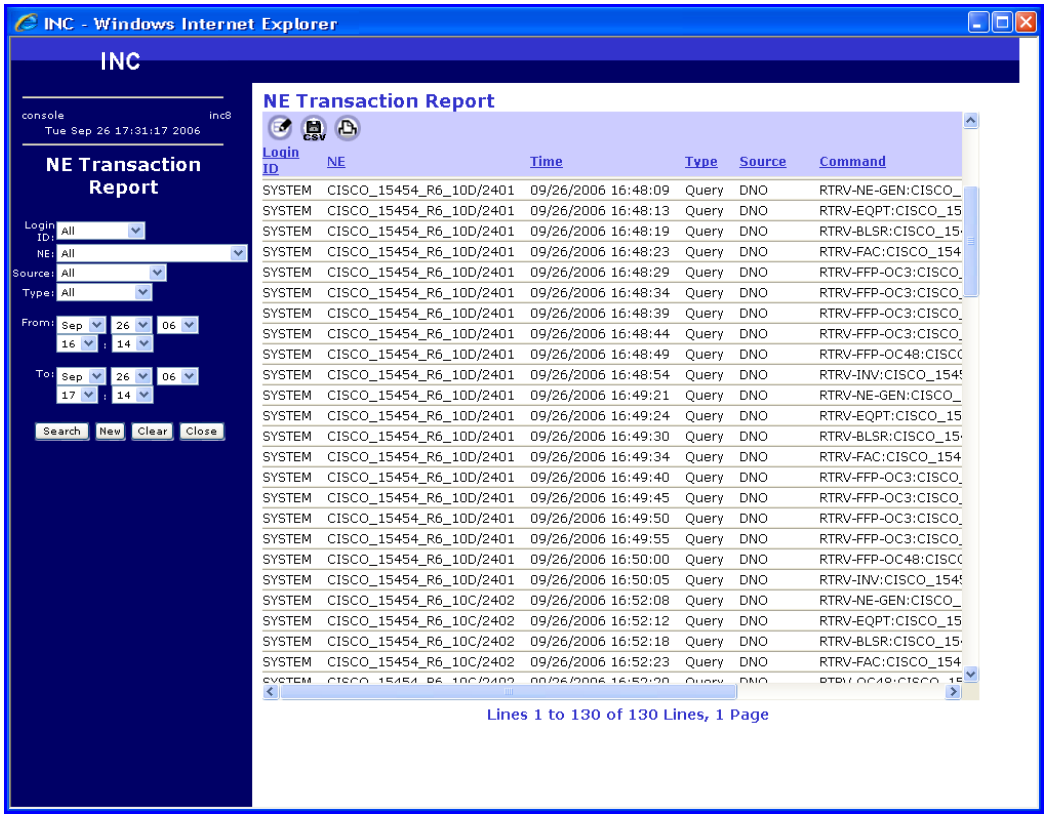


Figure 8-14. **NE Transaction Report**

Filters:

- NE - allows the user to filter on a particular TID/NEID
- Source - area of the system from which the command originated (i.e. Auto Discovery, Match, PM, etc)
- Type - based upon the Source choice above, this is the types of commands available within each Source
- From/To - date range for which the user wishes to see transaction activity

State

The State Report will query the Integrated Network Controller system for a list of all facilities or network elements identified as in the Maint, Block, or MBlock state.

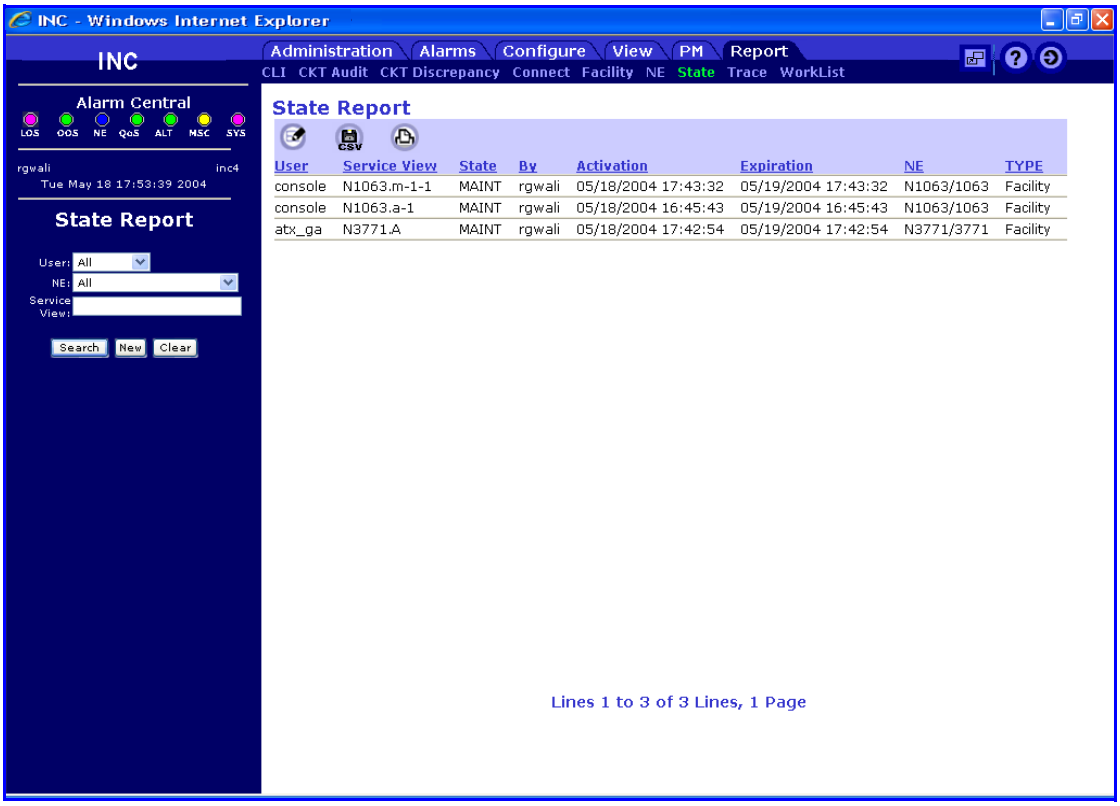


Figure 8-15. **State Report**

Filters:

- User - Displays data only for the user specified
- NE - Displays audit data on only the Network Element specified
- Service View - Allows the user to search for a specific service view

Columns Definitions:

- User - User that is assigned the listed facility or NE
- Service View - facility that is assigned to the user

- State - Current state of the facility or NE
- By - User that put the facility or NE into the current state
- Activation - Date and time that the facility was put into it’s current state
- Expiration - Date and time that the facility will revert to the CLEAR state
- NE - Network Element that the facility is on
- Type - Object that is in the current state (facility or NE)

Navigation Drop Down List:

- Update Maintenance - Displays the Update Maintenance State form so that users may change the alarm maintenance state of a facility or NE.

System Transactions

The System Transactions report is used to query Integrated Network Controller for a list of transactions for a given day. These reports are kept for the previous seven days.

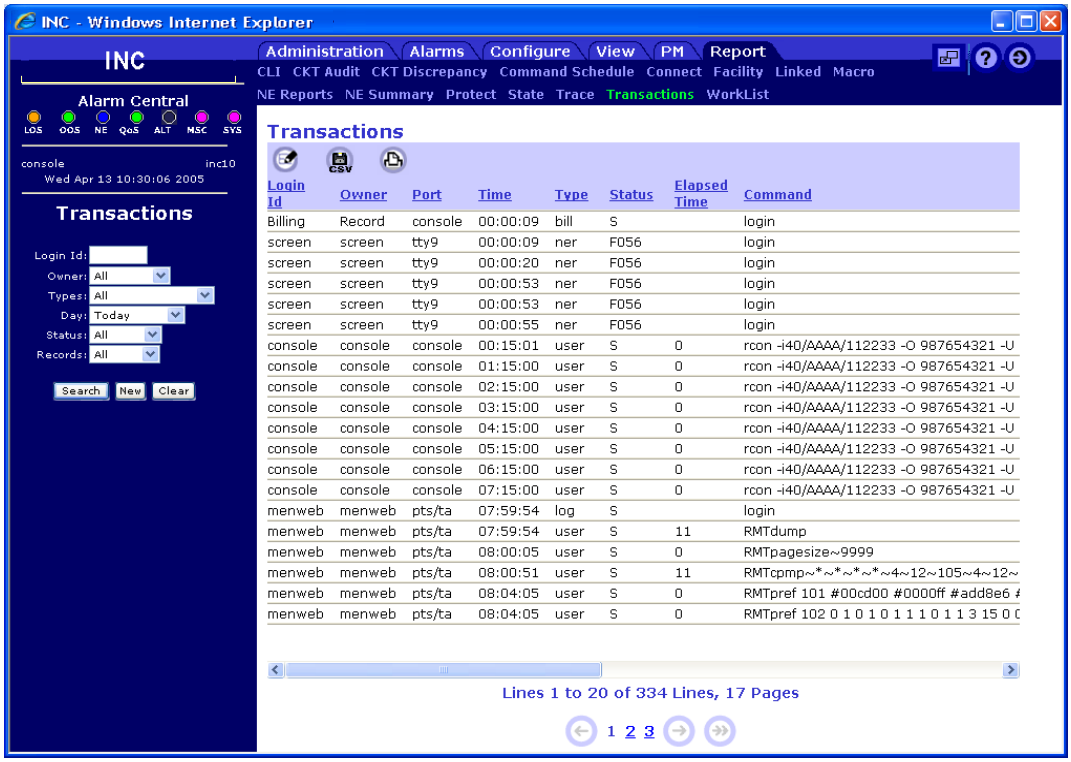


Figure 8-16. **System Transactions report**

Filters:

- Login ID - The login id for whom the transaction report is being requested
- Owner - Owner of the user
- Types - All transactions, or Commands only
- Day - The day for which the search is being executed
- Status - Indication of whether the transaction failed or succeeded
- Records - All or Last 20

Columns Definitions:

- Login ID- Login that executed the transaction
- Owner - Owner of the login that executed the transaction
- Port - Port from which the transaction took place
- Time - Time that the transaction was executed
- Type - Type of transaction that was executed
- Status - Indication of whether the transaction succeeded or failed
- Elapsed Time - Time from issue to completion of transaction request
- Command - Command that was executed

Trace

The Circuit Trace form allows the user to view the structure of a circuit from end to end. Circuits may be contained in one network element, or may be carried through a number of network elements. The information is displayed in both graphical and tabular format.

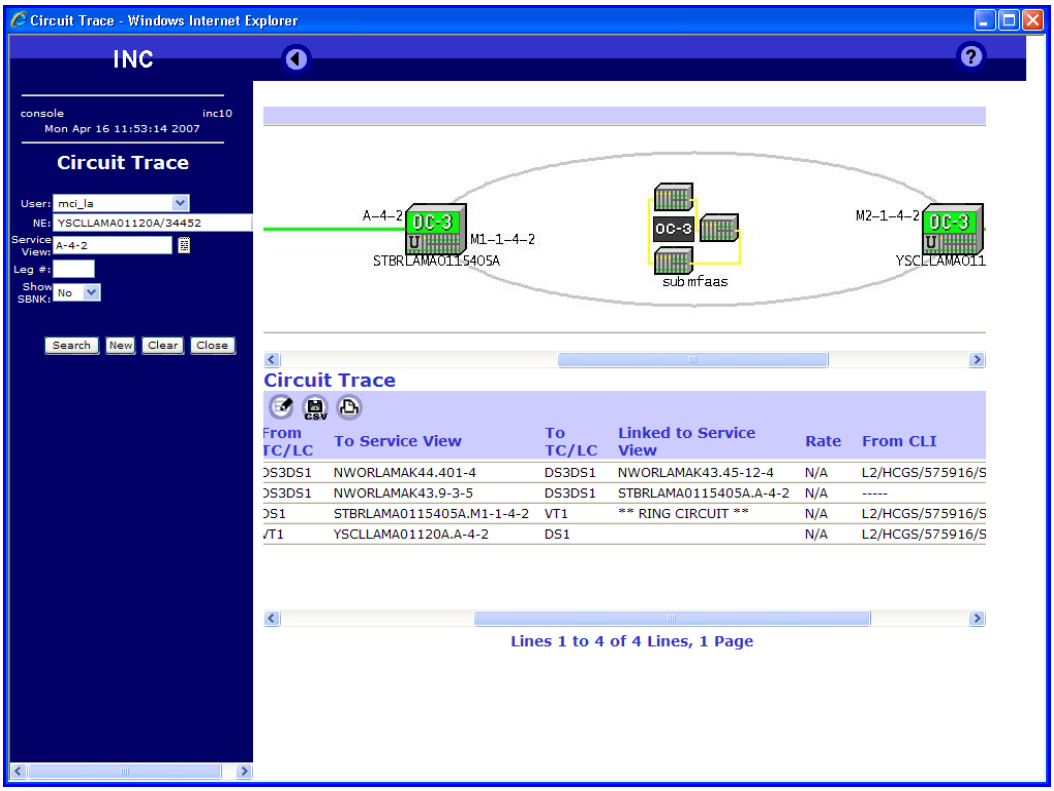


Figure 8-17. **Trace**

For performance monitoring, the Performance Quality Value may be optionally displayed with the graphical trace. When enabled (via the Display PQV option), the PQV for each facility will be shown on the graphical trace. If there is no PM data, or the PQV is not supported on that port, then an error message will be displayed. If an error is returned from the NE, the 4 character error code will be displayed (i.e. SNVS (System Not in Valid State) etc.). These codes are defined in the NE specific documentation. Running the Retrieve PM command for the associated port will also display the complete error string returned from the NE for further clarification.

The PQV from PM collected earlier than the current day is also available. A PQV Threshold can be specified to provide a reference.

Filters:

- User - (Required) the user that owns the circuit being traced
- Service View - (Required) the name of the circuit being traced
- Leg # -The leg number of the unit being traced, this option applies to subrate units
- Show Subnetwork - This option is only valid on ring configuration NEs and is used to show connections in the opposite direction.
- PQV
    - Display - Show the PQV on the graphical display. This option must be selected in order for the PQV Date and PQV Threshold filters to be used. If this option is selected, the PQV may also contain a bracketed "[ ]" value indicating whether or not the port is currently on the WorkList and what state it is currently in (S = Study, I = Investigate, R = Repair, C = Chronic, T=Trouble, and $=Paid)
    - Date - User definable date from which to display PQV data.
    - Threshold - A user definable value from 1 to 100.

Columns Definitions:

- Circuit ID - Contains the circuit identifier
- From Service View - Contains the service view name of the "From" side of each cross-connect in the trace
- From TC/LC - contains the trunk conditioning code or facility type of the From Service View
- To Service View - contains the service view name of the facility that the "From Service View" is connected to
- To TC/LC - contains the trunk conditioning code or facility type of the To Service View
- Linked to Service View - contains the service view name of the facility that the "To Service View" is linked to
- Rate - contains the circuit rate if applicable (Subrate connections)

Buttons:

- Reverse Trace - This button will **ONLY** appear if there is a RING circuit within the trace. It is designed to allow the user to see both directions of a defined circuit (generally m1- m2 directions). When selected, an additional trace window will be displayed showing the trace in the opposite direction.

Navigation Drop Down List (from Node):

- Add Circuit to WL - Allows the user to add all ports of the circuit to the WorkList
- Add FROM to WL (AZ) - Adds From side port of NE to WorkList

- Add TO to WL (ZA) - Adds To side port of NE to WorkList
- Alarm List (NE) - Displays the alarm list for that network element
- Alarm List (Circuit) - Displays the alarm list for that circuit
- Audit Circuit - Displays the Audit Circuit form for the selected circuit
- Disconnect - Displays the Disconnect form for the selected circuit
- Display Circuit PM - Displays the Display Circuit PM form for the selected circuit
- Display FROM PM (AZ) - Displays the stored PM of the FROM side of the circuit
- Display TO PM (ZA) - Displays the stored PM of the TO side of the circuit
- Equipment View - Displays the Equipment View for the selected NE
- Graph FROM PQV - Displays a historical graph of the last 30 days of the FROM side PQV values
- Graph TO PQV - Displays a historical graph of the last 30 days of the TO side PQV values
- Linked Report - Displays the Linked Facility Report for the selected NE
- Loop From (AZ) - Displays the Operate Loopback form for the selected NE's From side
- Loop To (ZA) - Displays the Operate Loopback form for the selected NE's To side
- NE Cut Thru - Opens the NE Cut Thru form for the selected NE
- NE Usage - Displays the Node Usage report for the selected NE
- Notes - Display the NOTE report for the selected circuit
- Retrieve Circuit PM - Displays the Retrieve Circuit PM form for the selected NE
- Retrieve FROM PM (AZ) - Displays 15 minute and 24 hour PM for the FROM side of the selected NE
- Retrieve TO PM (ZA) - Displays 15 minute and 24 hour PM for the TO side of the selected NE

- Ring Layout - Displays the Ring Layout for the selected NE. This is a graphical representation of the ring to which the selected network element belongs. The icons in the display will reflect the current alarm status of the network element when the form is opened.

NOTE:
Holding the mouse over the NE icon will show the “tip” containing the TID/NEID, NE type, and the associated tie information. If a TIE ID is associated with any of the ties displayed, it will be shown as part of the layout and will also be shown as part of the associated “tip” .

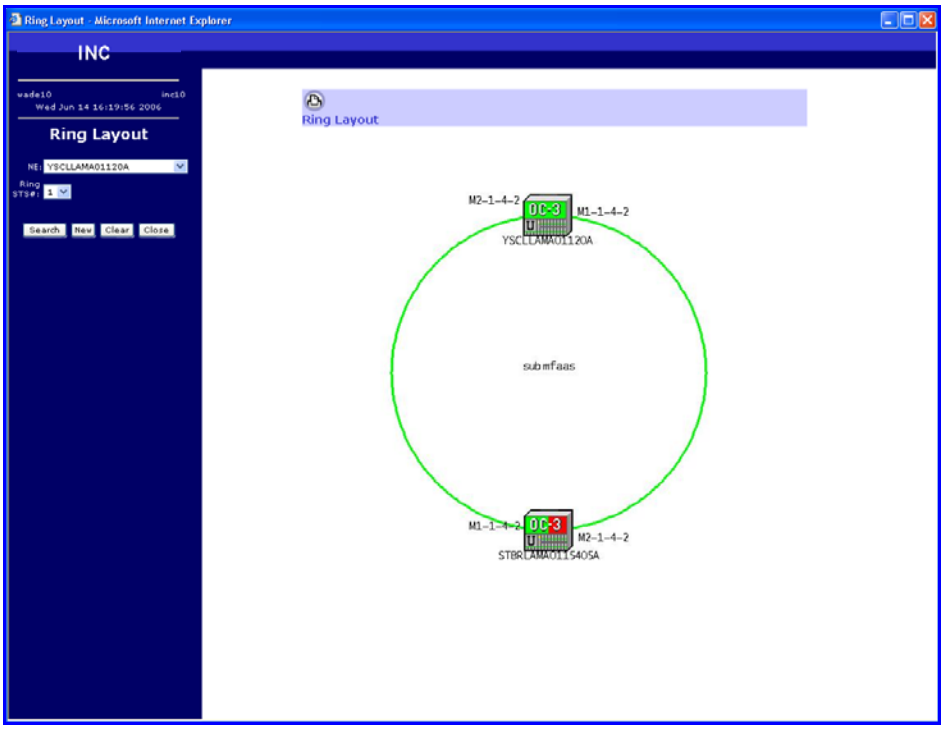


Figure 8-18. **Ring Layout**

- Subnetwork Report - Displays the Subnetwork Report for the selected NE
- Update Tag - Opens the Update tag form to allow a user to update the associated tag value on the Notes report

WorkList

The WorkList displays a database of facilities/ports which are being monitored by console or a console alias. Typically this list would be used to track facilities which have exhibited performance problems and require the special attention of a maintenance center. A port / facility is added to the WorkList from other report forms such as the Problem PM report. Any assigned facility on any node type can be added to the WorkList.

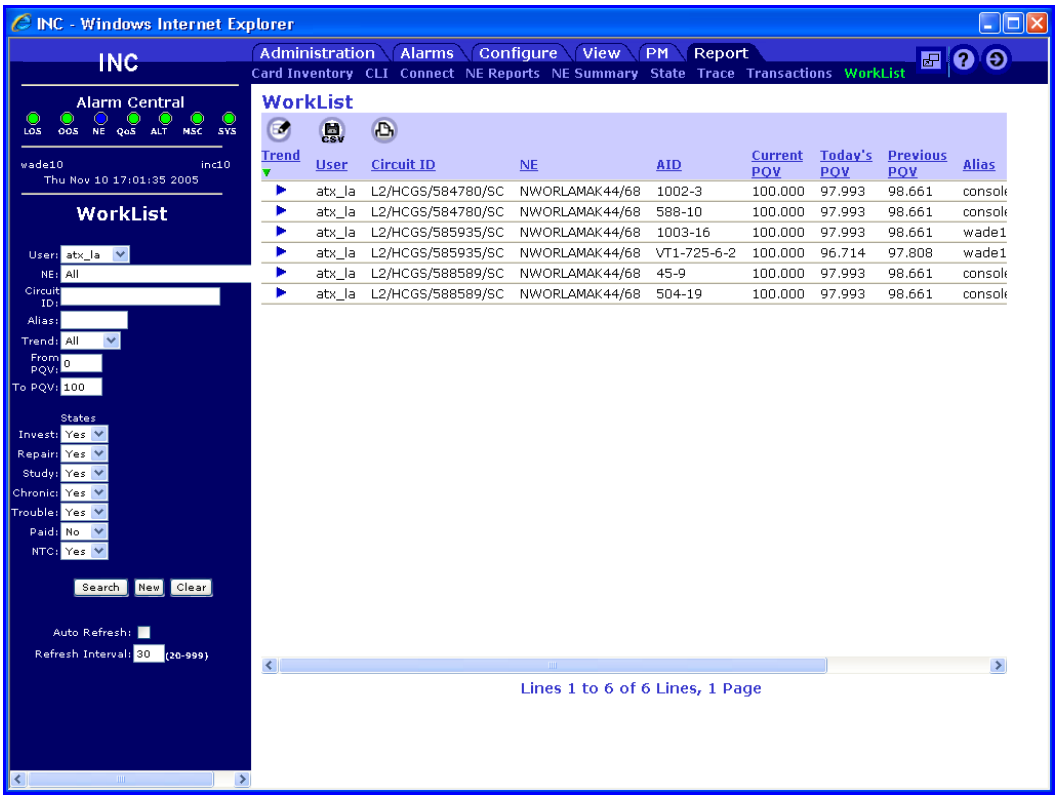


Figure 8-19. **WorkList**

A WorkList item can be placed into one of several different states and the use of those states will depend upon local practice and procedures. The states are defined as follows:

- Investigate - An information only state. A problem has been reported or detected on this facility and the problem is being investigated.
- Repair - An hourly PM Collection state. The facility is under repair (ticket entered).

- Study - An hourly PM Collection state. The facility is being studied for problems. Typically, this state is used after the ticket is closed. On the hour, Integrated Network Controller collects PM and calculates the current PQV based on the PM gathered on the last hour. An alarm outage interval, for the same hour, is also maintained.
- Chronic - An information only state. The facility has exhibited chronic problems.
- MOT - indicates Missed Opportunities via an AD (Auto Detect) ticket. These are tickets that are automatically generated and put into WFA before being placed on the WorkList.
- FIT - a closeout code indicating a Facility Integrity Test circuit loaded to the WorkList from WFA (via Load_FIT) and purged after 14 days.
- NTC - a closeout code indicating no problems have been found during the observation period. These tickets will be automatically loaded onto the WorkList from WFA (via Load_NTC) and purged after 30 days.
- Validate - INC maintains interfaces to WFA in order to receive trouble ticket notifications and also to allow INC users to create, update and clear trouble tickets. Information received from WFA will also automatically manage circuits on the INC EPM Worklist. The Worklist defines the current state of monitored facilities and circuits, and enables special PM monitoring of facilities for some Worklist states. If a WFA information "push" to INC indicates that a trouble ticket is closed, then the circuit that is implicated in the closed ticket is automatically placed on the INC Worklist and put into an internal Validate state, or the circuit transitions to the Validate state if already on the Worklist. If the facilities of that circuit are trouble-free, that is the daily PM counts are below pre-defined values, for a given period of time, then the circuit is removed from the WorkList. If the facility is not trouble-free, then the Validate is failed, and the Worklist displays those circuits when the Validate state is selected, and the WorkList Note indicates that the Validation is failed. Trouble free is determined by PM count thresholds defined in */usr/cnc/features/validate* located on the INC Core server. This feature is such that the aging period, for validation monitoring, is determined from information in the WFA "push". The WFA information contains an Analysis code. This two character code is compared against tunable values, in the */usr/cnc/features/val_user_codes* file on the INC Core Server. If all facilities on the circuit are trouble-free (as determined by PM counts against the thresholds), within the aging period, then the circuit is removed from the Worklist. If the circuit is deemed not trouble-free, then the validation is failed, and the circuit will appear on the Worklist for a Validate state query, and the Note will indicate failure. Note that, even if a circuit is marked failed, then validation monitoring continues. If validation monitoring indicates that the circuit is trouble free for the aging period, then the circuit is removed from the Worklist Please refer to the *1340 Integrated Network Controller (INC) Installation Guide* for information on the tunable files to properly setup this feature
- NCF - New Circuit Feed - any circuit read into the 1340 INC that is not currently on the Worklist is put into this state and placed on the Worklist. They are purged after 30 days.
- DS3 - circuits related to WFA tickets that indicate priority DS3 troubles.
- User Defined States -

- There can be up to 8 user defined states. These states are defined on the core side of the application. Please see the *1340 INC Systems Administration Guide* for details.

Filters:

- User - Display the WorkList information for the user specified
- NE - Display the WorkList for the specified NE
- Circuit ID - Display the WorkList information for the specified circuit

NOTE:
The wildcard character " * " can be used to filter on a Circuit ID. That is, if the user wishes to find a Circuit ID that begins with the characters AB, they can enter AB* into the Circuit ID field to find AB <*anything*>. Likewise, if the user enters *AB, then any Circuit ID that contains the characters AB will be displayed.

- Alias - Display the WorkList information for the specified alias
- Trend - Display only those items with trends of this type (All, Up, Down, Same)

- Spec - Display only items as they relate to the ANSI specification value (All, In, Out). These values are set in a user defined system file. Items will be displayed using the Trend arrow, but with a yellow box around the arrow indicating that it is out of spec.

NOTE:
The trend of a particular circuit and it's in spec/out of spec value can be mutually exclusive. That is, a value may have an up arrow, but still be out of spec, as indicated by a yellow box.

- From PQV/To PQV - Range of PQV values to be displayed in the "Today's PQV" column
- States -
    - Invest - Show ports in the Investigate state
    - Repair - Show ports in the Repair state
    - Study - Show ports in the Study state
    - Chronic - Show ports in the Chronic state

- MOT - Show ports in the MOT state
- FIT - Show ports in the FIT state
- NTC - Show ports in the No troubles found/Test ok/Came clear state
- Validate - Show ports in the Validate state

Column Definitions:

- State - Indicates the current WorkList state (Investigate, Repair, Study, Chronic, MOT, FIT, NTC, Validate)
- Days - Number of days that the port has been in this state
- User - Customer partition that the port is assigned to (e.g. atx_fl, atx_ga)
- Circuit ID - circuit identifier
- NE - Network Element that the circuit is connected on
- AID - Port that is connected and has PM collected on it
- Alias - Login of the operator who added the record
- Note - Displays the TAG value entered in the NOTES form.
- Current PQV - The PQV based on the PM counts accumulated during the last hour and the performance trend as compared with the CUR PQV last displayed, if there was one. This value is only displayed for circuits in the Repair or Study states.
- Trend - An up arrow to the right of the number indicates that performance is improved (higher PQV) with respect to the Current PQV last displayed. A down arrow indicates that performance has worsened (lower PQV) with respect to the Current PQV last displayed. A horizontal arrow indicates that the PQV is the same as the last hourly PQV.
- Today's PQV - The PQV based on the PM counts accumulated today (since midnight). This value is only displayed for circuits in the Repair or Study states.
- Previous PQV - Yesterday's PQV, based on the last 24 hr. PM collection
- Outage - The number (in seconds) of outage due to an alarm since the last PQV period (occurred during the CUR PQV period). This value is only displayed for circuits in the Repair or Study states.
- TR # (Trouble Report) - This is the trouble ticket identifier.
- TR Cat (Trouble Report Category) - This identifies the type of trouble ticket defined in the system (i.e., AD - Auto Detect, CR - Customer Report, etc.)
- TR Status (Trouble Status) - The current dispatch disposition of this ticket.

NOTE:
The TR fields are only displayed if the system is provisioned for the WFA/C Ticket feature. Please see the Integrated Network Controller Installation Application Guide for information on provisioning this feature.

Navigation Drop Down List:

- Alarm List - Displays the Alarm List for the selected port
- Audit Circuit - Displays the Audit Circuit Connections form for the selected circuit
- Change Circuit WL State - Allows the user to change the state of the circuit on the WorkList
- Change WL State - Allows the user to change the state of an individual port on the WorkList
- Circuit Analysis Tool - Displays the Circuit Analysis Tool

- Create/Close Ticket - Allows the user to create/close a trouble ticket in the WFA/C system.

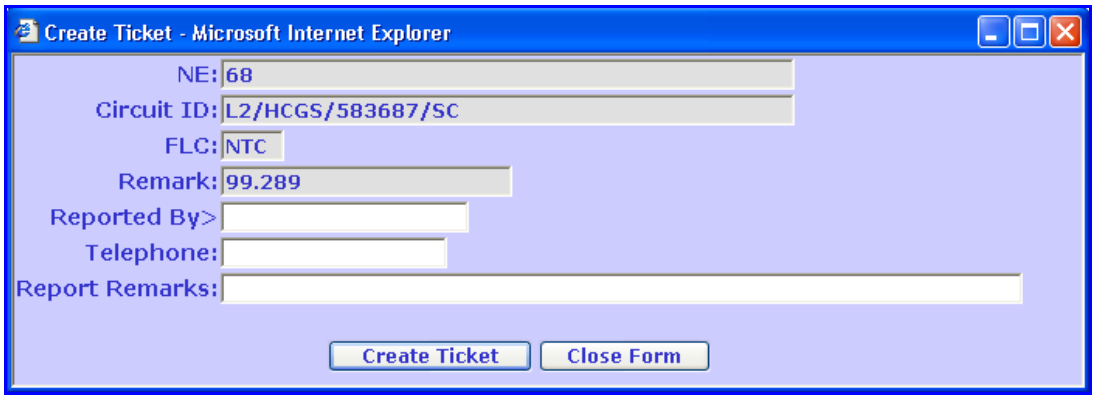


Figure 8-20. **Create Ticket**

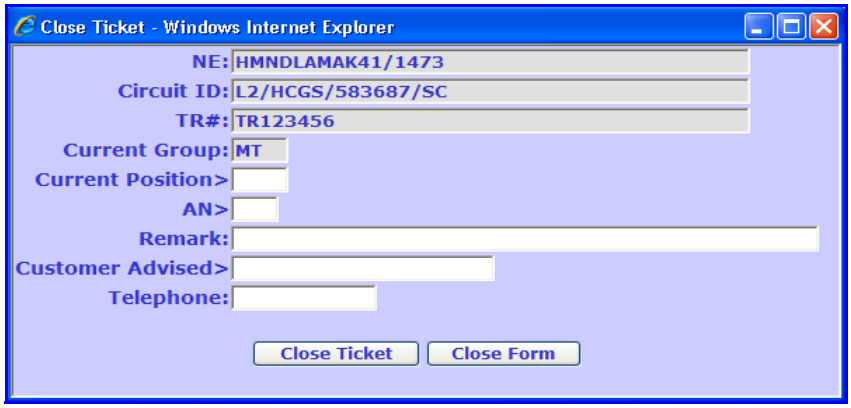


Figure 8-21. **Close Ticket**

- Display Circuit PM - Displays the Display Circuit PM form for the selected circuit
- Display PM - Displays the stored PM data for the selected port
- Graph PQV - Displays a historical graph of the PQV for the selected circuit
- Graph WL PQV - Displays the 24 most recently collected PQV values in both graphical and tabular format. Note that this graph can be printed directly to a system defined printer via the Print icon.

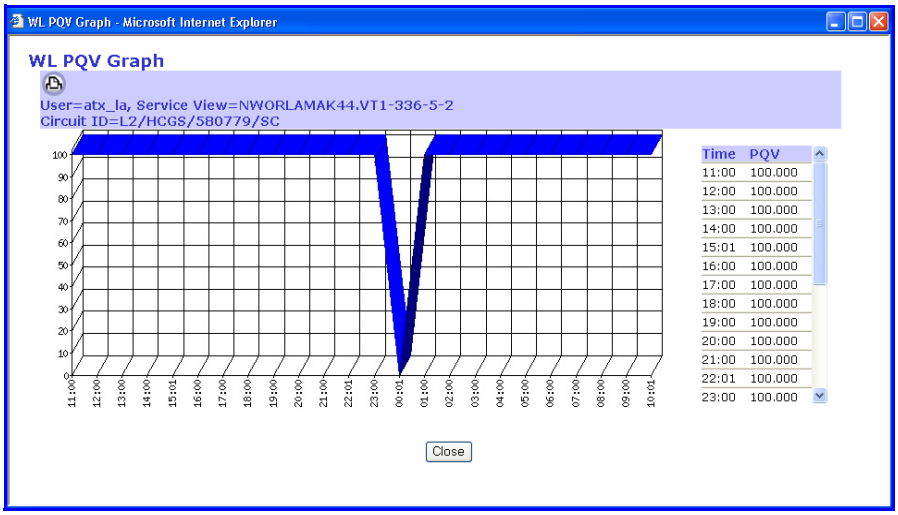


Figure 8-22. **WorkList PQV Graph**

- NE Cut Thru - Opens up an NE cut thru session for the selected NE
- Notes - Brings the user to the NOTE form for the selected circuit
- Reassign Circuit on WL - Allows an operator to change the alias name on the WorkList for the entire circuit
- Reassign on WL - Allows an operator to change the alias name on the WorkList for an individual port
- Remove Circuit from WL - Removes the circuit from the WorkList
- Remove from WL - Removes the port from the WorkList
- Retrieve Circuit PM - Displays the Retrieve Circuit PM form for the selected circuit
- Retrieve PM - Retrieves current PM data for the selected port
- Sync Ticket - Synchronizes the INC ticket status to the most recent WFA/C dispatch status
- Trace - Displays the Circuit Trace form for the selected circuit
- Update Tag - Brings the user to the Update Tag text form
- Update Ticket - Brings the user to the Update Ticket form and allows them to add comments to the selected INC-WFA/C ticket.

NOTE:
Old records may be purged from the WorkList database via an entry in the daily update shell script. The age and PQV threshold of records to be purged are settable in this script. For example, to purge all WorkList database records that are 10 days old and have a

PQV greater than 98, the entry would be “purgewl -d 10 -t 98”. This would allow the user to remove records for circuits that are no longer a problem.Contact your system administrator to configure this file.

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