

**NG Trace**

**User Manual**

**December 2009**

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# **1. Introduction**

## **1.1 Overview**

This document describes information on the usage of the system from the user point of view.

It explains about the different user account and their privileges, the options for exporting the result as CSV file, using the different reports and analysis pages, searching and filtering the results.

# **2. System Overview**

## **2.1 About the System**

NG Trace is a corporate security which is capable of monitoring the network traffic and taking action on the occurrence of suspicious or potentially dangerous events.

NG Trace as any modern security system is with flexible, multi-layered and easily configurable architecture and software design.

It has intuitive user-friendly interface and lots of functionalities.

It can apply both set of predefined rules following suspicious users' behavior and it can accept new targets of interest defined by newly inserted rule sets.

## **2.2 Feature**

- ✓ Capturing network traffic, transferring it to readable look and connecting of communication sessions.
- ✓ Saving the decoded traffic into database.
- ✓ Indexing of the decoded traffic into database.
- ✓ Exporting the data of database.
- ✓ Archiving of the database on hardware device.
- ✓ Sending e-mails in case of the emerging of difference event.

## **2.3 System Requirement**

OS : Cent OS 5.3 recommended.

The system's components run on Intel based, GNU / Linux compatible server machines, equipped with at least one network card, a CD / DVD drive, enough hard-disk space and RAM.

If all the system's components are deployed on a single server;  
Dual Core 2.4GHz Pentium CPU,  
4GB RAM system memory,  
80GB available disk space or more  
100Mbit/s Network card or more

### 3. User Management

#### 3.1 User Log In

User with user account enters Username and Password to log in.

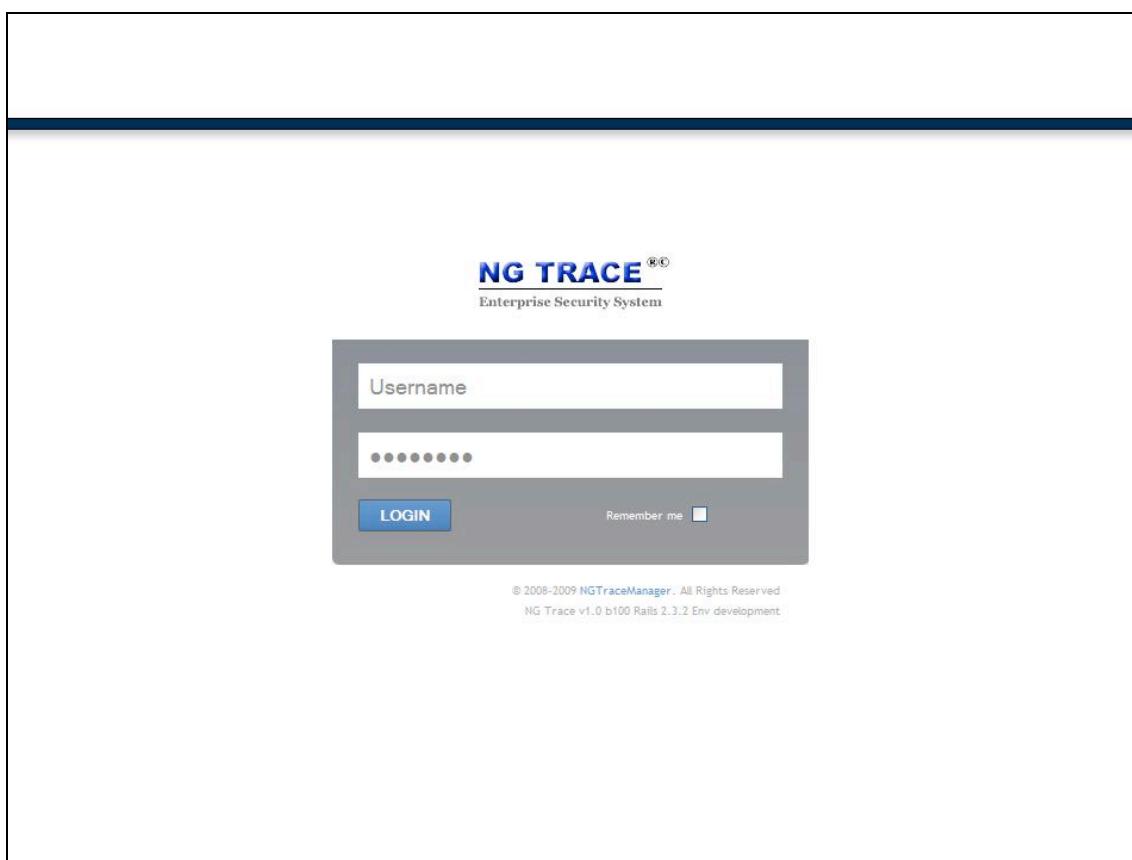


Figure 1. User Log In

## 3.2 User Management

User management section provides functionalities such as adding and deleting of user, displaying and modifying user's information.

The screenshot shows the 'List Users' page of the NG TRACE Enterprise Security System. At the top, there is a navigation bar with tabs for 'SYSTEM ADMINISTRATION' and 'REPORT AND ANALYSIS'. The 'USER MANAGEMENT' tab is highlighted in blue. On the left, a sidebar titled 'USERS' has two options: 'Users' (selected) and 'Roles'. Below the sidebar is a search bar with a magnifying glass icon, a dropdown for '10 Per Page', and a link to 'Show All Roles'. There are four buttons: 'ADD', 'SHOW', 'EDIT', and 'DELETE'. A table titled 'List Users' displays one row of data:

Login ID	Full Name	Email	Login	Roles	Receive Rpt	Host Groups
ngadmin	Administrator NGTrace	<a href="#">ngadmin@example.com</a>	logon	Administer NGTrace	false	

At the bottom right of the page, there is a copyright notice: © 2008-2009 NGTraceManager. All Rights Reserved NG Trace v1.0 b100 Rails 2.3.2 Env production

Figure 2. User Management Tab

User information contains user login ID, user name, e-mail address, phone number, registered date, modified date, option whether or not to receive notify information from notifier, login status, login date/time, user role, manageable host groups, description and etc.

- [ADD] :
  - Register new user.
  - Enter user information of new user.
  - Login ID and e-mail address should not be same as the ones of already registered users.
  - Symbol “\*” indicates mandatory fields. If mandatory field is left blank, user registration is not processed.

If user role “Administer NG Trace” is selected, other user role options become disabled. “Groups” item becomes activated only if user role “Group Part Admin” or “Group Part Viewer” is selected.

The screenshot shows the 'New User' form in the NG TRACE Enterprise Security System. The top navigation bar includes links for SYSTEM ADMINISTRATION, REPORT AND ANALYSIS, and USER MANAGEMENT. The left sidebar under 'USERS' has 'Users' selected. The main form fields are:

- Username: [empty input]
- Email: [empty input]
- First Name: [empty input]
- Last Name: [empty input]
- Phone Number: [empty input]
- Report Receiver: NO
- Password: [empty input]
- Confirm Password: [empty input]
- Description: [empty text area]

The 'Roles' section contains a list of checkboxes:
 

- Administer NGTrace
- Analysis Administrator
- Analysis Viewer
- System Administrator
- System Viewer
- User Administrator
- User Viewer
- Group Part Admin
- Group Part Viewer

The 'Groups' section lists:
 

- group 1
- group 2

A 'SAVE' button is located at the bottom of the form.

Figure 3. Add User

- [SHOW]

We can view selected User's information.

User's Information includes the Login ID, Name, Email Address, phone number, creation date/time, update date/time, Logon Status, Roles, Host Groups, and Description.

“Create at” indicates created time and “Update at” represents updated time.

Logon Status shows login state if user is login.

Roles field shows privilege of user.

The screenshot shows the 'USER MANAGEMENT' section of the NG TRACE interface. On the left, a sidebar menu under 'USERS' has 'Users' selected. The main content area displays user information for 'ngadmin' with the following details:

Login ID :	ngadmin
Name :	Administrator NGTrace
Email Address :	ngadmin@example.com
Phone Number :	0415235634433
Created at :	2009-08-15 02:42:38 UTC
Updated at :	2009-11-20 18:00:50 UTC
Report Receiver :	true
Logon Status :	Logon
Logon Time :	2009-11-20 18:00:50 UTC
Roles :	Administer NGTrace

Below the table, there is a 'Description' field containing the value 'default administrator'.

At the bottom right of the page, the footer reads: © 2008-2009 NGTraceManager. All Rights Reserved  
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**Figure 4. Show User Information**

- [EDIT]

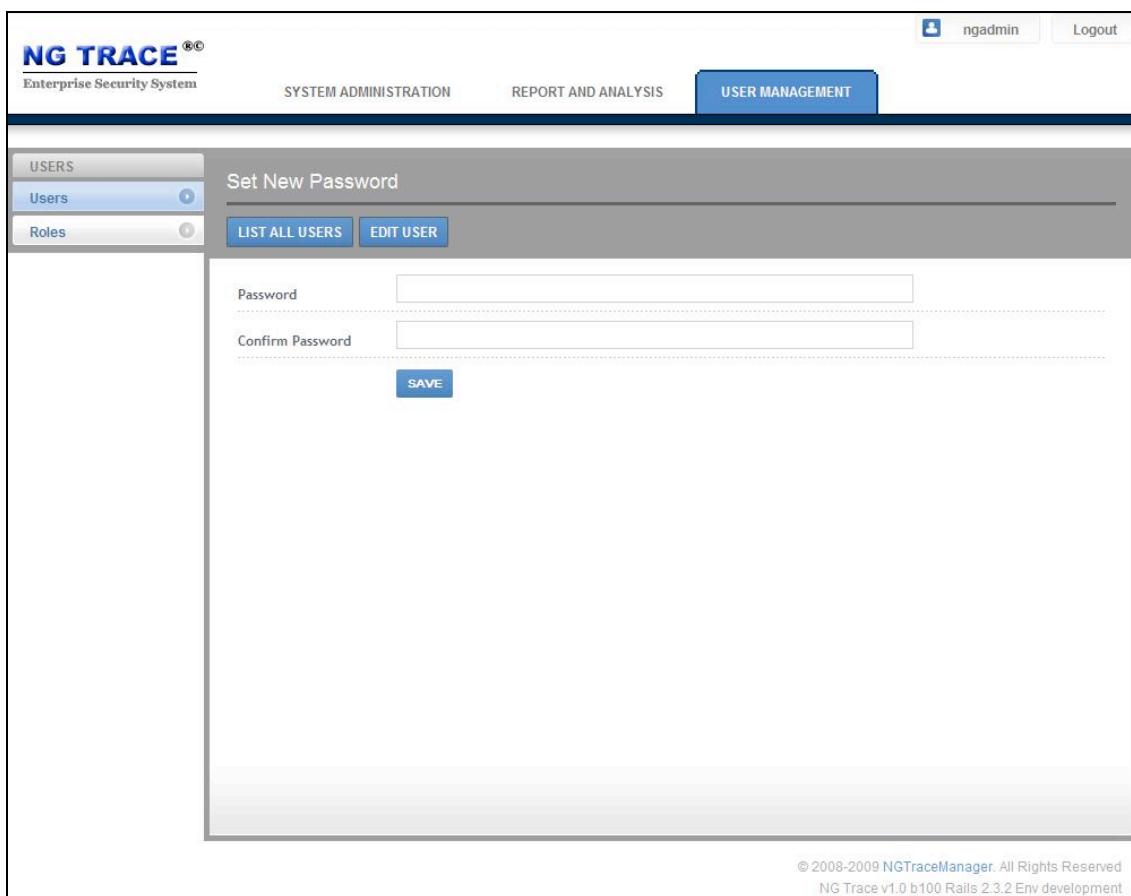
You can edit information and password of registered user here.

If user role “Administer NG Trace” is selected, other user role options become disabled. “Groups” item becomes activated only if user role “Group Part Admin” or “Group Part Viewer” is selected.

The screenshot shows the NG Trace Enterprise Security System interface. At the top, there is a header with the NG TRACE logo, a user dropdown set to 'ngadmin', and a 'Logout' button. Below the header, there are three main navigation tabs: 'SYSTEM ADMINISTRATION', 'REPORT AND ANALYSIS', and 'USER MANAGEMENT', with 'USER MANAGEMENT' being the active tab. On the left, a sidebar titled 'USERS' has 'Users' selected. The main content area is titled 'Edit User 'Ngadmin''. It contains fields for Username ('ngadmin'), Email ('ngadmin@example.com'), First Name ('Administrator'), Last Name ('NGTrace'), Phone Number ('0415235634433'), and a 'Report Receiver' dropdown set to 'YES'. A 'Description' field contains the text 'default administrator'. Below these fields is a 'Roles' section with a list of checkboxes. The 'Administrator NGTrace' checkbox is checked. Other roles listed include 'Analyst Administrator', 'Analyst Viewer', 'System Administrator', 'System Viewer', 'User Administrator', 'User Viewer', 'Group Part Admin', and 'Group Part Viewer'. There is also a section for 'Groups' with checkboxes for 'group 1' and 'group 2'. At the bottom right of the form is a 'SAVE' button.

**Figure 5. Edit User**

To change the Password, input new Password and Confirm Password, press [SAVE].



**Figure 6. Set New Password**

- [DELETE]

You can delete selected User from user list.

### 3.3 User Privilege

NG Trace Management Console provides several user privileges such as Administer NGTrace, Analysis Administrator, Analysis Viewer, System Administrator, System Viewer, User Administrator, User Viewer, Group Part Admin and Group Part Viewer.

- Administer NG Trace

The user of an account with Administer NG Trace privilege has all privilege of NG Trace System.

That is, can manage all information within SYSTEM ADMINISTRATION page and REPORT AND ANALYSIS page and USER MANAGEMENT.

- Analysis Administrator

The user with this privilege has access to all functionalities of REPORT AND ANALYSIS page.

- Analysis Viewer

The user with this privilege can only view information of REPORT AND ANALYSIS page.

- System Administrator

The user with this privilege has access to all functionalities of SYSTEM ADMINISTRATION page.

- System viewer

The user with this privilege can only view information of SYSTEM ADMINISTRATION page.

- User Administrator

The user with this privilege has access to all functionalities of USER MANAGEMENT page.

- User Viewer

The user with this privilege can only view information of USER MANAGEMENT page.

- Group Part Admin

- Group Part Viewer

## 4. Report and Analysis

### 4.1 Logs and Audits

#### 4.1.1 Whole

Show list of stored Logs and audits in selected DB.

The screenshot shows the 'REPORT AND ANALYSIS' section of the NG TRACE interface. On the left, there's a sidebar titled 'LOGS AND AUDITS' with options like 'Whole', 'ICMP', 'E-mail', etc. The main content area is titled 'Whole Log List Of STOREDDB'. It features a search bar at the top with fields for Date-Time (2009-11-13 00:00), Type (All Types), Target (All Target), Host (Enter host ip or name), and Page Size (10 Per Page). Below the search bar is a table with columns: Date-Time, Source, Destination, Type, Protocol, Rule, and Info. The table contains 10 log entries from November 17, 2009, to November 18, 2009. Each entry includes a 'view more' link. At the bottom of the table, it says 'Displaying 1 - 10 of 9704' and shows a page navigation bar with 'Page 1 of 971'.

**Figure 7. Whole Log List**

The following information displays contents of recorded whole log.

- Date – Time: Captured time.
- Source: IP Address of Source.
- Destination: IP Address of Destination.
- Type: Type of communication protocol.
- Protocol: Type of sub protocol.
- Rule: Target information.
- Info: Summarize information of carried contents.
- [view more]: Can see detail information of carried contents.

User can filter Whole Log List by Date-Time, Protocol, Target, Host, and Page.

This is a close-up view of the filter controls shown in Figure 7. It includes a date-time selector (2009-11-13 00:00), a dropdown for 'All Types', another for 'All Target', a text input for 'Enter host ip or name', and a dropdown for '10 Per Page'.

**Figure 8. Result Filter of Whole Log List**

- Date – Time Filter



Figure 9. Date – Time Filter

Filter whole Log List by date – time.

It shows all logs recorded since specified date/time to current date/time.

- Type filter

All Types	
All Types	
ICMP	natio
E-Mail	1.103
IM	1.103
HTTP	
File Transfer	1.103

Figure 10. Protocol Filter

It allows filtering whole Log List by Protocol.

It shows searched result by selected protocol.

For example, if selected E-mail protocol, user can see only E-mail communication log.

- Target Filter

All Target	
All Target	
Log	ub
Audit	SM

Figure 11. Target Filter

It allows filtering Whole Log List by Target.

It shows searched result by selected target.

For example, if “Log” is selected, user can see only logs.

- Host Filter



Figure 12. Host Filter

Allow filtering Whole Log List by name or address of host.

It shows searched result by selected host.

For example, if you enter 192.168.1.103, logs and audits containing 192.168.1.103 as its source or target IP address are filtered.

Or you can specify host name “powercom” instead of its IP address.

- Page Filter

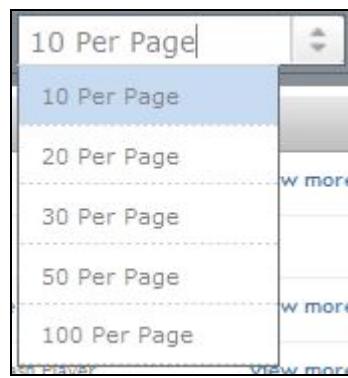


Figure 13. Page Filter

Filter Whole Log List by Page.

User can see only log as much as selected number.

For example, if selected 10 per Page, you can see 10 logs in one page.

#### 4.1.2 ICMP

Show list of stored ICMP Communication Logs in selected DB.

**ICMP Log List Of STOREDB**

Date-Time	Source	Destination	Message Type	Message Code	Size
2009-11-19 19:10:59	192.168.1.1	192.168.1.77	0: Echo (ping) reply	0: No code	56
2009-11-19 19:10:59	192.168.1.77	192.168.1.1	8: Echo (ping) request	0: No code	56
2009-11-19 19:10:58	192.168.1.1	192.168.1.77	0: Echo (ping) reply	0: No code	56
2009-11-19 19:10:58	192.168.1.77	192.168.1.1	8: Echo (ping) request	0: No code	56
2009-11-19 19:10:57	192.168.1.77	192.168.1.1	8: Echo (ping) request	0: No code	56
2009-11-19 19:10:57	192.168.1.1	192.168.1.77	0: Echo (ping) reply	0: No code	56
2009-11-19 19:10:56	192.168.1.1	192.168.1.77	0: Echo (ping) reply	0: No code	56
2009-11-19 19:10:56	192.168.1.77	192.168.1.1	8: Echo (ping) request	0: No code	56
2009-11-19 19:10:55	192.168.1.77	192.168.1.1	8: Echo (ping) request	0: No code	56
2009-11-19 19:10:55	192.168.1.1	192.168.1.77	0: Echo (ping) reply	0: No code	56

Displaying 1 - 10 of 9206

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**Figure 14. ICMP Log List**

The following information indicates contents of recorded ICMP log.

- Date – Time: Captured time.
- Source: IP Address of Source.
- Destination: IP Address of Destination.
- Message Type: ICMP message type.
- Message Code: Message code information.
- Size: ICMP packet length.

Can filter ICMP Log List by Date-Time, Host, Page.

2009-11-13 00:00

Enter host ip or name

10 Per Page

**Figure 15. Result Filter of ICMP Log**

- [EXPORT]
- Export the ICMP Log as CSV file.

When receiving the following message, click OK, then ICMP Log is exported as CSV file.



Figure 16. Export message.

- [DETAIL]  
View detailed information of ICMP Log.

The screenshot shows the NG TRACE Enterprise Security System interface. The top navigation bar includes "SYSTEM ADMINISTRATION", "REPORT AND ANALYSIS" (which is currently selected), and "USER MANAGEMENT". The top right shows a user session ("ngadmin") and a "Logout" link. On the left, a sidebar menu lists "LOGS AND AUDITS" (Whole, ICMP, E-mail, IM, HTTP, File Transfer), "SEARCH" (Search), "DATABASE" (Select Database), and "EXPORT" (Exported Tables). The main content area is titled "ICMP Detail" and contains a table with the following data:

Classific	Contents
Date-Time:	2009-11-19 19:10:59
Source Address:	192.168.1.1
Destination Address:	192.168.1.77
Message Type:	0: Echo (ping) reply
Message Code:	0: No code
Size:	56
Information:	Echo (ping) reply: No code

At the bottom right of the content area, there is a copyright notice: "© 2009-2009 NGTraceManager. All Rights Reserved NG Trace v1.0 b100 Rails 2.3.2 Env production".

Figure 17. ICMP Detail

#### 4.1.3 E-mail

Display list of stored E-mail Communication Logs in selected DB.

The screenshot shows the NG TRACE Enterprise Security System interface. The top navigation bar includes 'ngadmin' and 'Logout'. Below it are three main tabs: 'SYSTEM ADMINISTRATION', 'REPORT AND ANALYSIS' (which is selected), and 'USER MANAGEMENT'. On the left, a sidebar menu lists various log types: Whole, ICMP, E-mail (selected), IM, HTTP, File Transfer, SEARCH, Search, DATABASE, Select Database, EXPORT, and Exported Tables. The main content area displays the 'E-mail Log List Of STOREDB' with a table of captured logs. The table has columns for Date-Time, Source, Destination, Protocol, subject, sender, receiver, and Attachs. The logs show various email interactions between IP addresses 192.168.1.77 and 192.168.1.88 using protocols like pop3, smtp, and imap. The subject column contains Korean text such as '너이디어나이?' and '너마더아나이?'. The sender and receiver columns show email addresses like 'pak@mail.kcc.com' and 'rl@mail.kcc.com'. The 'Attachs' column indicates the number of attachments, ranging from 0 to 2.

E-mail Log List Of STOREDB							
EXPORT		DETAIL		Date-Time	Source	Destination	Protocol
2009-11-18 16:43:30	192.168.1.77	192.168.1.88	pop3	너이디어나이? ?	root	pak@mail.kcc.com	2
2009-11-18 16:43:25	192.168.1.77	192.168.1.88	smtp	너마더아나이? ?	root	pak@mail.kcc.com	2
2009-11-18 16:41:28	192.168.1.77	192.168.1.88	smtp	fjklidstja;flkjajd;	root	pak@mail.kcc.com	3
2009-11-18 16:38:15	192.168.1.77	192.168.1.88	smtp	test mail (pop3)	root	pak@mail.kcc.com	0
2009-11-18 16:27:09	192.168.1.77	192.168.1.88	imap	welcome test mail	root	pak@mail.kcc.com	2
2009-11-18 16:26:40	192.168.1.77	192.168.1.88	smtp	welcome test mail	root	pak@mail.kcc.com	2
2009-11-18 16:24:45	192.168.1.77	192.168.1.88	imap	123345	pak	rl@mail.kcc.com	0
2009-11-18 16:24:09	192.168.1.77	192.168.1.88	smtp	123345	pak	rl@mail.kcc.com	0

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Figure 18. E-mail Log List

The following information indicates contents of recorded E-mail log.

- Date – Time: Captured time.
- Source: IP Address of Source.
- Destination: IP Address of Destination.
- Protocol: Type of E-mail.
- Subject: E-mail's subject.
- Sender: E-mail Sender.
- Receiver: E-mail Receiver.
- Attaches: Attached files.

Filter E-mail Log List by Date-Time, Host, and Page.

The screenshot shows a horizontal search bar with three input fields: a date-time selector set to '2009-11-13 00:00', a search field containing 'Enter host ip or name', and a page size selector set to '10 Per Page'.

Figure 19. Result Filter of E-mail Log

- [EXPORT]

Export the E-mail Log as CSV file.

When receiving the following message, click OK, then ICMP Log is exported as CSV file.



Figure 20. Export message.

- [DETAIL]

View detailed information of E-mail Log.

A screenshot of the NG TRACE Enterprise Security System web interface. The top navigation bar includes 'ngadmin' and 'Logout'. Below it are tabs for 'SYSTEM ADMINISTRATION', 'REPORT AND ANALYSIS' (which is selected), and 'USER MANAGEMENT'. On the left, a sidebar menu under 'LOGS AND AUDITS' shows options like 'Whole', 'ICMP', 'E-mail' (which is selected and highlighted in blue), 'IM', 'HTTP', 'File Transfer', 'SEARCH', and 'Search'. Under 'DATABASE', there are 'Select Database' and 'EXPORT' sections. The main content area is titled 'E-mail Detail' and shows the following log entry:

Date-Time: 2009-11-18 16:26:40  
Source Address: 192.168.1.77  
Destination Address: 192.168.1.88  
From: root <ri@mail.kcc.com>  
To: pak@mail.kcc.com  
Subject: welcome test mail  
Attachs: 2 files  
test\_soap\_server.rb install.log  
pongpong test mail ..... computer numeric control

At the bottom right of the content area, there is a copyright notice: '© 2008-2009 NGTraceManager. All Rights Reserved NG Trace v1.0 b100 Rails 2.3.2 Env production'

Figure 21. E-mail Detail.

#### 4.1.4 IM

Display list of stored IM Communication Logs in selected DB.

The screenshot shows the NG TRACE Enterprise Security System interface. The top navigation bar includes 'ngadmin' and 'Logout'. Below it are three main tabs: 'SYSTEM ADMINISTRATION', 'REPORT AND ANALYSIS' (which is currently selected), and 'USER MANAGEMENT'. On the left, a sidebar menu lists 'LOGS AND AUDITS' (Whole, ICMP, E-mail, IM, HTTP, Ftp), 'SEARCH' (Search), 'DATABASE' (Select Database), and 'EXPORT' (Exported Tables). The main content area is titled 'IM Log List Of STOREDDB'. It features a search bar with fields for 'Date-Time' (set to '2008-09-03 00:00'), 'Source' (All Hosts), and 'Destination' (10 Per Page). A table displays log entries:

Date-Time	Source	Destination	Type	Server	Up/Down	Contents
2009-06-09 00:00:00	192.168.1.103	192.168.1.106	Skype	skype	Down	???????
2009-08-12 11:15:03	192.168.1.107	192.168.1.101	JABBER	hahaha	Up	mt.exe

At the bottom right of the content area, there is a copyright notice: '© 2008-2009 NGTraceManager. All Rights Reserved NG Trace v1.0 b100 Rails 2.3.2 Env development'.

Figure 22. IM Log List

The following information indicates contents of recorded IM log.

- Date – Time: Captured time.
- Source: IP Address of Source.
- Destination: IP Address of Destination.
- Type: Sub type of IM protocol.
- Server: Name of Server.
- Up/Down: Upload/Download.
- Contents: Message text, file name.

Filter IM Log List by Date-Time, Host, and Page.



Figure 23. Result Filter of IM Log

- [EXPORT]

Export the IM Log as CSV file.

When receiving the following message, click OK, then ICMP Log is exported as CSV file.



Figure 24. Export message.

#### 4.1.5 HTTP

Display list of stored HTTP Communication Logs in selected DB.

Date-Time	Source	Destination	Method	URL
2009-11-20 15:06:47	192.168.1.88	192.168.1.144	GET	<a href="http://192.168.1.144/fs/file/index.php?img=favicon">http://192.168.1.144/fs/file/index.php?img=favicon</a>
2009-11-20 15:06:37	192.168.1.88	192.168.1.144	GET	<a href="http://192.168.1.144/fs/file/view?path=%27ngt_JelxKk__filePh...">http://192.168.1.144/fs/file/view?path=%27ngt_JelxKk__filePh...</a>
2009-11-20 15:06:22	192.168.1.88	192.168.1.202	GET	<a href="http://192.168.1.202/report/Report/contents?proto=4&amp;id=9745">http://192.168.1.202/report/Report/contents?proto=4&amp;id=9745</a>
2009-11-20 15:04:40	192.168.1.88	192.168.1.34	GET	<a href="http://192.168.1.34/mysois">http://192.168.1.34/mysois</a>
2009-11-20 15:03:51	192.168.1.88	192.168.1.202	GET	<a href="http://192.168.1.202/report/report/?proto=4">http://192.168.1.202/report/report/?proto=4</a>
2009-11-20 15:03:39	192.168.1.88	192.168.1.34	GET	<a href="http://192.168.1.34/mysois/">http://192.168.1.34/mysois/</a>
2009-11-20 15:03:38	192.168.1.88	192.168.1.34	GET	<a href="http://192.168.1.34/index.html">http://192.168.1.34/index.html</a>
2009-11-20 15:03:11	192.168.1.88	192.168.1.202	GET	<a href="http://192.168.1.202/networkadmin/exe_components">http://192.168.1.202/networkadmin/exe_components</a>

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**Figure 25. HTTP Log List**

The following information indicates contents of recorded IM log.

- Date – Time: Captured time.
- Source: IP Address of Source.
- Destination: IP Address of Destination.
- Method: HTTP method.
- URL: URL of visit web site.
- Cookie: Cookie information.

Filter HTTP Log List by Date-Time, Host, and Page.

2009-11-13 00:00	<input type="button" value=""/>	Enter host ip or name	10 Per Page	<input type="button" value=""/>
------------------	---------------------------------	-----------------------	-------------	---------------------------------

**Figure 26. Result Filter of HTTP Log**

- [EXPORT]  
Export the HTTP Log as CSV file.

When receiving the following message, click OK, then ICMP Log is exported as CSV file.



**Figure 27. Export message.**

- [DETAIL]

View detailed information of HTTP Log.

Classific	Contents
Date-Time:	2009-11-20 15:03:11
Source Address:	192.168.1.88
Destination Address:	192.168.1.202
Method:	GET
Cookie:	_source_session=BAh7DDoPc2Vzc2lvbj9pZClioTRiOTi3ZGFjY2MxY2NjNzVjNzRiYTMjMTZjNzAwNDE6FG1vbml0b3Jfb3B0aW9uc3shOg1wZXJtcGFnZTABCXBhZ2UwOhoswVdoX2ZpbhRlc9vchRpzb5zexA7BzA6DlV9fdGFyZ2Y0MDolM819jcmloTA6D21vbml0b3JraVQwOgxvX3Byb3RvMDsIMDoLb19uYYV1
Content Type:	text/html; charset=utf-8
URL:	<a href="http://192.168.1.202/networkadmin/exe_components">http://192.168.1.202/networkadmin/exe_components</a>
Information:	HTTP/1.1 200 OK Response.

**Figure 28. HTTP Detail**

#### 4.1.6 FTP

Display list of stored FTP Communication Logs in selected DB.

**LOGS AND AUDITS**

- Whole
- ICMP
- E-mail
- IM
- HTTP
- File Transfer**
- SEARCH
- Search
- DATABASE
- Select Database
- EXPORT
- Exported Tables

**FTP Log List Of STOREDDB**

Date-Time	Source	Destination	Protocol	URL	Command	Arguments
2009-11-19 18:53:58	192.168.1.77	192.168.1.103	NFS	nfs://192.168.1.103	ACCESS	/iosi-utils.c
2009-11-19 18:53:37	192.168.1.77	192.168.1.103	NFS	nfs://192.168.1.103	ACCESS	/
2009-11-19 18:53:37	192.168.1.77	192.168.1.103	NFS	nfs://192.168.1.103	ACCESS	/centos5.1 server setup.pdf
2009-11-19 18:52:04	192.168.1.77	192.168.1.103	NFS	nfs://192.168.1.103	ACCESS	/system-config-bind-4.0.3.el...
2009-11-19 18:52:02	192.168.1.77	192.168.1.103	NFS	nfs://192.168.1.103	ACCESS	/
2009-11-19 18:51:03	192.168.1.77	192.168.1.103	NFS	nfs://192.168.1.103	ACCESS	test0
2009-11-19 18:51:03	192.168.1.77	192.168.1.103	NFS	nfs://192.168.1.103	READDIRPLUS	test0
2009-11-19 18:50:57	192.168.1.77	192.168.1.103	NFS	nfs://192.168.1.103	ACCESS	test1/test0/New Folder/saa/a...
2009-11-19 18:50:56	192.168.1.77	192.168.1.103	NFS	nfs://192.168.1.103	ACCESS	test1/test0/New Folder/saa
2009-11-19 18:50:55	192.168.1.77	192.168.1.103	NFS	nfs://192.168.1.103	ACCESS	test1/test0/New Folder/saa

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**Figure 29. FTP Log List**

The following information indicates contents of recorded FTP log.

- Date – Time: Captured time.
- Source: IP Address of Source.
- Destination: IP Address of Destination.
- Protocol: Type of file transfer protocol such as FTP and SMB
- URL: URL of visited web site
- Command: Request command.
- Arguments: Information of communication file.

Filter FTP Log List by Date-Time, Host, and Page.

2009-11-13 00:00	<input type="button" value=""/>	Enter host ip or name	10 Per Page	<input type="button" value=""/>
------------------	---------------------------------	-----------------------	-------------	---------------------------------

**Figure 30. Result Filter of FTP Log**

- [EXPORT]

Export the FTP Log as CSV file.

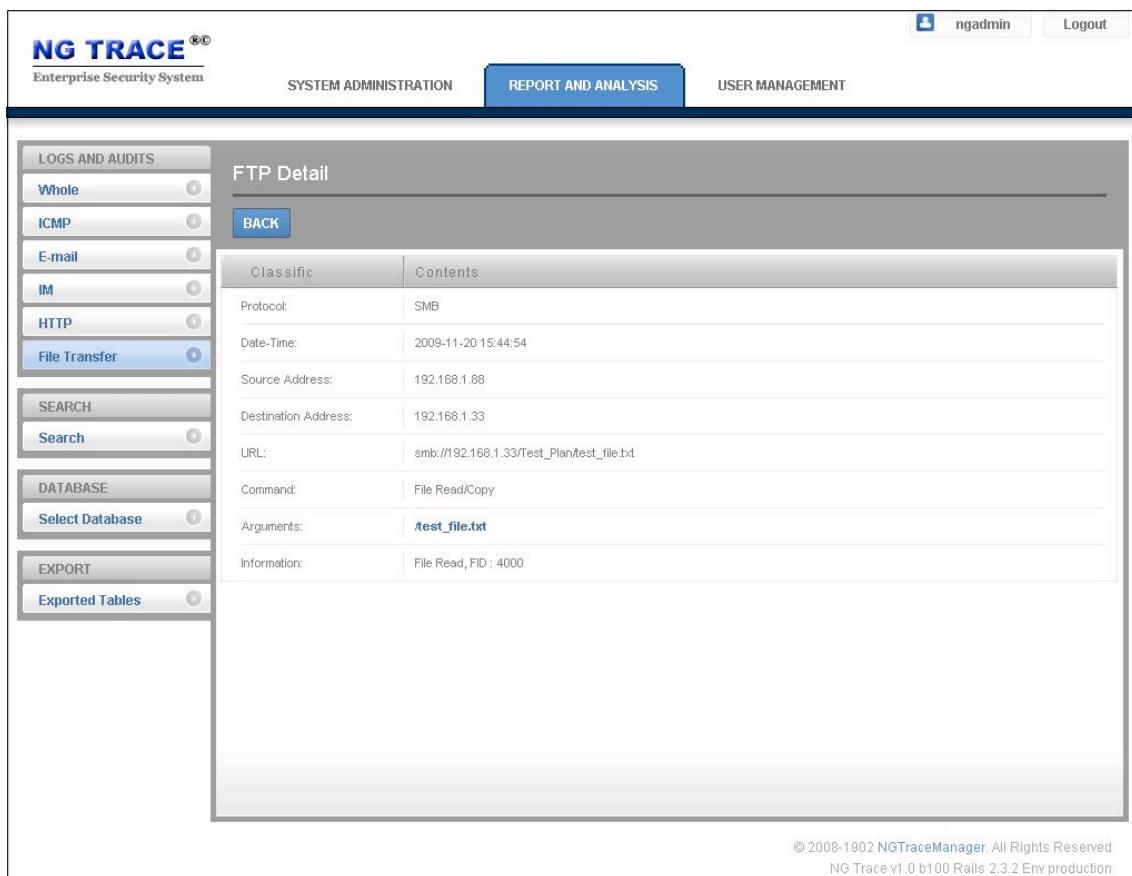
When receiving the following message, click OK, then ICMP Log is exported as CSV file.



Figure 31. Export message.

- [DETAIL]

View detailed information of FTP Log.



Classific	Contents
Protocol:	SMB
Date-Time:	2009-11-20 15:44:54
Source Address:	192.168.1.88
Destination Address:	192.168.1.33
URL:	smb://192.168.1.33/Test_Plan/test_file.txt
Command:	File Read/Copy
Arguments:	test_file.txt
Information:	File Read, FID : 4000

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Figure 32. FTP Detail

Console log could be shown slowly about large file.

## 4.2 Search

Search the audit data stored in stored Database by keyword and protocol.

The screenshot shows the NG TRACE Enterprise Security System interface. At the top, there is a header with the NG TRACE logo, a user dropdown (ngadmin), and a logout link. Below the header, there are three main navigation tabs: SYSTEM ADMINISTRATION, REPORT AND ANALYSIS (which is currently selected), and USER MANAGEMENT. On the left side, there is a sidebar with several menu items under 'LOGS AND AUDITS': Whole, ICMP, E-mail, IM, HTTP, File Transfer, and a 'SEARCH' section which includes 'Search' (selected). Below these are 'DATABASE' and 'EXPORT' sections, each with a 'Select Database' and 'Exported Tables' option. The main content area is titled 'Search Audits'. It features a search bar with the placeholder 'mail', a protocol selection dropdown set to 'All Types', and a page size selector set to '10 Per Page'. Below the search bar is a table with the following data:

ID	Time	Source	Destination	Protocol	Rule	Info
9421	2009-11-18 16:24:09	192.168.1.77	192.168.1.88	E-mail	Audit	"pak" send a mail to "ri@mail.kcc.com" <a href="#">view more</a>
9422	2009-11-18 16:24:45	192.168.1.77	192.168.1.88	E-mail	Audit	"pak" send a mail to "ri@mail.kcc.com" <a href="#">view more</a>
9423	2009-11-18 16:26:40	192.168.1.77	192.168.1.88	E-mail	Audit	"root" send a mail to "pak@mail.kcc.com" <a href="#">view more</a>
9424	2009-11-18 16:27:09	192.168.1.77	192.168.1.88	E-mail	Audit	"" send a mail to "" <a href="#">view more</a>

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Figure 33. Search

Input the keyword, or select the protocol and press .

## 4.3 Database

Display Database list that connect to System.

The screenshot shows the NG TRACE Enterprise Security System interface. At the top, there is a header with the logo 'NG TRACE®' and the subtext 'Enterprise Security System'. To the right of the logo are user authentication buttons for 'ngadmin' and 'Logout'. Below the header, there is a navigation bar with three main tabs: 'SYSTEM ADMINISTRATION', 'REPORT AND ANALYSIS' (which is currently selected), and 'USER MANAGEMENT'. On the left side, there is a sidebar menu with several categories: 'LOGS AND AUDITS' (containing 'Whole', 'ICMP', 'E-mail', 'IM', 'HTTP', and 'Ftp'), 'SEARCH' (containing 'Search'), 'DATABASE' (containing 'Select Database'), and 'EXPORT' (containing 'Exported Tables'). The 'Select Database' item under 'DATABASE' is highlighted with a blue background. The main content area is titled 'Select Database' and contains a sub-section labeled '[SELECT]'. Below this, there is a table with three columns: 'Database Type', 'Database Name', and 'IP Address'. The table lists three entries:

Database Type	Database Name	IP Address
RECENTDB	ngtracerecent_dev	192.168.1.104
STOREDDB	ngtracestored_dev	192.168.1.104
ARCHIVEDB	ngtracearchive_dev	192.168.1.104

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**Figure 34. Select Database**

- [SELECT]

From database list, select specific database to view stored log in it. If you select the RECENTDB and press the [SELECT], user can see Whole Log List stored in Recent DB.

**NG TRACE** ©

Enterprise Security System

SYSTEM ADMINISTRATION REPORT AND ANALYSIS USER MANAGEMENT

**LOGS AND AUDITS**

- Whole
- ICMP
- E-mail
- IM
- HTTP
- Ftp

**SEARCH**

- Search

**DATABASE**

- Select Database

**EXPORT**

- Exported Tables

**Whole Log List Of RECENTDB- 192.168.1.104**

Date-Time	Source	Destination	Protocol	Sub Type	Rule	Info	view more
2009-03-15 00:00:00	192.168.1.105	192.168.1.1	E-mail	SMTP	Audit	??, ??	<a href="#">view more</a>
2009-03-15 00:00:00	192.168.1.108	192.168.1.101	E-mail	POP3	Log	?? ? ? ? ?	
2009-04-21 00:00:00	192.168.1.106	192.168.1.101	FTP	FTP	Audit	stacraft.exe	<a href="#">view more</a>
2009-05-23 00:00:00	192.168.1.107	192.168.1.101	HTTP	HTTP	Audit	Download Flash Player	<a href="#">view more</a>
2009-06-09 00:00:00	192.168.1.103	192.168.1.106	IM	ICQ	Audit	??, ?? ? ?	
2009-06-09 00:00:00	192.168.1.107	192.168.1.101	FTP	FTP	Log	?? ? ? ? ? ? ?	
2009-06-09 00:00:00	192.168.1.107	192.168.1.101	FTP	FTP	Log	?? ? ? ? ? ? ?	
2009-06-09 00:00:00	192.168.1.107	192.168.1.101	FTP	FTP	Log	?? ? ? ? ? ? ?	
2009-06-09 00:00:00	192.168.1.107	192.168.1.101	FTP	FTP	Log	?? ? ? ? ? ? ?	

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**Figure 35. Whole Log List Of RECENTDB**

## 4.4 EXPORT

Display exported file's list.

The screenshot shows the 'REPORT AND ANALYSIS' section of the NG TRACE interface. On the left, there's a sidebar with categories like LOGS AND AUDITS (Whole, ICMP, E-mail, IM, HTTP, Ftp), SEARCH (Search), DATABASE (Select Database), and EXPORT (Exported Tables). The main area is titled 'Exported Table List' and contains a table with three columns: File Name, Exported Date, and Filter Condition. Three files are listed:

File Name	Exported Date	Filter Condition
export-ftplogs-20090903213306-1.csv	2009-09-03 21:33:06	Protocol:FTP, From Time: 2008-09-03 00:00
export-ftplogs-20090903213328-1.csv	2009-09-03 21:33:28	Protocol:FTP, From Time: 2008-09-03 00:00
export-ftplogs-20090903213348-1.csv	2009-09-03 21:33:48	Protocol:FTP, From Time: 2008-09-03 00:00

At the bottom right of the main area, it says: © 2008-2009 NGTraceManager. All Rights Reserved  
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**Figure 36. Export Table List**

The following information indicates contents of exported file.

- File Name: Name of exported file.
- Exported Date: Exported date.
- Filter Condition: Filter condition of exported file.
  
- [DOWNLOAD]  
Download selected file.
- [DELETE]  
Delete selected file.
- [DELETE ALL]  
Delete all file.