

# xMatters lite for HP

Network Node Manager i



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AlarmPoint Systems, Inc. is now xMatters, inc. This change extends to how we name our products: the AlarmPoint Integration Agent is now the xMatters integration agent; AlarmPoint Enterprise is now xMatters enterprise; and so on. You can learn more about why we changed our name at [www.xmatters.com](http://www.xmatters.com). During the ongoing transition to the new naming conventions, legacy corporate and product names will still appear in some parts of our products, such as directory paths, logs, and messages. This document reflects the new names whenever possible, while respecting the need for clarity when referring to older products, legacy issues, existing knowledge base articles, etc.

**Thursday, April 07, 2011**

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From this site, you can obtain information about the company, products, support, and other helpful tips. You can also visit the Customer Support Site from the main web page. In this protected area, you will find current product releases, patches, release notes, a product knowledge base, trouble ticket submission areas and other tools provided by xMatters, inc.

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This integration was designed and tested on an unmodified version of HP Network Node Manager i, and this document describes how to configure xMatters to integrate with the default installation. If you have customized or altered your instance of HP NNMi, this integration may need to be modified for your deployment. Please note that these integration

changes are not part of the services offered by xMatters Technical Support, but can be performed through xMatters's Professional Services department. For more information, contact your xMatters Sales representative.

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# Chapter 1: Introduction to xMatters

xMatters has consistently focused on critical event resolution, developing unrivaled domain expertise in every major event resolution category, including:

- Network monitoring
- Application management
- Business continuity
- Employee safety
- Data center job scheduling
- Network security
- Help desk management.

xMatters is an interactive alerting application, designed to capture and enrich important events, to route those events to the right person on any communication device, and to give that person the ability to solve, escalate or enlist others to resolve.

xMatters allows you to take critical business information and contact the right people via voice phone, SMS, two-way pagers, instant message, and email.

Through integration modules, the xMatters system can become the voice and interface of an automation engine or intelligent application (the Management System, such as BMC Remedy or HP Network Node Manager). When a Management System detects an event that requires attention, xMatters places phone calls, sends pages, messages, or emails to the appropriate personnel, vendors or customers.

The xMatters system is also persistent, escalating through multiple devices and personnel until someone accepts responsibility or resolves the event. Once contacted, the xMatters system gives the notified person instant two-way communication with the Management System. Responses are executed immediately on the Management System, enabling remote resolution of the event.

## Introduction to xMatters lite

xMatters lite is designed for small groups that do not require voice or distributed load capability (xMatters lite installs on a single computer). However, xMatters lite is a great way to get started with the xMatters product family and includes many sophisticated notification options and a web user interface for the system administrator.

xMatters lite has no voice communication capability, but is well-suited for a production environment in which few Users and Groups are required.

While a customer could build their own custom integration, it is presumed that customers will be deploying with one of the provided xMatters integration modules.

## Products and feature availability

xMatters offers the following product licensing:

- **xMatters lite**: designed for small groups that do not require voice or distributed load capability (xMatters lite installs on a single computer).
- **xMatters workgroup**: a mid-level product intended for mid- to large-size ESM (Enterprise Service Management) implementations that require voice capability, a rich feature set, greater flexibility, and user self-service.
- **xMatters enterprise**: intended for sophisticated ESM implementations that require full voice and text capability, an industry-leading feature set, unrivalled permissioning and scheduling flexibility, user self-service, customizable event subscriptions, customizable messaging panels, highly-distributed load capability, and a potentially global deployment.

Each xMatters application has a defined set of available features. However, because xMatters product licensing is very flexible, different deployments of the same product (e.g., xMatters workgroup) may not have the same feature set. In addition, the features available to you are controlled by your permissions, and also by any customizing done by your organization.

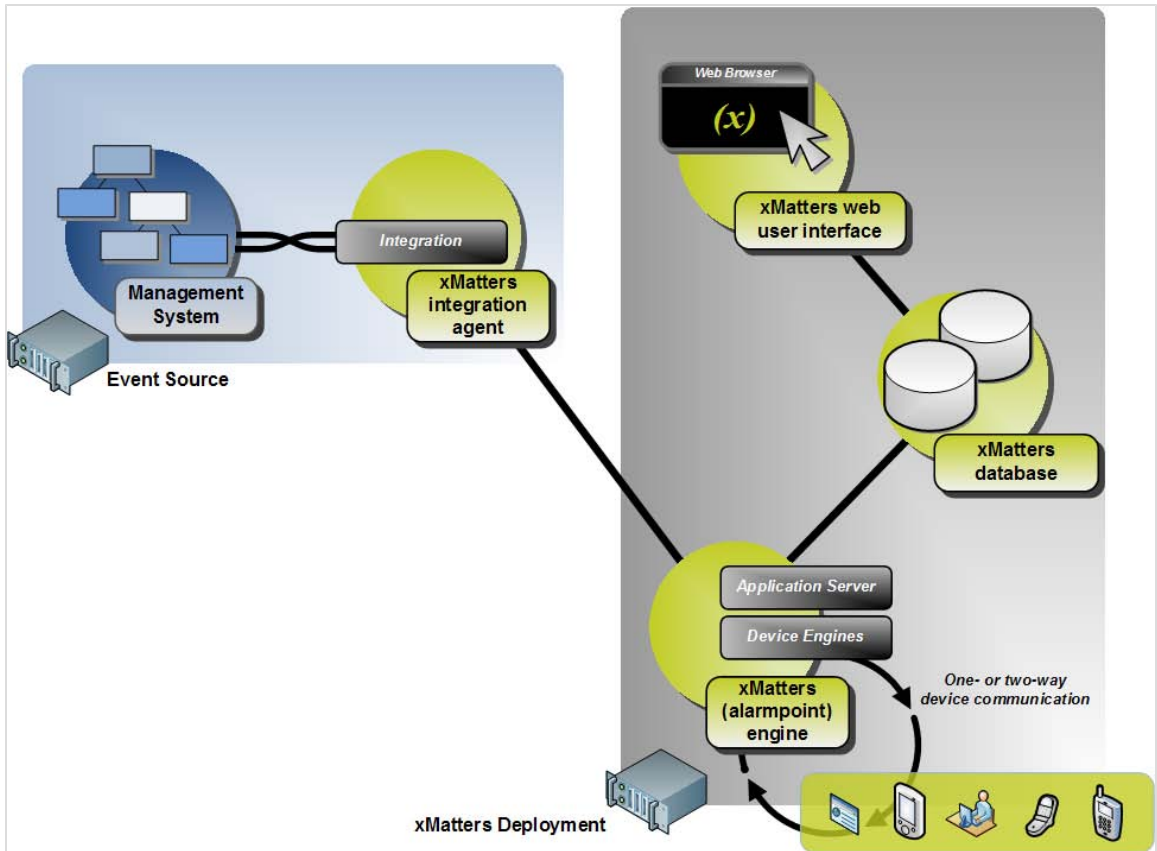
For complete product details, and a feature comparison matrix, visit <http://www.xmatters.com> or contact xMatters Sales.

### How the xMatters system works

The xMatters system can be thought of as a management system employee trained to notify people when problems arise. The management system can inform the xMatters system about situations in an organization that will trigger notifications to people based on steps predefined in scripts.

The following diagram shows an example xMatters lite deployment:





The example deployment shows the interrelationship between the key xMatters components, with the xMatters integration agent acting as a bridge between xMatters and the external management system; in this case, HP Network Node Manager i.

In this all-in-one deployment, the xMatters Application/Notification Server Node routes and sends notifications through the configured Device Engines. Virtually all system configuration is done through the xMatters web user interface, and the xMatters database acts as a central repository of all configuration, notification, component availability, and audit information. The database can be an internal Microsoft SQL Server or Oracle database on the xMatters system, or it can be located on another system.

The following table summarizes the key components of an xMatters deployment:

xMatters Components

Component	Notes
<b>xMatters Application Server (Node)</b>	The xMatters Application Server (Node) is the central xMatters component, running the business processes that instruct other components in the system.
<b>Notification Server (Node)</b>	<p>An xMatters deployment can have one or many Notification Servers that communicate with the Application Server and xMatters database to queue, route, and send notifications and their responses.</p> <p>Note that xMatters lite does not have a separate Notification Server Node.</p>
<b>Device Engines</b>	<p>A sub-component of Notification Servers, Device Engines send notifications to various Devices (phones, pagers, email, etc.). A Notification Server may have several Device Engines; for example, a Notification Server can have an Email and a Paging Engine.</p> <p>Note that due to thread availability, it is strongly recommended that a Notification Server does not have more than one Device Engine of the same type.</p>
<b>xMatters database</b>	The xMatters database is the central storehouse of User, Device, Group, logging and auditing information for the xMatters system.
<b>xMatters integration agent</b>	<p>The integration agent facilitates bi-directional communication (both in terms of data flow and initiation), between xMatters and one or more management systems. This functionality can be divided into two sets of core features:</p> <ul style="list-style-type: none"><li>■ An interface for web-based clients, such as the xMatters mobile access, to submit requests to a management system.</li><li>■ An interface for management systems to submit requests to xMatters.</li></ul>

xMatters dynamically selects and runs the script – called an Action Script – appropriate for an incoming event. Scripts can contact one person, a group, or even a specific communication device. Some scripts establish contact with people or services, while others provide a choice of actions specific to the situation. xMatters constantly updates the management system on what is happening, including replies from real-time two-way telephones, messaging devices, two-way pagers, or email.

The xMatters integration agent is installed on the management system, allowing the management system to communicate with xMatters. The integration agent is like a bridge, translator, and message enhancer between the management system and xMatters. If the management system wants to start or

stop a situation, it uses the integration agent to send a message. To respond, xMatters returns a message to the integration agent, which can log the information, run a command on the management system, and so on.

The xMatters integration agent running on the management system sends messages to xMatters on behalf of the management system. xMatters splits the notification process into several basic components, which allows the administrator to reuse several scripts, making Action Scripting more like piecing modules together than programming.

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**Note:** *For details on Action Scripting, refer to the xMatters Online Developer's Guide.*

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The main processing component in xMatters is called an Application Server. The Application Server communicates with one or many xMatters Notification Servers to manage sending and receiving of notifications. Notification Servers contain Device Engines (e.g., Email Engine, Phone Engine). In xMatters lite, the Application Server and Notification Server are combined into an all-in-one deployment.

## About this document

The *xMatters lite Quick Start Guide* is intended to help xMatters lite users install, configure, and maintain an xMatters lite installation.

This guide is not intended to be a complete guide to all of the xMatters features and capabilities, but rather to provide an introduction to and basic usage instructions for xMatters lite. The primary documentation resource includes the following manuals:

- *xMatters (alarmpoint) engine installation and administration guide*: this guide is intended to help xMatters Administrators install, configure, and maintain an xMatters (alarmpoint) engine installation. This guide also introduces key concepts, including the role of xMatters within an organization, and provides an overview of the main modules and processes.
- *xMatters (alarmpoint) engine user guide*: intended for end users, this guide explains the basics of the xMatters web user interface, and how to accomplish common tasks. This guide also includes a section for User and Group Supervisors about more advanced tasks, such as Group creation and management.
- *xMatters Online Developer's Guide*: this online guide is intended for developers and administrators, and contains instructions on using the scripting tools, web services, and integration components of xMatters.
- *xMatters (alarmpoint) engine java client guide*: this guide explains how to configure and use the custom features of the xMatters AlarmPoint Java Client.
- *xMatters (alarmpoint) engine integration agent guide*: this guide explains how to install and configure the xMatters integration agent, which enables integrations between xMatters and

management systems via web services.

- *xMatters (alarmpoint) engine mobile access guide*: this guide explains how to configure and maintain the xMatters mobile access, which allows Users to access their management systems from mobile devices.

xMatters Administrators may also refer to some of the advanced features described in the *xMatters (alarmpoint) engine user guide*.

## **Important Terms**

This manual uses the following terms to refer to specific components within xMatters. These terms are capitalized to help identify them as xMatters terminology, and are used throughout the xMatters documentation.

### **Event**

An Event is any kind of message generated by an external source that enters xMatters and describes a situation that requires a notification. Each Event requires at least one Alert.

### **Alert**

An Alert is any message or notification sent by the system to a Device, in order to inform a User of an Event that requires attention. The Alert contains information about the Event, such as the time and location, and may ask Users to respond, acknowledging that they have received the notification.

### **Users**

In xMatters, people who can receive notifications are called “Users”. Every person in the system is a User defined by a set of details, including ID number, user name, login password, and so on. In xMatters lite, you are limited to a maximum of ten Users.

### **Devices**

A Device in xMatters is any means of receiving a notification message. Devices can include physical items like a telephone or a BlackBerry, or intangible items such as email accounts. In xMatters lite, each User can have a maximum of three Devices.

### **Groups**

In xMatters, Groups are used for collecting Users and Devices and organizing them into notification schedules. For a complete definition of Groups, including the terms used to define Group components, see "Creating Groups" on page 36. In xMatters lite, you are limited to a maximum of five Groups.

## Chapter 2: Installing and Configuring

The following sections describe how to install, start, and configure an example xMatters lite deployment.

### Assumptions

To simplify the installation and configuration process described in this document, the instructions assume the following conditions:

- xMatters lite will be installed on Microsoft Windows 2000 or Windows 2003 (with no other database software running on the machine) using the standard install file.
- The machine used for the evaluation is configured for a static IP address (using DHCP may require additional installation considerations not covered in this guide).

### System Requirements

The following table outlines the general hardware requirements for an xMatters lite deployment (the processors are assumed to be Pentium 4 or equivalent):

Intel Pentium 4 or Equivalent Server System Requirements

Requirement	Minimum	Recommended
<b>CPU</b>	1 x CPU 2.8 GHz	2 x CPU 3.6 GHz
<b>Memory</b>	4 GB	4 GB (8GB for high-volume systems)
<b>Disk Space</b>	15 GB	30 - 60 GB

### Installation Overview

Installing xMatters lite requires the following components:

#### **xMatters database**

The xMatters installer requires that you enter parameters related to the database installation. For this reason, install the database you plan to use with xMatters before installing the application. If you are using the included Microsoft SQL Server database, it is installed during the installation of the xMatters application.

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**Note:** *This chapter includes instructions on how to configure xMatters for the included Microsoft SQL Server 2005 Express database. For instructions on how to configure xMatters for other databases, including Oracle installations, refer to the xMatters (alarmpoint) engine installation and administration guide.*

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### **xMatters integration agent**

The xMatters integration agent has its own installer, and the procedure for installing it on your management system depends on the type of management system and the level of customization required. For complete installation instructions, see the *xMatters (alarmpoint) engine integration agent guide*. If a customized integration was provided, refer to the documentation accompanying the integration package.

### **xMatters lite application**

The xMatters lite application install includes the database components, web server, and application server node. The xMatters lite licensing requires that it be installed on a single computer; other versions of xMatters may be distributed across multiple computers and different physical locations.

## **Installing the integration agent**

The xMatters integration agent is contained in a separate installation file, and requires a license key provided by xMatters.

It is recommended that you follow the installation instructions in the *xMatters (alarmpoint) engine integration agent guide*, which covers a basic installation. The following section is only intended to identify items of specific interest, or settings that should be changed from the default.



On the Installer Configuration page:

- In the Web Server Host field, type the IP address of the Application Server (where xMatters lite will be installed).
- In the Integration Host field, type the IP address of the computer on which you are installing the integration agent; note that the default setting for both the Web Server Host and Integration Host fields is *localhost*. This default setting will only work if you are installing xMatters lite and the integration agent on the same machine as your management system.

The Administrator Contact parameters allow you to specify an email account and SMTP server to use if the integration agent detects issues with contacting the application server. These are optional.

When the installation is complete, the integration agent should automatically begin running as a service, visible in the Windows Services panel.

## Configuring the integration service

After installing the integration agent, you must enable the integration service by copying the folder containing the integration agentfiles into the xMatters integration services folder and modifying the `hpnmi.js` and `IAConfig.xml` files..

**To configure the integration service:**

1. Copy the xM-HP-NNMi\components\alarmpoint-integration-agent\hpnmmi folder from the extracted integration archive to the <IAHOME>\integrationservices folder:
2. Open the IAConfig.xml file found in <IAHOME>\conf and add the following line to the “service-configs” section:  

```
<path>hpnmmi/hpnmmi.xml</path>
```
3. Open the <IAHOME>\integrationservices\hpnmmi\nnmi-config.js file and modify the following variables:

Setting	Default Value	Description
NNMI_HOST	localhost	To configure this setting, replace "localhost" with the IP address of your local server on which the WS-Eventing subscription service is installed.
NNMI_PORT	80	To configure this setting, replace "80" with the port number of your local server on which the WS-Eventing subscription service is installed. (For instructions on how to determine the port required, see "Identifying your port" on page 1.)
NNMI_USER	webservices	Specifies the username of the web services client account to use when connecting to the HP NNMi web services.  For more information, see "Creating a web services client" on page 15.
NNMI_PASSWORD	nnm	Specifies the password for the web services account.



Setting	Default Value	Description
<b>FILTER</b>	nature='ROOTCAUSE' and lifecycleState='com.hp.nms.incident.lifecycle.Registered' and severity='CRITICAL' and ( name='AddressNotResponding' or name='ConnectionDown' or name='InterfaceDown' or name='NodeDown' )	Specifies the filter to use when determining whether an event should be forwarded to xMatters.  For instructions on how to update this setting, refer to "Updating the event injection filter" on page 72.
<b>SERVICE_URL</b>	http://localhost:8081/http/hpnnmi_hpnnmi	Specifies the call back to the integration agent when subscribing to the WS-Eventing service.  Requires the following format: http://{service-gateway-host}:{service-gateway-port}/http/{domain}_{name}

- Restart the integration agent.

---

**Note:** *On Windows, the integration agent runs as a Windows Service; on Unix, it runs as a Unix daemon.*

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## Installing xMatters

The initial installation of xMatters provides several options, such as the installation folder, component features, etc. This section describes the recommended choices for various stages of the installation process.

Follow the on-screen instructions to install xMatters, using the settings explained below.

### Installation folder

Unless your company requirements do not allow the installation of any application software under C:\Program Files, accept the default settings. Otherwise, specify the folder in which you want to install xMatters, and note its location.

### Database Installation Query

If you are installing xMatters lite for evaluation purposes, it is recommended that you install and use the Microsoft SQL Server 2005 Express database.

On the installer's Database Installation Query page, select the **Install Microsoft SQL Server 2005 Express** option, and supply an "sa" (Super Administrator) password. (Note that the password must

satisfy Microsoft SQL Server's "strong password" guidelines or the installation will fail. It is recommended that you specify a password consisting of a combination of eight letters and digits.)

Click **Next**, .

Once the SQL Server 2005 installer has completed, select **Allow installer to automatically create**, and then click **Next** to create the database.

Make a note of the passwords as they are required when installing other components.

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**Note:** *If you want to use an existing database, refer to the xMatters (alarmpoint) engine installation and administration guide for instructions.*

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## Merging Accounts

When asked whether to merge the Administrator accounts, select **Yes**. This merges the separate Administrator and Super Administrator accounts into a single account using `root` as the Login ID, and `tree` as the password.

## Components

On the Select Components page of the installer, select the following options:

- **Install xMatters Web Server**
- **Install xMatters Node**
- **Create New Node**

You do not need to configure the Health Monitor at this point. If required, you can configure it using the Global Configuration page of the xMatters web user interface.

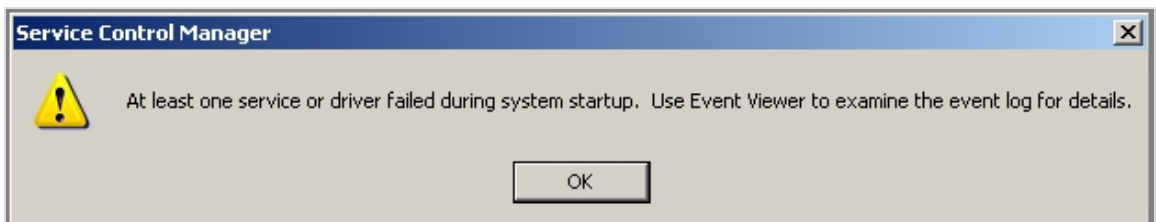
## Virtual Devices

The main installer includes Virtual Devices (Email, Pager, Text Phone) that can be used for training, testing, and troubleshooting without having to configure phone lines, email servers, pagers, modems, etc. The Virtual Devices are automatically configured during the installation process.

# Starting xMatters

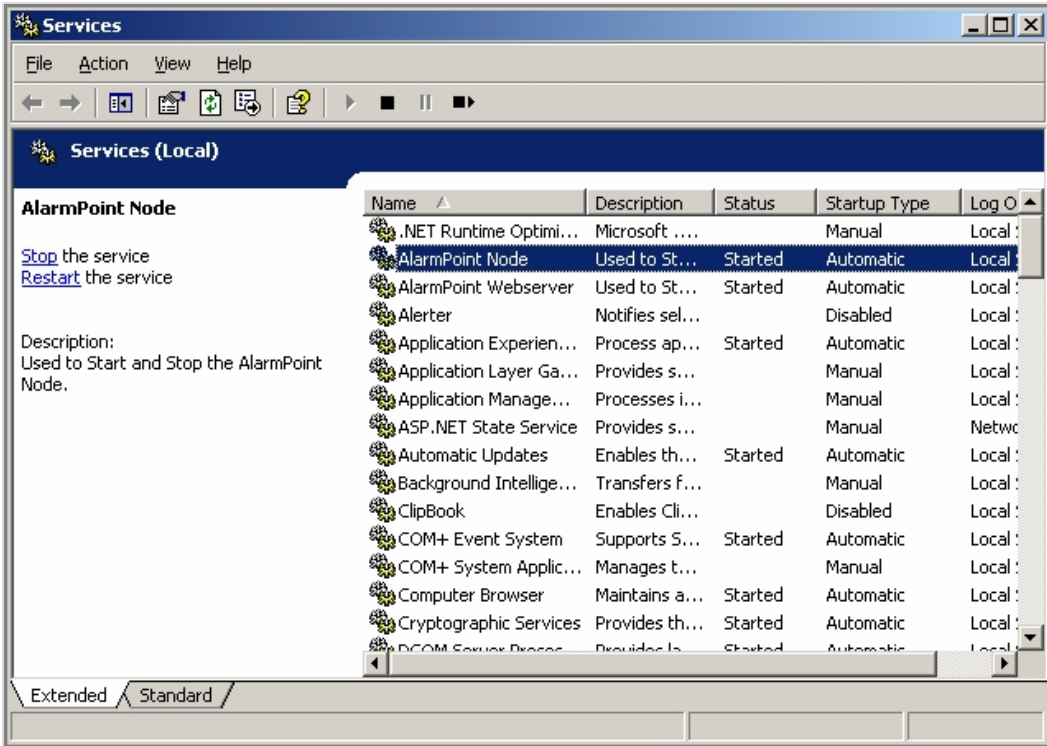
When the installation is complete, restart the computer.

On less-powerful machines, the startup of the xMatters services can exceed Windows' thresholds. If this occurs, Windows displays the following error message:



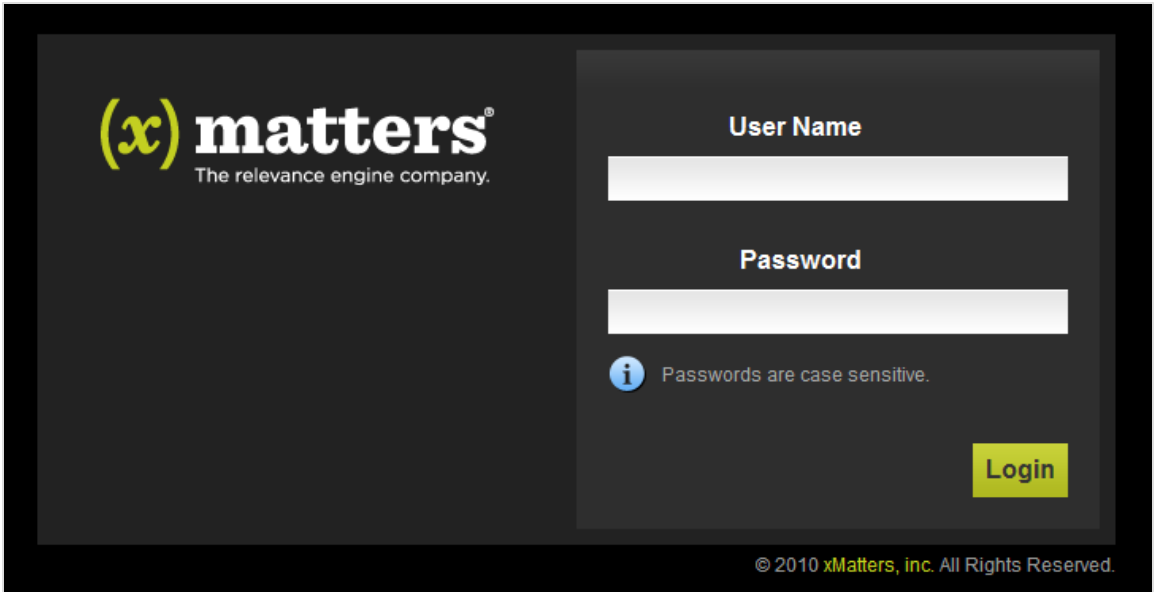
Note that a failure may not necessarily have occurred; the xMatters services may have started more slowly than Windows' tolerance.

If xMatters starts up successfully, the Virtual Phone appears and the xMatters Node service will be marked as Started, as shown in the following figure:



To verify that the web server components are correctly installed, open a web browser and navigate to <http://localhost:8888/xmatters> (or double-click the xMatters icon on your desktop).

xMatters displays the login page:

The image shows the xMatters login interface. On the left, there is a logo with a yellow '(x)' followed by the word 'matters' in white, with the tagline 'The relevance engine company.' below it. On the right, there is a login form with a dark gray background. It has two white input fields: the first is labeled 'User Name' and the second is labeled 'Password'. Below the password field, there is a small blue information icon followed by the text 'Passwords are case sensitive.' At the bottom right of the form is a yellow 'Login' button. At the very bottom of the interface, there is a copyright notice: '© 2010 xMatters, inc. All Rights Reserved.'

## Licensing xMatters lite

The default installation of xMatters lite is a 30-day trial version. To remove the 30-day trial time limitation, you can register at <http://info.xmatters.com/xmatterslite.html> and download an xMatters lite license file. Copy the license file to your hard drive, and then use the following instructions to install it.

### To install the license file:

1. Log in to xMatters:
  - **Login ID:** root
  - **Password:** tree
2. Click the **Admin** tab.
3. In the Administration menu, under Permissions, click **Active Licenses**.
  - xMatters displays the Active Licenses page:

**(x) matters lite** About xMatters Sign Out

**Super Admin** Reports Messaging Admin

Super Admin Details

**Company**

Companies

Company Details

Company Admins

**Permissions**

**Active Licenses** ▶

Integration Agents

**Configuration**

Global Configuration

Nodes and Device Engines

Schedule Jobs

Clear Runtime / History

Global Constants

**Providers**

Protocol Providers

### Active Licenses

▶ Add New ▶ From File

Name	Value	Expiry Date
Has Alerts	1	2010/12/16
Has Apjc Standard	1	2010/12/16
Has Gen Messaging	1	2010/12/16
Has Language English	1	2010/12/16
Has Lookup Assignments	1	2010/12/16
Has Mobile Gateway	1	2010/12/16
Has Reports Activity	1	2010/12/16
Has Reports Administration	1	2010/12/16
Has Role Company Admin	1	2010/12/16
Has Role No Access	1	2010/12/16
Has Role System Admin	1	2010/12/16
Has Role Web Service User	1	2010/12/16
Has Subscriptions	1	2010/12/16
Has Web Services Extended	1	2010/12/16
Has Web Services Standard	1	2010/12/16

[? Help](#)

- On the Active Licenses page, click the **From File** link.
- On the Add License page, click **Browse**.
- In the File Upload dialog box, select the xMatters lite license file, and then click **Upload**.
  - xMatters displays the updated Active Licenses page.

## Configuring HP Network Node Manager i

This section describes the changes and configuration steps you will have to perform on your HP NNMi deployment to prepare it to integrate with xMatters.

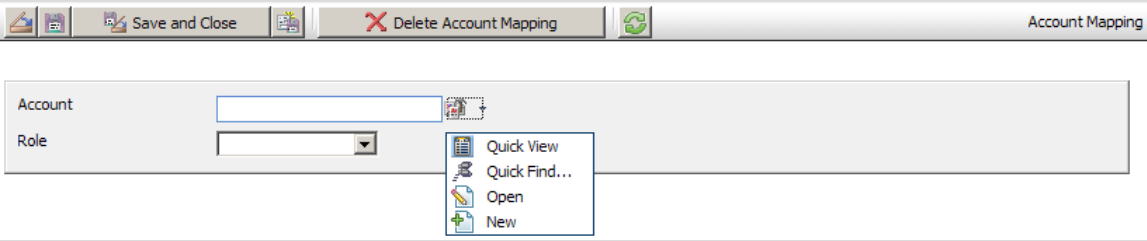
Configuring HP NNMi for xMatters lite requires the creation of a web services client in HP NNMi.

### Creating a web services client

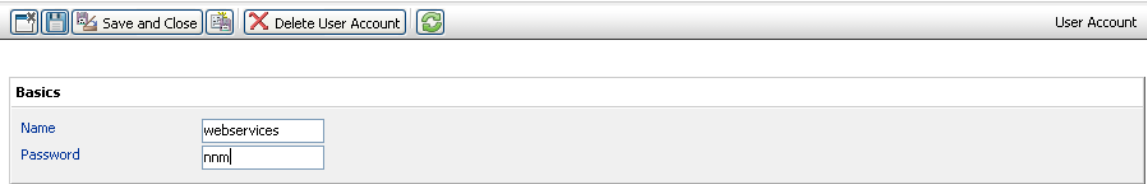
Configuring a web services client allows notification responses to update the HP NNMi incidents appropriately.

#### To create a web services client:

- Launch the HP NNMi Web Console, and log in as an Administrator.
- Under the Configuration Workspace, click **User Interface Configuration**.
- On the User Accounts tab, click **New**.
- On the Account Mapping page, in the **Account** drop-down list, select **New**:

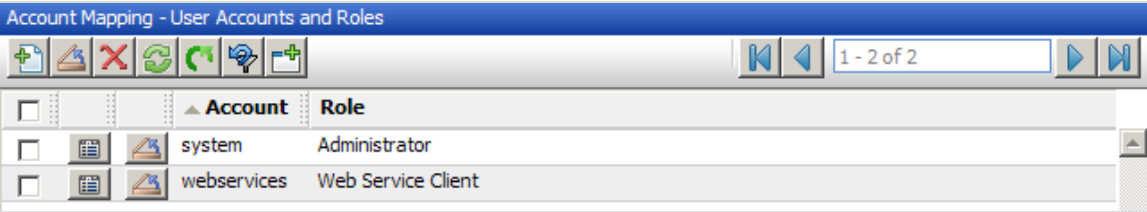


5. On the User Account page, specify the **Name** and **Password** for the Web Services Client User:



**Note:** By default, the user name and password configured within the xMattersAction Scripts are "webservices" and "nnm", respectively. If you want to use a different name or password, you must update the configuration variables in the initial PROCESS Action Script. For more information, see "Configuring the web services connection" on page 1.

6. Click **Save and Close**.
- The “webservices” user is now specified in the Account field on the Role page.
7. In the Role drop-down list, select **Web Service Client**.
8. Click **Save and Close**.
- The Web Service Client will now allow xMatters responses to update incidents using web service calls. The webservices user is listed on the User Accounts and Roles page:



# Configuring xMatters

This version of xMatters lite has been specially pre-configured to integrate with HP Network Node Manager i, and does not require any further configuration steps to enable the integration. Among the changes made to this version are the following configuration items:

- The script package is automatically imported into the xMatters Action Scripts.
- Scripts are automatically modified to allow web services to annotate tickets within HP NNMi.

- The hpnnmi Event Domain is included in the xMatters settings.
- The xMatters node and web server are pre-configured to initialize the web services library.
- The HP NNMi server connection parameters are automatically configured.

However, you may choose to further customize your installation by using the web user interface to configure Device Engines, Protocol Providers, and User Service Providers, which allow you to send notifications to different types of Devices. The following sections provide an example of the configuration process by explaining how to configure the SMTP protocol to send HTML email notifications to a real-life recipient.

**Note:** *This section is optional; if you would prefer to use only the xMatters Virtual Devices, continue to "Managing Users and Devices" on page 29.*

## Configuring a Protocol Provider

The first step in configuring SMTP is to set the Protocol Provider details. Protocol Providers define how xMatters accesses servers for outgoing notifications.

### To configure the SMTP Protocol Provider:

1. Login to xMatters as an Administrator and click the **Admin** tab.
2. In the Administration menu, click **Protocol Providers**.
  - xMatters displays the list of available Protocol Providers:

The screenshot shows the xMatters lite web interface. The top navigation bar includes the xMatters logo, 'About xMatters', 'Sign Out', and tabs for 'Reports', 'Messaging', and 'Admin'. The left sidebar has a 'Super Admin' section with 'Super Admin Details', a 'Company' section with 'Companies', 'Company Details', and 'Company Admins', a 'Permissions' section with 'Active Licenses' and 'Integration Agents', a 'Configuration' section with 'Global Configuration', 'Nodes and Device Engines', 'Schedule Jobs', 'Clear Runtime / History', and 'Global Constants', and a 'Providers' section with 'Protocol Providers' selected. The main content area is titled 'Protocol Providers' and includes a '+ Add New' link. Below this is a table listing all protocol providers.

<input type="checkbox"/>	Name	Description
<input type="checkbox"/>	<a href="#">Airtouch Email</a>	Airtouch Email Service Provider
<input type="checkbox"/>	<a href="#">Airtouch SNPP</a>	Airtouch SNPP Service Provider
<input type="checkbox"/>	<a href="#">Airtouch TAP</a>	Airtouch TAP Service Provider
<input type="checkbox"/>	<a href="#">Alltel Email</a>	Alltel Email Service Provider
<input type="checkbox"/>	<a href="#">Alltel SNPP</a>	Alltel SNPP Service Provider
<input type="checkbox"/>	<a href="#">Alltel TAP</a>	Alltel TAP Service Provider
<input type="checkbox"/>	<a href="#">American Messaging EMAIL</a>	American Messaging Email Service Provider
<input type="checkbox"/>	<a href="#">American Messaging WCTP</a>	American Messaging WCTP Service Provider
<input type="checkbox"/>	<a href="#">Arch/USA Mobility EMAIL</a>	Arch/USA Mobility Email Service Provider
<input type="checkbox"/>	<a href="#">Arch/USA Mobility TAP</a>	Arch/USA Mobility TAP Service Provider
<input type="checkbox"/>	<a href="#">Arch/USA Mobility WCTP</a>	Arch/USA Mobility WCTP Service Provider
<input type="checkbox"/>	<a href="#">AT&amp;T Email</a>	AT&T Email Service Provider
<input type="checkbox"/>	<a href="#">AT&amp;T TAP</a>	AT&T TAP Service Provider

3. Click the **Add New** link.
4. In the **Provider of Type** drop-down list, select **SMTP**, and then click **Continue**.
5. On the SMTP Provider Details page, specify the following settings:
  - **Name:** Type a name for the new Protocol Provider.
  - **Email Sender:** Type the email address from which the notifications will be sent. It is strongly recommended that you do not use your personal or company email address, as there is a chance that the contents of the account's Inbox will be deleted.
  - **Server Address:** Type the URL or IP address of the email server.

The screenshot shows the xMatters lite web interface. The top navigation bar includes links for About xMatters, Sign Out, Reports, Messaging, and Admin. The left sidebar contains a menu with categories: Super Admin (Super Admin Details), Company (Companies, Company Details, Company Admins), Permissions (Active Licenses, Integration Agents), Configuration (Global Configuration, Nodes and Device Engines, Schedule Jobs, Clear Runtime / History, Global Constants), and Providers (Protocol Providers). The main content area is titled 'SMTP Provider Details' and shows a form for configuring an SMTP provider. The form fields are as follows:

- Name:** Internal Company Email \*
- Description:** (empty text box)
- Maximum retries:** 3 \*
- Retry Interval:** 10 \*(sec)
- Maximum session size:** 20 \*
- Split long message:** ☐
- Split size:** 160 blank = unlimited
- Maximum message length:** blank = unlimited
- Maximum PIN length:** 100 blank = unlimited
- Account:** (empty text box)
- Password:** (empty text box)
- Email Sender:** network@admins.com \*
- Reply To:** (empty text box)
- Server Address:** 198.198.198.2 \*
- Server Port:** 25 \*
- Domain Name:** (empty text box)
- Use SSL:** ☐

A **Save** button is located at the bottom left of the form.

6. Accept the default settings for the remainder of the protocol provider details, unless your server or email settings require specific ports or other changes.

**Note:** For more information about the individual settings, refer to the xMatters (alarmpoint) engine installation and administration guide.

7. Click **Save** to create the new Protocol Provider.



## Configuring a User Service Provider

Once you have created a Protocol Provider, you can add a User Service Provider, which determines how xMatters communicates with Users' Devices.

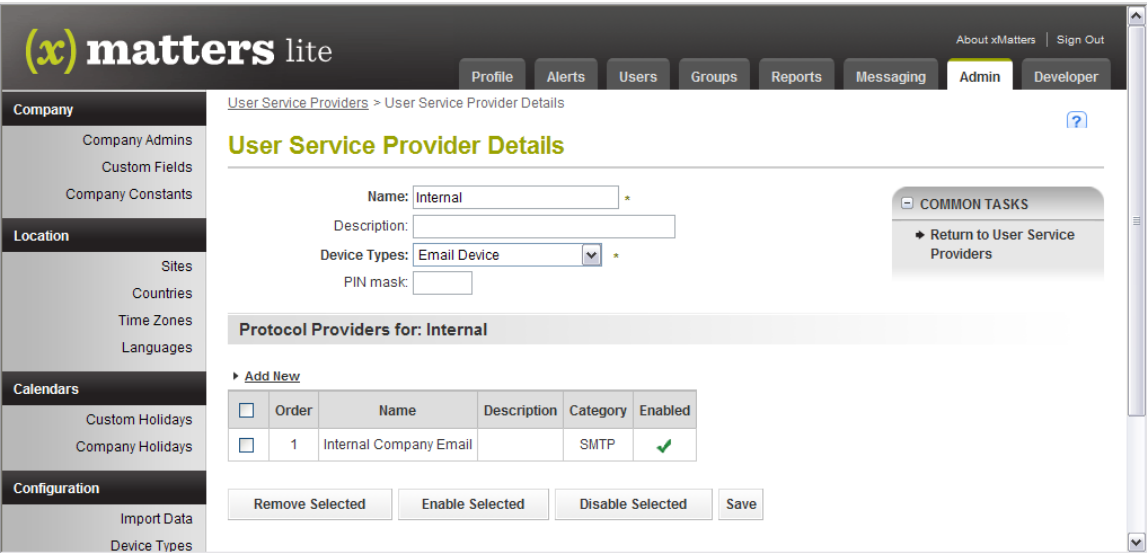
1. On the Admin tab, in the Administration menu, click **User Service Providers**.
  - xMatters displays the list of available User Service Providers:

The screenshot shows the xMatters lite Admin interface. The top navigation bar includes the xMatters logo, a 'Sign Out' link, and tabs for Profile, Alerts, Users, Groups, Reports, Messaging, Admin (selected), and Developer. The left sidebar contains a menu with categories: Company (Company Admins, Custom Fields, Company Constants), Location (Sites, Countries, Time Zones, Languages), Calendars (Custom Holidays, Company Holidays), Configuration (Import Data, Device Types, LDAP Servers, Password Policy, Audit), and Providers (User Service Providers, selected). The main content area is titled 'User Service Providers' and shows a table of providers for the 'Default Company'. A table with 4 columns: Name, Description, and Device Type. The table lists 15 providers, each with a checkbox in the first column. The providers are: Airtouch, Alltel, American Messaging, Arch/USA Mobility, AT&T, Bell Mobility Canada, Bell South, BES, Blackberry, Fido, GSM modem 1-way, GSM modem 2-way, Jabber COM, Jabber ORG, MAPI Email, mBlox Pager, and Metro PCS.

	Name	Description	Device Type
<input type="checkbox"/>	<a href="#">Airtouch</a>	Airtouch Service Provider	Text Pager Device
<input type="checkbox"/>	<a href="#">Alltel</a>	Alltel Service Provider	Text Pager Device
<input type="checkbox"/>	<a href="#">American Messaging</a>	American Messaging Service Provider	Text Pager Device
<input type="checkbox"/>	<a href="#">Arch/USA Mobility</a>	Arch/USA Mobility Service Provider	Text Pager Device
<input type="checkbox"/>	<a href="#">AT&amp;T</a>	AT&T Service Provider	Text Phone Device
<input type="checkbox"/>	<a href="#">Bell Mobility Canada</a>	Bell Mobility Canada Service Provider	Text Pager Device
<input type="checkbox"/>	<a href="#">Bell South</a>	Bell South Service Provider	Text Pager Device
<input type="checkbox"/>	<a href="#">BES</a>	BES Service Provider	BlackBerry Device
<input type="checkbox"/>	<a href="#">Blackberry</a>	Blackberry Service Provider	Text Pager Device
<input type="checkbox"/>	<a href="#">Fido</a>	Fido Service Provider	Text Phone Device
<input type="checkbox"/>	<a href="#">GSM modem 1-way</a>	GSM Service Provider	Text Phone Device
<input type="checkbox"/>	<a href="#">GSM modem 2-way</a>	GSM Service Provider	Text Phone Device
<input type="checkbox"/>	<a href="#">Jabber COM</a>	Jabber COM Service Provider	Instant Messaging Device
<input type="checkbox"/>	<a href="#">Jabber ORG</a>	Jabber ORG Service Provider	Instant Messaging Device
<input type="checkbox"/>	<a href="#">MAPI Email</a>	Service Provider for MAPI e-mail	Email Device
<input type="checkbox"/>	<a href="#">mBlox Pager</a>	mBlox Service Provider	Text Pager Device
<input type="checkbox"/>	<a href="#">Metro PCS</a>	Metro PCS Email Service Provider	Text Phone Device

2. Click the **Add New** link.
3. On the User Service Provider Details page, specify the following settings:
  - **Name:** Type a name for the new User Service Provider.
  - **Description:** Type a short description of the User Service Provider, such as “Express Email”.
  - **Device Types:** Select **Email Device**.
4. Click **Continue**.
5. In the Protocol Providers area, click the **Add New** link.

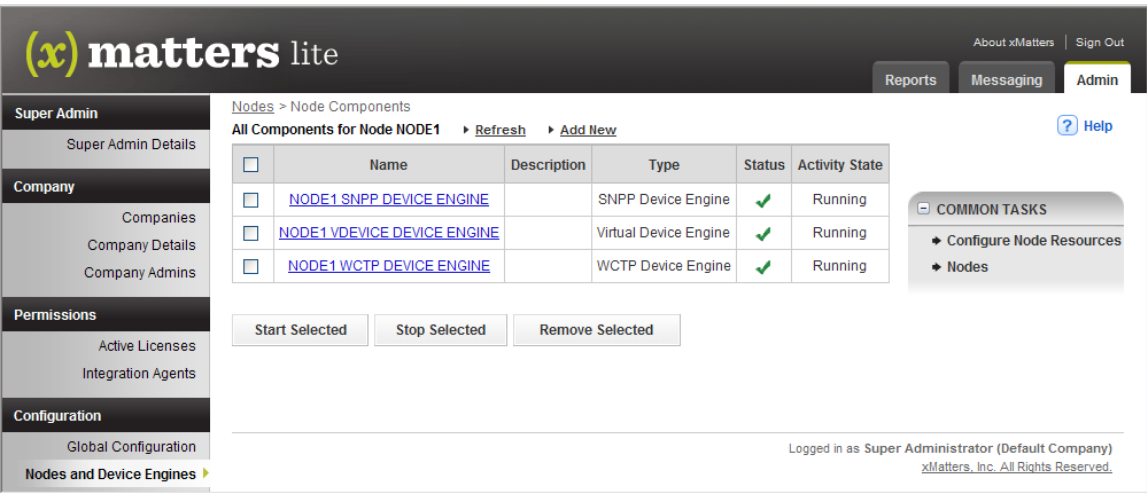
- 6. On the Select Your Protocol Providers page, click the Protocol Provider you created in the previous section, and then click **Add**.
- 7. Click **Save** to add the Protocol Provider and return to the User Service Provider Details page:



Configuring Nodes and Device Engines

The last step required when configuring the SMTP protocol is to create a Device Engine.

- 1. On the Admin tab, in the Administration menu, click **Nodes and Device Engines**.
- 2. On the Nodes page, in the All Nodes table, click the **Device Engines** link.
  - xMatters displays the Node Components page:



3. Click the **Add New** link, select **SMTP Device Engine** from the drop-down list, and then click **Continue**.
  - xMatters displays the SMTP Device Engine Details page:

The screenshot shows the xMatters lite web interface. The left sidebar contains the following navigation links: Super Admin (Super Admin Details), Company (Companies, Company Details, Company Admins), Permissions (Active Licenses, Integration Agents), Configuration (Global Configuration), Nodes and Device Engines (Schedule Jobs, Clear Runtime / History, Global Constants), and Providers (Protocol Providers). The main content area is titled 'Device Engine Details for: NODE1 SMTP DEVICE ENGINE' and includes a breadcrumb trail: Nodes > Node Components > Add Node Component > Device Engine Details for: NODE1 SMTP DEVICE ENGINE. A 'Help' link is visible in the top right. The 'General Details' section contains fields for Name (NODE1 SMTP DEVICE ENG), Description, Notification Polling (10 sec), and Concurrent Threads (1). The 'Logging' section has checkboxes for 'Generate Separate Log File' and a dropdown for 'Log Level' (Normal (Warn)). The 'Protocol Specific Details' section has a dropdown for 'Incoming Protocol' (NONE). A 'Continue' button is at the bottom left of the main content area.

4. Specify the following settings:
  - **Description:** Type a brief description to help identify the new Device Engine.
  - **Log Level:** Select **Detailed (All)**; this will assist you with any future troubleshooting.
  - **Incoming Protocol:** Select the protocol used by the company's email server; this is usually POP.
5. Accept the remaining default settings and click **Continue**.
  - xMatters displays the Protocol Specific Details page:

(x)matters lite

About xMatters | Sign Out

Reports | Messaging | Admin

Super Admin

Super Admin Details

Company

Companies

Company Details

Company Admins

Permissions

Active Licenses

Integration Agents

Configuration

Global Configuration

Nodes and Device Engines ▶

Schedule Jobs

Clear Runtime / History

Global Constants

Providers

Protocol Providers

Nodes > [Node Components](#) > Add Node Component > Device Engine Details for: NODE1 SMTP DEVICE ENGINE > Protocol Details for Device Engine NODE1 SMTP DEVICE ENGINE

Help

Protocol Details for Device Engine NODE1 SMTP DEVICE ENGINE

Protocol Specific Details

Email Account:

Email Format: user@domain ▼ \*

Password:  \*

Incoming Email Server:  \*

Incoming Server Port: 110 \*

SSL Flag: DISABLED ▼

Mailbox Polling Interval (sec): 30 \*

Notification Key:

NOTE: Include the original message in your reply, and do NOT delete this note, as it identifies this message (%Notification Key%).

Response Key: RESPONSE

Choice Message:

followed by your response choice: %Response Choices%

Response Message:

To respond, reply with the word %Response Key% in the subject line (or first line of the message body),

Save

6. Specify the following settings:
  - **Email Account:** Type the email address used to send notifications. It is strongly recommended that you do not use your personal or corporate account for this setting; have your system administrator create a dedicated xMatters evaluation account.
  - **Password:** Type the password used to access the IMAP or POP server.
  - **Incoming Email Server:** Type the address of the email server xMatters should poll for responses to notifications.
  - **Incoming Server Port:** Type the number of the server port to use for incoming responses.

**Note:** *If you are not sure about any of the required settings, contact your system administrator.*

7. Accept the remaining default settings and click **Save** to return to the Node Components page.

## Triggering a notification



























The following sections describe how to test the xMatters to HP NNMi integration by triggering a test or example incident that will create a corresponding event in xMatters.

## Increase the Polling Frequency

To speed up the demonstration, you can decrease the fault polling interval on your HP NNMi deployment. Make a note of your current settings; you may want to reverse the changes in this section once you are finished testing the integration.

### To adjust the fault polling interval:

1. If it is not already running, launch HP Network Node Manager i.
2. Log in to the HP NNMi Web Console as an Administrator.
3. Select the **Configuration Workspace**.
4. Open **Monitoring Configuration**.
5. On the Default Settings tab, in the **Default Fault Monitoring** dialog box, set the **Fault Polling Interval** to 15 seconds:
  - A Fault Polling Interval of 15 seconds may be too short an interval on larger deployments, and can consume significant resources on the HP NNMi system. You may need to increase the interval when moving to a production deployment.

Incident - Root Cause Incidents												
<div><div></div><div>Last Day <div>&lt;Set node group filter&gt;</div><div>1 - 3 of 3</div></div></div>												
	Se	Pr	LS	Last Occur	AT	Source Node	Source Object	Ca	Fa	Or	Message	Notes
				10/12/07 8:06 PM		192.168.168.40	192.168.168.40				Non-SNMP Node Unresponsive	Mon Dec 10 20:03:45 PST 2007 AlarmPoint:Successful
				10/12/07 7:47 PM		192.168.168.40	192.168.168.40				Non-SNMP Node Unresponsive	Mon Dec 10 19:44:44 PST 2007 AlarmPoint:Successful
				10/12/07 5:56 PM		192.168.168.40	192.168.168.40				Non-SNMP Node Unresponsive	Mon Dec 10 18:00:44 PST 2007 AlarmPoint:Successful

6. Click **Save and Close**.

## Disconnect a Computer from the LAN

If HP NNMi is monitoring a LAN, one of the easiest ways to trigger a notification is to interrupt the communication between HP NNMi and one of the computers on the LAN. The following steps describe how to do this and what to expect.

### To trigger a notification:

1. Physically disconnect a computer from the local area network (using a computer other than the xMatters or HP NNMi servers).
2. When the computer goes offline, a corresponding incident will be triggered within HP NNMi and can be viewed in the Incidents workspace under Root Cause Incidents (or another category depending on the trigger).
  - The Notes entry for the open incident indicates that this event has successfully notified an xMatters User:

Incident - Root Cause Incidents												
				Last Day	<Set node group filter>			1 - 3 of 3				
		Se	Pr	LS	Last Occur	AT	Source Node	Source Object	Ca	Fa	Or	Message
					10/12/07 8:06 PM		192.168.168.40	192.168.168.40				Non-SNMP Node Unresponsive
					10/12/07 7:47 PM		192.168.168.40	192.168.168.40				Non-SNMP Node Unresponsive
					10/12/07 5:56 PM		192.168.168.40	192.168.168.40				Non-SNMP Node Unresponsive

3. To display the full Notes for the incident, click the **Open Incident** button to open the incident, and view the Notes area:

Notes

Notes

Mon Dec 10 20:03:45 PST 2007 AlarmPoint:Successful Delivery for bsmith|BlackBerry

Mon Dec 10 20:03:46 PST 2007 AlarmPoint:Successful Delivery for bsmith|SMS Phone

Mon Dec 10 20:03:47 PST 2007 AlarmPoint:Successful Delivery for bsmith|Work Email

Mon Dec 10 20:03:48 PST 2007 AlarmPoint:Successful Delivery for bsmith|Work Email

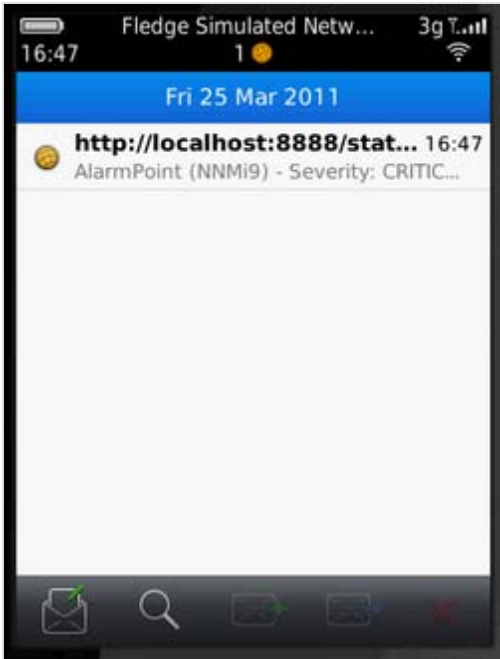
4. The target's specified contact type will receive a message corresponding to the notification, as shown in the following section.

Responding to a notification

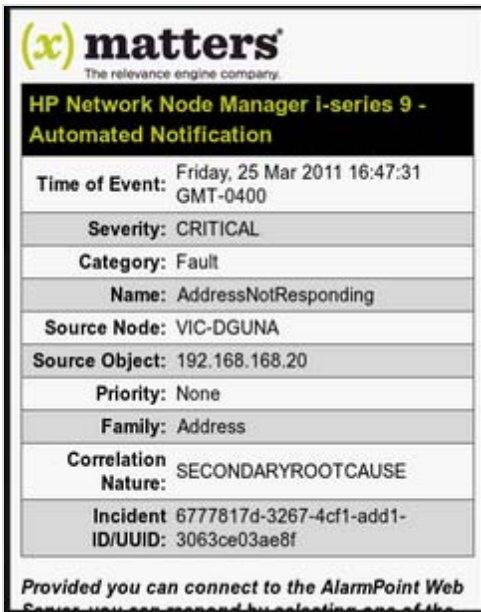
This section describes how to respond to the notification from xMatters. In the following example, the notification is received on a BlackBerry Device, but the process is similar for all Devices.

To respond to a notification:

1. When a notification arrives for the User, the Device indicates the number of calls received:



2. Opening the notification displays its details:



3. Scrolling down will display the remainder of the details, and the list of possible replies:

Name: AddressNotResponding

Source Node: VIC-DGUNA

Source Object: 192.168.168.20

Priority: None

Family: Address

Correlation Nature: SECONDARYROOTCAUSE

Incident 6777817d-3267-4cf1-add1-ID/UUID: 3063ce03ae8f

Provided you can connect to the AlarmPoint Web Server, you can respond by selecting one of the following links:

1. [Acknowledge](#)
2. [Set Priority Top](#)
3. [Set Priority High](#)
4. [Set Priority Medium](#)
5. [Set Priority Low](#)
6. [Close](#)
7. [Ignore](#)
8. [View Incident](#)

4. To respond to the notification, the User clicks a response choice, and xMatters updates the event in HP NNMi.

✔

Notification response successful.

For more information about response choices, and changing the options available to Users, see "Response choices" on page 75.

Viewing response results

After responding to a notification, you can log in to HP NNMi to view the results of the response.



In the Root Cause Incidents table, the In Progress arrow indicates that the incident has been acknowledged, and a message will be logged within the Notes field indicating who took responsibility.

#### To view the notification results:

1. Open the HP NNMi Web Console.
2. In the Incident Workspace, under Root Cause Incidents, locate the incident used for testing notifications.
  - The Life Cycle State has changed to In Progress, indicating that the incident was acknowledged from xMatters:

	Se	Pr	LS	Last Occur	AT	Source Node	Source Object	Ca	Fa	Or	Message	Notes
<input type="checkbox"/>				10/12/07 8:06 PM		192.168.168.40	192.168.168.40				Non-SNMP Node Unresponsive	Mon Dec 10 20:03:45 PST 2007 AlarmPoint:Successful Delivery for bsmith Pager
<input type="checkbox"/>				10/12/07 7:47 PM		192.168.168.40	192.168.168.40				Non-SNMP Node Unresponsive	Mon Dec 10 19:44:44 PST 2007 AlarmPoint:Successful Delivery for bsmith Home Email
<input type="checkbox"/>				10/12/07 5:56 PM		192.168.168.40	192.168.168.40				Non-SNMP Node Unresponsive	Mon Dec 10 18:00:44 PST 2007 AlarmPoint:Successful Delivery for bsmith Work Phone

3. To display the acknowledged incident's details, click the **Open** button.
  - The Notes field indicates that the incident was acknowledged by bsmith:

Save and Close
 Delete Incident

Incident

**Basics**

**Message**  
 Non-SNMP Node Unresponsive

Severity: Critical
 Priority: None
 Lifecycle State: In Progress

Source Node: 192.168.168.40
 Source Object: 192.168.168.40
 Assigned To:

**Notes**

Mon Dec 10 20:03:45 PST 2007 AlarmPoint:Successful Delivery for bsmith|Pager  
 Mon Dec 10 20:03:48 PST 2007 AlarmPoint:Successful Delivery for bsmith|Home Email  
 Mon Dec 10 20:10:20 PST 2007 AlarmPoint:Delivery Failure for bsmith|Work Phone  
 Mon Dec 10 20:20:32 PST 2007 AlarmPoint:Acknowledged by bsmith|

General
 Correlated Parents
 Correlated Children
 Custom Attributes

Registration

**Details**

Name: NonSNMPNodeUnresponsive
 Category: Fault
 Family: Node
 Origin: Management Software
 Correlation Nature: Root Cause

Duplicate Count: 0
 RCA Active: ☒

Correlation Notes

First Occurrence Time: December 10, 2007 8:06:59 o'clock PM PST  
 Last Occurrence Time: December 10, 2007 8:06:59 o'clock PM PST  
 Origin Occurrence Time: December 10, 2007 8:06:59 o'clock PM PST



# Chapter 3: Managing Users and Devices

This chapter explains how to add Users to xMatters, and configure the Devices used to contact them. You can add up to ten Users in xMatters lite, and up to three Devices for each User.

## Adding Users

After installing xMatters, add and configure several sample Users. xMatters lite allows you to add up to ten Users.

1. Log in to xMatters as an Administrator.
  - **Login ID:** root
  - **Password:** tree
2. Click the **Users** tab.
3. In the Users menu on the left side of the browser, click **Add User**.
  - xMatters displays the Add a User page:

The screenshot shows the 'Add a User' page in the xMatters lite interface. The page layout includes a top navigation bar with tabs for Profile, Alerts, Users (active), Groups, Reports, Messaging, Admin, and Developer. A left sidebar contains a 'Users' menu with options like 'Users I Supervise', 'Find Users', 'Add User' (highlighted), 'View Users by Role', and 'User Performance Report'. Below this is a 'Web Service Users' section with 'Find Web Service Users' and 'Add Web Service User'. The main content area is titled 'Add a User' and contains a form with the following fields and options:

- Active:** ☒
- Has Mobile Access:** ☐
- User ID:**
- First Name:**
- Last Name:**
- Site:**
- Language:**
- Time Zone:**
- Available Roles:**
  - No Access User
  - Support User
- Selected Roles:**
- Buttons:** 'Add »' and « Remove' between the role lists.
- Bottom Buttons:** 'Save' and 'Reset'.

A 'COMMON TASKS' sidebar on the right contains a 'Home Page' link. A 'Help' link is also visible in the top right corner of the main content area.

4. Specify the new User's **User ID**, **First Name**, and **Last Name**. Retain the other default settings, and assign the User to the Role of **No Access User**.

5. Click **Save** to add the User to xMatters.
  - xMatters displays the Details for User page:

The screenshot shows the xMatters lite interface for the 'Details for Mary McBride' page. The top navigation bar includes 'Profile', 'Alerts', 'Users' (selected), 'Groups', 'Reports', 'Messaging', 'Admin', and 'Developer'. The left sidebar has sections for 'Users' (with links like 'Users I Supervise', 'Find Users', 'Add User', 'View Users by Role', 'User Performance Report') and 'Web Service Users' (with links like 'Find Web Service Users', 'Add Web Service User'). The main content area shows a success message 'User has been saved.' and a form for user details. The form includes fields for 'Active' (checked), 'Has Mobile Access' (unchecked), 'User ID' (marym), 'First Name' (Mary), 'Last Name' (McBride), 'Site' (Default Site), 'Language' (English), and 'Time Zone' (US/Eastern). At the bottom of the form are 'Save', 'Reset', and 'Delete User' buttons. On the right, a 'COMMON TASKS' menu lists various actions: View Supervisors, Supervised Users, Change Web Login, User Devices, Temporary Replacements, Groups User Belongs To, View Roles, and Login as User.

**Note:** For more information about adding Users and assigning Roles, refer to the xMatters (alarmpoint) engine user guide.

## Adding Devices

Once you have added a User, you can specify the Devices xMatters will use to notify the User. xMatters lite allows you to add up to three Devices for each User.

1. On the Details for User page, in the Common Tasks menu, click **User Devices**.
2. On the Devices for User page, click **Add New**.
3. On the Add New Device page, in the **Select the Device Type** drop-down list, select **Email Device**.
4. Click **Continue**.
  - xMatters displays the Email Device Details page:

**x matters lite** About xMatters | Sign Out

Profile Alerts **Users** Groups Reports Messaging Admin Developer

Add a User > Details for Mary McBride > Devices for Mary McBride > Add New Device for Mary McBride > Email Device Details for Mary McBride [Help](#)

### Email Device Details for Mary McBride

Device Name:

Active: ☒

Default Device: ☒

Email Address:

Provider:

Delay:  (minutes)

Priority Threshold:

Default Timeframe rule is 24 x 7

5. In the **Device Name** drop-down list, select **Work Email**.
6. In the **Provider** drop-down list, select **Virtual Email**.
7. In the **Email Address** field, type an email address for this User (the actual address is not relevant, but the field must have content).
8. Accept the remaining default settings, and click **Save**.
  - xMatters returns you to the Devices for User page, and displays the new Device:

**x matters lite** About xMatters | Sign Out

Profile Alerts **Users** Groups Reports Messaging Admin Developer

Add a User > Details for Mary McBride > Devices for Mary McBride [Help](#)

### Devices for Mary McBride

**COMMON TASKS**

- Validate User Devices
- Home Page

Existing Devices [Add New](#)

<input type="checkbox"/>	Order	Name	Type	Details	Valid	Status	Default	Timeframe	Delay
<input type="checkbox"/>	1	<a href="#">Work Email</a>	Email	marym@xmattersCompany.com				<a href="#">24 x 7</a>	<input type="text" value="0"/>

9. Continue to add up to ten Users, and add at least one Device for each User.

**Note:** *The Import Data feature provided in xMatters allows you to add multiple Users, Devices, and Groups simultaneously by uploading a spreadsheet containing the necessary data. For more information, see "Importing Data" on page 53.*

## Validating Devices

xMatters includes a testing and validation tool that allows you to ensure that each Device added is working properly and able to receive notifications.

The validation procedure is the same for all Device types; use the following steps to validate the User's Virtual Email Device.

1. In the Existing Devices table, click the yellow triangle in the Valid column for the Virtual Email Device.
  - xMatters prompts you to confirm the validation message.
2. Click **OK** to send the validation message.
  - After a few seconds, xMatters will display the Virtual Email window containing the validation message.
3. In the Virtual Email window, double-click the email to reply to it.
4. In the **Subject** field, type `response validate`, and then click **Reply**.
5. Click **OK** to send the response.
6. Return to the Devices for User page.
  - If you successfully validated the Virtual Email Device, you will see a check mark next to it in the Valid column:

(x)matters lite
 

[About xMatters](#) | [Sign Out](#)

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[Developer](#)

**Users**  
 Users I Supervise  
 Find Users  
**Add User ▶**  
 View Users by Role  
 User Performance Report

**Web Service Users**  
 Find Web Service Users  
 Add Web Service User

[Add a User](#) > Details for Mary McBride > Devices for Mary McBride

## Devices for Mary McBride

[? Help](#)

COMMON TASKS

- Validate User Devices
- Home Page

Existing Devices ▶ [Add New](#)

<input type="checkbox"/>	Order	Name	Type	Details	Valid	Status	Default	Timeframe	Delay
<input type="checkbox"/>	1	<a href="#">Work Email</a>	Email	marym@xmattersCompany.com	✓	✓	✓	24 x 7	<input type="text" value="0"/>

Remove Selected

Save

An hourglass icon indicates that a validation message has been sent to a Device, and xMatters is awaiting a valid reply. You can use the same procedure to validate any User Device.

The following figure illustrates an example Existing Device table for a User with three Devices:

## Devices for Mary McBride

Existing Devices ▶ [Add New](#) ▶ [Reorder](#)

<input type="checkbox"/>	Order	Name	Type	Details	Valid	Status	Default	Timeframe	Delay
<input type="checkbox"/>	1	<a href="#">Work Email</a>	Email	marym@xmattersCompany.com	✓	✓	✓	<a href="#">24 x 7</a>	0
<input type="checkbox"/>	2	<a href="#">SMS Phone</a>	Text Phone	1235551234	⚠	✓		<a href="#">09:00 - 17:00 MO TU WE TH FR</a>	0
<input type="checkbox"/>	3	<a href="#">Numeric Pager</a>	Numeric Pager	(212)5555678	⚠	✓		<a href="#">17:00 Lasting 63:00 FR</a> <a href="#">17:00 - 22:00 MO TU WE TH</a>	0

Remove Selected

Save

Note how each Device has a predefined Timeframe during which it is available to receive notifications. For more information about working with Devices and creating Timeframes, see the *xMatters (alarmpoint) engine user guide*.





---

## Chapter 4: Managing Groups

The following sections describe how to add and configure Groups in xMatters.

### Important Terms for Groups

The following are some of the important terms used in relation to Groups.

#### Groups

Groups are a collection of Coverages (for details, see “Coverages”, below) relating to a specific task or responsibility. A Group might be created to meet a single, specific need, or it might serve as a duty roster or workgroup that relates to a similar function.

Each Group usually has a defined schedule that xMatters uses to determine who to notify. When different company sites, time zones, work shifts, and business needs are involved, Group scheduling can quickly become complex – managing this complexity is one of the strengths of xMatters.

For most Users, it is sufficient to understand that Groups consist of Users, and that Users can be members of multiple Groups, depending on their responsibilities.

#### Coverages

Coverages are a combination of a Team and Schedule (these terms are described in the following sections). xMatters uses Coverages to identify the Users who are on duty at a particular time to receive notifications about events.

#### Schedules

In xMatters, a Schedule is a specific period of time, such as a single day, a recurring span of several hours on certain days of the week, or 24/7 (every day, all day).

For example, a typical recurring Schedule is business hours, from 8:00 to 17:00, Monday through Friday. In turn, an ‘off-hour’ schedule could be from 17:01 to 7:59 Monday through Friday, and all day on Saturday and Sunday.

Schedules can also define rotations, such as 8:00 to 17:00 Monday through Friday every 3 weeks. This allows building sophisticated, automatic rotations with different Users and Groups.

#### Teams

A Team identifies who is available during specific Schedule times to receive notifications. Teams can consist of any combination of Users, Devices, Groups, or other Teams.

For example, a Team called “Shift 3” might include a User named “Terry Smith”, a Group named “Data Center Managers”, and a Device named “John’s Cell Phone”.

# Creating Groups

This section demonstrates the escalation capabilities of xMatters on a small scale by creating and configuring a simple Group. The following steps use the Operations Group, which is created during the xMatters installation.

**Note:** *You can add up to five Groups in xMatters lite.*

The default Operations Group has a single Team member assigned to a 24x7 Schedule. The first step in expanding the Group is to add more Users.

1. Log in as an Administrator, and click the **Groups** tab.
2. In the Groups I Supervise table, click **Operations**.
  - xMatters displays the Group Details page:

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[Profile](#)
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Manage Groups

Groups I Supervise ▾

[Group Performance Report](#)
[Find Groups](#)
[View User Schedule](#)
[Who is On Duty?](#)

Teams

[My Team Templates](#)

Groups I Supervise > Group Details for: Operations

Group Details for: Operations

Show Details

Filter

Time Zone: US/Eastern
Filter By: -- None --

Apply

Existing Coverages for week of 11/14/2010

« Prev

Next »

Monthly View

		Complete	Coverage		Sun.	Mon.	Tue.	Wed.	Thu.	Fri.	Sat.					
					Nov. 14	Nov. 15	Nov. 16	Nov. 17	Nov. 18	Nov. 19	Nov. 20					
					AM	PM	AM	PM	AM	PM	AM	PM				
<input type="checkbox"/>					[Solid Blue Bar]											
<input type="checkbox"/>	✓		<a href="#">Operations-24x7</a>													

Remove Selected

COMMON TASKS

- Teams in Group
- Group Supervisors
- Group Observers
- Add One-Time
- Add Recurring

Help

Logged in as Company Administrator (Default Company)

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3. Move your mouse cursor over any of the light blue segments to see details of that shift; each shift in this Group has only one member, Bob Smith.

4. In the Coverage column, click **Operations-24x7**.
5. On the Schedule Details page, in the Team Members area, click the **Add Users** link.
  - xMatters displays the Find Users page.
6. Click **All** to see a list of all the Users in xMatters.
7. Select the check box next to four Users, and then click **Add**.
8. Click **Save** to add the Users to the Team, and return to the Schedule Details page.

## Managing Escalations

After you have added Users to the Operations Group, you can define the escalation time for each Team member. If you do not specify a Delay between Team members, xMatters attempts to notify all Team members at the same time, as soon as the Event occurs.

In an actual deployment situation, each User would require time to respond to a notification, but for demonstration purposes, you can minimize the delay.

1. On the Schedule Details page, type **1** in the **Delay** field for the second, third, and fifth Team members:
  - The Escalation column indicates how long, in minutes, xMatters will wait after the Event occurs before it begins attempting to contact each Team member.

Groups I Supervise > Group Details for: Operations > Schedule Details for: Operations

### Schedule Details for: Operations

Show Details

Team Members for: Operations-team

Recently Used: Smith, Bob (bsmith) Select

[Add Users](#)
[Add Groups](#)
[Add Teams](#)
[Add Devices](#)
[Reorder](#)

	Escalation Rules			Name	Description	Type	Active
	Delay (min)	Escalation	Type				
<input type="checkbox"/>	0	0		Smith, Bob (bsmith)		Person	✓
<input type="checkbox"/>	1	1	Peer	Martin, Jim (jimm)		Person	✓
<input type="checkbox"/>	1	2	Peer	McBride, Mary (marym)		Person	✓
<input type="checkbox"/>	0	2		Fuller, Will (willf)		Person	✓
<input type="checkbox"/>	1	3	Peer	Herman, Ted (tedh)		Person	✓

Remove Selected Save Team

COMMON TASKS

- Change Existing Team
- View Team Details
- Back to Group Details

2. Click **Save Team**.

The escalation process for the Operations Group is now set to the following:

- The first Team member (in this case, Bob Smith) will be notified immediately when an Event occurs.
- One minute after beginning to notify Bob Smith, xMatters will begin attempting to notify the second Team member.
- One minute after beginning to notify the second Team member, xMatters will simultaneously begin attempting to notify the third and fourth Team members.
- One minute after beginning to notify the third and fourth Team members, xMatters will begin attempting to notify the fifth Team member.

In the next chapter, you can test the escalation by sending a notification message to the Group.

## Other escalation options

xMatters includes a wide variety of options you can implement within Groups to create your ideal escalation schedule.

### Team escalation options

You can create three different types of Teams, each of which affects the escalation order:

- **Basic:** Team members are notified in the order they are listed on the Team details page.
- **Event round robin:** After each Event, the first Team member will be moved to the last position on the Team list, and all other Team members will be moved up one position.
  - For example, assume an event round robin Team is made up of four members: A, B, C, and D. The first time xMatters sends a notification to the Team, A is notified first, then B, and so on. After that Event, the list of members is reordered so that the order becomes B, C, D, and A. After the next Event, the list is changed again, to C, D, A, and B.
- **Rotation:** After a defined time period called the Rotation Interval, the first Team member will be moved to the last position on the Team list, and all other Team members will be moved up one position.
  - For example, assume a rotation Team is made up of four members: A, B, C, and D. Further assume that the Rotation Interval has been set to four days. In this case, for the first four days after the specified Start Date and Start Time, when xMatters sends a notification to the Team, A is notified first, then B, and so on. After four days, the list of members is reordered so that the order becomes B, C, D, and A. After the next four days, the list is changed again, to C, D, A, and B.
  - You can also ‘freeze’ a Team Member’s position in the rotation so that they no longer rotate, but instead remain in the same position on the Team list.

### Allowing duplicate members in Groups

The Allow Duplicates check box on the Group details page specifies the following:

- whether the same Team member or members can appear more than once in the escalation rotation; and,
- whether the Group allows duplicate notifications for a single Event.

The Allow Duplicates setting applies to all Groups within a Group, even if the sub-Group is flagged differently.

For example, assume that User Bob Smith is a member of both the Operations Group, which allows duplicates, and the Support Group, which does not allow duplicates. If the Operations Group is added as a Team member to the Support Group, and a notification is sent to both Bob Smith and to the Operations Group, Bob would receive only one notification because the Support Group is not flagged to allow duplicates.

Note that if the Allow Duplicates check box is cleared, Users, Teams, and Groups already specified as Group members will not be displayed as part of any search results when adding members to the Group.

### **Schedule escalation options**

When creating a new Group, xMatters provides you with the opportunity to create a single Coverage consisting of one Schedule and one Team. Depending on your scheduling requirements, you might want to add more Coverages to your Group.

You can also add a One-time Coverage for unique scheduling situations, or add a Recurring Coverage for on-going and long-term scheduling. When adding a new Coverage to an existing Group, xMatters prompts you to set the Schedule first, and then assign the Team.

---

**Note:** *For detailed information about Group escalations and Schedule options, see the xMatters (alarmpoint) engine user guide.*

---



## Chapter 5: Messaging

This chapter explains how to send a message in xMatters using the Quick Messaging panel. The messaging feature in xMatters mimics the injection of an event from an outside source using the “messaging” Event Domain.

### Sending a Message

The quickest way to verify a Group’s escalation process is to use the Quick Message feature to send a message to the Group.

1. Click the **Messaging** tab.
  - xMatters displays the Send a Quick Message page.
2. Select an option from each of the **Event** and **Detail** drop-down lists.
3. Type the text for the message in the **Message Text** field.
4. In the Recipients area, click **Add Groups**.
  - Alarm displays the Find Group Recipients page:

**Find Groups**

Results per page: 10 ▼

Find Groups Where: Name ▼ Begins With ▼

**More Fields** **Less Fields**

Selected groups must ☒ **A** ☐ **All**  
match:

Only show supervised ☐  
groups:

**Find** **Show All**

5. Click **Show All**, select the check box next to the **Operations** Group, and then click **Add**.
6. Click **Save** to close the window and return to the Quick Message page.
7. In the Delivery area, ensure that the **All Devices** check box is selected.
  - Your Quick Message page should resemble the following:

(x)matters lite

About xMatters | Sign Out

ProfileAlertsUsersGroupsReportsMessagingAdminDeveloper

Send Messages

Quick Message ▶

View Messages

View Sent Messages

View Scheduled Messages

Send a Quick Message (Incident ID: WEB\_MESSAGE\_1290035696401) ? Help

Message

Detail:Building 5▼

Event:Security Breach▼

Message Text:

Testing the Group escalation

(1000 char. max.) 28 characters of 1000 entered.

Recipients

+ Recently Used

Add UsersAdd Groups

<input type="checkbox"/>	Name	Type
<input type="checkbox"/>	Operations	Group

Remove Selected

Refresh

Devices

☒ All Devices☐ Mobile Text☐ Email/Other

Handling

☐ Override Device Restrictions☐ Outbound Only

Scheduled Messaging

Schedule Message: ☐

Send Message

Logged in as Company Administrator (Default Company)  
xmatters, Inc. All Rights Reserved.

8. Click **Send Message**.

xMatters will send a Message to the Group, which results in Bob Smith immediately receiving a notification. To test the escalation schedule, you can respond to Bob Smith's notification with “Acknowledge”. This records the response, but does not clear the Event, and xMatters will continue to notify Group members.

Note the delay between notifications sent to Group members, and wait until the third or fourth User has been notified before responding with “Clear”. This will prevent xMatters from sending more



notifications based on the submitted message, and prevents the fifth Team member from receiving a notification.

The Event and Detail fields are based on the predicates configured in the “messaging” Event Domain. You can change the fields and the options within them by changing the Event Domain details as described in "Configuring a Subscription" on page 56.

---

## Chapter 5: Using xMatters mobile access

xMatters mobile access allows Users to connect to HP NNMi via a mobile Device's web browser. Users can create, view, and update incidents in HP NNMi remotely, and information about the messages is updated in real time.

This section describes how to connect to the mobile access component from a mobile Device, and illustrates how to update an originating incident remotely.

### Configuring a mobile access User

The Has Mobile Access check box on the User Details page determines whether a User can log into the mobile access component. You can grant access to an existing User by selecting the Has Mobile Access check box, or create a new User and select the check box while adding them.

**To configure a User for mobile access to HP NNMi:**

1. In xMatters, click the **Users** tab.
2. Use the Find Users page to locate the User you want to configure and view their details.
3. On the Details for User page, select the **Has Mobile Access** check box.
4. Enter the User's HP NNMi login credentials in the **HP NNMi Login** and **HP NNMi Password** custom fields.
5. In the Common Tasks pane, click **User Devices**.
6. Verify that an appropriate Device exists and that it is enabled.
7. Click **Save**.

---

**Note:** *If you have no Users in the system, you can use the default demonstration User, "bsmith". If this User does not exist, create a User with the User ID "bsmith", and add a virtual text phone Device. Ensure that the User also has access to the mobile access component.*

---

### Querying for a message

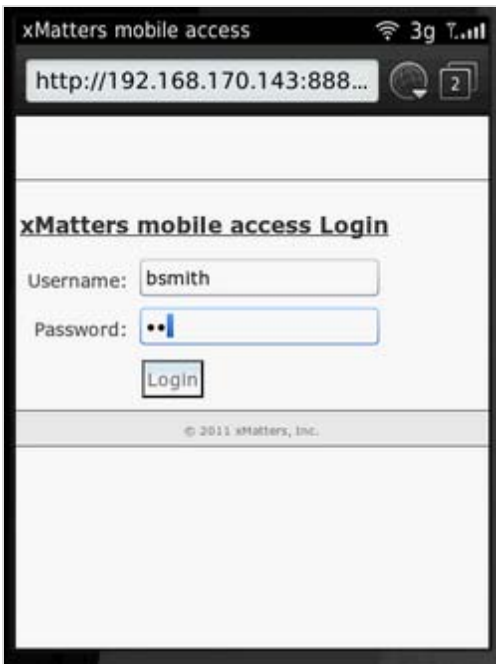
The mobile access component has a default access URL of:

`http://<xMatters>:8888/mg`

Where <xMatters> is the IP address of the xMatters web server where the mobile access component is configured.

**To query for a message:**

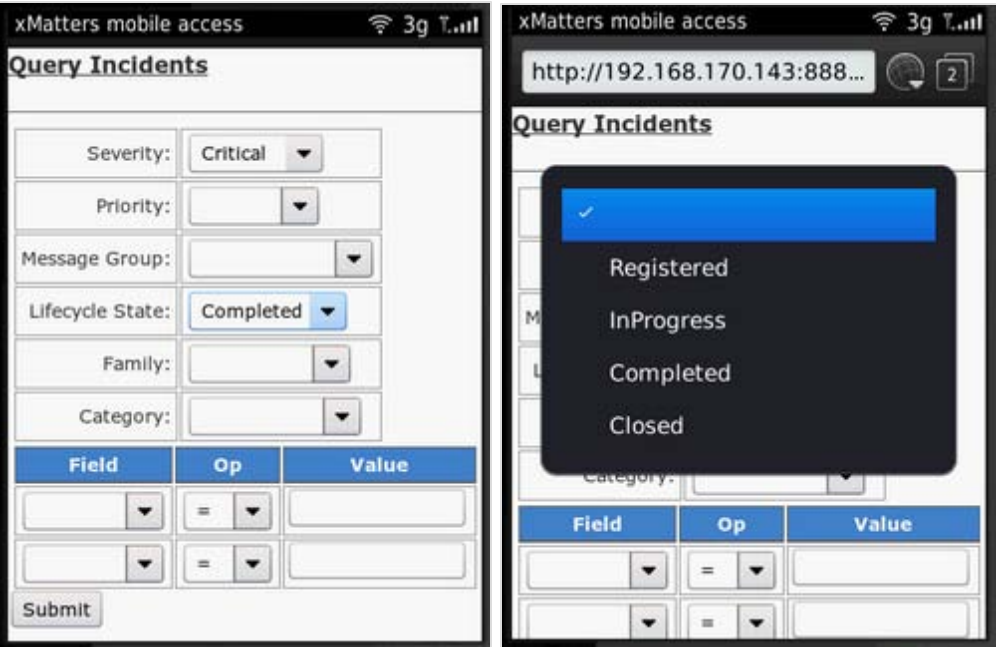
1. Using a browser-enabled smart phone (such as a BlackBerry), open a browser and navigate to the mobile access component IP address:



2. Log in to view the list of available integration services.
  - If more than one integration service is available, select the hpnnmi service.
3. If prompted, enter the HP NNMi login credentials, and then click the **Query Incidents** menu item:



4. Enter your search criteria in the fields provided:



5. Click **Submit** to list all matching incidents:

xMatters mobile access

Query Incidents [9]

S/P/LS/F	Node	Message
	192.168.168.32	<a href="#">Address Not Responding</a>
	192.168.168.55	<a href="#">Non-SNMP Node Unresponsiv</a>
	192.168.168.55	<a href="#">Address Not Responding</a>
	vic-esx-jirast	<a href="#">Node Down</a>
	192.168.168.42	<a href="#">Non-SNMP Node Unresponsiv</a>
	vic-kakey	<a href="#">Non-SNMP Node Unresponsiv</a>
	192.168.168.42	<a href="#">Address Not Responding</a>
	VIC-DGUNA	<a href="#">Non-SNMP Node Unresponsiv</a>

6. Click the link for an incident to view its details:

xMatters mobile access

<http://192.168.170.143:888...>

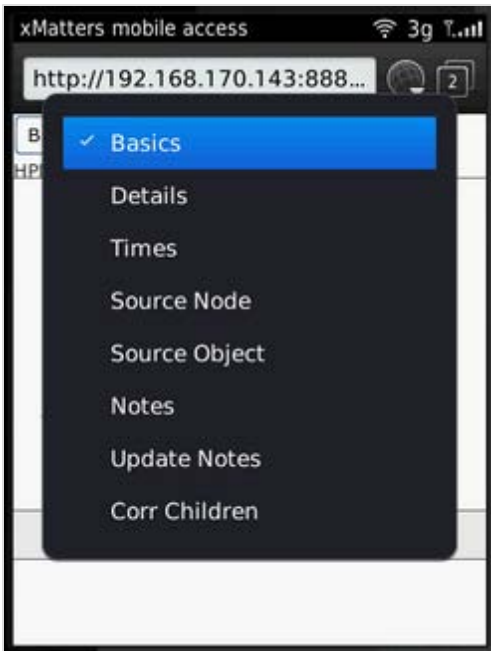
Details

HPNMI - Address Not Re...

**Name:** AddressNotResponding  
**Category:** Fault  
**Family:** Address  
**Origin:** MANAGEMENTSOFTWARE  
**Correlation Nature:** SECONDARYROOTCAUSE  
**Duplicate Count:** 0  
**RCA Active:** ☒

[HP NMI Menu](#) - [Services](#) - [Logout](#)

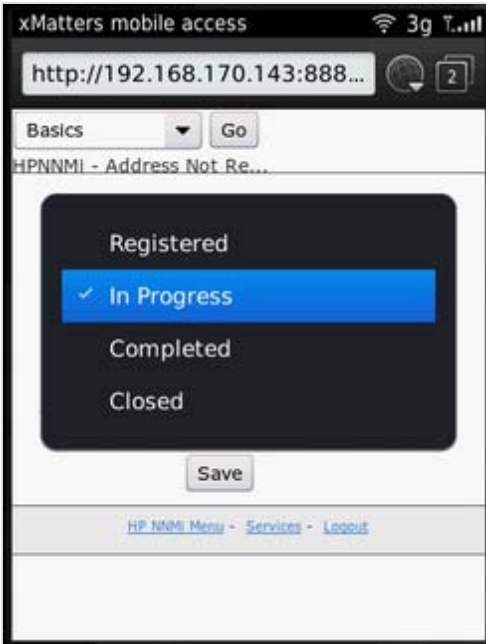
7. To view the available options for the incident, click the drop-down list at the top of the screen:



8. To update the issue, select **Basics** from the drop-down list:



9. On the Basics screen for the incident, click the Lifecycle State drop-down list, and then select a new status:



10. Log in to HP NNMi and view the details for the **incident** to confirm that it has been updated.

## Viewing message response choice

In standard xMatters lite deployments, only an Administrator can log into the web user interface or the mobile access component. In xMatters lite for HP NNMi, Users with a BlackBerry Device can select the “View Incident” response option within an xMatters notification, and then log into and view their HP NNMi incidents over xMatters mobile access.

When a User selects the View Incident response option in a BlackBerry notification, the default configuration uses the Super Administrator’s details to authenticate their access to xMatters mobile access, and then uses the recipient’s HP NNMi Login and HP NNMi Password Custom Fields settings to authenticate access to HP NNMi.

---

**Note:** *If the Custom Fields are not set, xMatters uses the defaults specified in the \$main.hpnnmiMGUser and \$main.hpnnmiMGPass settings in the PROCESS-initial script in the HP NNMi script package.*

---





## Chapter 6: Managing System Data

This chapter explains the reporting features of xMatters, and provides an introduction to the Import Data feature, which you can use to add multiple Users, Devices, Groups to xMatters.

### Generating Reports

xMatters provides a number of web-viewable reports for system monitoring and troubleshooting. The reports include logs of incoming messages, actions taken within xMatters, notification status messages, component status, and other interactions.

The following table summarizes some key terms used in xMatters Reports:

#### Key Reporting Terms

Term	Description
<b>Incident</b>	Represents one or many Events. For example, a Management System can use a single Incident ID to span multiple Events.
<b>Event</b>	Events originate when the Management System sends a message to the integration agent, or when the Event is generated from an xMatters Messaging Panel. Events represent the starting point and highest level of internal tracking. The Event ID is assigned within xMatters.
<b>Notification</b>	Generated based on Events, and can target one or many recipients (Users, Groups, and Devices). Notifications are delivered based on the Users' settings (schedules, escalations, overrides, and so on) and the business logic of the script used to process the Event.

### Accessing Reports

To access xMatters Reports, log in to the xMatters web user interface and click the Reports tab. The left menu displays links to all available Reports.

#### Available Reports

xMatters includes many predefined Reports with search criteria designed to help Administrators understand the application's runtime status, historical performance and auditing capabilities.

The following table summarizes the available reports and provides a brief description of each:

Category	Report	Description
<b>Activity</b>	<b>Events Activity</b>	Returns Events submitted to the system.
	<b>Events for User</b>	Returns Event details for a specific User based on a date and time range.
	<b>Events for Group</b>	Returns Event details for a specific Group based on a date and time range.
	<b>Submitted Notifications</b>	Returns all notifications sent within a specified date and time range.
	<b>Live Notifications</b>	Returns notifications that are currently live in the system, at a specified refresh rate (in seconds).
<b>Company Reports</b>	<b>Message Throughput</b>	This report returns all notifications the system has submitted, sent, and received based on a date and time range.
	<b>Domain Summary</b>	Returns all notifications the system has delivered based on a date and time range, and sorted by the specified Event Domain.
	<b>Synchronization Report</b>	Returns the results of data synchronizations based on a date and time range.
	<b>Application Audit Report</b>	Returns any additions, deletions, or changes to the specified system item, based on a date and time range.
<b>System Reports</b>	<b>Component Status</b>	Returns the status of all xMatters components, at a specified refresh rate (in seconds). By default, this Report is available only to the xMatters Super Administrator.
<b>Audit</b>	<b>Security Audit Report</b>	Returns login attempts (success/failure) by User ID and Web Login based on a date and time range.
	<b>Web Service Audit Report</b>	Returns xMatters Web Services activity, including Audit Time, WS User, Status, Method Name, Client Timestamp, Client IP, and Client OS user, based on a date and time range.

---

**Note:** *For more information about working with Reports, see the xMatters (alarmpoint) engine installation and administration guide.*

---

## Importing Data

You can use the xMatters web user interface to import XML spreadsheets of User information or other data directly into the database. The Import Data feature provides a quick way to import large amounts of records without the need for significant resources, or having to enter data into the system manually, one record at a time.

While this feature is most useful in more robust installations, xMatters lite users may find it useful if they are repeatedly seeding the installation for evaluation purposes.

You can use the Import Data feature to import the following information from the spreadsheet:

- **User information:** User ID, first and last name, Site, Role, Phone ID, and up to three Devices, including the Service Provider for each Device.
- **Group information:** Group names, descriptions, and default time zones.
- **Group Member information:** the Users to assign to each Group.

---

**Note:** *You can add a maximum of five Groups and ten Users in xMatters lite.*

---

### Spreadsheet template

xMatters includes a pre-formatted Excel 2003 XML spreadsheet you can use as a template when entering your data. The template is named DataImportTemplate.xml, and is stored in the xMatters installation folder.


For complete instructions on how to use the sample spreadsheet with the Import Data feature, see the *xMatters (alarmpoint) engine installation and administration guide*. Note that many of the fields included in the Import Data spreadsheet, such as Web and Phone Login IDs, are not required in xMatters lite.

## Importing spreadsheets

Once your data is formatted on the Excel 2003 XML spreadsheet, you can import it into the database using the web interface.

### To import a spreadsheet:

1. Click the **Admin** tab.
2. In the Configuration area of the Administration menu, click **Import Data**.
  - xMatters displays the Import Data page:



[Go to Home Page](#)
[Profile](#)
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Configuration

[Import Data](#)

Import Data

Person Defaults

Default Site: 
Default Role:

Group Defaults

Default Time Zone: 
Default Observer Role:

3. On the Import Data page, enter the following information into the form:

## Import Data page details

Detail	Description
Import	Name and location of the Excel 2003 XML spreadsheet you want to import. Type a path and a file name into the field, or click Browse to locate a spreadsheet file on your system.
Default Site	Site to which all Users will be assigned, unless otherwise specified in the spreadsheet.
Default Role	Role to which all Users will be assigned, unless otherwise specified in the spreadsheet.
Default Time Zone	Time Zone to which all Groups will be assigned, unless otherwise specified in the spreadsheet.
Default Observer Role	Observer Role which will be assigned to all Groups, unless otherwise specified in the spreadsheet.

4. Click **Upload** to import the spreadsheet data into xMatters.

- xMatters attempts to upload the data and import it into the database. If the import process is successful, xMatters displays a success message at the top of the Import Data page.

If the import process failed for any reason, xMatters displays a failure message. You can click the **Download Results** button to generate and view an Excel 2003 spreadsheet with more information about the errors.

---

## Chapter 7: Subscribing to Alerts

With Subscriptions, xMatters can automatically notify Users whenever an event matches a pre-defined set of criteria. For example, when a certain type of error occurs on a specific asset or service, xMatters can notify a particular Group.

The following sections describe how to manage Subscriptions in xMatters, including instructions on how to incorporate a custom Subscription panel and assign Subscriptions to Users. Note that this feature is strictly optional; the ability to directly target Users, Devices, and Groups through integration or web messaging is sufficient for most deployments.

xMatters lite supports one Subscription Panel per deployment. This panel can be generated dynamically, but may be included with an xMatters integration module.

### Important Terms

The following terms are used in relation to Subscriptions in xMatters:

#### Event Domain

Each source of incoming events, such as a Management System, requires a separate Event Domain in xMatters. The Event Domain defines the name/value pairs that xMatters uses to determine the nature of the event. The information contained in the event identifies its Event Domain, which in turn determines which Script Package xMatters should use to handle the event. xMatters lite supports a maximum of one customer Event Domain.

#### Predicate

Each name/value pair within an Event Domain is referred to as a predicate.

#### Subscription Domain

A Subscription Domain defines a subset of the predicates within an Event Domain, and sends notifications to Subscribers based on those criteria. xMatters lite supports a maximum of one Subscription Domain.

### Creating Subscriptions

Subscriptions can be used in one of two ways: self-subscriptions and managed subscriptions. With self-subscriptions, Users with proper permissions can create their own Subscriptions for informational types of Events and Alerts. With managed subscriptions, supervisors can define Subscriptions and assign them to Groups or Users, who can then see what has been assigned to them. You can also create Subscriptions that combine both approaches.

For xMatters lite, it is recommended that you create “Managed” Subscriptions, as only the Administrator account has access to the xMatters web user interface.

The instructions in the following sections describe how to work with the “default” Event Domain and script package in xMatters. Other Event Domains require changes to their associated script packages. See the *xMatters (alarmpoint) engine installation and administration guide* for more information.

## Adding a Custom Subscription Panel

xMatters lite for HP Network Node Manager i comes equipped with a pre-built custom Subscription panel (and modified script package) that you can use to create Subscriptions in xMatters. If you want to create your own Subscription panel, see the xMatters Online Developer's Guide for complete instructions; note that xMatters lite supports only one custom Subscription Panel per installation, and that all custom Subscription panels must be in Java Server Pages (.jsp) format.

---

**Note:** *The custom Subscription panel included with this integration, NNMiSubscriptionForm.jsp, is automatically installed to the correct location.*

---

## Configuring a Subscription

The xMatters lite for HP Network Node Manager i installer automatically creates and configures the "hpnmmi" Event Domain and the "hpnmmi" Subscription Domain with the following predicates (case insensitive):

- SEVERITY
- CATEGORY
- NAME
- SOURCENODENAME
- SOURCEOBJECTNAME
- PRIORITY
- FAMILY
- NATURE

The following sections explain each predicate's settings and its corresponding value in HP NNMi.

### SEVERITY

Severity is a list predicate containing some or all of the following values (case sensitive):

- Critical
- Major
- Minor
- Normal
- Warning

The items listed for Severity should be specifically chosen to match the severity of the Events forwarded from HP NNMi. Exclude any severities that will not be submitted for notification.

This predicate corresponds to the \$severity variable in HP NNMi.

## CATEGORY

Category is a list predicate that describes the type of incident; allowed values are:

- com.hp.nms.incident.category.Fault
- com.hp.nms.incident.category.Status
- com.hp.nms.incident.category.Config
- com.hp.nms.incident.category.Accounting
- com.hp.nms.incident.category.Performance
- com.hp.nms.incident.category.Security
- com.hp.nms.incident.category.Alert
- NNMi will generate only the values listed above. Exclude from your list any categories that will not be submitted for notification.

This predicate corresponds to the \$category variable in HP NNMi.

## NAME

Name is a list predicate that identifies the incident type of the event. The values should be only those incident types you have configured to inject messages into xMatters.

The default available incident types are:

- AddressNotResponding
- ConnectionDown
- ConnectionPartiallyUnresponsive
- ImportantNodeOrConnectionDown
- InterfaceDown
- ModifiedConnectionDown
- NodeDown
- NodeOrConnectionDown
- NonSNMPNodeUnresponsive
- ImportantNodeUnmanageable
- InterfaceDisabled
- NnmHealthOverallStatus

This predicate corresponds to the \$name variable in HP NNMi.

## **SOURCENODENAME**

Source Node Name is a list predicate that identifies the name of the Node that is the source of the incident. This list is populated through a Web Services Call to HP NNMi.

This predicate corresponds to the \$sourceNodeName variable in HP NNMi.

## **SOURCEOBJECTNAME**

Source Object Name is a text predicate containing the name of the Object that generated the incident. The Object can be determined through a combination of the Object Name and Family.

As this is a text field, you can use any number of filters on the results.

## **PRIORITY**

Priority is a list predicate that identifies how important fixing the incident is to Users. This is in contrast to Severity, the level of which is automatically determined by HP NNMi. Note that xMatters allows the priority to be altered by notification recipients.

Valid values for Priority are:

- com.hp.nms.incident.priority.None
- com.hp.nms.incident.priority.Low
- com.hp.nms.incident.priority.Medium
- com.hp.nms.incident.priority.High
- com.hp.nms.incident.priority.Top.

This predicate corresponds to the \$priority variable in HP NNMi.

## **FAMILY**

Family is a list predicate that identifies the type of object that generated the incident. Valid values for Family are:

- com.hp.nms.incident.family.Address
- com.hp.nms.incident.family.Interface
- com.hp.nms.incident.family.Node
- com.hp.nms.incident.family.OSPF,
- com.hp.nms.incident.family.HSRP
- com.hp.nms.incident.family.AggregatePort
- com.hp.nms.incident.family.Board
- com.hp.nms.incident.family.Connection
- com.hp.nms.incident.family.Correlation
- com.hp.nms.incident.family.NnmHealth

This predicate corresponds to the \$family variable in HP NNMi.



## NATURE

Nature is a list predicate that describes how HP NNMi views the incident. Valid values for Nature are:

- ROOTCAUSE
- SECONDARYROOTCAUSE
- SYMPTOM
- USERROOTCAUSE.

This predicate corresponds to the \$nature variable in **NNMi**.

## Assigning Alerts

Once the Event and Subscription Domains are prepared, you can create Subscriptions and assign them to Users, Groups, and Dynamic Teams, or even specific Devices. For example, you could create a Subscription that would automatically send an Alert to a specific email address every time an Event enters the system with a “critical” severity.

### To create a Subscription:

1. Click the **Alerts** tab, and then click **Assign Alerts**.
2. On the Assign Alerts page, above the Subscriptions That I Manage table, click **Add New**.
3. On the Subscription Details page, enter a name for the Subscription and specify the Subscription criteria using the **Event Details** and **Preferences** tabs.

The Event Details tab:

Event Details

Preferences

Category:

-- ANY --

Accounting

Alert

Config

Fault

Family:

-- ANY --

Address

AggregatePort

Board

Connection

Incident Name:

-- ANY --

AddressNotResponding

ConnectionDown

InterfaceDown

NodeDown

Nature:

-- ANY --

ROOTCAUSE

SECONDARYROOTCAUSE

SYMPTOM

USERROOTCAUSE

Priority:

-- ANY --

High

Low

Medium

None

Severity:

-- ANY --

Critical

Major

Minor

Normal

Source Node Name:

-- ANY --

192.168.168.1

192.168.168.40

LAGAVULIN

LJ\_PRINTER\_VICT

Source Object Name:

CONTAINS

Empty Field = Any Value

Save

## The Preferences tab:

Event Details

Preferences

---

### Timeframe

**Start Time:** 03:00 24 hours 0 minutes \*

On the following days: ☒ Sun ☒ Mon ☒ Tue ☒ Wed ☒ Thu ☒ Fri ☒ Sat

Time Zone: US/Eastern

---

### Overrides

Device Types: ☒ All Devices ☐ Email ☐ Instant Message ☐ Text Devices ☐ Voice Devices

Override User Device ☐

Timeframes:

Ignore Device Delays: ☐

Override Device Severities and Use All: ☐

Notification Delay: 0 min

---

Save

You can view the Subscription details at any time on the Summary tab:

Summary

Event Details

Preferences

---

### Matching Any Event Where

- CATEGORY MATCHES (com.hp.nms.incident.category.Fault)
- AND
- FAMILY MATCHES (com.hp.nms.incident.family.Address)
- AND
- NAME MATCHES (AddressNotResponding)
- AND
- NATURE MATCHES (ROOTCAUSE)
- AND
- PRIORITY MATCHES (com.hp.nms.incident.priority.None)
- AND
- SEVERITY MATCHES (Critical)
- AND
- SOURCENODENAME MATCHES (192.168.168.40)
- AND
- SOURCEOBJECTNAME CONTAINS (192.168.168.40)

**Available:** Sun Mon Tue Wed Thu Fri Sat 03:00 - 03:00

**Using:** All Devices

---

Save

4. At the bottom of the page, in the Recipients area, click the **Add Users** link.
5. Use the search page to add any of the Users you added in the preceding chapters to the Subscribers list, and then click **Save**.
6. Click **Save** to create the Subscription.

## Chapter 8: Scripting Overview

The following sections provide a brief overview of scripting in xMatters, including an introduction to Action Script, the terminology used when discussing xMatters scripts, and how the included xMatters Developer IDE works. This section also introduces the process required to create an integration.

xMatters provides the ability for Administrators to edit scripts to enhance the notification business process. For example, you could:

- change the display content for a message; e.g., the default subject line for an email;
- change the job control when integrating with a management system; or,
- provide different response options for notification recipients.

Note that the sections included here are introductory in nature; for more complete information on these and other related topics, see the *xMatters Online Developer's Guide*.

---

**Note:** *xMatters-provided Integration Modules include the full Script Package required for integrations.*

---

## Introduction to Scripting

Action Script, the scripting language used in xMatters, has been designed to be lightweight and powerful, and to meet the unique requirements of xMatters software products and customers.

This introduction will focus on the basics of Action Script, and what is necessary for event resolution.

### Important Terms

The following terms are used throughout this section to describe elements of the business process management system:

- A **business process** is a set of actions taken by the xMatters runtime in response to an event from an event source.
- An **event** is an external occurrence that has been injected into the xMatters system from another source, such a management system. The event contains data which determines how the associated business process will behave.
- Events are associated with **event domains** when they enter the xMatters system. Event domains represent the event source and determine which scripts will be run for that event.
- A **script** is a user-modifiable part of the business process.
- A **script package** is a grouping mechanism for scripts and is associated with an event domain.
- A **script object** is a script element which functions as both a container for data (variables) and an interface from within a script to the xMatters runtime (methods).

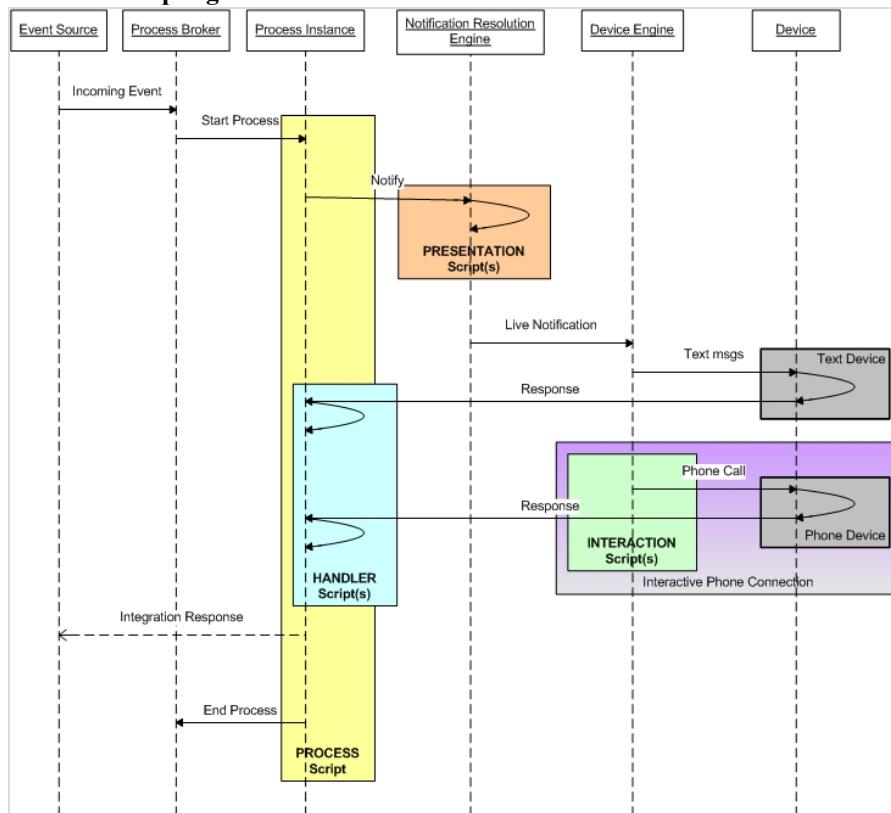
- A **notification** is a message from the xMatters system to a User. Notifications have **content** which is presented to a User on a **Device**. Notifications are dispatched to Users by **Device Engines**.
- Users can send **responses** to the xMatters system that typically consist of **response choices** and sometimes auxiliary data.

Much of the business process is managed by compiled code distributed with the xMatters runtime. However, certain parts of the business process are “scriptable” so that users can customize behaviour according to their needs.

## Concepts

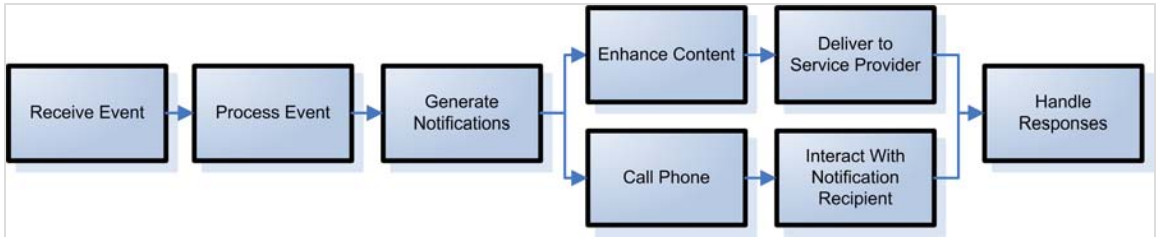
The primary purpose of the runtime portion of an xMatters deployment (the community of nodes) is to receive external events and manage business processes surrounding those events. This business process typically includes generating notifications, processing responses from notification recipients, and managing the lifecycle of the business process and its constituent parts.

### xMatters scripting and event flow



## Event Processing Overview

The following figure represents a typical set of steps taken by the xMatters system in response to an external event:



Each of the steps is described as follows:

- **Receive Event:** an event is injected into xMatters from an event source (through an integration or from the web interface).
- **Process Event:** a business process is created and started for the event.
- **Generate Notifications:** as part of the business process, notifications are generated.
- **Enhance Content:** content specific to the recipient is added.
- **Deliver to Service Provider:** the generated notifications are dispatched to User Service Providers.
- **Call Phone:** a conversation is established with the recipient.
- **Interact with Notification Recipient:** the notification is presented to the recipient.
- **Handle Responses:** responses are received for the generated notifications.

---

**Note:** *Scripting in xMatters is extremely flexible; for illustration purposes, the workflow described in this section has been simplified. Actual scripting processes and data flow may vary.*

---

## Editing Action Scripts

To create or edit an Action Script, you must install the xMatters Developer IDE, and change the script based on the script packages.

### Installing the xMatters Developer IDE

The xMatters Developer IDE is an integrated development environment used to create, edit, and manage processes within xMatters. You can also import the business processes provided by xMatters for an integration to specific management systems.

The IDE has an automated installer (Windows wizard or console). The following sections describe the steps for installing the xMatters Developer IDE.

### To install the xMatters Developer IDE on Windows:

1. Navigate to the folder containing the installation file.
2. Double-click the install file.
3. Read the text on the Introduction page, and then click **Next**.
4. Read the License Agreement, select **I accept the terms of the License Agreement**, and then click **Next**.
5. Specify the location to install the IDE or accept the default installation folder, and then click **Next**.
6. After the installation has completed, click **Done**.

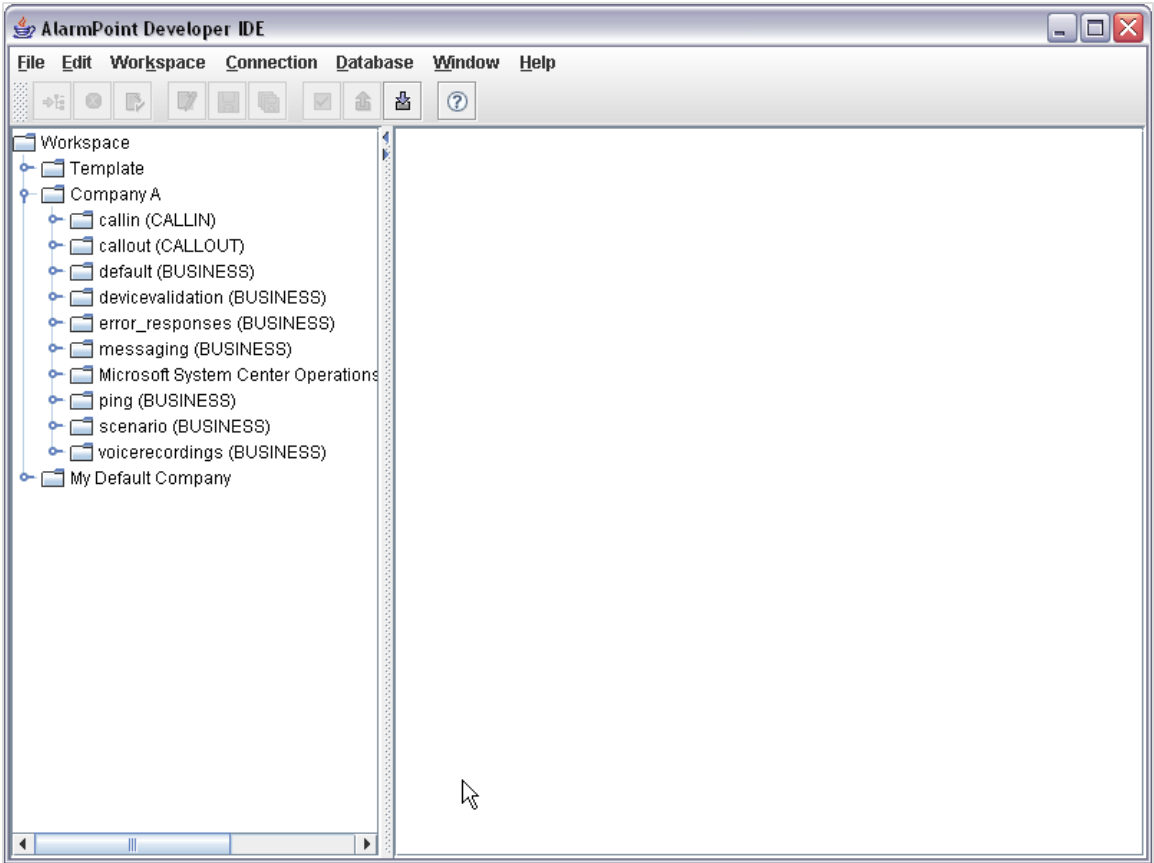
### Using the xMatters Developer IDE

Once the xMatters Developer IDE is installed, you can configure the connection to the xMatters database.

### To configure and use the xMatters Developer IDE:

1. Once installation is complete, click **Start > Programs > xMatters > xMatters Developer IDE**.
2. When the xMatters Developer IDE starts, click **Connection > SQL Server Example**.
3. Click **Connection > Edit Connection**.
4. In the JDBC Connection dialog box, specify the following settings:
  - **URL:** Type the URL to access the database; for example:  
jdbc:jtds:sqlserver://<yourIPAddress>:1433 , where <yourIPAddress> is the URL.
  - **User:** Type the user name of the account to use when connecting to the database.
  - **Password:** Type the password for the account to use when connecting to the database.
5. Click **OK**.
6. Click **Database > Check Out**.
  - The xMatters Developer IDE connects to the database and presents a list of available scripts:





This indicates that the xMatters Developer IDE is properly configured. You can click **Close**, and then exit the xMatters Developer IDE.

### About the workspace

The workspace in the xMatters Developer IDE is divided into two panes:

- **Workspace pane:** The area on the left side of your screen displays a list of your current Script Packages, and a collapsible view of each package's versions and scripts.
- **Scripting pane:** The area on the right side of your screen displays a separate pane for each script on which you are currently working. It is in these panes that you can add and edit the code for each script.

You can drag the border between the panes to resize them.

### Saving your workspace

You can save your progress at any time by saving the state of your workspace. This does not save your scripts and Script Packages to the database, but allows you to restore your workspace at another time, or to revert to the current state.

### To save your workspace:

1. In the Workspace pane, select the **Workspace** folder.
2. Click **File > Save All**.

Once you have saved your workspace, you can restore to the saved state at any time by clicking File > Revert. Note that this will discard any changes since the last time you saved your workspace.

---

**Note:** *For more information about using the xMatters Developer IDE, refer to the xMatters Online Developer's Guide.*

---

## Scripting example

The following code sample is taken from the “default” Script Package, and defines the subject line for all email notifications sent by xMatters:

```
IF ($content.deviceclassification == "email")
$content.subject = "xMatters Message: " & $event.incident_id
```

In this case, once xMatters determines that the notification is being sent to an Email Device, it sets the subject line to the default text for all xMatters email notifications, which would resemble the following:

**xMatters Message: 3445**

You can change the default subject line for email notifications by using the xMatters Developer IDE to edit the Action Scripts. In the following example, the default script has been edited so that each email message subject line includes the severity of the event, in addition to the Incident ID:

```
IF ($content.deviceclassification == "email")
$content.subject = "xMatters Message: " & $event.incident_id &
" Severity: " & $event.severity
```

The email message subject line for an xMatters notification will now resemble the following:

**xMatters Message: 3445 Severity: CRITICAL**

## Creating an Integration

The three phases required when creating an integration for xMatters are:

- Test the automation capabilities to launch a command line when an event occurs.
- Test the ability to pass dynamic data to the automation via arguments.
- Create a new integration point.

---

**Note:** *xMatters has created xMatters Integration Modules for many popular Management Systems. For more information, contact xMatters.*

---

The process of creating an integration is described in detail in the *xMatters Online Developer's Guide*.

## Preparing xMatters lite for an Integration

Integrating external applications with xMatters requires the xMatters integration agent and, for pre-built integrations, the xMatters Developer IDE.

### The xMatters integration agent's Role

The xMatters integration agent facilitates bi-directional communication (both in terms of data flow and initiation), between xMatters and one or more management systems. This functionality can be divided into two sets of core features:

- An interface for web-based clients, such as the xMatters mobile access, to submit requests to a management system.
- An interface for management systems to submit requests to xMatters.

For a complete overview of the communication process between the xMatters (alarmpoint) engine and the xMatters integration agent, see the "Architectural Overview" section in the *xMatters (alarmpoint) engine integration agent guide*.

---

**Note:** *For information about configuring the integration agent, see "Installing the integration agent" on page 8.*

---

### The xMatters Developer IDE's Role

Once you have defined the required token information to send to xMatters from the integration agent, you can use the xMatters Developer IDE to create an Action Script Set to handle notification and responses.

When creating a new integration, it is recommended that you use the out-of-the-box default script package as a starting point.

There are four types of scripts in an Action Script Set:

- **Process:** This is the main script that runs initially, and allows generic information definition and 'pre-processing' of the event information. Then the correct people or groups are notified using the following three script types.
- **Presentation:** This script allows you to define how the information should be presented on each Device, and what response options are available to the notified User.
- **Interaction:** This script is used only for Phone (Voice) notification scripts, and is not used in

xMatters lite.

- **Handler:** The handler script takes care of all responses from Users on any of the Devices, and allows you to set up communication with the integration agent to take actions on a management system.

---

**Note:** *For more information about configuring the xMatters Developer IDE see "Using the xMatters Developer IDE" on page 66.*

---

## Chapter 8: Optimizing and Extending the Integration

This section describes some of the available methods you can use to optimize or extend the xMatters lite for HP Network Node Manager i integration.

### Adding new parameters

Additional data elements (or tokens) can be forwarded to xMatters by adding them in HP NNMi. The following steps explain how to add a new event token to the event injected to xMatters.

---

**Note:** *For more information about which parameters may be available, refer to the HP NNMi documentation.*

---

#### To add an event parameter:

1. Open the <IAHOME>\integrationservices\hpnmmi\hpnmmi.js file.
2. To add a new child node to the generated APXML data, locate the function `apia_http (httpRequestProperties)`.
3. Locate the following comments:  

```
// add custom tokens
// data.appendChild(<custom_parameter>{content.incidentResent.text()}</custom_
parameter>);
// data.appendChild(<custom2>static custom token value</custom2>);
```
4. Add an `appendChild` command.  

```
data.appendChild(<custom_parameter>{content.incident_parameter.text()}</custom_
parameter>);
```

The new parameter can now be used within the xMatters Action Scripts. The following section illustrates a possible use for the variable.

### Adding new parameters to notification content

Once you have injected the new data elements, you can add the token as a parameter to the notification content for Devices. The following steps explain how to add the custom parameter to email notifications; adding content for other Device types is similar and requires the presentation script to be modified for the specific Devices.

#### To add a new token to email notification content:

1. Open the xMatters Developer IDE and check out the HP Network Node Manager (BUSINESS) Script Package.
2. In the Presentation Action Script, add the following line to the email content creation section:

```
$content.message = $content.message & "TokenName: " & $event.tokenvalue &
"\n"
```

3. You can also add a check in the Initial script to confirm that the custom parameter was injected properly and exists within the Action Scripts:

```
IF ( ! EXISTS( $event.custom_parameter ) )
    $event.custom_parameter = $undefined_default
    IF ( $main.debug )
        @script::log( $main.log_prepend & "Optional token ' custom_parameter '
            not found, defaulting to '" & $event.custom_parameter & "'" )
    ENDIF
ENDIF
ENDIF
```

Your custom parameter should now appear in the notification content for email Devices.

## Updating the event injection filter

By default, this integration is configured to receive all events in HP NNMi where:

- the nature of the event is ROOTCAUSE;
- the lifecycleState is com.hp.nms.incident.lifecycle.Registered;
- the severity is CRITICAL;
- and, the Event Type is one of AddressNotResponding, ConnectionDown, InterfaceDown, NonSNMPNodeUnresponsive, or NodeDown.

This is specified in the default filter in the <IAHOME>\integrationservices\hpnmmi\nnmi-config.js file as follows:

```
// Filtering for subscription.
// Only matching Incidents will trigger the subscription call back
var FILTER = "/sys:onNotification/arg0[nature='ROOTCAUSE' and
lifecycleState='com.hp.nms.incident.lifecycle.Registered' and
severity='CRITICAL' and ( name='AddressNotResponding' or name='ConnectionDown'
or name='InterfaceDown' or name='NodeDown' or name='NonSNMPNodeUnresponsive')]"
```

The following NNMi incident parameters can be used in this filter expression:

Data Type	Filter Name	NNMi Web Field	Possible Values
Int	id		
String	uuid		
String	sourceUuid		
String	sourceName	Source Object	
String	sourceNodeUuid		
String	sourceNodeName	Node Name	

Data Type	Filter Name	NNMi Web Field	Possible Values
String	name	Name	
String	severity	Severity	NORMAL WARNING MINOR MAJOR CRITICAL
String	priority	Priority	com.hp.nms.incident.priority.Low com.hp.nms.incident.priority.Medium com.hp.nms.incident.priority.High com.hp.nms.incident.priority.Top com.hp.nms.incident.priority.None
String	lifecycleState	Lifecycle State	com.hp.nms.incident.lifecycle.Registered com.hp.nms.incident.lifecycle.InProgress com.hp.nms.incident.lifecycle.Completed com.hp.nms.incident.lifecycle.Closed
String	category	Category	com.hp.nms.incident.category.Fault com.hp.nms.incident.category.Status com.hp.nms.incident.category.Config com.hp.nms.incident.category.Accounting com.hp.nms.incident.category.Performance com.hp.nms.incident.category.Security com.hp.nms.incident.category.Alert

Data Type	Filter Name	NNMi Web Field	Possible Values
String	family	Family	com.hp.nms.incident.family.Address
			com.hp.nms.incident.family.Interface
			com.hp.nms.incident.family.Node
			com.hp.nms.incident.family.OSPF
			com.hp.nms.incident.family.HSRP
			com.hp.nms.incident.family.AggregatePort
			com.hp.nms.incident.family.Board
			com.hp.nms.incident.family.Connection
			com.hp.nms.incident.family.Correlation
String	origin	Origin	MANAGEMENTSOFTWARE
			MANUALLYCREATED
			REMOTELYGENERATED
			SNMPTRAP
			SYSLOG
String	nature	Correlation Nature	OTHER
			ROOTCAUSE
			SECONDARYROOTCAUSE
			SYMPTOM
			SERVICEIMPACT
			STREAMCORRELATION
Int	duplicateCount	Duplicate Count	NONE
String	formattedMessage	Message	
Boolean	rcaActive	RCA Active	
Date	originOccurrenceTime	Origin Occurrence Time	



Data Type	Filter Name	NNMi Web Field	Possible Values
Date	firstOccurrenceTime	First Occurrence Time	
Date	lastOccurrenceTime	Last Occurrence Time	
Date	created	Created	
Date	updateTime		
String	previousLifecycleState		
String	previousRcaActive		

**Note:** For more details, refer to the *HP Network Node Manager i Software Developer's Toolkit*.

For example, to change the filter so only incidents with a priority of “Top” or “High” should be injected into xMatters, you would change the filter to resemble the following:

```
var FILTER =
"/sys:onNotification/arg0[priority='com.hp.name.incident.priority.High' or
priority='com.hp.nms.incident.priority.Top']";
```

### To customize the injection filter:

1. Open the <IAHOME>\integrationservices\hpnmmi\nnmi-config.js file.
2. Locate the **FILTER** variable, and update it to match your requirements.
3. Save and close the file, and then restart the xMatters web server.

## Response choices

This integration allows recipients to respond to notifications with several default choices, some of which are injected back to the HP NNMi server, updating the original incident. Users notified on email Devices also have the ability to respond with an extra annotation message which will be logged in the original incident, as described in "Adding annotation messages", below.

The following is a list of the default response choices available with the integration and their associated actions on the xMatters event and the HP NNMi incident.

Response	Description
<b>Acknowledge</b>	User takes ownership of the incident, preventing further notifications to other Users. (The exception is subscription FYI notifications, which are reporting on the service outage. These are not stopped until the problem has actually been solved.)
<b>Ignore</b>	Stops notifying the current User.
<b>Raise Priority</b>	Increases the priority of the incident in NNMi by one level. <b>(Voice only)</b>
<b>Lower Priority</b>	Decreases the priority of the incident in NNMi by one level. <b>(Voice only)</b>
<b>Set Priority Top</b>	Sets the priority of the incident to Top. <b>(Email, BES, and browser only)</b>
<b>Set Priority High</b>	Sets the priority of the incident to High. <b>(Email, BES, and browser only)</b>
<b>Set Priority Medium</b>	Sets the priority of the incident to Medium. <b>(Email, BES, and browser only)</b>
<b>Set Priority Low</b>	Sets the priority of the incident to Low. <b>(Email, BES, and browser only)</b>
<b>Annotate</b>	Allows the User to append a message to the Notes field of the NNMi incident. <b>(Non-HTML Email only)</b>

## Adding annotation messages

Two-way email Device notifications (not FYI) can add extra annotations that will be added to the HP NNMi incident as a message on the Journal Updates tab. To add an extra annotation, respond to an email notification with the following format in the subject line:

```
RESPONSE <Choice> <Message>
```

<Choice> can be any of the response choices listed in the table above, and <Message> can be any content you want to add as the annotation.

## Changing and adding response choices

The response choices and behavior can be changed in the response script in the Action Script set (to change Subscription responses, update the subscriptionResponse script). Actions available through web service calls include acknowledging an incident, annotating it, and changing its priority. Any other response functionality for the integration must be configured within the response HANDLER script with HP NNMi provided web service calls.

As an example, the following code illustrates adding a response choice of "Be there in 10 minutes" to the integration:

### Presentation Script

```
$content.choices::add( "be there in ten minutes" ) )
```

## Response Script

```
# Handle responses
$reply = $response.reply
$reply::toLowerCase()
$ten_minutes= $reply::startsWith( "be there in ten minutes" )
...
IF ( $ten_minutes )
    # Perform any changes to the AlarmPoint event and notifications here
    @event::delinkAll() # Consider the incident handled
    $main.continue = true
...
# Acknowledge Event on Management System
GOSUB acknowledgeIncident
...
# Acknowledges the original NNM incident using a web service call, changing the
lifecycle state
acknowledgeIncident:
    @nnmiRequest = new NetworkNodeManagerScriptObject( $main.nnmi_incident_url,
        $main.nnmi_username, $main.nnmi_password )
    IF (! EXISTS($event.nnm id))
        $event.nnm_id = @nnmiRequest::getNNMIncidentId($event.incident_id)
    ENDIF
    $request_successful = @nnmiRequest::acknowledgeIncident($event.nnm_id)
    IF ($request_successful != true )
        $err_msg = "Failed to acknowledge NNMi incident: " & $event.incident_id
        IF ( $main.debug )
            @script::log( $main.log_prepend & $err_msg )
        ENDIF
        @event::report( $err_msg )
    ENDIF
RETURN
```

The above is intended only as a brief overview of the required components. For more information about responses and scripting, refer to the xMatters Action Scripts and the *xMatters Online Developer's Guide*.

## Constructing BES and email notifications

You can configure xMatters to create BES and HTML email notifications. This feature requires the xMatters Developer IDE, as described in "Installing the xMatters Developer IDE" on page 65, and the HP Network Node Manager script package that is installed with the integration.

---

**Note:** *Some email clients, such as Microsoft Outlook 2007, may not display HTML elements correctly. It is recommended that you test the HTML compatibility of your email client before implementing the HTML email feature.*

---

### To enable BES and/or HTML email:

1. In xMatters, click the Developer tab, and then, in the menu on the left side of the screen, click **Event Domain Constants**.

2. In the Event Domain drop-down list, select **.hpnmmi**.
3. On the Event Domain Constants page, do the following:
  - Set the **enablehtmlmail** constant to `true`.
  - Set the **uselogo** constant to `true` (if you want your HTML email to show a logo).
  - Set the **xmattersurl** constant to the base URL of your xMatters web server. (default is `localhost`).
  - If you are using BES, set the **bespushurl** constant to the URL of the BES server.

---

**Note:** *If the Event Domain Constants are not present, you can add them using the names specified above. For more information, see*

---

4. Optionally, you can also use the Developer IDE to make any of the following changes to the Global Configuration Variables section of the initial PROCESS script in the HP Network Node Manager (Business) Production script package::
  - Change `$main.HTML_form_url` to point to a JSP page that you want to process any responses from the HTML email. (the default setting should work out-of-the-box).
  - Change `$main.logo` to a URL that holds the image you want to display at the top of HTML emails (by default, it points to the xMatters logo).
  - Set `$main.logo_alt_text` to the text you wish to display when the logo cannot be fetched. This can be displayed if the email client is configured not to show images, or it could be displayed because the email client cannot access the xMatters web server directly and thus cannot respond by using the links in the HTML.
  - If you are using BES and have access to a BES server, you can set the URL to the BES server in the `$main.bes_pushurl` variable.
5. Save and validate the script, and check in the script package.

## Optimizing the mobile access component

This section describes the methods you can use to optimize the xMatters mobile access portion of the integration.

### Adding incident details

You can add additional read-only content to the details displayed on xMatters mobile access by modifying the `eventContent.jsp` file in the `<xMHOME>\webserver\webapps\mobilegateway\hpnmmi\includes` folder.

The first step in adding new content is to determine what information is available from the `getIncident` web service call. (For more information on how to do this, refer to the HP NNMi Developer's Toolkit Reference or other HP NNMi developer documentation available from HP).

It is also important that you know what the return type is for the attribute you are requesting from the “event” object. For the information to be displayed in the mobile access component, you must return a

string; depending on the attribute you want to add, you might have to call the `toString()` method, or cast it to a string using `String.valueOf()`.

Open the `<xMHOME>\webserver\webapps\mobilegateway\hpnmi\includes\eventContent.jsp` file, and locate the section to which you want to add the new detail:

```
else if ( tab.equalsIgnoreCase( "Details" ) )
{
    fields.add(new FieldImpl(FieldType.READONLY, "Name", event.getName()));
    fields.add(new FieldImpl(FieldType.READONLY, "Category",
getHPObjectSuffix(event.getCategory())));
    fields.add(new FieldImpl(FieldType.READONLY, "Family",
getHPObjectSuffix(event.getFamily())));
    fields.add(new FieldImpl(FieldType.READONLY, "Origin",
event.getOrigin().toString()));
    fields.add(new FieldImpl(FieldType.READONLY, "Correlation Nature",
event.getNature().toString()));
    fields.add(new FieldImpl(FieldType.READONLY, "Duplicate Count",
String.valueOf(event.getDuplicateCount())));
    fields.add(new FieldImpl(FieldType.READONLYBOOLEAN, "RCA Active",
String.valueOf(event.getRcaActive())));
}
```

For this example, assume that you want to add the `SourceNodeUuid` as a read-only field type to the incident details displayed in the mobile access component. Note that the `SourceNodeUuid` value is a string, so you do not have to cast it:

```
else if ( tab.equalsIgnoreCase( "Details" ) )
{
    fields.add(new FieldImpl(FieldType.READONLY, "Name", event.getName()));
    fields.add(new FieldImpl(FieldType.READONLY, "Category",
getHPObjectSuffix(event.getCategory())));
    fields.add(new FieldImpl(FieldType.READONLY, "Family",
getHPObjectSuffix(event.getFamily())));
    fields.add(new FieldImpl(FieldType.READONLY, "Origin",
event.getOrigin().toString()));
    fields.add(new FieldImpl(FieldType.READONLY, "Correlation Nature",
event.getNature().toString()));
    fields.add(new FieldImpl(FieldType.READONLY, "Src Node Uuid",
event.getSourceNodeUuid()));
    fields.add(new FieldImpl(FieldType.READONLY, "Duplicate Count",
String.valueOf(event.getDuplicateCount())));
    fields.add(new FieldImpl(FieldType.READONLYBOOLEAN, "RCA Active",
String.valueOf(event.getRcaActive())));
}
```

The new field should now appear on the incident details page.



---

## Chapter 9: Contacting xMatters

You can access the xMatters Web Site at <http://http://www.xmatters.com>. From this site you can obtain information about the company, products, support and other helpful information. xMatters workgroup and xMatters enterprise customers may also access the Customer Support Site from the main web page. This protected site contains current product releases, helpful hints, patches, release notes, a product knowledge base, trouble ticket submission areas and other helpful tools provided by xMatters, inc.

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4457 Willow Road, Suite 220  
Pleasanton, CA 94588

**Phone:** 1-866-xMatters

**Fax:** 925-226-0310

**Email:** [support@xmatters.com](mailto:support@xmatters.com)

**Website:** <http://www.xmatters.com>

### Customer Support for xMatters lite Users

For xMatters lite support and information, visit <http://info.xmatters.com/xmatterslite.html>.

The xMatters lite site contains links to helpful tools, documentation, and other assistance specific to xMatters lite users.









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