

## Harrier 4.1 Evaluation Guide

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## Introduction

This guide demonstrates how to get up and running with Harrier 4.1. Harrier 4.1 is one of a family of email messaging products which comprises:

- M-Switch SMTP (SMTP Message Transfer Agent)
- M-Box (POP/IMAP Message Store)
- M-Switch X.400 (X.400 Message Transfer Agent)
- M-Store (X.400 Message Store)
- M-Switch MIXER (message gateway providing conversion between X.400 and Internet email according to the MIXER specifications)
- M-Switch Gateway (Email Messaging for low-bandwidth and/or high-latency networks)
- M-Switch User Server

Isode products are widely deployed in the Government, Military, Intelligence, Civil Aviation and EDI markets.

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*Use of TLS: Due to UK Export Controls we are unable to provide Evaluation Activations that support TLS to certain geographic regions. This guide is written with the assumption that the reader is not a member of those regions and by default, we will provide a product activation that supports TLS. For customers whose region we have no current export control arrangement, further configuration information may be required and provided separately.*

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## Objectives

By the end of this evaluation, you will have:

1. Installed Harrier 4.1
2. Configured Harrier 4.1 to handle internet and Military Messages
3. Sent and received internet and Military messages
4. Configured and used Harrier in ACP127 mode

More information on Harrier can be found at [www.isode.com/products/harrier.html](http://www.isode.com/products/harrier.html). A comprehensive Administration Guide, which goes into far greater detail than this short document, can be found at [www.isode.com/support/help.html](http://www.isode.com/support/help.html)

## **Using Isode Support**

You will be given access to Isode support resources when carrying out your evaluation. Any queries you have during your evaluation should be sent to [support@isode.com](mailto:support@isode.com). Please note that access to the Self-Service Portal for web-based ticket submission and tracking is not available to evaluators.

## Preparing the Server Environment

It will be assumed that Harrier is to be evaluated in the environment generated using the “M-Switch User Server Evaluation Guide”.

### Server Name

The M-Switch User Server Evaluation Guide defines the following:

Machine name: MU-ONE

Primary dns suffix for the server FIELD.NET

There is no reason why alternative naming can't be used as long as the machine name and fully qualified machine name is defined in dns or a local host file.

### Installed Isode Software

Follow the instructions in the release notes for the appropriate platform for the products.

Remember to install an appropriate java runtime engine first which is required for M-Vault, M-Switch and M-Box. (refer to product release notes) and in a Windows environment the visual c++ redistributable package. For this guide, the following products were used:

Messaging Activation Server 1.1v1

M-Vault 19.0v21

M-Switch 19.0v21

M-Box 19.0v21

Cobalt-1.5v3

Isode-Harrier-4.1v1

Please use a supported web browser as documented in the product release notes.

## Activating the Isode Products

Harrier requires a valid Product Activation Key from Isode before it will run correctly. The M-Switch User Server Evaluation Guide describes the activation process. Add “Harrier” to the list of products requested for evaluation.

## Configuration Data Collection

This guide will assume that you are utilizing the environment generated using the “M-Switch User Server” Evaluation Guide. Should your environment be different it would be useful to collect the following data before reaching the later configuration steps. The entries in brackets are those from the M-Switch User Server Evaluation Guide.

1. Hostname (mu-one.field.net)
2. Internet Domain Name (field.net)
3. Military Domain name (mmhs.field.net)
4. IMAP Server URL (mu-one.field.net:143)
5. SMTP Server URL (mu-one.field.net:587)
6. LDAP Server URL (mu-one.field.net:19389)
7. User Login Details/Passwords (jack.sparrow@field.net/Secret1+ & radio.operator@field.net/Secret1+)

## Installing Harrier

### Windows

Double-click the .msi file that you downloaded earlier and follow the instructions for a fresh install.

Start the “Isode Harrier Web Server” service either through the Windows Services MMC or the “Isode Service Configuration” tool.

### Linux

The Linux installation package for Harrier is called **harrier-4.1v1-0.rpm**

To install Harrier, run the command:

```
# rpm -i harrier-4.1v1-0.rpm
```

On Linux, Harrier can be started the with following command:

```
# systemctl start harrier
```

To stop harrier run the command:

```
# systemctl stop harrier
```

When you make some configuration changes to Harrier you would need to restart Harrier service, you can do so by running the command:

```
# systemctl restart harrier
```



# Configuring Harrier

## Initial Harrier Configuration

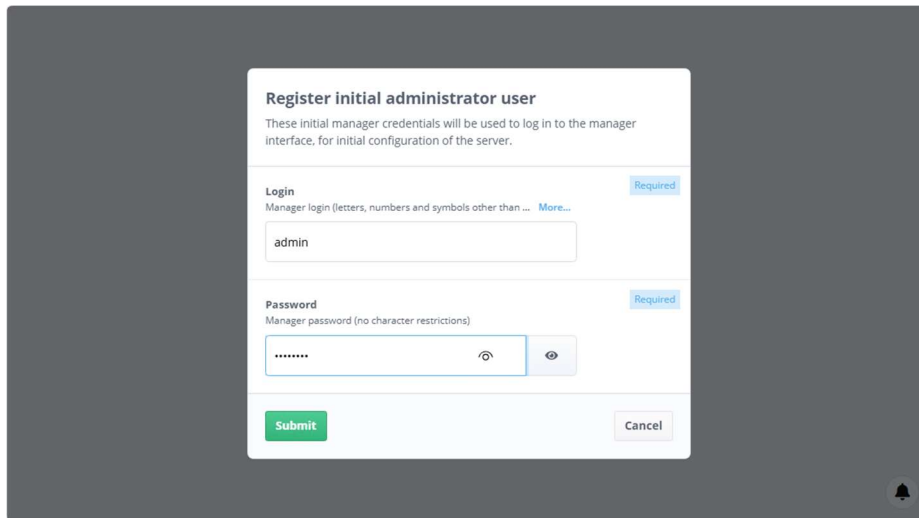
Harrier is configured using the “Harrier Manager”

Open a browser and navigate to “https://localhost:9095”

The browser will provide a security warning. Choose an option to override the warning.

You will see the Welcome screen, showing that Harrier has installed successfully and is running.

### Harrier Welcome Screen

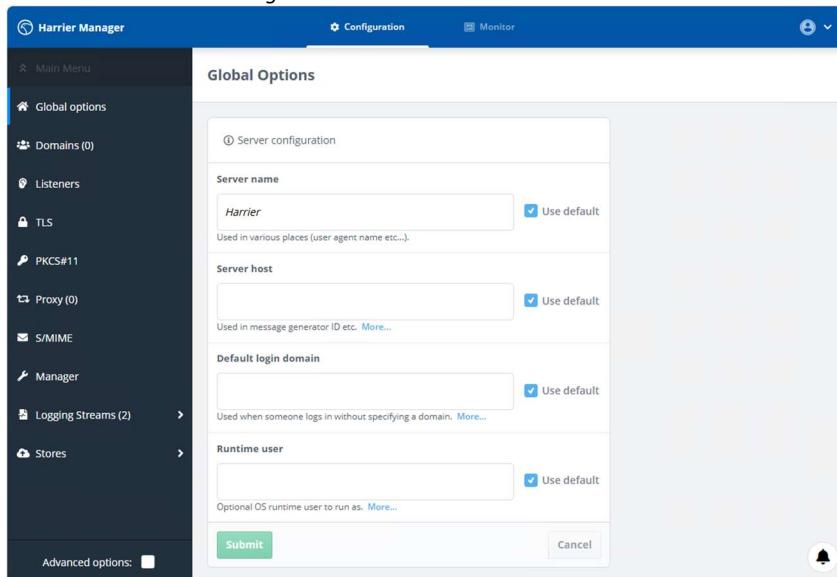


The screenshot shows a web form titled "Register initial administrator user". Below the title, it states: "These initial manager credentials will be used to log in to the manager interface, for initial configuration of the server." The form contains two input fields: "Login" with the value "admin" and "Password" with masked characters. Both fields are marked as "Required". There are "Submit" and "Cancel" buttons at the bottom.

Provide an administrator username and password.

Click “Submit”

### Initial Harrier Server Settings



The screenshot shows the "Global Options" configuration page in the Harrier Manager. The page has a sidebar menu with options like "Global options", "Domains (0)", "Listeners", "TLS", "PKCS#11", "Proxy (0)", "S/MIME", "Manager", "Logging Streams (2)", and "Stores". The main content area is titled "Global Options" and contains several configuration sections: "Server configuration" with "Server name" (Harrier) and "Server host" (empty), "Default login domain" (empty), and "Runtime user" (empty). Each section has a "Use default" checkbox. There are "Submit" and "Cancel" buttons at the bottom.

## Configure a Domain for Internet Messaging

Click “Domains” and then “Add...”

### Add Harrier Domain

The screenshot shows the 'Add new item to Domains' configuration form in the Harrier Manager interface. The form includes the following fields and options:

- Domain name or pattern:** A text input field containing 'field.net'.
- Configuration selector:** A dropdown menu with 'More...' as an option.
- Mode:** A dropdown menu set to 'Internet'.
- Enable message correction, cancellation and retransmission:** A checkbox that is checked.
- Session timeout:** A text input field containing '30min'.
- Auto-save period:** A text input field containing '5m'.
- Notify unread deletion:** A checkbox that is checked.
- Role self:** A checkbox that is checked.

At the bottom of the form, there are 'Add' and 'Cancel' buttons.

Enter your “Internet Domain Name”

Select “Mode” “Internet”

Click “Add”

In the left panel click “IMAP server”

### IMAP Configuration

The screenshot shows the 'IMAP server' configuration form in the Harrier Manager interface. The form includes the following fields and options:

- Primary URL:** A text input field containing 'imap://mu-one.field.net:143'.
- Backup URL:** A text input field that is empty.
- STARTTLS policy:** A dropdown menu set to 'License'.
- Trust anchors:** A section with a '+ Add item' button and a note: 'Connections to the IMAP server using TLS, will fail unless the IMAP server's certificate can be verified against these trust anchors (see: "Trust anchors").'
- Pinned certificates:** A section with a '+ Add item' button and a note: 'If IMAP server certificate is not issued by any trusted CA pinned certificates allows to specify trustworthy certificates directly (see: "Trust anchors").'

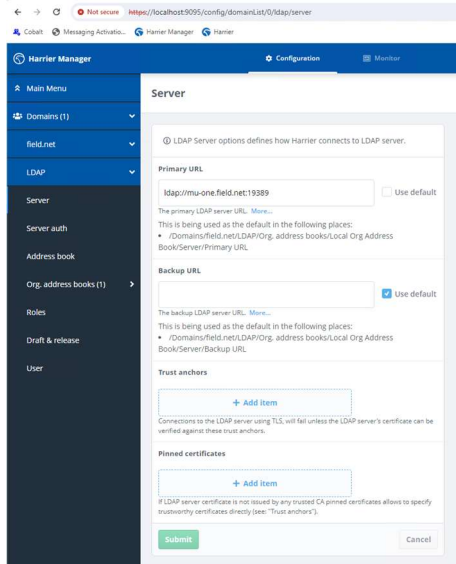
At the bottom of the form, there are 'Submit' and 'Cancel' buttons.

Set the “Primary URL” to “imap://mu-one.field.net:143”

Click “Submit”

Click “LDAP” and then “Server” from the left panel.

### LDAP Server Configuration

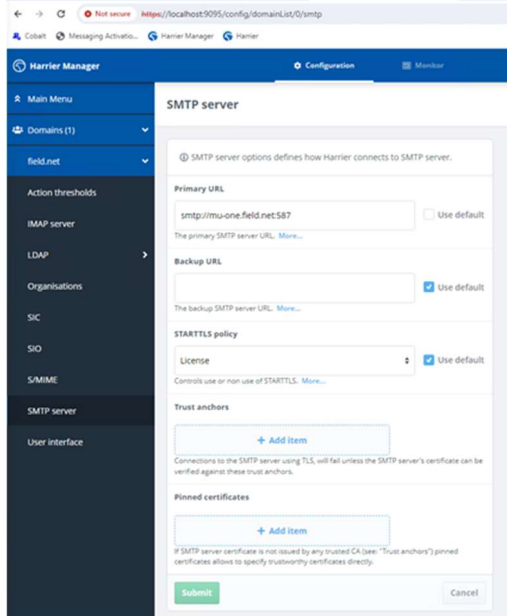


Set the “Primary URL” to “ldap://mu-one.field.net:19389”

Click “Submit”

Click “field.net” and then “SMTP server” in the left panel

### SMTP Server Configuration



Set the “Primary URL” to “smtp://mu-one.field.net:587”

Click “Submit”

## Configure a Domain for Military Messaging

Repeat the steps above from the section “Configure a Domain for Internet Messaging”

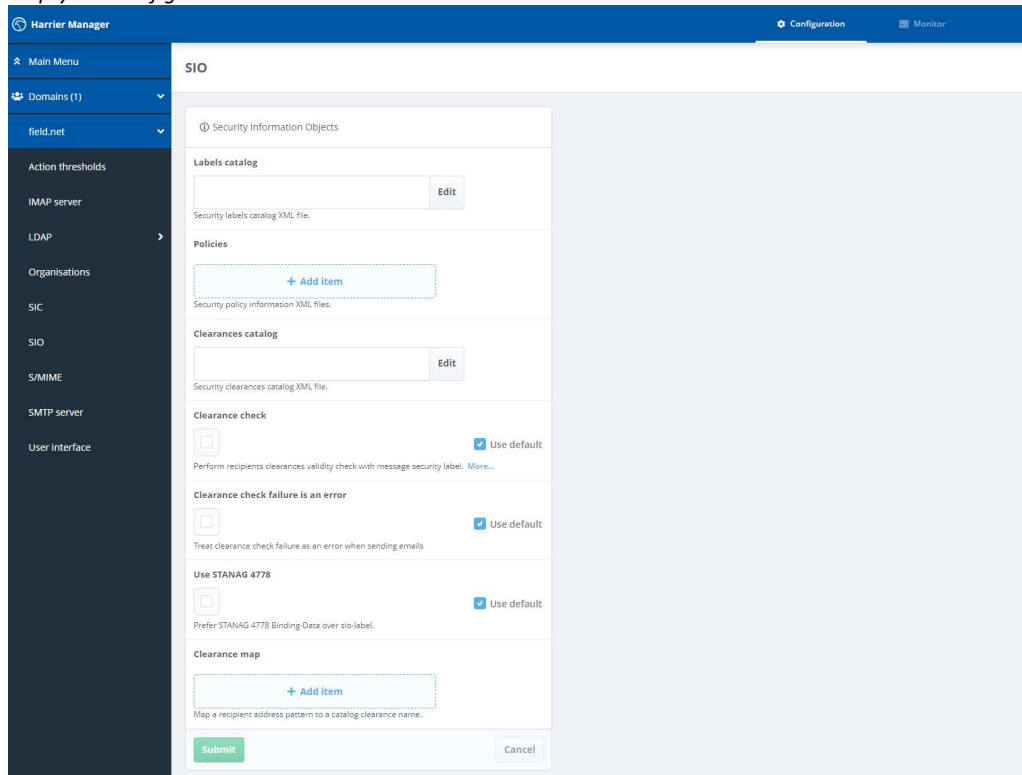
When naming the domain use the “military domain name” (mmhs.field.net)

When selecting a mode, choose “Military”

While setting the smtp server, select domain “mmhs.field.net” first.

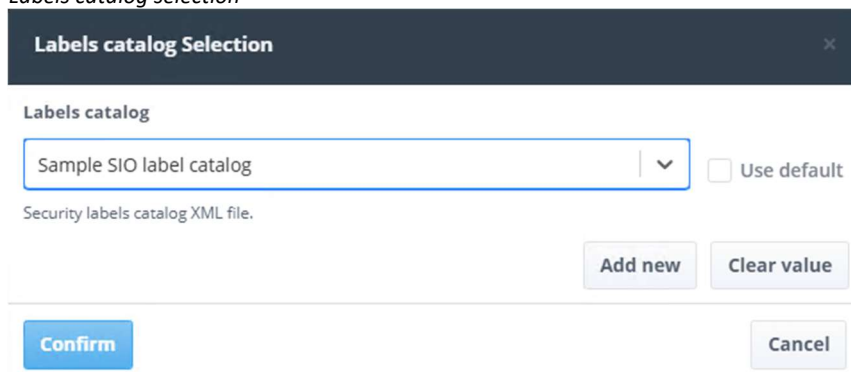
Select “SIO” in the left-hand pane.

### Empty SIO Configuration



Click “Edit” under “Labels catalog”

### Labels catalog selection



In the “Labels catalog Selection” dropdown select “Sample SIO label catalog”

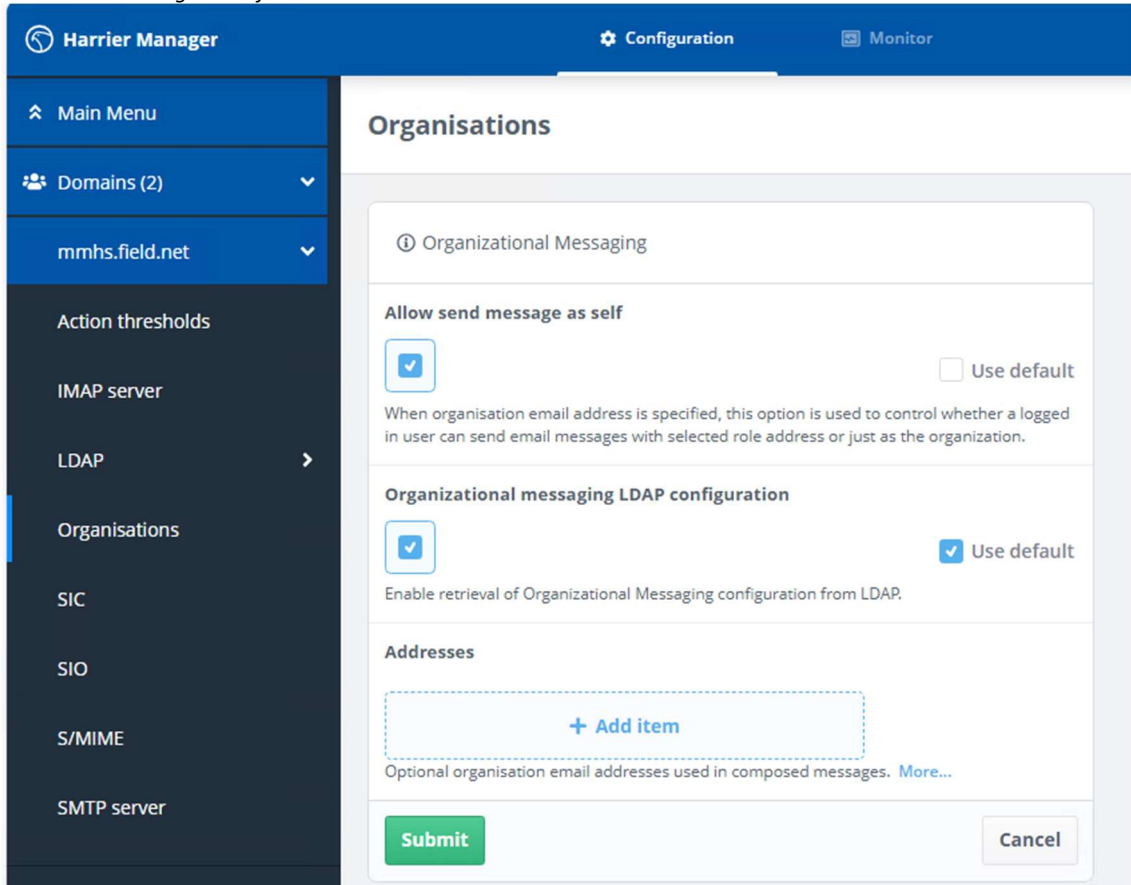
Press “Confirm”

Click “Add item” under “Policies” and add the “Sample SIO policy”

Press “Submit”

Select “Organisations” in the left-hand pane.

*Allow send message as self*



Check “Allow send messages as self”

Press “Submit”

## Using Harrier

Harrier supports three types of messaging configurations: Internet, Military and ACP127. We will exercise them in the following sections.

### Internet Mode

Open <https://localhost:9090> in a browser.

The browser will provide a security warning. Choose an option to override the warning.

*Cookie warning*

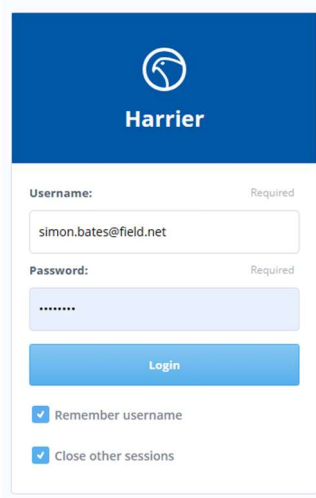
#### This application uses cookies

Harrier uses cookies to track session state. This does not include personal information.

Acknowledge

Acknowledge the cookie warning.

*Log in – Internet mode*



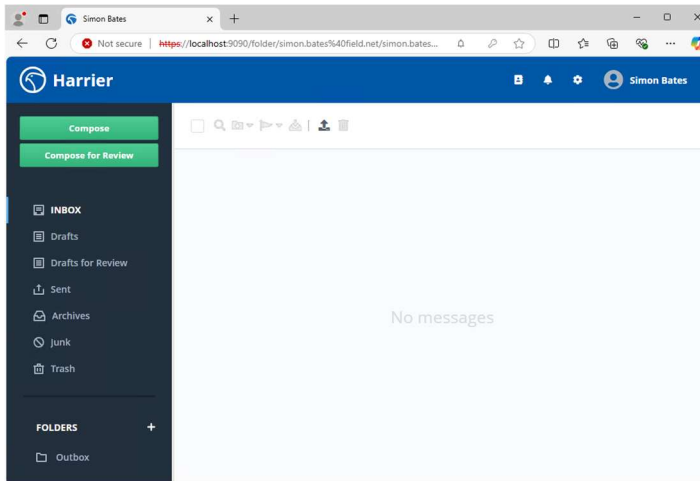
The screenshot shows the Harrier login interface. At the top is a blue header with the Harrier logo and the word "Harrier". Below the header is a login form with the following elements:

- Username:** A text input field containing "simon.bates@field.net". The label "Username:" is on the left, and "Required" is on the right.
- Password:** A password input field with masked characters ".....". The label "Password:" is on the left, and "Required" is on the right.
- Login:** A blue button with the text "Login".
- Remember username:** A checkbox that is checked, with the text "Remember username" to its right.
- Close other sessions:** A checkbox that is checked, with the text "Close other sessions" to its right.

Provide a Username and password.

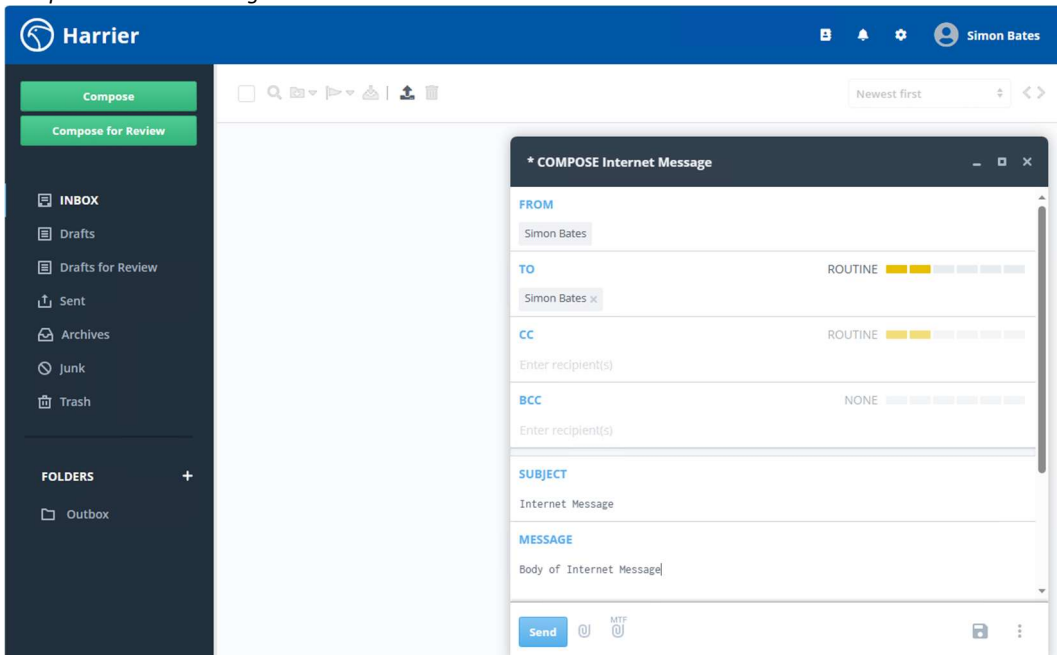
The internet mode inbox is presented.

## Internet Mode Inbox



Indications of “internet mode” are the “Delete” button and the “Junk” and “Trash” folders.  
Click “Compose”

## Compose Internet Message

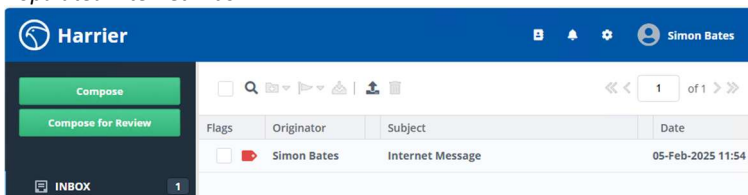


Populate the “To:”, “Subject” and “Message”

Press “Send”

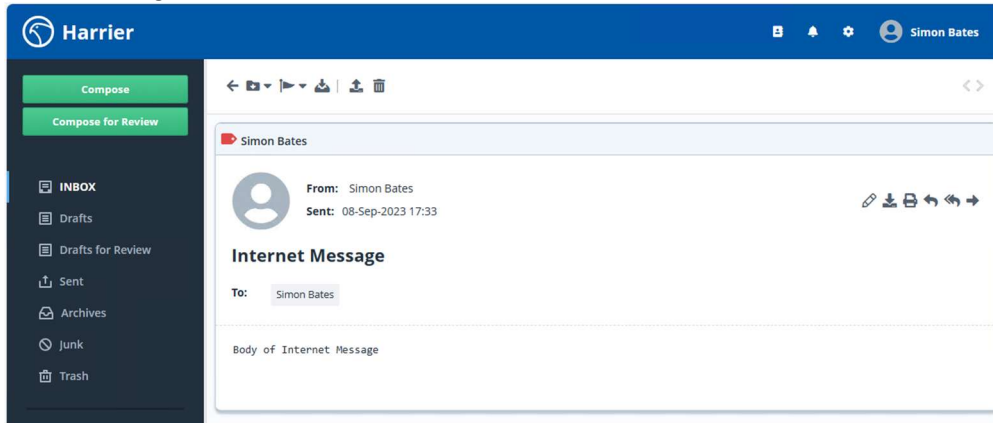
The message arrives in the inbox.

## Populated Internet Inbox



Click on the message to view its contents:

Internet Message Contents



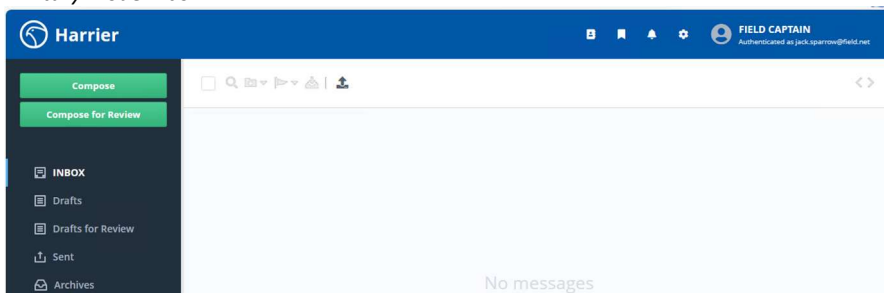
**Military Mode**

**Send a Military Message**

Log in to Harrier using the user “jack.sparrow@field.net”

The military mode inbox is presented.

*Military mode inbox*



Note that because Jack Sparrow occupies the “FIELD CAPTAIN” role, we are presented with the “FIELD CAPTAIN” mailbox.

Click “Compose”

The military message form is presented.



### Unpopulated Military Form

The screenshot shows a web-based interface for composing a message. At the top, the window title is "COMPOSE (no subject)". Below this, the security classification "DEMO-NATO UNCLASSIFIED" is displayed with a "Create..." button. The form is organized into several sections:

- FROM:** A dropdown menu currently showing "BLACK PEARL".
- ACTION:** A section for defining recipients, currently set to "ROUTINE" with a yellow bar indicating the selection. Below it is a text input field labeled "Enter recipient(s)".
- INFO:** Another section for defining recipients, also set to "ROUTINE" with a yellow bar. Below it is a text input field labeled "Enter recipient(s)".
- EXEMPT:** A section for defining exempt recipients, with a text input field labeled "Enter recipient(s)".
- SICS:** A section for entering Subject Indicator Codes (SICs), with a text input field labeled "Enter SICs" and an edit icon.
- DTG:** A section for Date and Time Grouping, currently showing "051247Z Feb 2025".
- EXPIRES:** A section for setting a message expiry date, with a text input field and an edit icon.
- REPLY BY:** A section for setting a deadline for a response, with a text input field and an edit icon.
- MMHS TYPE:** A section for setting an MMHS type, with a text input field and an edit icon.
- SUBJECT:** A section for setting an optional subject for the message, with a text input field.
- MESSAGE:** A section for composing the message content, with a text input field.

At the bottom of the form, there is a "Send" button, a "MIT" icon, and a vertical ellipsis menu.

The compose screen allows for:

- The manipulation of Security Labels
- Defining a message Originator
- Action and Information recipients together with their precedence selection
- Exempt recipients. This field can be used to exclude any recipients from a message sent to a distribution list.
- Subject Indicator Codes (SICs) used for message distribution.
- Message Expiry and Message Reply By times/dates
- Message Subject and content
- This message type supports attachments, which can be added using the icon next to the "Send" button

Populate the Form fields with some test information.

*Populated Military Form*

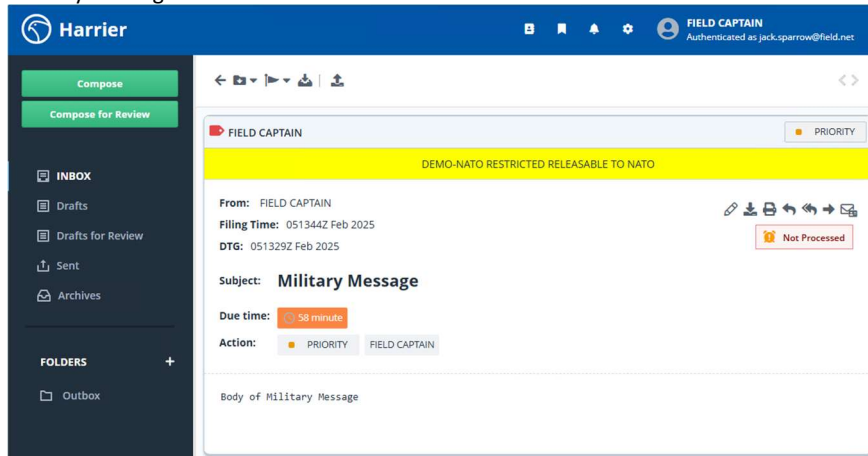
Press “Send”

The message arrives in the inbox

*Populated Military Inbox*

Click on the message to view its content

## Military Message Contents



## Send and Distribute a Military Message

It is also possible to demonstrate message distribution. Formal military messages are often originated from and addressed to organizations. BLACK PEARL, is the organization configured at MU-ONE when following the “M-Switch User Server” evaluation guide. When a message is delivered to an organization it is processed by a Profiler, which looks at the content of the message to determine which Roles should receive the message. This is often based on SICs included in the message. Distribution based upon other headers and content is possible.

Click “Compose”

Populate the following field data:

FROM: BLACK PEARL

ACTION: BLACK PEARL

SICS: A1A

Subject: SIC A1A Distribution Test

Message: Profiler Test

## Create Military Message for Distribution

COMPOSE SIC A1A Distribution Test

DEMO-NATO UNCLASSIFIED

FROM: BLACK PEARL

ACTION: ROUTINE

INFO: ROUTINE

EXEMPT

SICS: A1A

DTG: 060910Z Feb 2025

EXPIRES: Set a message expiry date

REPLY BY: Set a deadline for a response

MMHS TYPE: Set an MMHS type

SUBJECT: SIC A1A Distribution Test

MESSAGE: Profiler Test

Send

Click “Send”

## Profiled Message in Inbox

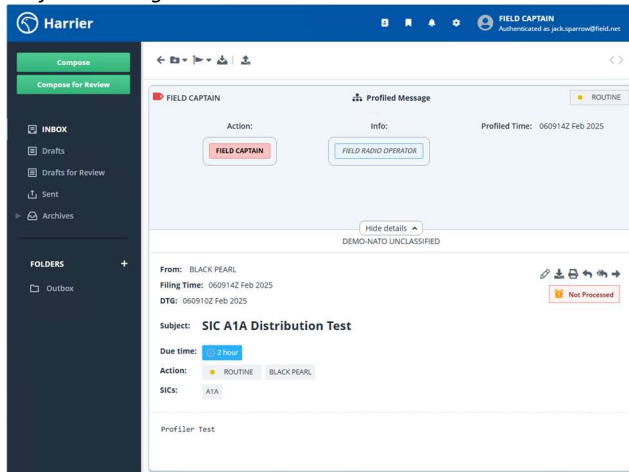
Flags	Originator	Subject	Tags	Urgency	Precedence	DTG
	BLACK PEARL	SIC A1A Distribution Test DEMO-NATO UNCLASSIFIED		2 hour	ROUTINE	060910Z Feb 2025

When the message arrives, note the icon indicating that the message is the result of a distribution.

Open the message

Click “Show details” under “Profiled Message”

**Profiled Message**



**ACP127 Message Mode**

The third message mode of Harrier provides further assistance in an ACP127 environment.

**Configure ACP127 Mode**

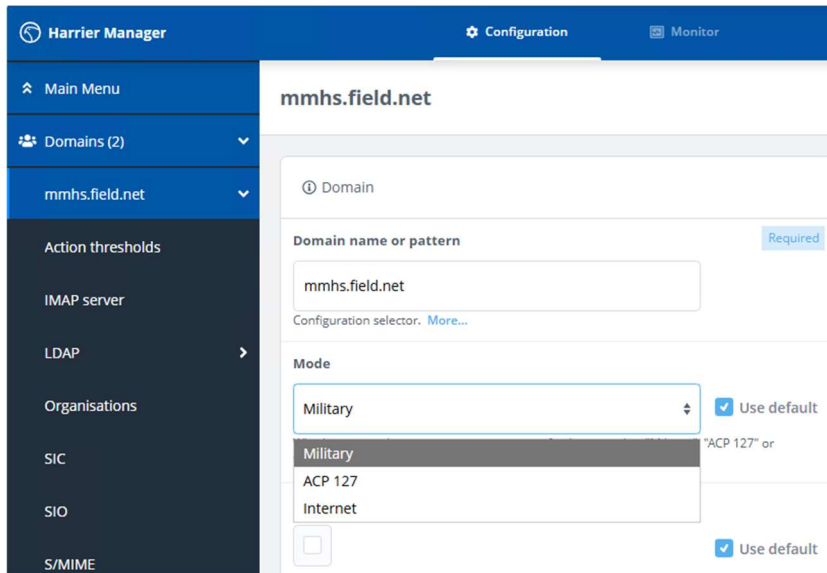
Log into “Harrier Manager”

Select “Domains” in the left-hand pane.

Select the domain “mmhs.field.net”

In the “Mode” dropdown, select “ACP 127”

**Select ACP127 mode**



Press “Submit”

**Use ACP127 Mode**

Log in to Harrier using the user “jack.sparrow@field.net”

Click “Compose”

Populate some test data.

## Compose in ACP127 Mode

The screenshot shows a message composition window titled "COMPOSE (no subject)". The window contains several sections for configuring a message:

- ACTION:** ROUTINE (with a yellow progress indicator)
- INFO:** ROUTINE (with a yellow progress indicator)
- EXEMPT:** Enter recipient(s)
- SICS:** Enter SICS
- DTG:** 060934Z Feb 2025
- EXPIRES:** Set a message expiry date
- REPLY BY:** Set a deadline for a response
- MMHS TYPE:** Set an MMHS type
- SUBJECT:** Set an optional subject for the message
- MESSAGE:** Compose your message

At the bottom of the window, there is a "Send" button with an MTF icon, and icons for file attachment, print, and a menu.

In ACP127 mode, you will notice two major differences in the message compose window:

1. Two vertical lines enforce the character limit for subject and message content fields
2. As ACP127 messaging does not support message attachments, there is no file attachment option next to the "send" button.

## What Next?

More information on Harrier can be found on the Isode website at [www.isode.com/products/harrier.html](http://www.isode.com/products/harrier.html).

Detailed configuration and operational information on Harrier can be found in the Admin Guide available from the Isode website at [www.isode.com/documentation/HARRIERADM.pdf](http://www.isode.com/documentation/HARRIERADM.pdf)

## Whitepapers

Isode regularly publishes whitepapers on technical and market topics related to its products. A full list of these can be found at [www.isode.com/whitepapers/](http://www.isode.com/whitepapers/).

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