

Harrier 4.2 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.

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.

Objectives

By the end of this evaluation, you will have:

1. Installed Harrier 4.2
2. Configured Harrier 4.2 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. A comprehensive Administration Guide, which goes into far greater detail than this short document, can be found at 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 isode.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 1.1v3

M-Vault 19.1v8

M-Switch 19.1v8

M-Box 19.1v8

Cobalt-1.5v4

Isode-Harrier-4.2v0

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. Internet user Login Details/Password (simon.bates@field.net/Secret1+)
8. Military user Login Details/Password (jack.sparrow@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-4.2v0-0.rpm**

To install Harrier, run the command:

```
# rpm -i harrier-4.2v0-0.rpm
```

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

```
# systemctl start harrier
```

To stop harrier run the command:

```
# systemctl stop 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

Register initial administrator user

These initial manager credentials will be used to log in to the manager interface, for initial configuration of the server.

Login Required

Manager login (letters, numbers and symbols other than ... [More...](#))

Password Required

Manager password (no character restrictions)

Provide an administrator username and password.

Click “Submit”

Initial Harrier Server Settings

Harrier Manager Configuration Monitor

[Main Menu](#)

- [Global options](#)
- [Domains \(0\)](#)
- [Listeners](#)
- [TLS](#)
- [PKCS#11](#)
- [Proxy \(0\)](#)
- [S/MIME](#)
- [Manager](#)
- [Logging Streams \(2\)](#)
- [Stores](#)

Advanced options: ☐

Global Options

ⓘ Server configuration

Server name

 ☒ Use default
Used in various places (user agent name etc...).

Server host

 ☒ Use default
Used in message generator ID etc. [More...](#)

Default login domain

 ☒ Use default
Used when someone logs in without specifying a domain. [More...](#)

Runtime user

 ☒ Use default
Optional OS runtime user to run as. [More...](#)

Configure a Domain for Internet Messaging

Click “Domains” and then “Add...”

Add Harrier Domain

The screenshot shows the 'Harrier Manager' interface with the 'Configuration' tab selected. On the left, a sidebar menu has 'Domains (0)' highlighted. The main area is titled 'Add new item to Domains' and contains a form for adding a new domain. The form fields are as follows:

- Domain name or pattern:** A text input field containing 'field.net'. A 'Required' label is to the right.
- Configuration selector:** A link labeled 'More...'.
- Mode:** A dropdown menu set to 'Internet'. To the right is a checkbox labeled 'Use default'.
- Enable message correction, cancellation and retransmission:** A checkbox is unchecked. To the right is a checked checkbox labeled 'Use default'.
- Session timeout:** A text input field containing '30min'. To the right is a checked checkbox labeled 'Use default'.
- Auto-save period:** A text input field containing '5m'. To the right is a checked checkbox labeled 'Use default'.
- Notify unread deletion:** A checkbox is unchecked. To the right is a checked checkbox labeled 'Use default'.
- Role self:** A checkbox is unchecked. To the right is a checked checkbox labeled 'Use default'.

At the bottom of the form are two buttons: 'Add' (green) and 'Cancel' (grey). At the bottom left of the sidebar, there is a link 'Advanced options:' followed by an unchecked checkbox.

Enter your “Internet Domain Name”

Select “Mode” “Internet”

Click “Add”

In the left panel click “IMAP server”

IMAP Configuration

Harrier Manager Configuration Monitor

Main Menu Domains (1) field.net

IMAP server

IMAP server options defines how Harrier connects to IMAP server.

Primary URL
imap://mu-one.field.net:143 ☐ Use default
The primary IMAP server URL. [More...](#)

Backup URL
☐ Use default
The backup IMAP server URL. [More...](#)

STARTTLS policy
License ☒ Use default
Controls use or non use of STARTTLS. [More...](#)

Trust anchors
[+ Add item](#)
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
[+ Add item](#)
If IMAP server certificate is not issued by any trusted CA pinned certificates allows to specify trustworthy certificates directly (see: "Trust anchors").

Submit Cancel

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

Harrier Manager Configuration Monitor

Main Menu Domains (1) field.net

LDAP

Server

LDAP Server options defines how Harrier connects to LDAP server.

Primary URL
ldap://mu-one.field.net:19389 ☐ Use default
The primary LDAP server URL. [More...](#)
This is being used as the default in the following places:
• /Domains/field.net/LDAP/Org. address books/Local Org Address Book/Server/Primary URL

Backup URL
☒ Use default
The backup LDAP server URL. [More...](#)
This is being used as the default in the following places:
• /Domains/field.net/LDAP/Org. address books/Local Org Address Book/Server/Backup URL

Trust anchors
[+ Add item](#)
Connections to the LDAP server using TLS, will fail unless the LDAP server's certificate can be verified against these trust anchors.

Pinned certificates
[+ Add item](#)
If LDAP server certificate is not issued by any trusted CA pinned certificates allows to specify trustworthy certificates directly (see: "Trust anchors").

Submit Cancel

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

The screenshot shows the Harrier Manager web interface. The left sidebar contains a navigation menu with options: Main Menu, Domains (1), field.net, Action thresholds, IMAP server, LDAP, Organisations, SIC, SIO, S/MIME, SMTP server, and User interface. The main content area is titled 'SMTP server' and contains the following configuration options:

- Primary URL:** A text input field containing 'smtp://mu-one.field.net:587'. To its right is a checkbox labeled 'Use default' which is unchecked.
- Backup URL:** An empty text input field. To its right is a checked checkbox labeled 'Use default'.
- STARTTLS policy:** A dropdown menu showing 'License'. To its right is a checked checkbox labeled 'Use default'.
- Trust anchors:** A section with a '+ Add item' button and a text box. Below it is a note: 'Connections to the SMTP server using TLS, will fail unless the SMTP server's certificate can be verified against these trust anchors.'
- Pinned certificates:** A section with a '+ Add item' button and a text box. Below it is a note: 'If SMTP server certificate is not issued by any trusted CA (see: Trust anchors) pinned certificates allows to specify trustworthy certificates directly.'

At the bottom of the configuration area are two buttons: 'Submit' (green) and 'Cancel' (grey).

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

Harrier Manager Configuration Monitor

Organisations

① Organizational Messaging

Allow send message as self

☒ ☐ Use default

When organisation email address is specified, this option is used to control whether a logged in user can send email messages with selected role address or just as the organization.

Organizational messaging LDAP configuration

☒ ☒ Use default

Enable retrieval of Organizational Messaging configuration from LDAP.

Addresses

+ Add item

Optional organisation email addresses used in composed messages. [More...](#)

Submit **Cancel**

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

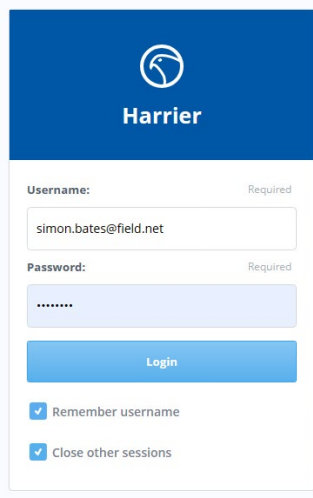
This application uses cookies

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

Acknowledge

Acknowledge the cookie warning.

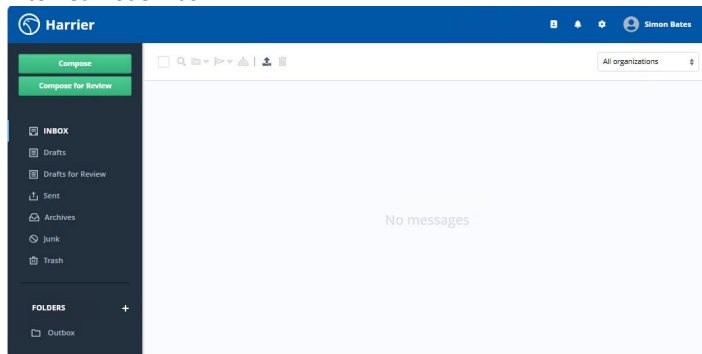
Log in – Internet mode

The screenshot shows the Harrier login page. At the top is a blue header with the Harrier logo (a stylized bird) and the word "Harrier". Below the header is a white login form. The form has two input fields: "Username:" and "Password:". The "Username:" field contains the text "simon.bates@field.net". The "Password:" field is masked with dots. Below the password field is a blue "Login" button. At the bottom of the form are two checkboxes: "Remember username" and "Close other sessions", both of which are checked.

Provide a Username and Password.

The internet mode inbox is presented.

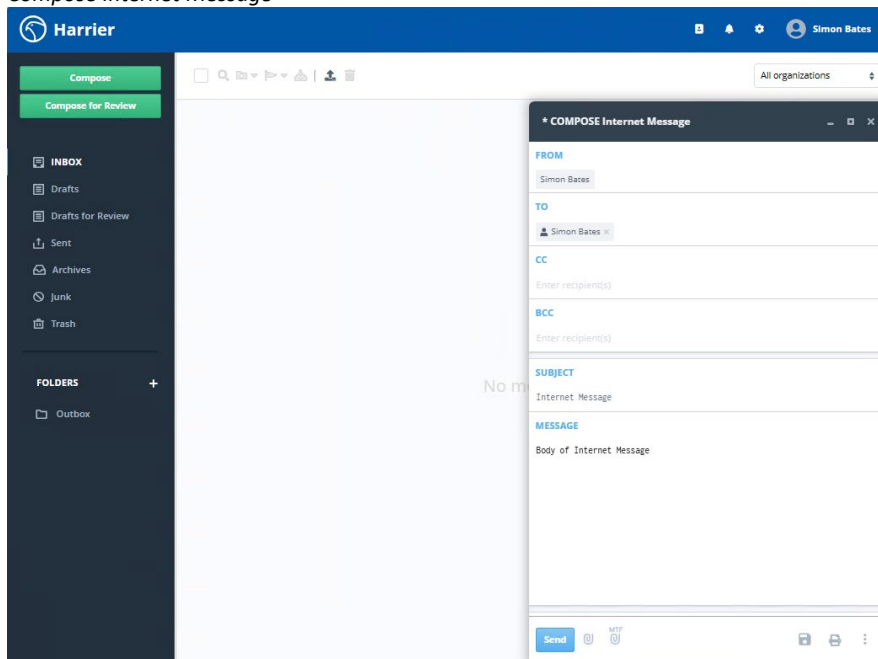
Internet Mode Inbox



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

Click “Compose”

Compose Internet Message

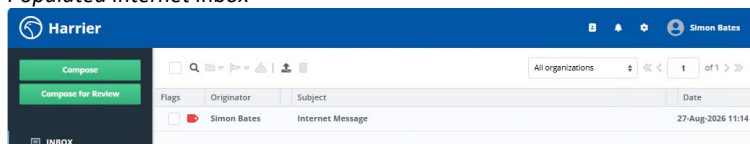


Populate the “To:”, “Subject” and “Message”

Press “Send”

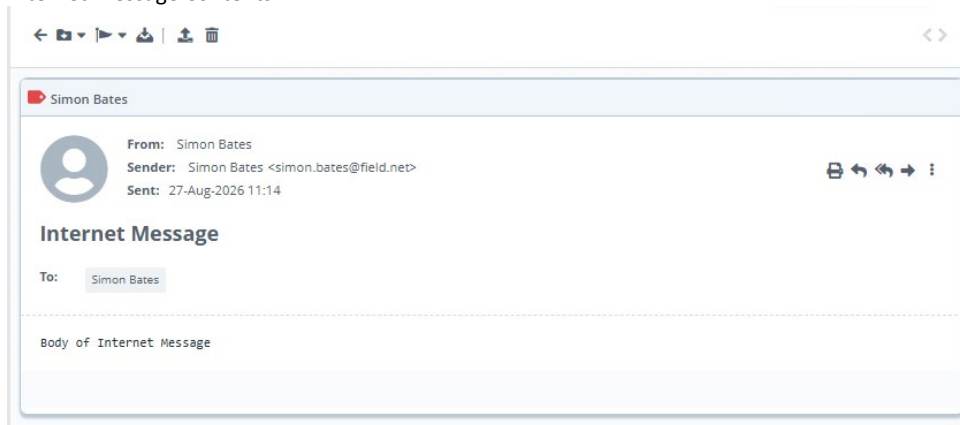
The message arrives in the inbox.

Populated Internet Inbox



Click on the message to view its contents:

Internet Message Contents



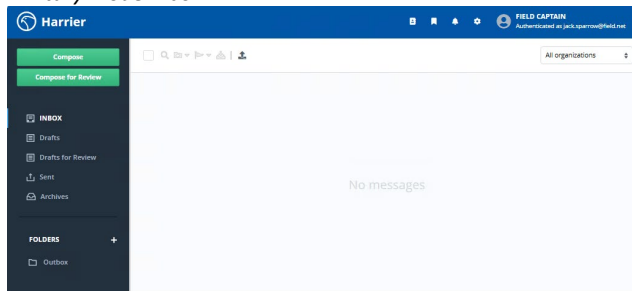
Military Mode

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

COMPOSE (no subject)

DEMO-NATO UNCLASSIFIED

Create...

FROM

BLACK PEARL

ACTION

ROUTINE

Enter recipient(s)

INFO

ROUTINE

Enter recipient(s)

EXEMPT

Enter recipient(s)

SICS

Enter SICS

DTG

051247Z 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

Send

MTF

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

Military Message Contents

FIELD CAPTAIN

PRIORITY

DEMO-NATO RESTRICTED RELEASABLE TO NATO

From: FIELD CAPTAIN
Sender: FIELD CAPTAIN <captain@mmhs.field.net>
Filing Time: 271029Z AUG 2026
DTG: 271026Z AUG 2026

Not Processed

Subject: Military Message

Due time: 58 minute

Action:

PRIORITY

FIELD CAPTAIN

SICs:

A1B

Body of Military Message

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

Create...

FROM

BLACK PEARL

ACTION

ROUTINE

BLACK PEARL

INFO

ROUTINE

Enter recipient(s)

EXEMPT

Enter recipient(s)

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

PDF

Print

More

Click “Send”

Profiled Message in Inbox

Harrier

FIELD CAPTAIN
Authenticated as jack.sparrow@field.net

Compose
Compose for Review
INBOX

Search

All organizations

1 of 1

Flags	Originator	Subject	Tags	Urgency	Precedence	DTG
☐	BLACK PEARL	SIC A1A Distribution Test DEMO-NATO UNCLASSIFIED		2 hour	ROUTINE	271033Z AUG 2026

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

Harrier

FIELD CAPTAIN
Authenticated as jack.sparrow@field.net

Compose
Compose for Review
INBOX
Drafts
Drafts for Review
Sent
Archives
FOLDERS
Outbox

Profiled Message

ROUTINE

FIELD CAPTAIN

FIELD RADIO OPERATOR

Profiled Time: 271034Z AUG 2026

hide details

DEMO-NATO UNCLASSIFIED

From: BLACK PEARL

Sender: BLACK PEARL <blackpearl@mmhs.field.net>

Filing Time: 271034Z AUG 2026

DTG: 271033Z AUG 2026

Subject: SIC A1A Distribution Test

Due time: 2 hour

Action: ROUTINE

SICS: A1A

Profiler Test

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

The screenshot shows the Harrier Manager interface. The left-hand navigation pane is open, showing the 'Domains (2)' section with 'mmhs.field.net' selected. The main content area displays the configuration for 'mmhs.field.net'. The 'Domain' section shows the domain name 'mmhs.field.net'. The 'Mode' section has a dropdown menu open, showing three options: 'Military', 'ACP 127', and 'Internet'. The 'ACP 127' option is selected. There are 'Use default' checkboxes for both the 'Mode' and a checkbox below it.

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

COMPOSE (no subject)

DEMO-NATO UNCLASSIFIED

Create...

ACTION ROUTINE

Enter recipient(s)

INFO ROUTINE

Enter recipient(s)

EXEMPT

Enter recipient(s)

SICS

Enter SICS

DTG **EXPIRES**

060934Z Feb 2025 Set a message expiry date

REPLY BY **MMHS TYPE**

Set a deadline for a response Set an MMHS type

SUBJECT

Set an optional subject for the message

MESSAGE

Compose your message

Send MIME

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.

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

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/.

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