

Connecting XMPP and IRC Chat Services

Using Isode's M-Link IRC Gateway to establish connections between XMPP Multi-User Chat (MUC) rooms and IRC channels, without downgrading security for XMPP users with XMPP traffic.

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Introduction

This guide details the process for connecting IRC and XMPP chat services using Isode's M-Link IRC Gateway. The M-Link IRC Gateway is one of a family of XMPP products which comprises:

- M-Link User Server (XMPP Server)
- M-Link Edge (XMPP Boundary Guard)
- M-Link IRC Gateway (XMPP/IRC Gateway)
- M-Link Constrained Networks (XMPP Messaging for low-bandwidth and/or high-latency networks)
- Swift (multi-platform XMPP client)

M-Link products are widely deployed in the Government, Military, and Intelligence markets.

Use of TLS: Due to UK Export Controls we are unable to provide Evaluation Licenses to certain Geographic regions that would allow the use of TLS so this guide will not configure any TLS. Should you wish to use TLS please contact your Account Manager and if you are located in an approved region we can provide a license (MAC Address of Server required) and additional instructions for configuring TLS.

Objectives

By the end of this guide you will have:

1. Enabled IRC Functionality within M-Link.
2. Created and configured a Multi-User Chat (MUC) room to connect to an IRC channel.
3. Increased Nickname length.

You'll use the M-Link Console (MLC) management GUI to interact with the M-Link IRC gateway. MLC is Isode's central tool for XMPP system Configuration and Operational management for all products in the M-Link family.

This guide does not cover initial M-Link setup activities. Before beginning this guide, you should have gained experience with M-Link, M-Link Console, Isode's Swift XMPP client and the configuration of Multi-User Chat (MUC) domains and MUC rooms. This experience can be gained either as a result of your own operational experience or by following the separate evaluation guide "Setting up an XMPP System for 1:1 and Multi-User Chat" (all of the screenshots in this evaluation guide assume you have followed that guide).

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. Please note that access to the Self-Service Portal for web-based ticket submission and tracking is not available to evaluators.

Preparation

You should visit www.isode.com/products/supported-platforms.html to discover which operating systems are supported for Isode evaluations. Please note that in addition to the server platforms listed, we support the use of Isode servers on Windows 8, Windows 8.1 and Windows 10 for simple evaluations and demonstrations.

Isode Products

Product downloads are held in a password-protected section of the Isode website. If you have not already done so you should apply for a username/password by filling in the form located at www.isode.com/evaluate/evalrequest.html.

Products can be obtained by clicking on the links in the “Download Links” section of the Evaluation page (www.isode.com/evaluate/evaluate-xmpp.html). The downloads page will give installation instructions specific to your platform.

Product Activation Key

Isode server products require a valid Product Activation Key from Isode before they will run correctly. Keys are issued by Isode Customer Services. If you haven't already been sent a Key when requesting access to the evaluation files, please send a message to request one to sales@isode.com remembering to specify which Isode server products you need a Key for.

By default, the file you receive needs to be placed in `\Isode\etc\` (Windows) or `/etc/isode/` (Linux), renamed as 'license.dat'. You may have chosen an alternative installation directory when installing the software, in which case you will have to place the license file there.

Server Addresses

M-Link Console recognizes real server addresses rather than the 'localhost/machinename' designations you'll be using if you set up this evaluation on your local machine. you have two options to ensure correct functioning of MLC (M-Link Console).

Edit the Hosts File

Edit your hosts file (found at `/Windows/System32/drivers/etc/hosts` on Windows and `/etc/hosts` on Linux) to include a line that adds a references between the localhost address and the domain name you'll be using for this evaluation. In this document we're using the domain name 'headquarters.net' so your hosts file will need to include the line:

```
127.0.0.1    headquarters.net
```

Use DNS Settings

Alternatively, you can use DNS instead of the Hosts file, to use DNS you will need to set up SRV records within DNS. SRV records are set up for every domain that you host, pointing to every node of the cluster on port 5269, and that for the chat domains you should also have `_xmpp-client._tcp` set up pointing to 5222. If you're running non-standard ports replace 5269 and 5222 as appropriate. Below is an example:

```
_xmpp-server._tcp.headquarters.net IN SRV 5 33 5269 xmpp.mydomain.com.  
_xmpp-client._tcp.headquarters.net IN SRV 5 33 5222 xmpp.mydomain.com.
```

Enabling IRC Functionality

The M-Link IRC Gateway connects local M-Link Multi User Chat (MUC) Rooms to a Channel of an IRC Server.

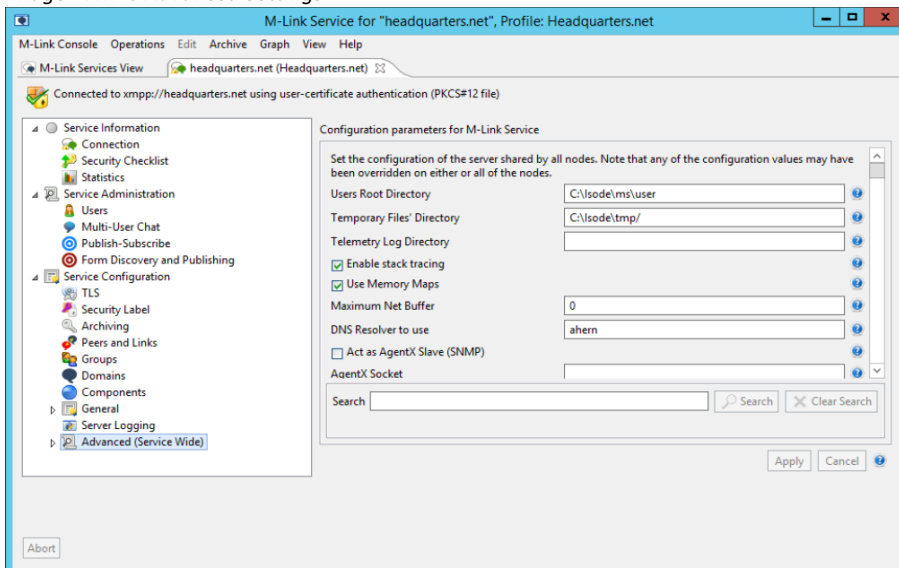
Before you start you need to know the following information about the IRC Server you wish to connect to:

- IRC Server Hostname
- IRC Server Port that IRC Clients connect on
- The IRC Channel(s) that you wish to connect to

Configure your XMPP Server with your chosen XMPP IM and MUC domains as outlined in the “Setting up an XMPP System for 1:1 and Multi-User Chat” evaluation guide. In the screenshots that follow we will be using “headquarters.net” and “chat.headquarters.net” as the IM and MUC Domains.

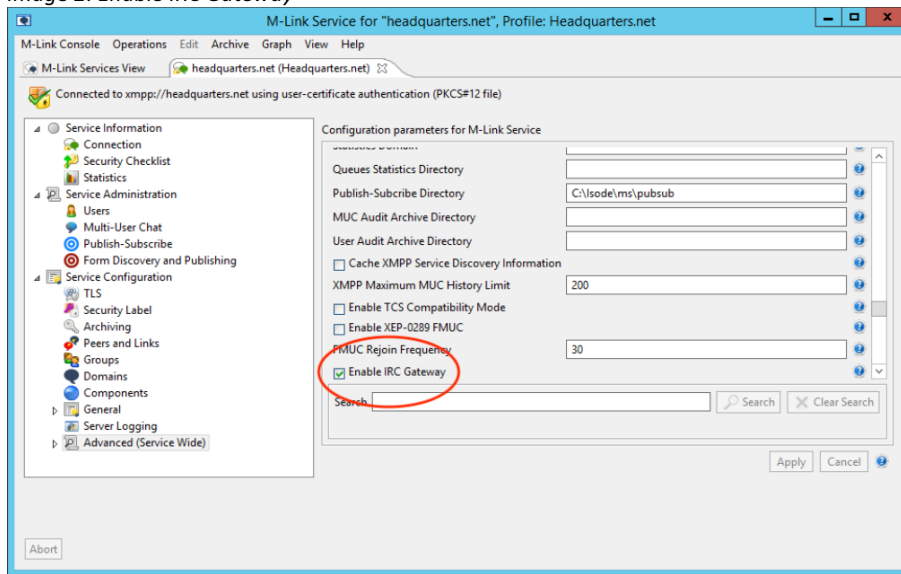
Start M-Link Console and connect to your server, expand the “Advanced (Service Wide)” Option and select “headquarters.net (Node Specific)” as in Image 1.

Image 1: MLC Advanced Settings



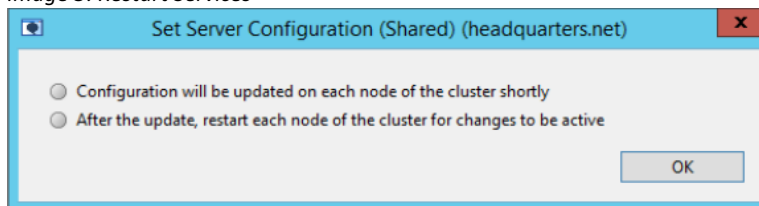
Scroll down to the “Enable IRC Gateway” option, check this option (Image 2) and click [Apply]. Note you can use the search box to find the option in the long list of advanced settings.

Image 2: Enable IRC Gateway



When the dialog box appears (Image 3) stop/start services as advised by clicking [OK].

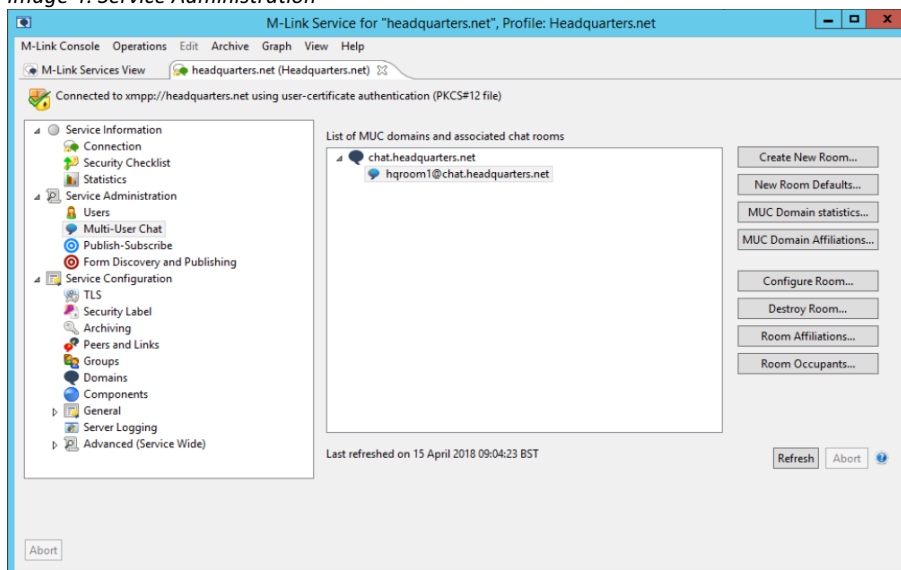
Image 3: Restart Services



Configure a MUC room to connect to an IRC Channel

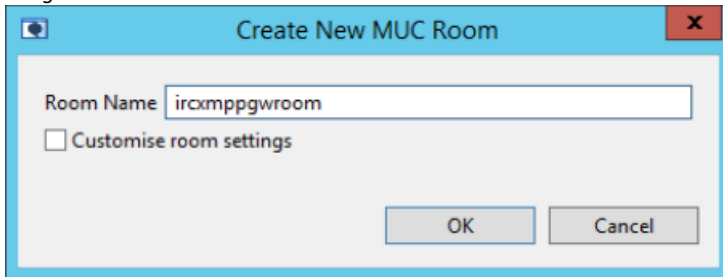
Within MLC, select “Multi-User Chat” from the “Service Administration” tree in the left pane (Image 4).

Image 4: Service Administration



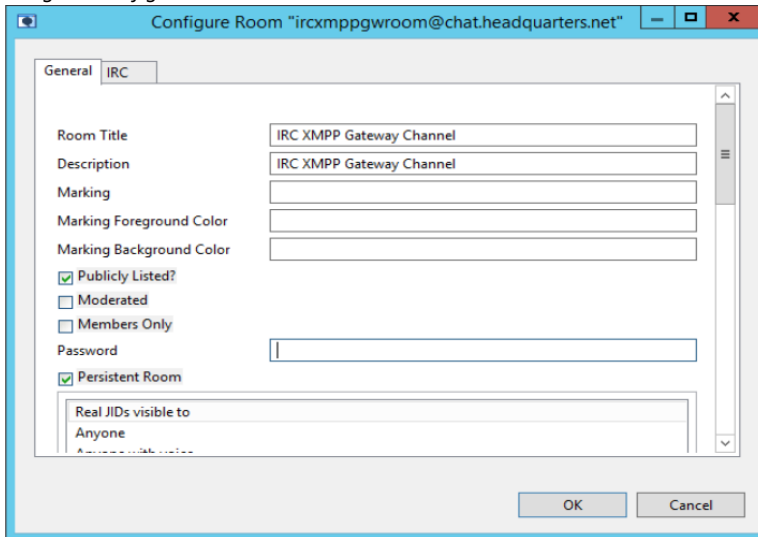
Select the MUC domain, click on [**Create New Room...**], enter a room name that reflects the IRC Channel you are connecting to and tick the “Customer room options” box before clicking [**OK**].

Image 5: Create New MUC Room



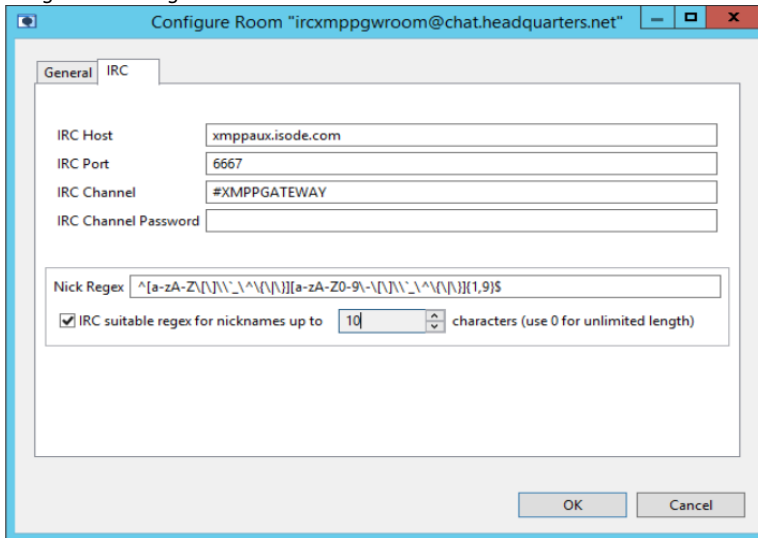
In the Configure Room dialog box (Image 6) give the room a title and description.

Image 6: Configure Room



Now select the IRC tab (Image 7) enter the IRC Hostname (or IP Address), IRC Port and the IRC Channel you wish to connect to. As IRC places additional restrictions on names in a channel beyond those that XMPP places on names in a MUC it is useful to set a regular expression to limit the nicknames of users in the MUC to those that are supported by IRC, this is where we use a Nick Regex.

Image 7: Nick Regex



The Nick Regex should be set to match your own IRC server restrictions. Tick the "IRC suitable regex for nicknames" In the following example if the IRC server is configured to allow ASCII alphanumeric nicknames of up to 10 characters, an appropriate value for the Nick Regex would be:

```
^[a-zA-Z[\]\_\^{\|\|}][a-zA-Z0-9\-\[\]\_\^{\|\|}]{1,9}$
```

It is important to have an appropriate Nick Regex to stop situations where for instance, XMPP clients are able to join the MUC room but unable to join the IRC channel, this therefore leads to unexpected errors such as message loss.

Click [OK], repeat the same process for any other channels you wish to connect to.

What Next?

More information on the M-Link IRC Gateway can be found on the Isode website at www.isode.com/products/m-link-irc-gateway.html.

Detailed configuration and operational information on all variations of M-Link can be found in the M-Link Administration Guide available from the Isode website at www.isode.com/support/help.html.

Other Evaluations

This guide is one of three relating to Isode's XMPP products:

- Setting up an XMPP System for 1:1 and Multi-User Chat
- Connecting XMPP and IRC Chat Services (this guide)
- XMPP for Constrained Network Environments

Information on all of these evaluations can be found at www.isode.com/evaluate/evaluate-xmpp.html. For XMPP evaluations outside of the scope of these guides, please contact us.

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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