RELNOTES-19.4

Isode R19.4 M-Link Release Notes

Isode

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Chapter 1 Introduction

Release 19.4v7 is a new release of the M-Link product suite.

A description of this product is given on http://www.isode.com/products/.

Warning: These release notes contain important information in Chapter 7, *Upgrading*. You must read these before starting to upgrade. Otherwise, you may lose data or have an unusable system.

Chapter 2 Important Information

2.1   M-Link R19.4 Limited Release

M-Link 19.4 provides a very significant update and in particular provides the M-Link User Server product. It also provides M-Link MU Server, M-Link MU Gateway and M-Link Edge. It does not provide M-Link IRC Gateway, which remains M-Link 17.0 only.

M-Link 19.4 Limited Release is provided ahead of the full M-Link 19.4 release. M-Link 19.4 Limited Release is fully supported by Isode for production deployment. There is one significant difference with a standard Isode release:

Updates to M-Link 19.4 Limited Release will include additional functionality. This contrasts to standard Isode releases where updates are "bug fix only". There will be a series of updates which will culminate in the full M-Link 19.4 release.

More information on the R19.4 Limited Releases can be found at https://www.isode.com/company/wordpress/m-link-19-4-limited-release/

Chapter 3 Installation Instructions

After obtaining an installation package for M-Link, it can be installed as described in the following sections. The initial configuration and further administration instructions are described in the M-Link Administration Guide.

3.1   Windows Server

To install M-Link on Windows Server, run the installation Windows Installer Package (.msi) and follow the on-screen instructions.

To uninstall M-Link from Windows Server, use the standard *Apps & features* panel in the Settings, search for M-Link, and remove the software.

3.2   Ubuntu

To install M-Link on Ubuntu, run `apt install ./mlink-*.deb` with sufficient permissions.

To remove M-Link from Ubuntu, run `apt remove mlink` with sufficient permissions.

3.3   Red Hat Enterprise Linux

To install M-Link on Red Hat Enterprise Linux, run `dnf install mlink-*.rpm` with sufficient permissions.

To remove M-Link from Red Hat Enterprise Linux, run `dnf remove mlink` with sufficient permissions.

Chapter 4 New Features

This section outlines the new features available in the current release of R19.4.

M-Link Edge Server R19.4 continues the significant rearchitecture of the product, extending the core functionality and web-based administration of previous M-Link Edge Server and M-Link MU Gateway releases to provide the R19.3 benefits for the M-Link User Server and M-Link MU Server products.

4.1 Features introduced in R19.4v2

- Audit logging on parity with M-Link R17.0.
- Monitoring of `Client` sessions from the M-Link Administration Interface.
- M-Link is now using OpenSSL 3.0.
- Sharing files using HTTP File Upload (XEP-0363).
- Federated MUC for Constrained Environments (XEP-0289).

4.2 Features introduced in R19.4v5

- Assigning MUC affiliations to groups.
- Support for Form Discovery and Publishing (XEP-0346) on PubSub domains.
- Two node clustering.
- Binding listen ports to particular IP addresses.
- Message archiving and access through an administrative interface and Message Archive Management (XEP-0313).
- Allowing re-enabling of TLS1.0 and TLS1.1 through configuration for interoperability with deprecated systems.
- A new stanza transform for stripping vcards from peer stanzas.

4.3 Features introduced in R19.4v6

- Support for the Message Processing Hints (XEP-0334) `store` hint.

4.4 Features introduced in R19.4v7

- Administration of Publish-Subscribe (XEP-0060) domains from the M-Link Administration Interface.
- Administration of Form Discovery and Publishing (XEP-0346) enabled PubSub domains from the M-Link Administration Interface.
- Stanza transformations on local domains.
- Server-wide default transformations.

- Filtering of stanzas based on source and destination JIDs.

- Service names for Service Discovery (XEP-0030) can be set.

- Configuration of security labelling on pubsub domains.

- R17.0 M-Link configurations can be upgraded so that they can be used by R19.4.

Chapter 5 Platform and Version Support

5.1 Supported Releases

Isode provides full support for all major and minor releases for 5 years from the date of release.

- R19.4: until June 2028
- R19.3: until March 2027
- R19.2: until August 2026

Full support is generally no longer provided by Isode for older releases.

5.2 Supported Platforms

5.2.1 Server Products

R19.4 server products are supported on the following platforms:

- Red Hat Enterprise Linux 8, 9.
- Ubuntu 22.04 LTS
- Windows Server 2019, Windows Server 2022

Use of M-Link servers on Windows is only supported if installed and deployed on NTFS filesystems (i.e. not FAT filesystems).

In all cases the operating system must be updated with all available updates and patches from the operating system supplier. This can be important for the security of your system. Isode reserves the right not to support a system that is not up to date.

5.2.2 Evaluations and Demonstrations

Use of M-Link servers on Windows 10 or 11 is appropriate for simple evaluations and demonstrations. However, Isode does not support running the servers on these operating systems in a production environment.

5.2.3 Compatible Web Browsers

The following web browsers are supported:

- Latest version of Chrome
- Latest version of Firefox
- Latest version of Microsoft Edge

These browsers should be updated with all available updates and patches.

Note: Internet Explorer is not supported.

Chapter 6 Other Important Information

6.1 OpenSSL Advisory

19.4v7 is built with OpenSSL 3.0.16 which was shipped on 11th February 2025. See https://www.openssl.org for details.

6.2 Activation

You will need a Product Activation Key appropriate to R19.4 for your M-Link product. The M-Link Administration Interface allows you to generate a Product Activation Request, which can be used to request a Product Activation Key from isode.support@isode.com. The Activation Key can then be installed using the M-Link Administration Interface.

Please contact isode.support@isode.com for further details.

6.3 Documentation

R19.4 documentation is available from the Isode web site at https://www.isode.com/support/guides-downloads.

Once Product Activation is complete, the M-Link Manual and Release Notes can also be accessed from within the M-Link Administration Interface.

6.4 Export Controls

M-Link uses TLS (Transport Layer Security) to encrypt data in transit. This means that M-Link is subject to UK Export Controls.

For some countries (at the time of shipping this release, these comprise all EU countries, United States of America, Canada, Australia, New Zealand, Switzerland, Norway, Japan), these Export Controls can be handled by administrative process as part of evaluation or purchase.

For other countries, a special Export License is required. This can be applied for only in context of a purchase order from Isode.

The TLS features of M-Link are enabled by a TLS Product Activation feature. This feature may be turned off, and without this TLS feature M-Link is not export-controlled. This can be helpful to support evaluation in countries that need a special export license.

XMPP servers are generally deployed with TLS for security reasons and Isode strongly recommends that all operational deployments use the export-controlled TLS feature.

You must ensure that you comply with these Export Controls where applicable, i.e. if you are licensing or re-selling M-Link. M-Link is subject to an Isode license agreement and your attention is also called to the export terms of the license agreement.

6.5　　　Interoperability with M-Link R17

Attempting to use compression on a TLS-enabled link between M-Link R17 and M-Link R19.4 servers may cause interoperability issues. Compression should not be used in this situation.

6.6　　　Audit Logs

The prefix "MLink_" has been stripped from all the audit log types.

6.7　　　Logging Levels

The `trace` logging level is now only supported for the `mlink` logging facility. The `mlink` facility no longer supports the `detail` logging level. When upgrading from versions prior to R19.4v3, logging levels set to `trace` (as well as `detail` for the `mlink` facility) will be reset to `info`.

Chapter 7 Upgrading

Configurations created by M-Link R19.2 and newer continue to work with R19.4, and will be automatically upgraded where needed when the server starts.

M-Link R19.4 includes a tool which can be used to upgrade R17.0 configurations so that they can be used by R19.4. This tool is documented in the M-Link Administration Guide, available from the Isode web site at https://www.isode.com/support/guides-downloads.

Chapter 8 Changes Affecting New Configuration Automation

Note: This only requires action if you're automating new configurations; existing configurations will upgrade automatically.

This section outlines the changes to the option schema that may affect existing configuration automation. The changes per release are grouped by their scope within the option schema.

If a release does not have a section, any changes to the option schema should not affect existing automation. The list does not contain new options, unless these options affect (previously) existing options.

8.1 Changes introduced in R19.4v1 since R19.3

`/`
> The `useArchiving` option has been moved to `/archiving/enabled`.

`/loggingConfiguration/logStreams/*/facilityLevels/*`
> The logging stream with facility name `mlink` now has a `trace` level instead of a `detail` level.

`/securityLabellingConfig`
> The `xep258catalog` option has been removed. XEP-0258 catalogs are now always generated from the catalogs configured on IM domains.

8.2 Changes introduced in R19.4v2

`/httpUpload`
> The `httpUploadDomains` list has been removed. In its place, global options are now defined in a new `httpUpload` section, and domain-specific settings such as the host name are configured on the domain level.

8.3 Changes introduced in R19.4v5

various
> Storage paths have been made cluster-node specific, allowing per-node storage paths.
>
> Node-specific listen addresses have been added for all services.

`/tlsConfig`
> The `suppressTLSv1` option has been replaced with a more general `minimumTlsLevel` option.

`/archiving`
> Archiving is now enabled by default.

8.4   Changes introduced in R19.4v7

`/imDomains/*`

All options prefixed with `imDomain` have been renamed as follows:

Table 8.1. Renamed options

Old	New
imDomainLabelSubstore	labelSubstore
imDomainLabel	label
imDomainDefaultLabelSubstore	defaultLabelSubstore
imDomainDefaultLabel	defaultLabel
imDomainClearanceSubstore	clearanceSubstore
imDomainClearance	clearance
imDomainDefaultUserClearanceSubstore	defaultUserClearanceSubstore
imDomainDefaultUserClearance	defaultUserClearance
imDomainUpdateDisplayMarkings	updateDisplayMarkings
imDomainAddFlot	addFlot
imDomainStripLabel	stripLabel
imDomainOutboundLabelFormat	outboundLabelFormat
imDomainXep258LabelCatalog	xep258LabelCatalog
imDomainStaticGroups	staticGroups
imDomainRosterGroups	rosterGroups

`/links/*`

A cluster-wide `remoteHostDefault` and `remotePortDefault` have been added to links. The existing `remoteHost` and `remotePort` options have been made node-specific.

`/ldapConfigurations/*/uidRules/*`

The `rule` option of LDAP UID Mapping Rules has been renamed to `replacement`. Each mapping rule now also requires a value for the newly added `name` option.

`/mixDomains/*`

All options prefixed with `mixDomain` have been renamed as follows:

Table 8.2. Renamed options

Old	New
mixDomainLabelSubstore	labelSubstore
mixDomainLabel	label
mixDomainDefaultLabelSubstore	defaultLabelSubstore
mixDomainDefaultLabel	defaultLabel
mixDomainClearanceSubstore	clearanceSubstore
mixDomainClearance	clearance

Appendix A Bugs Resolved In M-Link

A.1 Bugs Resolved In 19.4v1 Since 19.3v1

LINK-2652	Stanzas sent to S5066 servers may take longer to process than required
LINK-2667	Broken connection to Icon-5066 may crash the server
LINK-2848	Queueing a workitem from workers may corrupt the post-shutdown queue
LINK-2854	Responses to XEP-0060 subscribe use the wrong element
LINK-3029	IDs of messages in MUC rooms are not archived
LINK-3054	Heap-buffer-overflow in or around librestpp's validate_json_value
LINK-3057	JSON parser may create invalid results
LINK-3074	MAM queries do not return messages without type attribute

A.2 Bugs Resolved In 19.4v2 Since 19.4v1

LINK-2929	XML parsing doesn't enforce namespace-well-formedness
LINK-3081	Stacktracer filenames do not contain a timestamp
LINK-3084	Administration interface prohibited characters list is incomplete for initial admin user creation in help text
LINK-3085	XEP-0258 security label catalogue generation misses colour fields
LINK-3086	Internal tool exes not signed in Windows packages
LINK-3087	TLS can be used to the DSA when disabled in configuration
LINK-3089	Multiple daemons may try to lock the object store database at startup
LINK-3091	Release Notes are missing installation instructions for RedHat
LINK-3097	Archive server sometimes cannot authenticate on a new install
LINK-3099	Archive service fails to handle signals during start-up
LINK-3101	Clearance checks are not properly applied to MAM results
LINK-3114	iq:private stanzas can bypass ACL check
LINK-3115	C2S sessions don't terminate on TLS errors
LINK-3116	PubSub domains should only handle domain jids
LINK-3117	Labels from MUC MAM results are not rendered on the inner message
LINK-3138	Startup connection failures to statsd aren't retried
LINK-3172	Unsigned numeric options can be set to negative numbers

A.3 Bugs Resolved In 19.4v3 Since 19.4v2

LINK-3173	Inputs with an invalid namespace prefix may crash the server
LINK-3190	R19.3 logging configuration may prevent an upgraded server from starting

LINK-3191	FMUC status is shown in MUC module when FMUC is disabled
LINK-3192	Client session monitoring appears when IM not activated
LINK-3194	Crash when processing FMUC message from unknown member

A.4 Bugs Resolved In 19.4v4 Since 19.4v3

LINK-3199	Upload service only listens on IPv6 on Windows Server

A.5 Bugs Resolved In 19.4v5 Since 19.4v4

LINK-2628	Admin Interface does not warn when discarding unsaved changes after modifying a list
LINK-2817	Admin Interface mis-indents some complex options
LINK-2932	Persistent storage created on non-existent user query
LINK-3052	Cannot remove links referenced by peers no longer using a specialised connection mechanism
LINK-3090	BOSH and HTTP File Upload services may fail to listen on HTTP port after reconfiguration
LINK-3174	Admin Interface mis-renders object stores descriptions/toolbars
LINK-3195	Daemons occasionally fail to shut down
LINK-3196	MUC Configuration form's subject change description is incorrect
LINK-3197	MUC subject changes with an origin-id are rejected
LINK-3198	FMUC: Subject synchronisation in case of conflict might not resolve correctly
LINK-3200	Upload slot request right after adding new domain won't be answered
LINK-3201	Error notifications not shown on bootstrap screen
LINK-3203	Admin Interface misrenders when receiving encoding of spaces in MUC room names
LINK-3204	Admin Interface doesn't warn when cancelling MUC configuration changes
LINK-3205	MUC affiliations tab does not warn if you navigate away or close tab with unsaved changes
LINK-3247	Room creation through Admin Interface isn't recorded in archive
LINK-3248	Kicking a MUC occupant may crash the server if archiving is enabled
LINK-3256	Child services cannot recover from wrong connection parameters
LINK-3348	Pubsub psis entries are synchronised across the cluster out of order

A.6 Bugs Resolved In 19.4v6 Since 19.4v5

LINK-3354	Stanzas for local node only may end up being routed over the cluster
LINK-3355	Administrative interface fails to launch from installer

A.7   Bugs Resolved In 19.4v7 Since 19.4v6

LINK-3249	Room occupant presence payload is not archived
LINK-3293	Cluster join token form description mentions field (port number) that doesn't exist
LINK-3312	Both servPass Passphrase and Verifier should be read-only.
LINK-3343	DiscoInfo responses for existing and non-existing users differ
LINK-3352	Manual description of disabling TLSv1 is incorrect
LINK-3359	Cannot make rooms permanent using the admin interface
LINK-3362	MUC room edit form corrupts room passwords
LINK-3363	Clustered nodes don't automatically sync after an archive import
LINK-3367	Archiving server could stop working on invalid inputs
LINK-3370	Very long object store names overflow in lists in admin interface
LINK-3372	Small memory leak when uploading clearance catalogs
LINK-3374	Intermittent failure during initial cluster configuration
LINK-3379	Potential crash in group handling
LINK-3381	Small memory leak when uploading label catalogs
LINK-3387	Wabacd: Prevent file name duplication
LINK-3388	Wabacd: Giving an export a name ending with . prevents it from being downloaded/deleted/imported
LINK-3390	Archive admin UI: Deleting a file should refresh the view so that file disappears
LINK-3393	Admin interface modules not reloaded after product activation
LINK-3395	Text overlap in admin interface listing archive files
LINK-3401	Lines sometimes wrap mid-word in admin interface notifications
LINK-3410	MLAI search uses config from initial load of the page
LINK-3411	MLAI shows almost overlapping text displaying list of wabac files
LINK-3424	MUC affiliation filter visually misaligned in admin interface
LINK-3427	Unexpected memory growth
LINK-3433	Memory growth in WebInterface
LINK-3434	Room config validators are not applied when receiving an update
LINK-3435	Crash reading offline storage after disk corruption
LINK-3437	Invalid characters in display name may break LDAP authentication backend
LINK-3449	Primary XEP-0030 identity of user accounts is incorrect
LINK-3453	Original stanza routing details are lost when transformations are applied