

Messaging Hub user documentation

Messaging Hub
IGT Consulting s.r.o

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Introduction

Welcome to the Messaging Hub Documentation!

1.1 Overview

The Messaging Hub is a versatile project designed specifically for individuals familiar with Software AG products, including Integration Server and Universal Messaging. Created to streamline communication and enhance functionality, the Messaging Hub acts as a centralized control hub for managing Universal Messaging instances and integrating seamlessly with Integration Server.

1.2 Purpose and Goals

The primary goal of the Messaging Hub is to provide a comprehensive solution for developers, team leaders, analysts, and architects working within the Software AG ecosystem. By connecting to multiple Universal Messaging servers, the Messaging Hub facilitates efficient management of messaging infrastructure, allowing users to create topics, configure interfaces, and automate message processing.

1.3 Target Audience

This documentation is crafted for professionals who are already familiar with Software AG products and are actively involved in the development, architecture, and leadership aspects of enterprise solutions. The intended audience includes:

Developers: Engaged in creating and maintaining Integration Server components, interfaces, and services.

Team Leaders: Overseeing development teams and ensuring efficient use of messaging infrastructure.

Analysts: Leveraging data insights and message patterns to optimize system performance.

Architects: Designing and implementing robust, scalable, and efficient solutions using Software AG products.

1.4 What You Will Find in This Documentation

This documentation provides a comprehensive guide to understanding and utilizing the features of the Messaging Hub. You will find detailed instructions on installation, configuration, and use cases, along with best practices and future plans for integration with other JMS providers like Kafka. Whether you are monitoring Universal Messaging instances, creating topics on Integration Server, or automating message workflows, this documentation aims to empower you with the knowledge to maximize the potential of the Messaging Hub.

1.5 Getting Started

Before diving into the specifics, ensure you have met the necessary prerequisites outlined in the 'Getting Started' section. This will guide you through the installation and initial configuration process, paving the way for a smooth integration of the Messaging Hub into your Software AG environment.

Thank you for choosing the Messaging Hub. Let's embark on a journey to enhance the efficiency and effectiveness of your messaging infrastructure within the Software AG ecosystem!

Getting Started

2.1 Prerequisites

Before you begin the installation of the Messaging Hub, ensure that you have the following prerequisites in place:

Official Instance of Integration Server:

You must have your own official instance of Integration Server installed either on-premise or within a container provided by Software AG.

2.2 Installation Process

Follow these steps to install the Messaging Hub on your Integration Server:

1. Download the Messaging Hub Package:

Visit the official Messaging Hub website or repository to download the latest version of the Messaging Hub package.

2. Access Integration Server:

Log in to your Integration Server instance with administrative privileges.

3. Package Installation:

Move the download package to the inbound directory of your Integration Server.

Then in web console navigate to install inbound package and install MessagingHub package.

4. Configuration

Once the package is uploaded, our configuration wizard will guide you through the installation process.

The configuration of the package Messaging hub will automatically set up an embedded database, create necessary schedulers, and configure the initial settings required for the Messaging Hub to function seamlessly.

2.3 What configuration does

During the installation process, the configuration takes care of the following tasks:

1. Embedded Database Creation:

Sets up an embedded database to store essential configuration data.

2. Scheduler Configuration:

Creates and configures schedulers required for scheduled tasks within the Messaging Hub.

3. Default Settings:

Establishes initial default settings based on recommended configurations.

2.4 Verification

After the installation and configuration are complete, verify the successful setup by checking the Integration Server logs and confirming that the Messaging Hub package is listed as installed.

Congratulations! You have now successfully installed and configured the Messaging Hub on your Integration Server. The next steps involve exploring the diverse features and functionalities provided by the Messaging Hub to enhance your messaging infrastructure within the Software AG ecosystem. Proceed to the relevant sections in this documentation to delve deeper into the capabilities of the Messaging Hub.

Overview of Messaging Hub Components

3.1 Integration Server

The Integration Server serves as the core platform for the Messaging Hub, acting as the central hub for communication and coordination between various components.

3.2 Universal Messaging Servers

Messaging Hub seamlessly connects to multiple Universal Messaging Servers, providing a unified interface for monitoring and managing instances.

3.3 Additional JMS Providers - KAFKA

While currently focused on Integration Server and Universal Messaging, the Messaging Hub has already expand its functionality to other JMS providers, such as Kafka.

3.4 Frontend Interface

In addition to backend functionalities, the Messaging Hub package includes a user-friendly frontend. This interface offers a visual alternative to the Enterprise manager, providing users with a more comfortable and intuitive way to manage topics, interfaces, and configurations.

The combination of these components ensures a comprehensive and user-friendly solution for almost everyone working in System Integration industry.

Key Features and Functionality

4.1 Connection Management to Universal Messaging Servers

- **Create/Update/Delete Connections:**

Easily establish, modify, or remove connections to multiple Universal Messaging Servers directly from the Messaging Hub. This centralizes server connectivity management.

- **Connection Health Monitoring:**

Gain insights into the health and status of your Universal Messaging connections, ensuring robust and reliable communication.

4.2 Topic Management on Integration Servers

- **Create/Update/Delete Topics:**

Effortlessly manage topics on Integration Servers through intuitive controls. Create, update, or delete topics with ease.

- **Publish Topics to Universal Messaging:**

Publish topics directly to your desired Universal Messaging connection, facilitating seamless integration and data distribution.

- **Message Publishing:**

Send messages to specific topics, enabling efficient communication across your messaging infrastructure.

4.3 Interface Creation

- **Create Interfaces:**

Introduce a novel functionality by creating interfaces. Define the integration logic, and our system automatically generates triggers associated with your chosen topics.

- **Automated Trigger and Service Creation:**

Upon interface creation, the Messaging Hub generates triggers for the specified topic and services to send messages to your API endpoint of choice.

4.4 Universal Messaging Instance Monitoring

- **Detailed Instance Information:**

Access comprehensive details about Universal Messaging instances, including configuration settings and performance metrics.

- **Real-time Monitoring:**

Monitor Universal Messaging instances in real-time, ensuring timely response to any changes or issues.

4.5 Prometheus Integration for Message Metrics

- **Graphical Message Metrics:**

Utilize Prometheus integration to visualize and analyze the total published messages to topics. Graphs provide insights into message distribution and system performance.

4.6 User-Friendly Frontend

- **Responsive Interface:**

Enjoy a user-friendly and responsive frontend that simplifies the entire process. Manage connections, topics, interfaces, and more with ease.

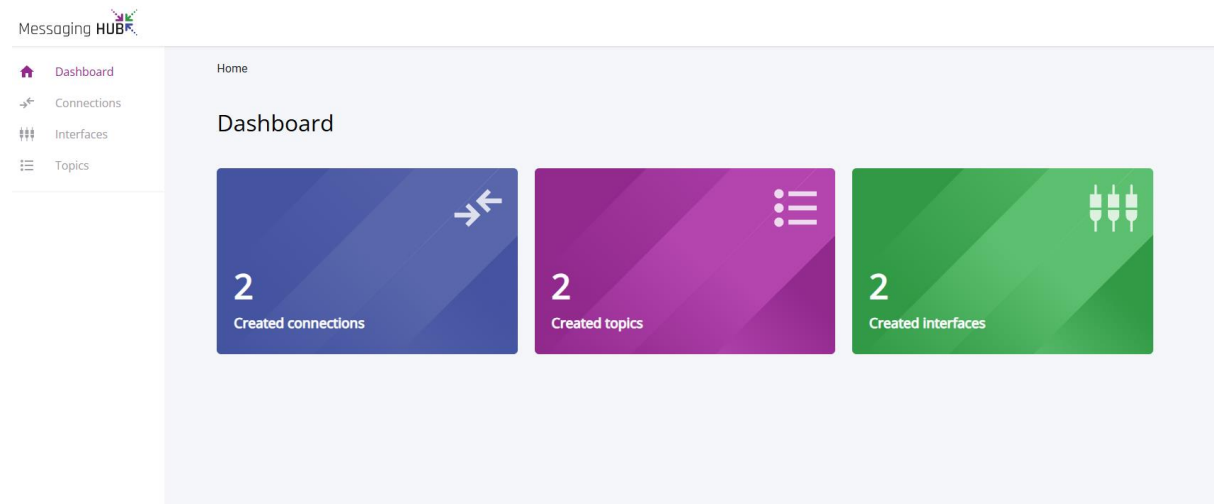
- **Enhanced User Experience:**

Perform all key actions, from connection management to topic creation, through an intuitive frontend, reducing dependency on webMethods Service Designer and Enterprise Manager.

The combination of these features empowers users to efficiently manage their messaging infrastructure, create interfaces seamlessly, and monitor Universal Messaging instances—all from a visually intuitive and responsive frontend provided by the Messaging Hub.

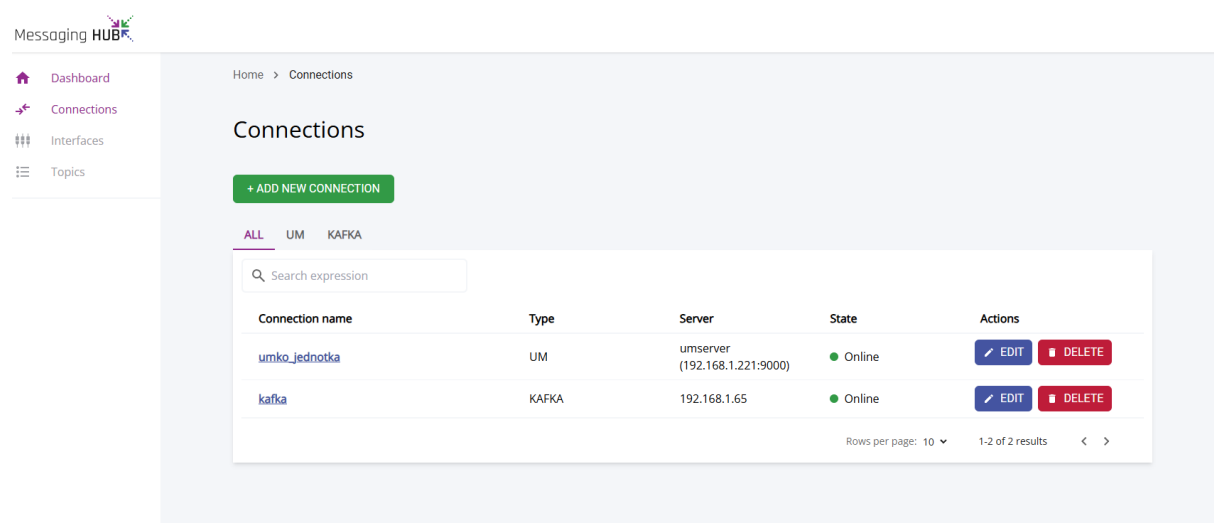
Use Cases

Overview



Discover the practical applications of the Messaging Hub in real-world scenarios. From Universal Messaging instance monitoring to automated interface creation and external endpoint communication, these concise use cases showcase the versatility of the Messaging Hub within the Software AG ecosystem. Explore step-by-step guides tailored for everyone who interests in system integration to optimize your messaging infrastructure and unlock the full potential of the Messaging Hub.

Use Case: Connection Management



Creating a Connection

Learn how to seamlessly establish connections to multiple Universal Messaging Servers or Kafka servers using the Messaging Hub. This use case guides you through the process of creating new connections, ensuring a streamlined and efficient setup.

Messaging HUB

Dashboard
Connections
Interfaces
Topics

Home > Connections > New

< Back

Create New connection

Connection type
UM

Connection name
UMConnection

IS resource name ⓘ
messaging-hub-um1

Prometheus URL (optional) ⓘ

Document type prefix ⓘ
umconnection

CANCEL CREATE CONNECTION

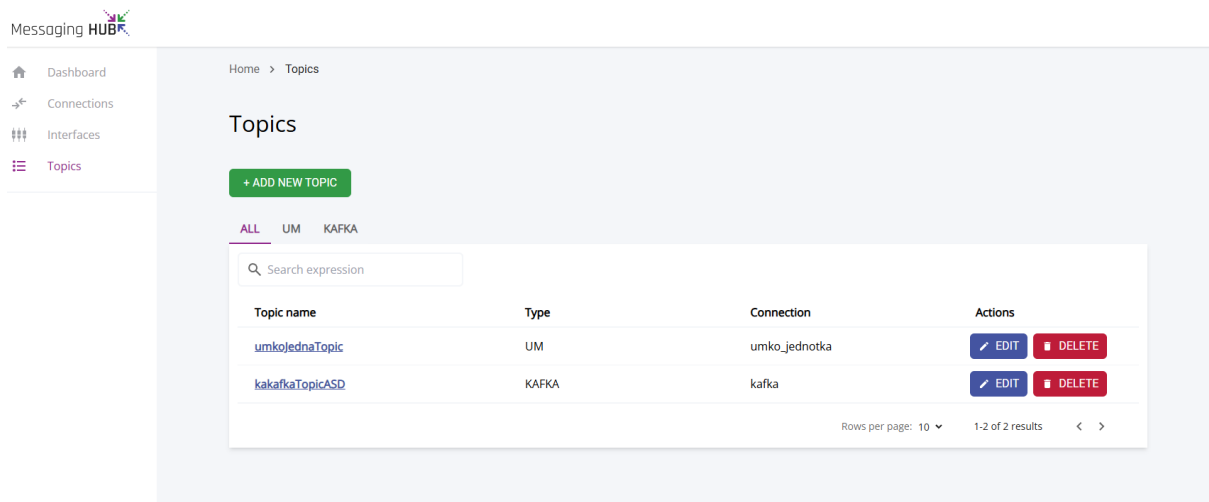
Updating a Connection

Explore the steps to modify and update existing connections within the Messaging Hub. Adapt to changing requirements and optimize your Universal Messaging server connections with ease.

Deleting a Connection

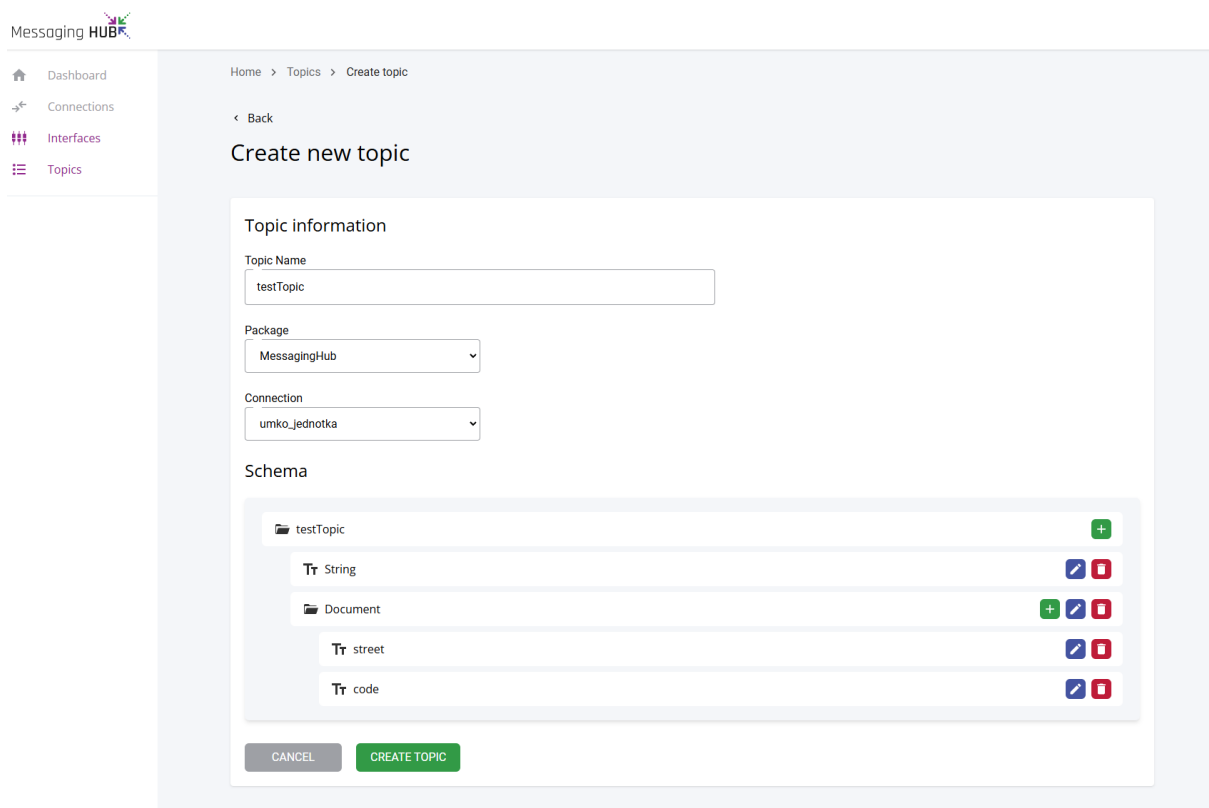
Efficiently manage your server connections by understanding how to delete obsolete or unnecessary connections. This use case provides insights into the proper removal of connections, ensuring a clean and organized configuration.

Use Case: Topic Management



Creating a Topic

Discover the process of creating topics on Integration Servers and associating them with your selected Universal Messaging connection. This use case guides you through the steps to efficiently set up new topics for seamless communication.



Updating a Topic

Explore how to modify and update existing topics within the Messaging Hub. This use case provides insights into adapting topics to changing requirements, ensuring flexibility in your messaging infrastructure.

Messaging HUB

Dashboard
Connections
Interfaces
Topics

Home > Topics > umkoJednaTopic > Edit topic

< Back

Edit umkoJednaTopic

Topic information

Topic Name
umkoJednaTopic

Package
PackageNameUM2

Connection
umko_jednotka

Schema

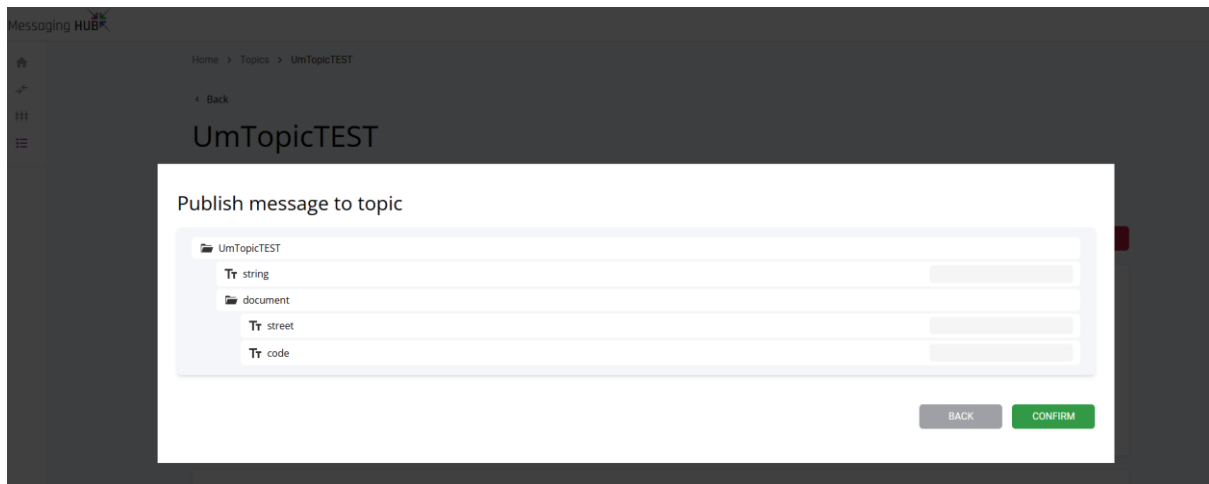
umkoJednaTopic

lastName	
surName	
address	
street	
psc	

CANCEL SAVE CHANGES

Publish message to Topic

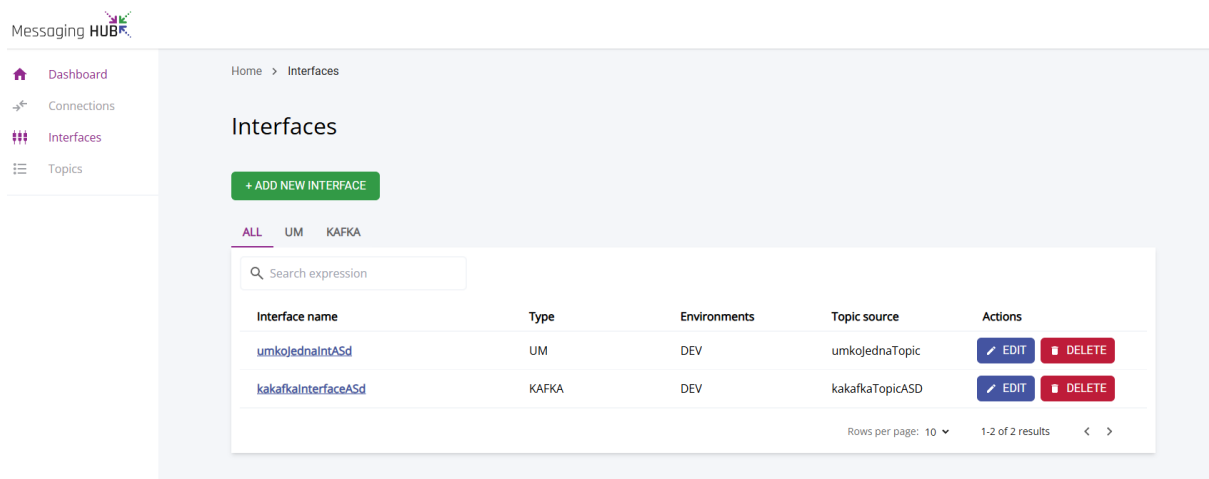
Efficiently publish messages to a topic using Messaging Hub. This use case outlines the steps to send a message to a topic, whether it's in Kafka or Universal Messaging, ensuring seamless communication and integration.



Deleting a Topic

Efficiently manage your topics by learning how to delete obsolete or unnecessary topics. This use case outlines the steps to remove topics, maintaining a clean and organized Integration Server configuration.

Use Case: Interface Management



5.4.1 Creating a New Interface

Explore the process of creating a new interface within the Messaging Hub. Learn how to define integration logic, with the system automatically generating triggers associated with your chosen topics, streamlining the creation of powerful interfaces.

Create New interface

Interface details

Enable after interface is created



Interface name

Connection Type

Source Topic

UM Connection

Global Prefix

Environment

Package name

Trigger execution user

Message filter

deliveryMethod

Messaging hub forwarding



CANCEL

NEXT

*next step

Create New interface

Delivery - Generic

Delivery Endpoint

deliveryFormat

Excluded fields

Authentication

Auth Type

Username

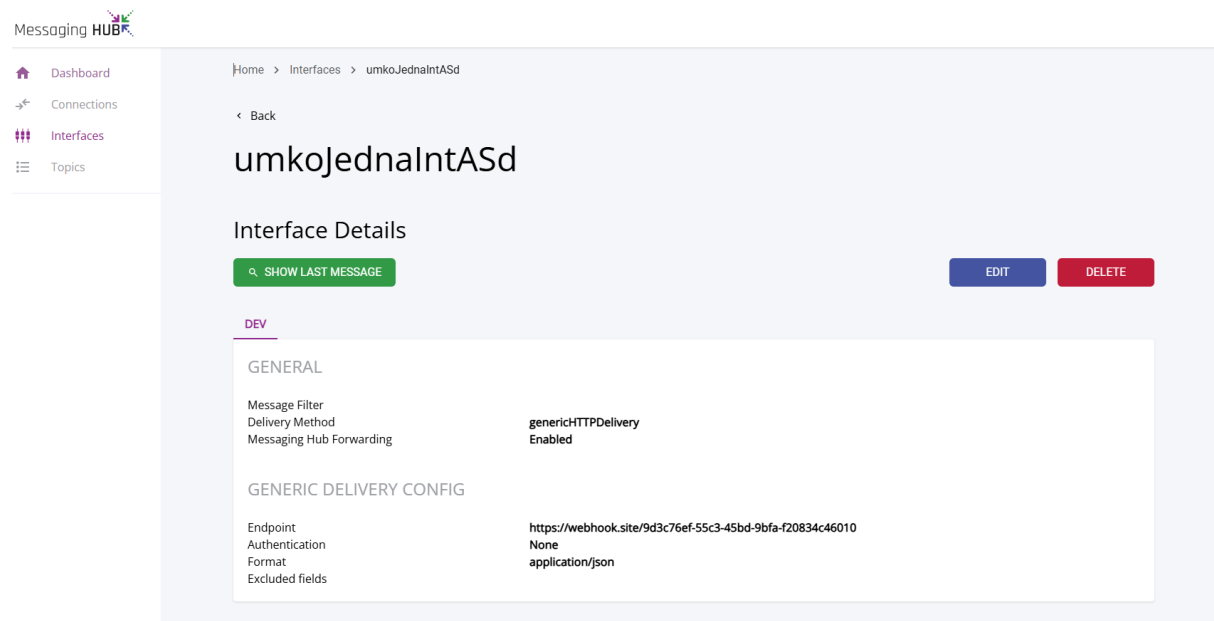
Password

BACK

CREATE INTERFACE

5.4.2 Updating an Interface

Discover how to modify and update existing interfaces, adapting them to changing integration requirements. This use case guides you through the steps to ensure that your interfaces remain optimized and effective.



5.4.3 Deleting an Interface

Efficiently manage your interfaces by learning how to delete obsolete or unnecessary ones. This use case outlines the steps to remove interfaces, ensuring a streamlined and organized interface configuration within the Messaging Hub.

Use Case: Monitoring

Messaging HUB

Dashboard

Connections

Interfaces

Topics

Home > Connections > umko_jednotka

< Back

umko_jednotka

Connection Details

EDITDELETE

GENERAL

Name	umserver (192.168.1.221:9000)
Realm Size	1
Server Time	Tue Nov 26 15:29:59 CET 2024
Update Interval	5000

CPU

CPU Usage	1
Number of channels	2
Total published	0
Total nodes	4

MEMORY

Free memory	809088000 B (approx. 771.61 MB)
Physical memory	16500461568 B (approx. 15.37 GB)
Max heap memory	1073741824 B (approx. 1 GB)
Buffers created	1600

API Documentation

While the comprehensive API documentation is available separately in an accompanying file generated using Apicurio or a similar tool, this section provides an overview and directs users to the detailed API documentation for the Messaging Hub. The API documentation file offers in-depth information about the available endpoints, request and response formats, authentication mechanisms, and usage examples.

For complete details on integrating with the Messaging Hub through its API, please refer to the dedicated API documentation file provided along with this main document. It serves as a valuable resource for developers seeking to extend or integrate Messaging Hub functionalities into their own applications or workflows.