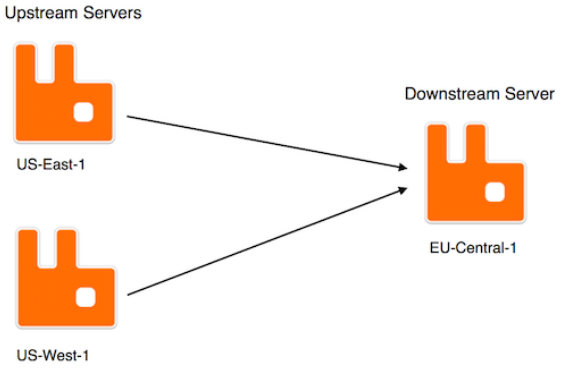
Rabbitmq Federation



Usually when RabbitMQ is used, messages are published to an exchange and the messages are then routed to the queue or the queues. With use of exchange federation it is possible to get RabbitMQ to distribute those messages to any other clusters. That means messages arriving to those federated exchanges will also be forwarded to the downstream clusters. Exchange federation consumes messages from an upstream cluster and republishes on it's own local exchange, as if the messages published on the upstream cluster were published on the local cluster. A situation where exchange federation could be used is when there are clusters in multiple regions, but you want to collect all messages to a central cluster where your consumers can process them. The federation act as an intelligent shovel, so it will create a queue on the upstream cluster, bind it to the exchange you're federating and then consume from that queue and republish them on the local exchange. If the connection is broken messages will queue up on the upstream queue and when the server reconnects again it will transfer all messages that were publish during the network outage.

Upstreams: each upstream defines how to connect to another broker.
Upstream sets: each upstream set groups together a set of upstreams to use for federation.
Policies: each policy selects a set of exchanges, queues or both, and applies a single upstream or an upstream set to those objects.

Enable Federation plugins

Commands:

rabbitmq-plugins enable rabbitmq_federation

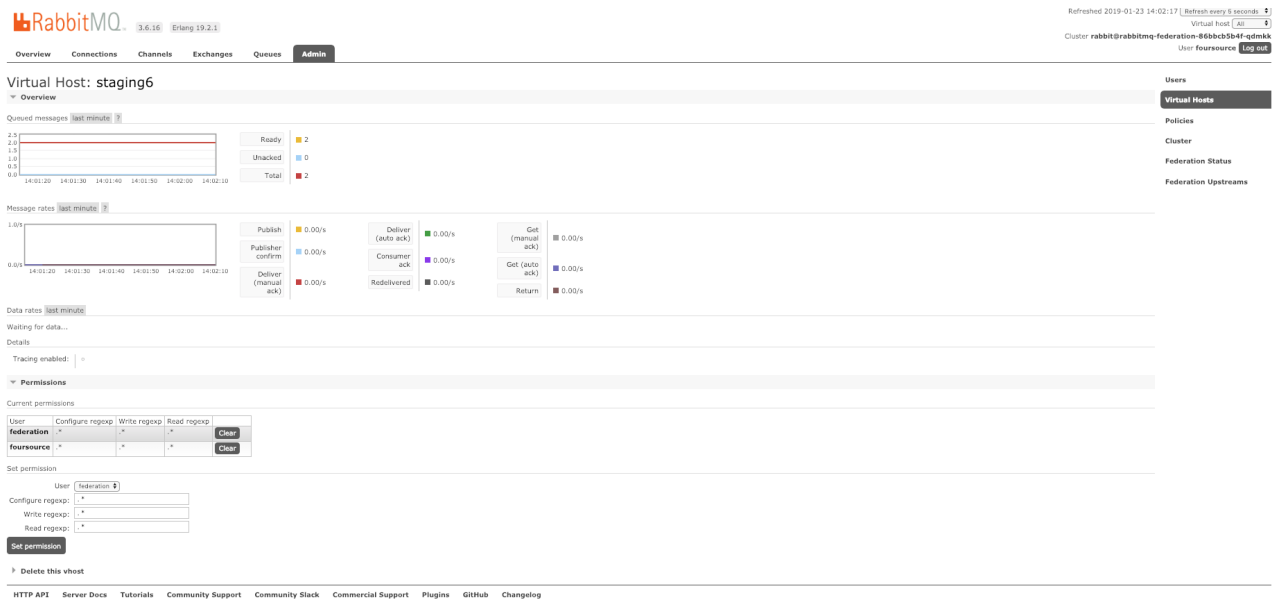
rabbitmq-plugins enable rabbitmq_federation_management

Upstream and Downstream configuration

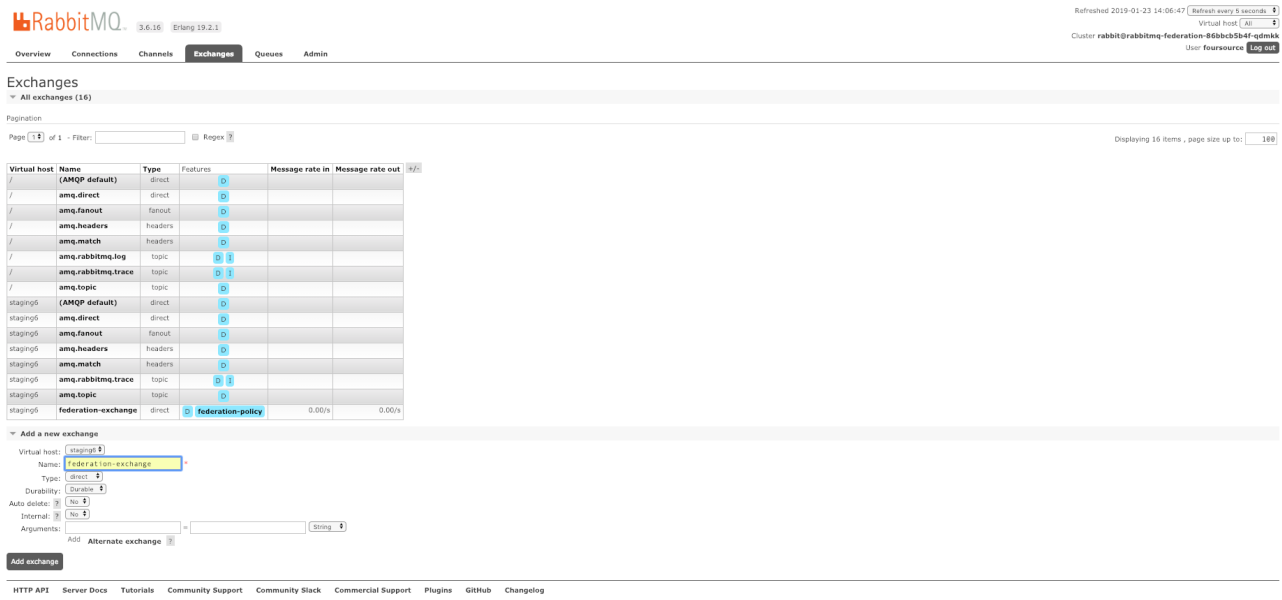
Add a new user, example“federation” with “management” tag

Add a virtual host, example “staging6”

Add permissions on the virtual host “staging6” for the user “federation”

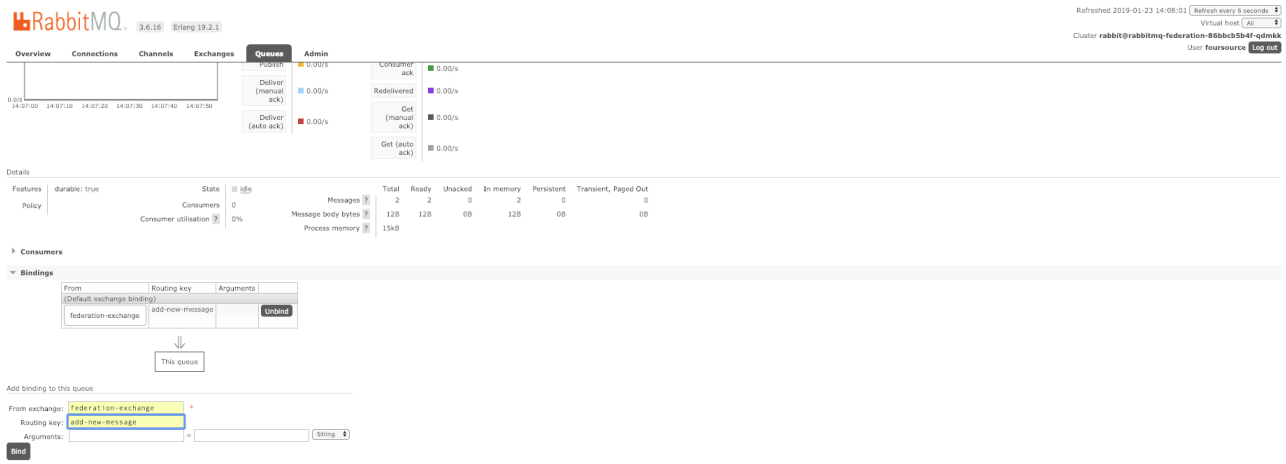


Create a new exchange, for example "federation-exchange”



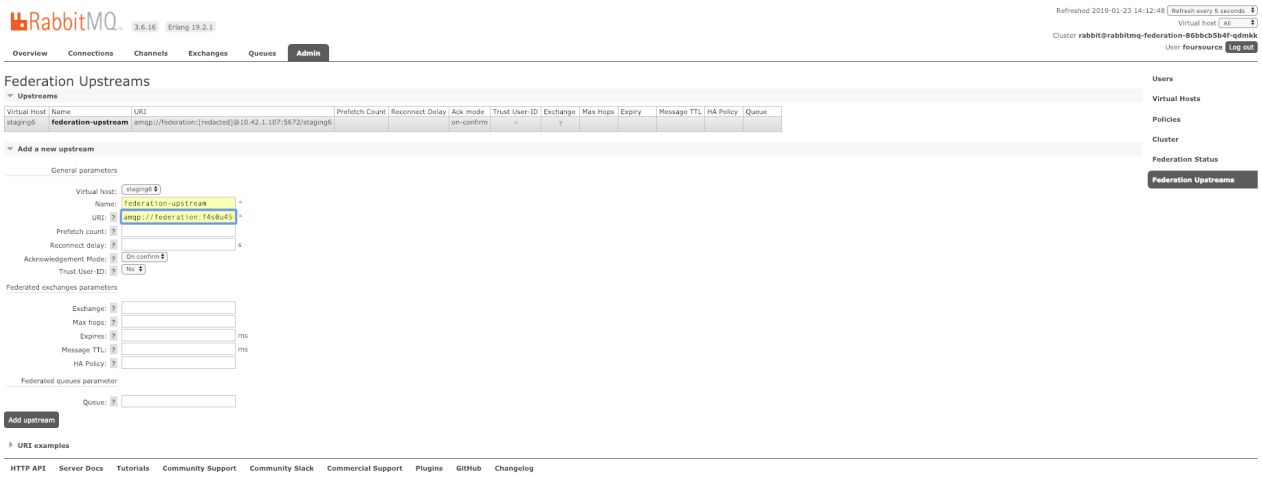
Add a new queue, for example "federation”

Add new binding for the queue “federation”, from exchange “federation-exchange” routing key “add-new-message”



Downstream configuration

Create a new federation upstream, example “federation-upstream”, uri “amqp://federation:f4s0u45e@10.42.1.107:5672/staging6”



Create a new policy, example “federation-policy”, pattern “federation-exchange”, definition “federation-upstream” = “federation-upstream”

Check the federation status

Try to send a message from the upstream exchange “federation-exchange” with routing key “add-new-message” to the downstream

Check if the downstream received the message