# Qpid extensions to AMQP

## Overview

This page is an attempt to collect in a single place all the extensions that have been made (through the use of arguments, options, etc.) to AMQP across the Qpid Java and C++ Brokers.

Ultimately the aim is to try to get both brokers implementing as much common functionality as possible through common extensions - and to advertise which extensions are available in a common way, so that clients can take advantage of functions that are present (or work around functions that are not).

## Connection

### Connection.Start

Options are carried in the server-properties field.

| Name | C++ | Java | Description |
|---|---|---|---|
| qpid.federation_tag | Y | Y | |

### Connection.Start-Ok

Options are carried in the client-properties field.

| Name | C++ | Java | Description |
|---|---|---|---|
| qpid.client_pid | Y | N | Allows the process id of a client to be reported by mgmt tools |
| qpid.client_ppid | Y | N | Allows the parent process id of a client to be reported by mgmt tools |
| qpid.client_process | Y | N | Allows the process name of a client to be reported by mgmt tools |

## Session

???

## Exchange

### Exchange.Declare

| Name | C++ | Java | Description |
|---|---|---|---|
| qpid.ive | Y | N | Specifies 'initial value exchange' behaviour is desired |
| qpid.msg_sequence | Y | N | Requests that the exchange sequences all messages routed through it and adds the sequence number to the message headers |

## Binding

### Exchange.Bind

Options are carried in the arguments field.

| Name | C++ | Java | Description |
|---|---|---|---|
| qpid.fed.origin | Y | Y | |

| Name | C++ | Java | Description |
|---|---|---|---|
| x-filter-jms-selector | N | Y* | (Java Broker topic exchange only currently) add a JMS Selector to the binding to filter messages against an SQL style query |

# Queue

## Queue.Declare

Options are carried in the arguments field.

| Name | C++ | Java | Description |
|---|---|---|---|
| no-local | Y | Y | (AMQP 0-10 only). Specifies that the queue should discard any messages enqueued by sessions on the same connection as that which declares the queue |
| qpid.policy_type | Y | N | Valid values "reject", "ring", "self-destruct" |
| qpid.max_size | Y | N | Defines the maximum size of message data (in bytes) that a queue can contain before the action dictated by the policy_type is taken. |
| qpid.max_count | Y | N | Defines the maximum number of messages that a queue can contain before the action dictated by the policy_type is taken. |
| qpid.file_count | Y | N | This is really a property of a particular store implementation (sets the number of files to use for the queue's 'journal') |
| qpid.file_size | Y | N | This is really a property of a particular store implementation (sets the size of the files to use for the queue's 'journal') |
| qpid.last_value_queue | Y | Y | Enables last value queue behaviour |
| qpid.last_value_queue_key | Y | Y | Defines the key to use for LVQ |
| qpid.last_value_queue_no_browse | Y | N | Enables special mode for last value queue behaviour (see QPID-2104), now deprecated |
| qpid.queue_msg_sequence | Y | N | Causes a sequence number to be added to headers of enqueued messages (non-persistent at present) |
| qpid.trace.id | Y | Y | Adds the given trace id as to the application header "x-qpid.trace" in messages sent from the queue |
| qpid.trace.exclude | Y | Y | Does not send on messages which include one of the given (comma separated) trace ids |
| x-qpid-priorities | Y | Y | Defines the number of distinct priority levels supported by the queue |
| x-qpid-maximum-message-age | N | Y | Specifies that if the oldest message on the queue gets above this age then alerts should be sent |
| x-qpid-maximum-message-size | Y | Y | Specifies that if the queue gets above this size (in bytes) an alert should be sent |
| x-qpid-maximum-message-count | Y | Y | Specified that if the queue gets above this size (in message count) an alert should be sent |
| x-qpid-minimum-alert-repeat-gap | Y | Y | Specified the minimum time gap between consecutive alerts |

| x-qpid-capacity | N | Y | Defines the size of the queue in bytes at which flow control on producers will be brought into affect |
| x-qpid-flow-resume-capacity | N | Y | Defines the size on bytes of the queue when flow control will be rescinded |
| qpid.flow_stop_count | Y | N | Defines the queue depth in messages at which flow control of producer will come into affect |
| qpid.flow_resume_count | Y | N | Defines the queue depth in messages at which inflow from producers will no longer be restricted |
| qpid.flow_stop_size | Y | N | Defines the queue depth in bytes at which flow control of producer will come into affect |
| qpid.flow_resume_size | Y | N | Defines the queue depth in bytes at which inflow from producers will no longer be restricted |
| qpid.alert_size | Y | N | Specifies that if the queue gets above this size (in bytes) an alert should be sent (alias for x-qpid-maximum-message-size) |
| qpid.alert_count | Y | N | Specified that if the queue gets above this size (in message count) an alert should be sent (alias for x-qpid-maximum-message-count) |
| qpid.alert_repeat_gap | Y | N | Specified the minimum time gap between consecutive alerts (alias for x-qpid-minimum-alert-repeat-gap) |
| qpid.priorities | Y | N | Defines the number of distinct priority levels supported by the queue (alias for x-qpid-priorities) |
| qpid.auto_delete_timeout | Y | N | Delays auto-deletion of the queue by the specified number of seconds |
| qpid.browse-only | Y | N | All users of queue are forced to browse. Limit queue size with ring, LVQ, or TTL. |

## Subscription

### Message.Subscribe (Basic.Consume in 0-8/0-9)

| Name | C++ | Java | Description |
| --- | --- | --- | --- |
| x-filter-jms-selector | N | Y | add a JMS Selector to the subscription to filter messages against an SQL style query |
| x-filter-no-consume | N | Y | (0-8/0-9 only) Implements browsing for 0-8/0-9 - messages sent on the subscription are not acquired |
| x-filter-auto-close | N | Y | (0-8/0-9 only) The server closes the subscription when the queue becomes empty |