Creating a Broker Instance

A broker instance is the directory containing all the configuration and runtime data, such as logs and data files, associated with a broker process. It is recommended that you do *not* create the instance directory under `${ARTEMIS_HOME}`. This separation is encouraged so that you can more easily upgrade when the next version of ActiveMQ Artemis is released.
On Unix systems, it is a common convention to store this kind of runtime data under the `/var/lib` directory. For example, to create an instance at '/var/lib/mybroker', run the following commands in your command line shell:

```
cd /var/lib
${ARTEMIS_HOME}/bin/artemis create mybroker
```

A broker instance directory will contain the following sub directories:

- `bin`: holds execution scripts associated with this instance.
- `etc`: hold the instance configuration files
- `data`: holds the data files used for storing persistent messages
- `log`: holds rotating log files
- `tmp`: holds temporary files that are safe to delete between broker runs

At this point you may want to adjust the default configuration located in the `etc` directory.

Options

There are several options you can use when creating an instance.

For a full list of updated properties always use:

```
$./artemis help create
NAME
        artemis create - creates a new broker instance

SYNOPSIS
        artemis create [--addresses <addresses>] [--aio] [--allow-anonymous]
                [--autocreate] [--blocking] [--cluster-password
<clusterPassword>]
                [--cluster-user <clusterUser>] [--clustered] [--data <data>]
                [--default-port <defaultPort>] [--disable-persistence]
                [--encoding <encoding>] [--etc <etc>] [--failover-on-shutdown]
[--force]
                [--global-max-size <globalMaxSize>] [--home <home>] [--host
<host>]
                [--http-host <httpHost>] [--http-port <httpPort>]
                [--java-options <javaOptions>] [--mapped] [--max-hops
<maxHops>]
                [--message-load-balancing <messageLoadBalancing>] [--name
<name>]
                [--nio] [--no-amqp-acceptor] [--no-autocreate] [--no-autotune]
                [--no-fsync] [--no-hornetq-acceptor] [--no-mqtt-acceptor]
                [--no-stomp-acceptor] [--no-web] [--paging] [--password
<password>]
```

```
                [--ping <ping>] [--port-offset <portOffset>] [--queues
<queues>]
                [--replicated] [--require-login] [--role <role>] [--shared-
store]
                [--silent] [--slave] [--ssl-key <sslKey>]
                [--ssl-key-password <sslKeyPassword>] [--ssl-trust <sslTrust>]
                [--ssl-trust-password <sslTrustPassword>] [--use-client-auth]
                [--user <user>] [--verbose] [--] <directory>

 OPTIONS
        --addresses <addresses>
            Comma separated list of addresses

        --aio
            Sets the journal as asyncio.

        --allow-anonymous
            Enables anonymous configuration on security, opposite of
            --require-login (Default: input)

        --autocreate
            Auto create addresses. (default: true)

        --blocking
            Block producers when address becomes full, opposite of --paging
            (Default: false)

        --cluster-password <clusterPassword>
            The cluster password to use for clustering. (Default: input)

        --cluster-user <clusterUser>
            The cluster user to use for clustering. (Default: input)

        --clustered
            Enable clustering

        --data <data>
            Directory where ActiveMQ data are stored. Paths can be absolute or
            relative to artemis.instance directory ('data' by default)

        --default-port <defaultPort>
            The port number to use for the main 'artemis' acceptor (Default:
            61616)

        --disable-persistence
            Disable message persistence to the journal

        --encoding <encoding>
            The encoding that text files should use

        --etc <etc>
            Directory where ActiveMQ configuration is located. Paths can be
absolute or
            relative to artemis.instance directory ('etc' by default)

        --failover-on-shutdown
            Valid for shared store: will shutdown trigger a failover?
(Default:
            false)
```

```
        --force
            Overwrite configuration at destination directory

        --global-max-size <globalMaxSize>
            Maximum amount of memory which message data may consume (Default:
            Undefined, half of the system's memory)

        --home <home>
            Directory where ActiveMQ Artemis is installed

        --host <host>
            The host name of the broker (Default: 0.0.0.0 or input if
clustered)

        --http-host <httpHost>
            The host name to use for embedded web server (Default: localhost)

        --http-port <httpPort>
            The port number to use for embedded web server (Default: 8161)

        --java-options <javaOptions>
            Extra java options to be passed to the profile

        --mapped
            Sets the journal as mapped.

        --max-hops <maxHops>
            Number of hops on the cluster configuration

        --message-load-balancing <messageLoadBalancing>
            Load balancing policy on cluster. [ON_DEMAND (default) | STRICT |
            OFF]

        --name <name>
            The name of the broker (Default: same as host)

        --nio
            Sets the journal as nio.

        --no-amqp-acceptor
            Disable the AMQP specific acceptor.

        --no-autocreate
            Disable Auto create addresses.

        --no-autotune
            Disable auto tuning on the journal.

        --no-fsync
            Disable usage of fdatasync (channel.force(false) from java nio) on
            the journal

        --no-hornetq-acceptor
            Disable the HornetQ specific acceptor.

        --no-mqtt-acceptor
            Disable the MQTT specific acceptor.
```

--no-stomp-acceptor
   Disable the STOMP specific acceptor.

--no-web
   Remove the web-server definition from bootstrap.xml

--paging
   Page messages to disk when address becomes full, opposite of
   --blocking (Default: true)

--password <password>
   The user's password (Default: input)

--ping <ping>
   A comma separated string to be passed on to the broker config as
   network-check-list. The broker will shutdown when all these
   addresses are unreachable.

--port-offset <portOffset>
   Off sets the ports of every acceptor

--queues <queues>
   Comma separated list of queues.

--replicated
   Enable broker replication

--require-login
   This will configure security to require user / password, opposite
of
   --allow-anonymous

--role <role>
   The name for the role created (Default: amq)

--shared-store
   Enable broker shared store

--silent
   It will disable all the inputs, and it would make a best guess for
   any required input

--slave
   Valid for shared store or replication: this is a slave server?

--ssl-key <sslKey>
   The key store path for embedded web server

--ssl-key-password <sslKeyPassword>
   The key store password

--ssl-trust <sslTrust>
   The trust store path in case of client authentication

--ssl-trust-password <sslTrustPassword>
   The trust store password

--use-client-auth

```
            If the embedded server requires client authentication

        --user <user>
            The username (Default: input)

        --verbose
            Adds more information on the execution

        --
            This option can be used to separate command-line options from the
            list of argument, (useful when arguments might be mistaken for
            command-line options

        <directory>
            The instance directory to hold the broker's configuration and
data.
            Path must be writable.
```

Some of these properties may be mandatory in certain configurations and the system may ask you for additional input.

```
./artemis create /usr/server
Creating ActiveMQ Artemis instance at: /user/server

--user: is a mandatory property!
Please provide the default username:
admin

--password: is mandatory with this configuration:
Please provide the default password:


--allow-anonymous | --require-login: is a mandatory property!
Allow anonymous access?, valid values are Y,N,True,False
y

Auto tuning journal ...
done! Your system can make 0.34 writes per millisecond, your journal-buffer-
timeout will be 2956000

You can now start the broker by executing:

   "/user/server/bin/artemis" run

Or you can run the broker in the background using:

   "/user/server/bin/artemis-service" start
```

Starting and Stopping a Broker Instance

Assuming you created the broker instance under `/var/lib/mybroker` all you need to do start running the broker instance is execute:
```
/var/lib/mybroker/bin/artemis run
```
Now that the broker is running, you can optionally run some of the included examples to verify the the broker is running properly.

To stop the Apache ActiveMQ Artemis instance you will use the same `artemis` script, but with the `stop` argument. Example:

```
/var/lib/mybroker/bin/artemis stop
```
Please note that Apache ActiveMQ Artemis requires a Java 7 or later runtime to run.

By default the `etc/bootstrap.xml` configuration is used. The configuration can be changed e.g. by running `./artemis run -- xml:path/to/bootstrap.xml` or another config of your choosing.
Environment variables are used to provide ease of changing ports, hosts and data directories used and can be found in `etc/artemis.profile` on linux and `etc\artemis.profile.cmd` on Windows.