

AEROSPIKE

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# Monitoring

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## Objectives

At the end of this module, you will be able to use:

- Aerospike Management Console
- asadm – CLI for administering Aerospike
- asloglatency – CLI for looking at server latency

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## Aerospike Management Console (AMC)

## Aerospike Management Console (AMC)

The AMC is a web interface to managing/monitoring the Aerospike database.

- Cluster summary
- Node info
- Storage info
- Definitions
- Jobs
- Alerts
- Cross Datacenter Replication (XDR) stats
- Latency stats
- Backup/restore
- Edit configuration

AMC Community Edition is for Monitoring only.

AMC Enterprise Edition includes management functions.

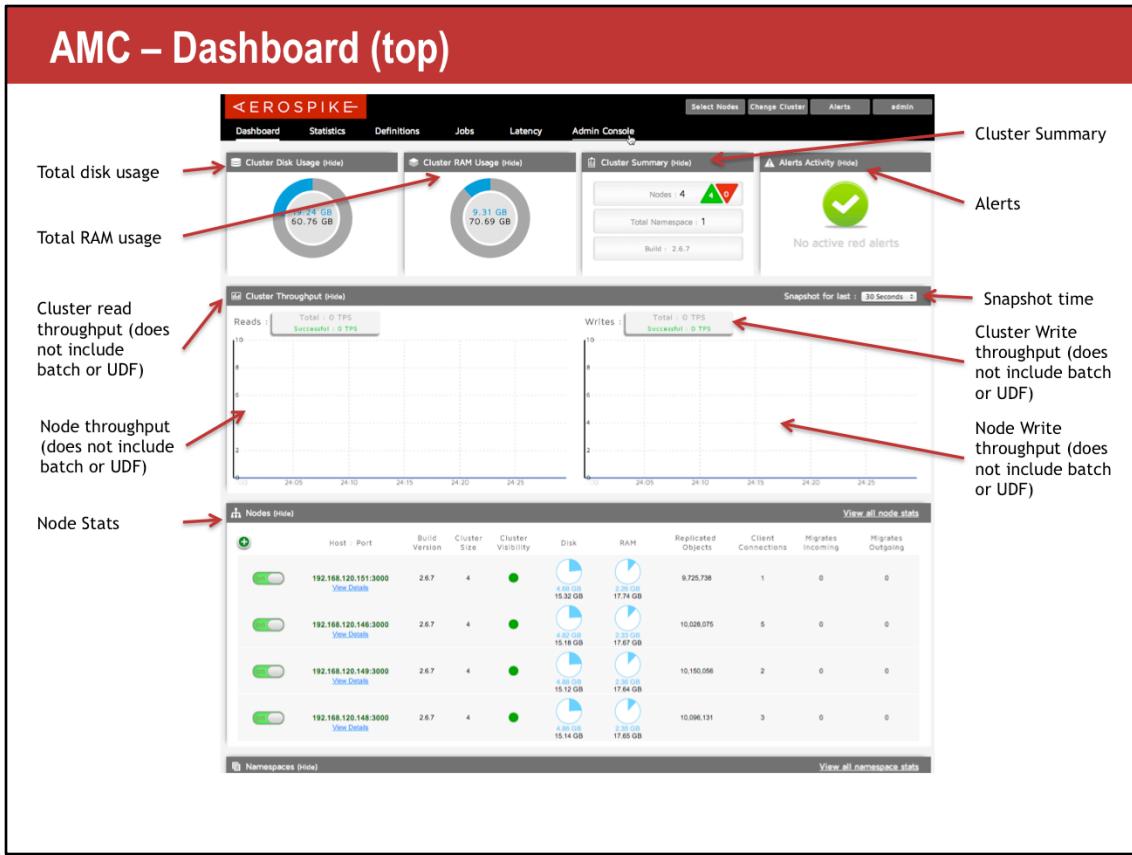
This class is intended for AMC Community Edition, but we do cover a few Enterprise Edition features.

## AMC - Dashboard

The AMC Dashboard provides many of the high level health statistics. This is often used in NOCs to see if there are any problems with the Aerospike clusters.

A listing of different plug-ins is also available at:

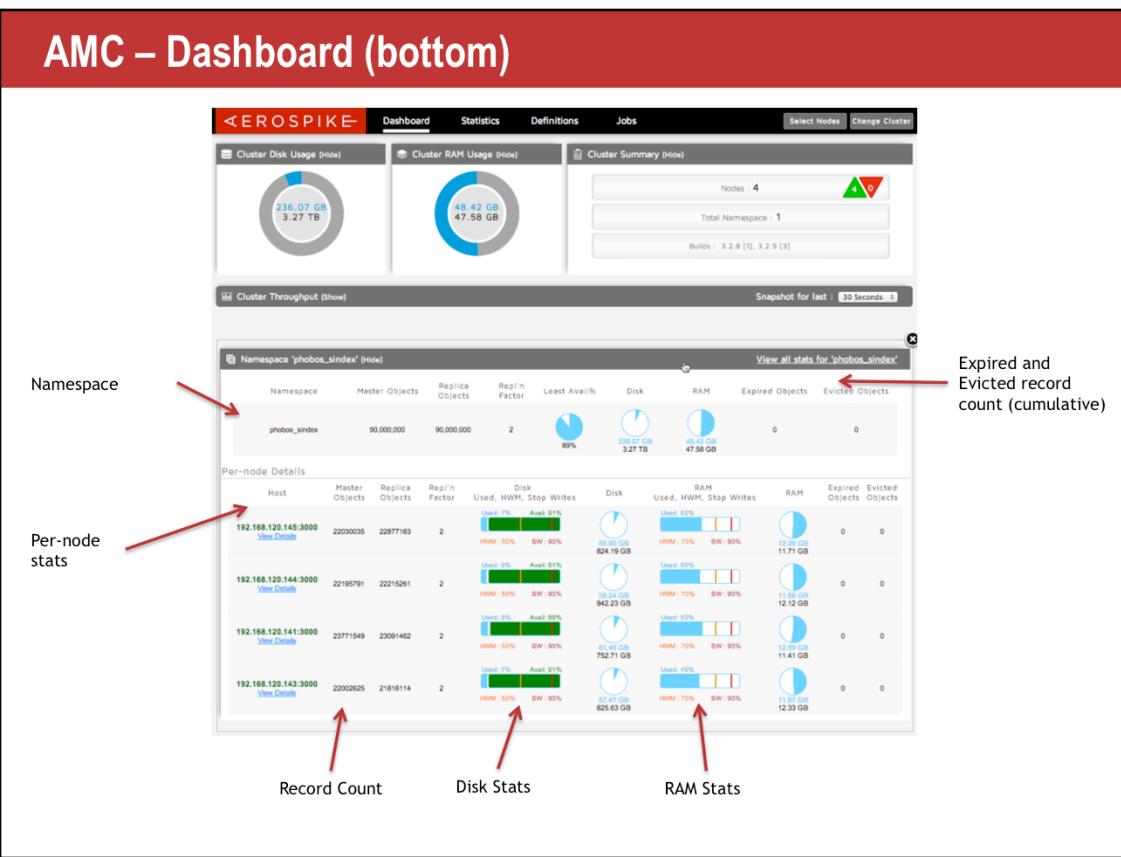
<http://www.aerospike.com/docs/operations/monitor/>



This interface is sometimes used in NOCs.

From the TOP:

- The Disk and RAM usage are marked in blue as a fraction of the total available space.
- The Cluster Summary shows the number of nodes (total) as well has how many are up (GREEN) and down (RED), a count of the number of namespaces, and the current build number. Be careful as it is possible that individual nodes may be on a different version.
- The Alerts Activity panel is only available in the Enterprise Edition. It is missing in the Community Edition.



In the Namespace panel, you see the high level information for each namespace.

The Per-node section will show the detail for each node in the cluster.

One special thing to note is that the expired and evicted record counts are cumulative, so you should look at the number increasing rather than the static value.

## AMC - Statistics

The statistics page shows all statistics and configuration variables related to:

- Nodes
- Namespaces
- Secondary Indexes

These statistics show how these are being used.

These interfaces can be used to quickly find where there are differences in the cluster.

## AMC – Statistics: Nodes

The screenshot shows the Aerospire AMC Statistics: Nodes interface. A red arrow labeled "Select 'Statistics'" points to the "Statistics" tab in the top navigation bar. Another red arrow labeled "Select 'Nodes'" points to the "Nodes" radio button under the "View Attributes For (Hide)" dropdown. A third red arrow labeled "Search for attributes" points to the search input field. A fourth red arrow labeled "Change refresh interval" points to the "Refresh Interval (Seconds)" dropdown set to 5, with an "Apply" button next to it. The main table displays various configuration attributes across four nodes: 192.168.120.145:3000, 192.168.120.144:3000, 192.168.120.141:3000, and 192.168.120.143:3000.

Attribute Name	192.168.120.145:3000	192.168.120.144:3000	192.168.120.141:3000	192.168.120.143:3000
1 accounting-patch	N/A	N/A	N/A	N/A
2 address	192.168.120.145:3000	192.168.120.144:3000	192.168.120.141:3000	192.168.120.143:3000
3 allow-inline-transactions	true	true	true	true
4 auto-dur	false	false	false	false
5 auto-undr	false	false	false	false
6 batch-max-requests	5000	5000	5000	5000
7 batch-priority	200	200	200	200
8 batch-threads	4	4	4	4
9 batch-errors	0	0	0	0
10 batch-initrate	544876	435946	329803	507914

You can quickly find differences between different nodes. While this is not always an indication of a problem, you can quickly find where the differences are.

There are hundreds of values. So if you know what value you want, enter in a search string in box (3) and hit enter. It will filter on just the ones that match the pattern.

## AMC – Statistics: Namespaces

The screenshot shows the Aerospike AMC Statistics: Namespaces page. The interface has a red header bar with the title "AMC – Statistics: Namespaces". Below the header is a navigation bar with tabs: Dashboard, Statistics (which is selected), Definitions, and Jobs. There are also "Select Namespaces" and "Change Cluster" buttons. A red arrow labeled "Select 'Namespaces'" points to the "Namespaces" radio button in the navigation bar. Another red arrow labeled "Select Namespace" points to the "Select Namespace" dropdown menu, which is set to "photos\_index". A third red arrow labeled "Search for attributes" points to the search input field "Type full or partial comma separated attribute name". A fourth red arrow labeled "Change refresh interval" points to the "Refresh Interval (Seconds)" input field, which is currently set to "5". The main content area displays a table of statistics for four nodes: 192.168.120.145:3000, 192.168.120.144:3000, 192.168.120.141:3000, and 192.168.120.143:3000. The table includes columns for Attribute Name, and values for various configuration parameters like allow\_versions, available\_bin-names, available\_pct, cold-start-evict-ttl, conflict-resolution-policy, current-time, data-in-memory, data-used-bytes-memory, default-ttl, and defrag-lvm-pct.

Attribute Name	192.168.120.145:3000	192.168.120.144:3000	192.168.120.141:3000	192.168.120.143:3000
1 allow_versions	false	false	false	false
2 available-bin-names	32761	32761	32761	32761
3 available_pct	91	91	89	91
4 cold-start-evict-ttl	4294967295	4294967295	4294967295	4294967295
5 conflict-resolution-policy	generation	generation	generation	generation
6 current-time	138227906	138227906	138227907	138227907
7 data-in-memory	false	false	false	false
8 data-used-bytes-memory	0	0	0	0
9 default-ttl	345600	345600	345600	345600
10 defrag-lvm-pct	50	50	50	50

Very similar to the Nodes, the Namespaces page shows statistics for the namespaces. You must select the namespace (3).

## AMC – Statistics: Secondary Indexes

The screenshot shows the AEROSPIKE AMC Statistics interface. At the top, there are tabs for Dashboard, Statistics (which is selected), Definitions, and Jobs. Below the tabs, there are buttons for Select Nodes and Change Cluster. A red arrow labeled "Select 'Statistics'" points to the Statistics tab. Another red arrow labeled "Select secondary index" points to a dropdown menu titled "Select Index" which contains options like str\_100\_idx, str\_uniq\_idx, and int\_uniq\_idx. A third red arrow labeled "Search for attributes" points to a search bar at the top of the main table area. A fourth red arrow labeled "Select 'Secondary Index'" points to a radio button labeled "Secondary Index". A fifth red arrow labeled "Change refresh interval" points to a "Refresh Interval (Seconds)" input field set to 10, with an "Apply" button next to it. The main table displays statistics for four nodes: 192.168.120.145.3000, 192.168.120.144.3000, 192.168.120.141.3000, and 192.168.120.143.3000. The table has columns for Attribute Name and four node values. The first row shows attributes avg\_record\_size, avg\_selectivity, data-max-memory, and data\_memory\_used, all with N/A values across all nodes. The second row shows g\_data\_memory\_used with values N/A, N/A, N/A, and N/A. The third row shows go-max-units with values 1000, 1000, 1000, and 1000. The fourth row shows gc-period with values 1000, 1000, 1000, and 1000. The fifth row shows histogram with values false, false, false, and false. The sixth row shows lbt\_memory\_used with values 2304437432, 2293911200, 2425802648, and 2231595976. The seventh row shows ignore-not-sync with values true, true, true, and true.

Attribute Name	192.168.120.145.3000	192.168.120.144.3000	192.168.120.141.3000	192.168.120.143.3000
1 avg_record_size	N/A	N/A	N/A	N/A
2 avg_selectivity	N/A	N/A	N/A	N/A
3 data-max-memory	18446744073709551615	18446744073709551615	18446744073709551615	18446744073709551615
4 data_memory_used	N/A	N/A	N/A	N/A
5 g_data_memory_used	N/A	N/A	N/A	N/A
6 go-max-units	1000	1000	1000	1000
7 gc-period	1000	1000	1000	1000
8 histogram	false	false	false	false
9 lbt_memory_used	2304437432	2293911200	2425802648	2231595976
10 ignore-not-sync	true	true	true	true

You can also see the attributes for secondary indexes. In this case you must select both the namespace and the secondary index (3).

## AMC - Definitions

The Definitions page shows how the following are defined:

- Namespaces
- User Defined Functions (UDFs)

## AMC – Definitions: Namespaces

The screenshot shows the Aerospike Management Console (AMC) interface for the 'Definitions: Namespaces' page. The top navigation bar includes 'AEROSPIKE', 'Dashboard', 'Statistics', 'Definitions' (which is highlighted), and 'Jobs'. A 'Change Cluster' button is also present.

Annotations on the left side point to specific sections:

- 'Select "Namespace"' points to the 'Select Namespace' dropdown menu.
- 'Select the namespace' points to the dropdown menu where 'phobos\_index' is selected.
- 'Secondary Indexes' points to the 'Secondary Index (Hide)' section, which lists three index entries:

Index Name	Bin	Set	Bin Type	Synced on all nodes?
str_100_idx	str_100_bin	longevity	TEXT	YES
str_uniq_idx	str_uniq_bin	longevity	TEXT	YES
int_uniq_idx	int_uniq_bin	longevity	INT SIGNED	YES

- 'Sets' points to the 'Sets (Hide)' section, which shows one set named 'longevity' with the following details:

Set	Objects	Stop Writes Count	Evict HWM Count	Delete	Enable XDR
longevity	46863011	0	0	false	use-default

- 'Storage' points to the 'Storage (Hide)' section, which lists attached storage devices:

device	Devices	Synced on all nodes?
/dev/sdb, /dev/sdc, /dev/sdd, /dev/hde		YES

Red numbered circles (1 through 6) highlight specific UI elements across these sections.

On the Definitions: Namespaces page, you can see statistics for Secondary Indexes, Sets, and what storage is attached to the namespace.

Of particular importance for Secondary Indexes is whether or not the index is synchronized on all nodes. This refers to Secondary Indexes only. If they are not synchronized, queries based on the secondary index will fail with an error.

## AMC – Definitions: User Defined Functions

Select "Definitions"

Select "UDF"

View Definitions For (Hide)

Namespace UDF

UDF (Hide) 3

UDF File Name	UDF File Type	Cache Size	Synced on all nodes?
loop_udf.lua	LUA	n/a	YES

User Defined Functions (UDFs) are code that are run on the Aerospike server rather than the client (similar to stored procedures).

UDFs are managed automatically by the Aerospike database, but must be registered. Once it has been registered, it will be internally distributed to all nodes in the cluster. If there has been a problem the the "Synced on all nodes?" column will show "NO"

## AMC - Jobs

The Jobs page allows you to see what jobs are currently running on the server.

Because most queries are fast, you will only be able to see very long running ones.

## AMC – Jobs

The screenshot shows the 'AMC – Jobs' interface. At the top, there is a red header bar with the title 'AMC – Jobs'. Below it is a navigation bar with several tabs: 'Dashboard', 'Statistics', 'Definitions', 'Jobs' (which is highlighted with a red circle and has a red arrow pointing to it labeled 'Select "Jobs"'), 'Select Nodes', and 'Change Cluster'. The main content area is titled 'AEROSPIKE' and contains a sub-section titled 'Running Jobs (Hide)' with a red circle labeled '2'. Below this, there is a search bar and several filter options: 'Host : Port', 'Job ID', 'Progress', 'Status', 'Memory', 'Namespace', 'Run Time', 'Module', and 'Type'. A red arrow points from the text 'Currently running jobs will be shown.' to the 'Running Jobs' section.

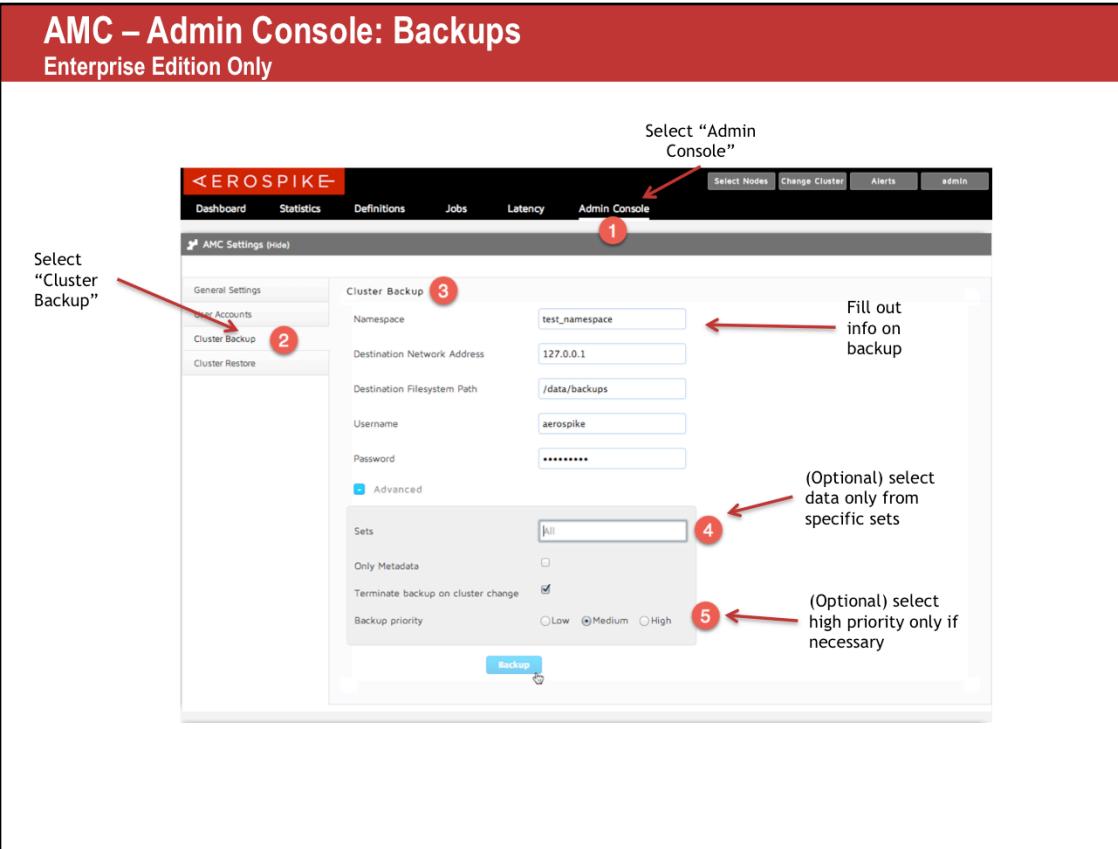
Jobs like scans and queries may show up in the Jobs page. Be aware that many queries are very short duration and may not show up on this interface.

## AMC – Admin Console

Enterprise Edition Only

The AMC admin console gives you added functionality to manage a cluster.

- Backup a cluster
- Restore a cluster
- Dynamically change configuration node variables
- Dynamically change configuration namespace variables
- View Cross Datacenter Replication (XDR) stats



Backups are done on a namespace by namespace basis and will be done on the AMC server.

The export will be in human readable format, but is not consistent. It is possible for a record to appear more than once. This normally fixes itself during the restore process. But if you will be importing the backup file into another system you should know that records may have multiple entries with different generations.

As an option, you can specify to only backup specific sets.

We generally recommend using medium priority, which places a lower load on the cluster, but still should complete in a reasonable time. Use "High" if you must have the backup and are willing to take the risk of them impacting traffic. Use "Low" if you don't want to impact traffic and are ok with the backup taking a long time.

Performance will depend on how much data, how many nodes, etc, but it will take a long time.

## AMC – Admin Console: Restore

Enterprise Edition Only

Select "Admin Console"

Select "Cluster Backup"

1

2

3

4

5

6

Fill out info on restore

(Optional) Change namespace name

(Optional) Alter the number of threads only if you need to restore quickly.

(Optional) Rarely used.

The restoration works in reverse of the backup.

One important note is that if you are restoring because an application error has lead to corruption of data, you can select to "Ignore Generation Number". This will let you restore the old data without wiping out everything. Otherwise, you will usually want to leave this unselected.

## AMC – Admin Console: Change Node Variables

Enterprise Edition Only

Select "Admin Console"

Select "Nodes"

Edit variables

Changes will be made dynamically (if possible) to all nodes in the cluster.

Attribute Name	Value	192.168.120.151.3000	192.168.120.146.3000	192.168.120.149.3000	192.168.120.148.3000
1 accepting-patch	New Value	0	0	0	0
2 address	New Value	192.168.120.151.3000	192.168.120.146.3000	192.168.120.149.3000	192.168.120.148.3000
3 auto-durun	New Value	false	false	false	false
4 auto-undrun	New Value	false	false	false	false
5 batch-max-requests	New Value	9000	9000	9000	9000
6 batch-priority	New Value	200	200	200	200
7 batch-threshold	New Value	4	4	4	4
8 defrag-queue-escape	New Value	10	10	10	10
9 defrag-queue-hwm	New Value	20	20	20	20
10 defrag-queue-lwm	New Value	5	5	5	5
11 defrag-queue-priority	New Value	1	1	1	1
12 dump-message-above-size	New Value	134217728	134217728	134217728	134217728
13 enable-xdr	New Value	true	true	true	true
14 fabric-port	New Value	3001	3001	3001	3001
15 fb-health-bad-pct	New Value	0	0	0	0
16 fb-health-good-pct	New Value	50	50	50	50
17 fb-health-msg-per-burst	New Value	0	0	0	0
18 fb-health-msg-timeout	New Value	200	200	200	200
19 heartbeat-address	New Value	239.2.0.1	239.2.0.1	239.2.0.1	239.2.0.1
20 heartbeat-interval	New Value	150	150	150	150

With the Enterprise Edition AMC you can make changes to the node configuration dynamically. That is, the AMC can change the value of many variables while the server is still operating.

## AMC – Admin Console: Change Namespace Vars

Enterprise Edition Only

The screenshot shows the KEROSPIKE Admin Console interface. At the top, there is a navigation bar with links for Dashboard, Statistics, Definitions, Jobs, Latency, Admin Console, Select Nodes, Change Cluster, Alerts, and admin. A red arrow points to the "Admin Console" link. Below the navigation bar, a sub-menu titled "AMC Settings (Show)" is visible. Another red arrow points to the "Select Namespace" dropdown, which is set to "test". A third red arrow points to the "Edit variables" link, which is highlighted in blue.

**Select "Namespaces"**

**Select "Admin Console"**

**Edit variables**

**Changes will be made dynamically (if possible) to all nodes in the cluster.**

Attribute	Name	Value	192.168.120.151.3000	192.168.120.146.3000	192.168.120.149.3000	192.168.120.148.3000
1	allow-versions	New Value	N/A	N/A	N/A	N/A
2	data-in-memory	New Value	true	true	true	true
3	default-ttl	New Value	0	0	0	0
4	defrag-wm-pct	New Value	50	50	50	50
5	defrag-max-blocks	New Value	5000	5000	5000	5000
6	defrag-period	New Value	1	1	1	1
7	defrag-startup-minimum	New Value	0	0	0	0
8	evict-pct	New Value	N/A	N/A	N/A	N/A
9	file	New Value	/shardidc/test/data	/shardidc/test/data	/shardidc/test/data	/shardidc/test/data
10	flexible	New Value	21474836480	21474836480	21474836480	21474836480
11	high-water-disk-pct	New Value	80	80	80	80
12	high-water-memory-pct	New Value	80	80	80	80
13	high-water-pct	New Value	N/A	N/A	N/A	N/A
14	load-en-startup	New Value	true	true	true	true
15	low-water-pct	New Value	0	0	0	0
16	max-ttl	New Value	0	0	0	0
17	memory-size	New Value	21474836480	21474836480	21474836480	21474836480
18	name	New Value	test	test	test	test
19	node	New Value	192.168.120.151.3000	192.168.120.146.3000	192.168.120.149.3000	192.168.120.148.3000
20	node_status	New Value	on	on	on	on

You can do likewise dynamically change the Namespace variables.

## AMC – Admin Console: Change XDR Vars

Enterprise Edition Only

Select “Admin Console”

Select “XDR”

Edit variables

Changes will be made dynamically (if possible) to all nodes in the cluster.

Attr/Attribute Name	Value	192.168.120.151:3000	192.168.120.146:3000	192.168.120.149:3000	192.168.120.148:3000
1 address	New Value	192.168.120.151:3000	192.168.120.146:3000	192.168.120.149:3000	192.168.120.148:3000
2 enable_xdr	New Value	N/A	N/A	N/A	N/A
3 forward_xdr-writes	New Value	N/A	N/A	N/A	N/A
4 node_status	New Value	on	on	on	on
5 stop-writes-xdr	New Value	N/A	N/A	N/A	N/A
6 xdr-batch-num-retry	New Value	0	0	0	0
7 xdr-batch-retry-sleep	New Value	0	0	0	0
8 xdr-check-data-before-delete	New Value	false	false	false	false
9 xdr-compression-threshold	New Value	N/A	N/A	N/A	N/A
10 xdr-forward-with-gencheck	New Value	N/A	N/A	N/A	N/A
11 xdr-hockey-manskip	New Value	5	5	5	5
12 xdr-wtbs-timeout	New Value	N/A	N/A	N/A	N/A
13 xdr-local-port	New Value	3000	3000	3000	3000
14 xdr-new-timout	New Value	0	0	0	0
15 xdr-read-batch-size	New Value	100	100	100	100
16 xdr-send-batch-size	New Value	100	100	100	100
17 xdr-shp-delay	New Value	0	0	0	0
18 xdr-shipping-enabled	New Value	true	true	true	true
19 xdr-threads	New Value	3	3	3	3
20 xdr-timeout	New Value	30000	30000	30000	30000

You can also dynamically alter the XDR variables.

A

asadm

## asadm

asadm is a command line tool used to track the health of an Aerospike cluster.

Typical syntax:

- `asadm [-h <host>[:<port>]] [-p <port>]`

This will put you into the asadm command line which looks like this:

**Admin>**

Hitting `<TAB>` will show you possible options.

While there are other options for asadm we will just try connecting to an instance.

The asadm does not need to be on the same host. You need only give asadm one host/IP address and it will connect to the other nodes in the cluster.

Just entering asadm without any parameters will put you into the local Aerospike node on port 3000.

## asadm – Commonly Used Commands

Subcommand: `help`

Displays the full syntax of the `asadm` command.

## asadm – Commonly Used Commands

Subcommand: `info`

Displays cluster info similar to the dashboard on the AMC.

```
Admin> info
=====
Service Information
-----
Node      Build   Cluster    Cluster   Free   Free   Migrates   Principal   Objects   Uptime
      .     .       .       .       .       .       .       .       .       .       .
u10  3.5.3-62-ge9e92ce  N/E   True     N/E     N/E   N/E     N/E     N/E   N/E
u12  3.5.3-62-ge9e92ce  3   True     True    89    30  (0,0)  u12    57.277 M  15:38:53
u13  3.5.3-62-ge9e92ce  3   True     True    91    43  (0,0)  u12    57.480 M  10:03:27
Number of rows: 3

Network Information
-----
Node      Node Id      Pgdn      Ip      Client   Current   HB      HB
      .        .       .       .       .       .       .
u10  BB931F106CA0568  u10.citrusleaf.local:3000  192.168.120.110:3000  13891  163636730  0   694935
u12  *BB9BE0A05CA0568  u12.citrusleaf.local:3000  192.168.120.112:3000  2367   163636730  0   704077
u13  BB93AFl06CA0568  u13.citrusleaf.local:3000  192.168.120.113:3000  1821   163636730  0   469679
Number of rows: 3

Namespace Information
-----
Node      Namespace   Avail%   Evictions   Objects   Repl Factor   Stop   Disk   Disk   HWM   Mem   Mem   HWM   Stop
      .        .       .       .       .       .       .       .       .       .       .       .       .       .       .
u10    test        88       0   54.072 M   2   false   74.332 GB   10   50  15.721 GB   70   70   90
u12    test        87  3913203  57.277 M   2   false   74.799 GB   11   50  16.742 GB   70   70   90
u13    test        89       0   57.480 M   2   false   75.185 GB   9    50  13.582 GB   57   70   90
```

The most important things to note here are:

- The number of object are replicated.
- If the number of migrates is non-zero, the cluster is in a dynamic state.
- There are counters for the number of evicted objects, if this is increasing, the system is short on configured resources.

## asadm – Commonly Used Commands

Command: show stat

Displays node stats for each node in the cluster. You can select for a single set of statistics by choosing the statistic type:

- bins
- namespace
- service
- sets
- xdr (for Enterprise Edition)

```
Admin> show stat sets
~~~~~test longevity Set Statistics~~~~~
NODE          : u10        u13
n_objects     : 55976084   57480531
ns_name       : test       test
set-delete    : false      false
set-enable-xdr: use-default use-default
set-evict-hwm-count: 0      0
set-stop-write-count: 0      0
set_name      : longevity  longevity
```

There are hundreds of possible variables and just entering "stat" will show all values for all nodes in the cluster.

## asadm – Commonly Used Commands

Command: show stat

Displays node stats for each node in the cluster. The output can be very long, so filter with the "like" modifier.

```
Admin> show stat like total
-----Service Statistics-----
NODE      :   u10      u12      u13
total-bytes-disk : 800197705728 800197705728 948214693888
total-bytes-memory: 25769803776 25769803776 25769803776

----- test Namespace Statistics-----
NODE      :   u10      u12      u13
total-bytes-disk : 800197705728 800197705728 948214693888
total-bytes-memory: 25769803776 25769803776 25769803776
```

It is often easier to filter for just the variables you are interested in. Use the "like" will limit the variables to those that contain the string.

## asadm – Commonly Used Commands

Command: show config

Displays node configurations for each node in the cluster. The output can be made specific to specific areas:

- namespace
- network
- service
- xdr (for Enterprise Edition)

```
Admin> show config namespace
~~~~~ test Namespace Configuration~~~~~
NODE : u12
allow_versions : false
cold-start-evict-ttl : 4294967295
conflict-resolution-policy : generation
data-in-memory : false
default-ttl : 345600
defrag-lwm-pct : 50
defrag-queue-min : 0
defrag-sleep : 1000
defrag-startup-minimum : 10
dev : /dev/sdb,/dev/sdc,/dev/sdd,/dev/sde
disallow-null-setname : false
enable-xdr : true
evict-tenths-pct : 5
filesize : 17179869184
flush-max-ms : 1000
fsync-max-sec : 0
high-water-disk-pct : 50
high-water-memory-pct : 70
ldt-enabled : true
max-ttl : 0
max-write-cache : 67108864
memory-size : 25769803776
...
...
```

Each area contains a different set of configuration variables specific to the different contexts in the configuration file.

## asadm – Commonly Used Commands

Command: `asinfo -v`

Dynamically alters the configuration of the nodes in the cluster. The context will match the area in the configuration file. Not all variables are dynamically changeable.

Go to <http://www.aerospike.com/docs/reference/configuration/>.

### Configuration Parameters

The screenshot shows a web-based configuration interface for Aerospike. At the top, there is a search bar with the placeholder "Search: memory-". A red arrow points from this search bar to the text "Search for config parameter." Below the search bar, there is a table-like structure listing configuration parameters. The first row has a header "Parameter" and a "Context: namespace" column. The second row shows the "high-water-memory-pct" parameter. It has a "Context: namespace" column, a "Default: 60" column, and a "[dynamic]" status indicator. A red arrow points from this "[dynamic]" label to the text "'dynamic' means it can be changed without restarting the node." The third row shows the "memory-size" parameter, also with a "Context: namespace", a "Default: 4G" value, and a "[dynamic]" status indicator. Below the table, a note says "Showing 1 to 2 of 2 entries (filtered from 146 total entries)".

You may find that you need to change a configuration variable. First, you may want to determine if it can be changed without restarting the node.

While this is often true, it is not always true. You can find out if the parameter you want to change is by looking at the Aerospike web site.

## asadm – Commonly Used Commands

### Example

Command: `asinfo -v`

To update the amount of memory (RAM) used by the namespace "test" to 2 GB without restarting the nodes in the cluster. Issue the following command. Note that all nodes will be changed. The configuration file will NOT be altered.

```
Admin> asinfo -v "set-config:context=namespace;id=test;memory-size=2G"
u12 (192.168.120.112) returned:
ok
u13 (192.168.120.113) returned:
ok
u10 (192.168.120.110) returned:
ok
```

In this example we have now dynamically changed the amount of RAM used in the namespace "test" to 2 GB. Note that shrinking memory can have bad side effects.

## asadm – Commonly Used Commands

Command: show latency

Displays latency stats for how long requests take to be filled as measured on the server. This may differ significantly from the client latency measures. There are additional parameters to take a look back at a specific time or gather other metrics. Useful for determining throughput.

```
Admin> show latency
=====
-----proxy Latency-----
Node      Time   Ops/Sec >1Ms   >8Ms   >64Ms
Span
u10     22:59:33-GMT->22:59:43    0.0    0.0    0.0    0.0
u12     22:59:30-GMT->22:59:40    0.0    0.0    0.0    0.0
u13     22:59:35-GMT->22:59:45    0.0    0.0    0.0    0.0
Number of rows: 3

-----
-----query Latency-----
Node      Time   Ops/Sec >1Ms   >8Ms   >64Ms
Span
u10     22:59:33-GMT->22:59:43  1661.7  99.99  52.3   38.96
u12     22:59:30-GMT->22:59:40  1332.5  100.0   13.75  1.06
u13     22:59:35-GMT->22:59:45  1398.5  100.0   22.53  0.0
Number of rows: 3

-----
-----reads Latency-----
Node      Time   Ops/Sec >1Ms   >8Ms   >64Ms
Span
u10     22:59:33-GMT->22:59:43    0.0    0.0    0.0    0.0
u12     22:59:30-GMT->22:59:40    0.0    0.0    0.0    0.0
u13     22:59:35-GMT->22:59:45    0.0    0.0    0.0    0.0
Number of rows: 3

-----
-----udf Latency-----
Node      Time   Ops/Sec >1Ms   >8Ms   >64Ms
Span
u10     22:59:33-GMT->22:59:43    0.0    0.0    0.0    0.0
u12     22:59:30-GMT->22:59:40    0.0    0.0    0.0    0.0
u13     22:59:35-GMT->22:59:45    0.0    0.0    0.0    0.0
Number of rows: 3

-----
-----writes_master Latency-----
Node      Time   Ops/Sec >1Ms   >8Ms   >64Ms
Span
u10     22:59:33-GMT->22:59:43    4.0   100.0  100.0  100.0
u12     22:59:30-GMT->22:59:40  357.9   76.73  2.1   0.08
u13     22:59:35-GMT->22:59:45  334.8   75.84  1.67  0.06
Number of rows: 3

-----
-----writes_reply Latency-----
Node      Time   Ops/Sec >1Ms   >8Ms   >64Ms
Span
u10     22:59:33-GMT->22:59:43    4.0   100.0  100.0  100.0
u12     22:59:30-GMT->22:59:40  357.8   76.69  2.07  0.08
u13     22:59:35-GMT->22:59:45  334.8   75.84  1.67  0.06
Number of rows: 3
```

One of the most commonly used asadm commands is to measure latency.

Note that these are latencies as measured on the server, it is not possible to measure the client latencies from the Aerospike nodes. This command also shows the throughput for each node/type.

This command gives you the latencies for all nodes in the cluster for different measures:

**writes\_master:** These are the latency times for responds to writes from the master. Unless you have actively configured for asynchronous writes, this will be the same as the latency to any replica.

**writes\_reply:** These are the latency times for replica writes. This is normally the same as for writes\_master, unless you have configured differently.

**reads:** These are the latency times for reads. Aerospike does reads from a single node.

**udf:** The latency times for UDFs to run.

**proxy:** In cases where the cluster state is dynamic (nodes added/removed) it is possible that the node not have the data. Aerospike will automatically proxy the request for the client. These latency times are just for proxied requests.

**query:** The latency times for queries using secondary indexes.

## asmonitor – Commonly Used Commands

Command: collectinfo (not usually run from the asmonitor command line)

Sometimes you need to gather information for Aerospike support. This can be done using the collectinfo command. Note that you must have sudo/root privileges. This command uses the precursor to asadm called asmonitor.

```
[root@v15 ~]# sudo asmonitor -e "collectinfo"
Enter help for commands

3 hosts in cluster: 192.168.120.143:3000,192.168.120.144:3000,192.168.120.145:3000
Data collection for collect_ascheck in progress..
Data collection for collect_params in progress..
Data collection for collect_loginfo in progress..
Data collection for collect_readlogs in progress..
sh: line 1: 0: command not found
Data collection for collect_sys in progress..
Data collection for collect_shell in progress..
sh: dpkg: command not found
running shell command: tar -czvf /tmp/as_log_1408404265.16.log.tgz /tmp/as_log_1408404265.16.log
tar: Removing leading `/' from member names
/tmp/as_log_1408404265.16.log

FILE /tmp/as_log_1408404265.16.log and /tmp/as_log_1408404265.16.log.tgz saved. Please send it to support@aerospike.com
END OF ASCOLLECTINFO
```

This is being moved to asadm with the same parameters soon

A

asloglatency

## asloglatency

asloglatency is a command line tool used to find the latency of the server in log files for specific types of transactions.

Typical syntax

```
> asloglatency -h <histogram> -l <log_file> -f <time_from> -d <duration>
```

Option	Default	Description									
-l	/var/log/aerospike/aerospike.log	Log file to read from. Can be used to read from logs that have been rotated out.									
-h	[none]	(required) One of read, writes_master, writes_reply, udf, proxy, query									
-t	10	Analysis slice interval in seconds or time format. Time format is "HH:MM:SS"									
-f	tail	Time_from may be in either form "Aug 6 2014 22:10:13", "-3600", "-1:00:00". Default is to tail the file.									
-d		Maximum duration from which to analyze. Duration is in either form "3600" or "HH:MM:SS"									
-n	3	Number of buckets to display.									
-e	3	Show the 0-th and then every e-th bucket. Lower numbers show finer granularity. Examples: <table border="1"><tr><th>n</th><th>e</th><th>will show (ms)</th></tr><tr><td>3</td><td>3</td><td>1,8,64</td></tr><tr><td>7</td><td>1</td><td>1,2,4,8,16,32,64</td></tr></table>	n	e	will show (ms)	3	3	1,8,64	7	1	1,2,4,8,16,32,64
n	e	will show (ms)									
3	3	1,8,64									
7	1	1,2,4,8,16,32,64									

asloglatency will show the latencies taken from log files. These may be a considerable time in the past. This is very useful for seeing:

- when a problem started
- did the problem occur suddenly or over a long period of time

## asloglatency - example

Suppose there was an issue in read latency 12 hours ago that lasted for an hour. You wish to review the read latencies from 12 hours ago to 10 hours ago. You can issue the command:

```
> asloglatency -h reads -f -12:00:00 -d 2:00:00
```

```
reads
Aug 6, 2014 01:58:58
% > (ms)
slice-to (sec)      1      8      64  ops/sec
-----
01:59:08    10  1.13  0.04  0.00  4661.8
01:59:18    10  1.13  0.04  0.00  4661.8
01:59:28    10  1.13  0.04  0.00  4661.8
...
03:58:58    10  1.13  0.04  0.00  4661.8
03:59:08    10  1.13  0.04  0.00  4661.8
-----
avg            0.97  0.04  0.00  4188.0
max           1.34  0.05  0.00  4661.8
```

## Summary

What we have covered:

- Aerospike Management Console
- asadm
- asloglatency