



## Platform

- [Memcache Memory Size Support on pcrfclient](#), on page 1
- [Upgrade MongoDB from 3.6.17 to 4.0.27](#), on page 2
- [Upgrade MongoDB from 3.6.9 to 4.0.27](#), on page 3
- [Support for Ubuntu 18.04 LTS Version](#), on page 5

# Memcache Memory Size Support on pcrfclient

## Feature Summary and Revision History

**Table 1: Summary Data**

Applicable Product(s) or Functional Area	CPS
Applicable Platform(s)	Not Applicable
Default Setting	Enabled - Always-on
Related Changes in This Release	Not Applicable
Related Documentation	<i>CPS Installation Guide for VMware</i>

**Table 2: Revision History**

Revision Details	Release
First introduced	22.1.0

## Feature Description

The stale-session-cleaner uses memcached process on pcrfclient VMs. The memory requirements varies based on the deployment size. CPS supports changing the memcached memory size on pcrfclients. To support this, a new parameter `pcrfclient_memcache_memory_size` is added.

This parameter doesn't change memcached memory on other VMs.

For more information, see the *General Configuration Parameters* table in the *CPS Installation Guide for VMware*.

# Upgrade MongoDB from 3.6.17 to 4.0.27

## Feature Summary and Revision History

**Table 3: Summary Data**

Applicable Product(s) or Functional Area	CPS
Applicable Platform(s)	Not Applicable
Default Setting	Enabled - Always-on
Related Changes in This Release	Not Applicable
Related Documentation	Not Applicable

**Table 4: Revision History**

Revision Details	Release
First introduced	22.1.0

## Feature Description

In CPS 22.1.0, MongoDB has been upgraded from 3.6.17 to 4.0.27.

To verify MongoDB version on VMs, execute the following command from Cluster Manager:

```
cat /etc/broadhop/mongoConfig.cfg | grep -e '^MEMBER' -e '^ARBITER=' | cut -d= -f 2 | while
  read hnp; do echo
$hnp; mongo --quiet $hnp --eval "db.version()"; done
```




---

**Note** Post upgrade all the data members and arbiters for all the replica-sets must show the same MongoDB version.

---

## Configuration and Restrictions

During ISSM, only one new VM and one new replica-set is created with a new MongoDB version.

Table 5: Upgrade, Migration, or Backward Compatibility

Database	Attribute/Class	Description	Upgrade/Migration/Backward Compatibility
MongoDB Server: 4.0.27 MongoDB Client: 3.12.9	NA	Post ISSM, new VM is created with new MongoDB server version 4.0.27 which is not compatible with MongoDB java driver (client) version 3.7.1.  As a prerequisite, MongoDB java driver (client) version 3.12.9 should be installed on the CPS 21.1.0/21.2.0 systems prior to the ISSM to CPS 22.1.0 version.	MongoDB java driver (client) version 3.7.1 is not compatible with MongoDB server version 4.0.27.  As a prerequisite, MongoDB java driver (client) version should be updated to 3.12.9 which is compatible with MongoDB server version 4.0.27.

**Supported Versions**

CPS 19.5.0 and later releases

**Unsupported Versions**

Any CPS version prior to CPS 19.5.0

**Backup/Restore Considerations**

It is recommended to take the backup of critical databases, such as balance, SPR, and audit. For more information on backup and restore, see the *CPS Backup and Restore Guide*.

**Geo/HA Considerations**

During ISSM, a VM and a replica set member is newly created with only new mongo version.

**Troubleshooting:**

- Due to some reason if MongoDB upgrade fails, check the mongo upgrade log in the following log location:  
`/var/log/broadhop/scripts/mongo_upgrade.log`
- Rectify the issue and re-run the **mongo\_upgrade.py** again to successfully upgrade the MongoDB version.

## Upgrade MongoDB from 3.6.9 to 4.0.27

**Feature Summary and Revision History**

Table 6: Summary Data

Applicable Product(s) or Functional Area	vDRA
Applicable Platform(s)	Not Applicable

Default Setting	Enabled - Always-on
Related Changes in This Release	Not Applicable
Related Documentation	Not Applicable

**Table 7: Revision History**

Revision Details	Release
First introduced	22.1.0

**Feature Description**

In vDRA, MongoDB has been upgraded from 3.6.9 to 4.0.27.

**Note**

- Before you upgrade to vDRA 22.1.0 (MongoDB 4.0), ensure to update the feature compatibility version to 3.6 only on mongo-admin-db. For fresh installation, no changes are required.
- Ensure that no replica set member is in ROLLBACK or RECOVERING state.

**Table 8: Upgrade, Migration, or Backward Compatibility**

Database	Attribute/Class	Description	Upgrade / Migration / Backward Compatibility
Mongo DB Server: 4.0.27 Mongo DB Client: 3.12.9	NA	Post ISSM, new mongo container is created with new mongo server version 4.0.27, which is not compatible with mongo java driver (client) version 3.7.1.  As a prerequisite, MongoDB java driver (client) version 3.12.9 should be installed on the vDRA VNF 21.1.0/21.2.0 systems prior to the ISSM to vDRA 22.1.0 version.	Mongo java driver (client) 3.7.1 is updated to 3.12.9, which is compatible with Mongo server 4.0.27 version.

**Supported Versions**

vDRA 19.4.0 and later releases.

**Unsupported Versions**

Releases earlier than vDRA 19.4.0.

**Supported Storage Engine:** MMAPv1 storage engine is retained with MongoDB 4.0

**Prerequisites:** Run the following command before upgrade (21.1.0 to 22.1.0) and downgrade (22.1.0 to lower version) on all sites:

```
database fcvcheck
```

There are two options for `database fcvcheck` command.

- `set`: It checks and sets fcv only on primary member.
- `check`: It only checks fcv on all members (primary/secondary).



**Note** It is recommended to use set option first and then check to make sure fcv is replicated also on secondary members.

The `database fcvcheck` command will be a part of prerequisite patch. For more information, connect with the Cisco Technical Representative.

Upgrade/downgrade should not be triggered if any errors are found or fcv is not replicated on secondary members. Make sure to resolve the errors and rerun the `database fcvcheck` command. Once all errors are resolved, proceed with MongoDB upgrade/downgrade.

**Mongo Driver Version:** The compatible mongo driver 3.12 version is supported for MongoDB 4.0.

**Troubleshooting:**

- Due to some reason if MongoDB upgrade fails, verify shard status using `show database status` command.
- Verify each replica set member logs in `/data/db/mongo-<port>.log` file under corresponding container.
- Run `mongo --version` command inside `mongo/admin-db/orchestrator` container to confirm 4.0.27 mongo version.

## Support for Ubuntu 18.04 LTS Version

**Table 9: Summary Data**

Applicable Product(s) or Functional Area	vDRA
Applicable Platform(s)	Not Applicable
Default Setting	Enabled - Always-on
Related Changes in This Release	Not Applicable
Related Documentation	Not Applicable

**Table 10: Revision History**

Revision Details	Release
First introduced	22.1.0

## Feature Description

In CPS vDRA, Ubuntu is upgraded to the latest 18.04 stable version. The following docker, python, and zing package versions are also upgraded.

- Docker - 20.10.8 version
- Python - 3.6.9 version
- Zing - 21.08 version

Use the following latest release and Kernel version in Base VM's:

```
## cat /etc/lsb-release
DISTRIB_ID=Ubuntu
DISTRIB_RELEASE=18.04
DISTRIB_CODENAME=bionic
DISTRIB_DESCRIPTION="Ubuntu 18.04.6 LTS"
# uname -a
Linux dral-sys04-master-0 4.15.0-163-generic #171-Ubuntu SMP Fri Nov 5 11:55:11
UTC 2021 x86_64 x86_64 x86_64 GNU/Linux
```