OnApp Cloud 6.4 Edge 1 Upgrade Guide

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This guide provides instructions on how to upgrade OnApp Cloud to the 6.4 Edge 1 version. You can update to OnApp 6.4 Edge 1 from OnApp 6.3 Stable. Depending on the version that you have, refer to one of the following documentation sets.

Upgrade from OnApp 6.3 Stable

- Upgrade Control Panel Server

1 What's New

The OnApp Cloud 6.4 Edge 1 provides new features and improvements. You can find the list of all key enhancements at Release Notes.

1.1 Default Role Creation

Previously it was possible to migrate only Linux-based VSs from Xen to KVM. In 6.3 Edge 1, OnApp introduces the possibility to migrate Windows-based virtual servers from Xen to KVM compute resource. The most time-consuming operations are performed with the virtual server being online, so the required downtime period is as short as possible.

1.2 Edge Accelerator Operator Dashboard

Now you can learn more about your accelerator performance and track the amount of bandwidth used by accelerated websites in the Operator Dashboard menu. The Dashboard also allows you to view bandwidth statistics generated for the last 24 hours or more.

1.3 Sub-allocated IP Pools

Now you can manage your vCloud Edge Gateways easier with the ability to view sub-allocated IP pools. Therefore, your configurations on vCloud side are now better rendered on OnApp side.

1.4 Passthrough Host CPU Configuration Model

Passthrough host CPU is one of the CPU model configurations, that allows to group compute resources with similar CPU performance characteristics into compute zones. Passthrough host CPU model configuration passes the host CPU model and features directly to the guest VS. This mode provides the maximum available capabilities of the host's CPU to VS's virtual CPU. VS hot migration is possible only to a host with identical hardware.

1.5 Updated UI

In OnApp 6.3, we updated the user interface with the new look and feel for all UI components. Among others, now the following UI components match the new layout design: tables, pop-up windows, instance packages card view, steps in wizards, labels, action buttons, and group form components.

1.6 Virtual Network Interface support and custom network configuration for Integrated Storage

Added support for virtual network interfaces and the ability to view, create, and edit advanced network interfaces for Integrated Storage compute resources and smart servers. Also, if you have complex network configuration, you can now can configure networks manually to make them compatible with OnApp Integrated Storage. Manual configuration may be performed for network interfaces bonding or one network interface, depending on your environment.

1.7 Live log for migrations and transactions

Now users can inspect their transactions in real time. Also for the full migrate and hot full migrate it is possible to watch the migration process in real time.

1.8 OVA install method for OnApp Control Panel

OnApp now supplies an official method to install the OnApp Control Panel via OVA, which can speed up how long it takes to install your cloud if you virtualize your control panel on other virtualization platforms. Not only will it install CentOS & OnApp, but also configure networking, MySQL, RabbitMQ and more.

2 Upgrade Notes

OnApp 6.3 is a new stable version that introduces a lot of new features, improvements, and fixes. You can update to OnApp 6.3 from OnApp 6.2 or 6.3 Edge 1/2. Before upgrading to OnApp 6.3, read these upgrade notes to get ready for the upgrade.

- To upgrade to 6.3, the MySQL version must be >= **5.6.4.** For database migration instructions, refer to Migrate Control Panel Database to MariaDB 10.4.
- To test the upgrade, you may first simulate the upgrade process on the test environment. For the instructions, refer to the Configuring Control Panel Environment for Simulation Purposes page.

2.1 Control Panel Server

- Check the Activity Log on your OnApp CP dashboard if there are no transactions running on your cloud. Wait until all transactions are completed before proceeding to the upgrade.
- Make sure no Control Panel files are open for editing under the root user account.
- If you use an isolated license, you need to manually sync with the dashboard by downloading a validation request and then uploading a validation response after the Control Panel upgrade. For more information on how to do this, refer to the License guide.
- If you use custom languages on your CP, after the update follow the procedure at How to import custom languages after an upgrade to import a custom locale.
- If you plan to deploy Accelerator, refer to the RabbitMQ Configuration for Accelerator document for more details.

2.2 Static Compute Resources

- Be aware that OnApp does not support UEFI on static compute resources. You should disable UEFI on your compute resources before the upgrade.
- If you are running OnApp version prior to 5.4 and consider upgrade, note that starting from OnApp 5.4, it is allowed to attach only one network to a NIC, and different networks can be assigned to the same NICs if their VLANs are different. If you attach more than one network to the same NIC, all of them will be displayed in the interface, but only one will work.

2.3 CloudBoot Compute Resources

- If you use Integrated Storage, refer to Upgrade Integrated Storage and Upgrade Cloud with Integrated Storage Static Servers (from 6.2) for more information about the upgrade details.
- If you use the auto-healing functionality for Integrated Storage, make sure to disable it before the upgrade.
- Drives assigned for use by Integrated Storage are identified, using a disk signature that is generated by the SCSI page query mechanism to the device. Please note that disk signatures may change across different kernel versions following an upgrade and reboot. If this occurs, go to the compute resource edit page to re-identify and select the correct drives. Please contact support if you have any concerns regarding this operation.

3 Upgrade from 6.3

The guides in this section apply to upgrade to OnApp 6.4 Edge 1 from the 6.3 Stable version.

3.1 Upgrade Guide for Control Panel Server (from 6.3 Stable)

- OnApp 6.4 Edge 1 is an edge release that is not designed to be installled on production environments.
- To upgrade to 6.4 Edge 1, the MySQL version must be >= **5.6.4.** For database migration instructions, refer to Migrate Control Panel Database to MariaDB 10.4.
- You can update to OnApp 6.4 Edge 1 from OnApp 6.3 Stable.

This guide provides an instruction how to upgrade your Control Panel server from OnApp Cloud 6.3 Stable to 6.4 Edge 1. Please follow the complete procedure of the upgrade process. All packages must belong to the same major version to ensure the best performance of your cloud.

See also:

Upgrade Cloud with CloudBoot Servers
Upgrade Cloud with Static Servers

3.1.1 Upgrade Control Panel Server

- Installer output is redirected to ./onapp-cp-install.log
- All installer critical errors are in located at /var/log/messages

To upgrade your Control Panel server:

1. Download the OnApp YUM repository file:

```
# rpm -Uvh http://rpm.repo.onapp.com/repo/onapp-repo-6.3.noarch.rpm
```

2. Upgrade OnApp Control Panel installer package

```
# yum update onapp-cp-install
```

3. Update your server OS components (if required):

```
# /onapp/onapp-cp-install/onapp-cp-install.sh -y
```

4. *(Optional)* If you need some custom Control Panel configuration, set the values before the installer script runs.

   The list of custom configuration options for Control Panel.

```
# vi /onapp/onapp-cp.conf
```

Template server URL

```
TEMPLATE_SERVER_URL='http://templates-manager.onapp.com';
```

IPs (separated with coma) list for the SNMP to trap. This is the list of Control Panel IP addresses on which the traps sent from the compute resources are processed.

```
SNMP_TRAP_IPS=""
```

OnApp Control Panel custom version

```
ONAPP_VERSION=""
```

OnApp MySQL/MariaDB connection data (database.yml)

```
ONAPP_CONN_WAIT_TIMEOUT=15
ONAPP_CONN_POOL=30
ONAPP_CONN_RECONNECT='true'
ONAPP_CONN_ENCODING='utf8'
```

MySQL/MariaDB server configuration data (in case of local server)

```
MYSQL_WAIT_TIMEOUT=604800
MYSQL_MAX_CONNECTIONS=500
MYSQL_LIMITNOFILE=8192
```

Use MariaDB instead of MySQL as OnApp database server (Deprecated parameter. If you set any values for this parameter, they will not take effect)

```
WITH_MARIADB=0
```

#Configure the database server relative amount of available RAM

```
TUNE_DB_SERVER=1
```

The number of C data structures that can be allocated before triggering the garbage collector. It defaults to 8 million. Only change this value if you understand what it does.

```
RUBY_GC_MALLOC_LIMIT=16000000
```

sysctl.conf net.core.somaxconn value

```
NET_CORE_SOMAXCONN=2048
```

The root of OnApp database dump directory (on the Control Panel box)

```
ONAPP_DB_DUMP_ROOT=""
```

Remote server's (to store database dumps) IP, user, path, openssh connection options and number of dumps to keep

```
DB_DUMP_SERVER=""
DB_DUMP_USER="root"
DB_DUMP_SERVER_ROOT="/onapp/backups"
DB_DUMP_SERVER_SSH_OPT="-o StrictHostKeyChecking=no -o
UserKnownHostsFile=/dev/null -o PasswordAuthentication=no"
KEEP_DUMPS=168
DB_DUMP_CRON='40 * * * *'
```

Enable monit - tool for managing and monitoring Unix systems

```
ENABLE_MONIT=1
```

If enabled (the 1 value is set) - install (if local box) and configures RabbitMQ Server (messaging system) for the vCloud support. (Deprecated parameter. If you set any values for this parameter, they will not take effect)

```
ENABLE_RABBITMQ=1
```

Rotate transactions' log files created more than TRANS_LOGS_ROTATE_TIME day(s) ago

```
TRANS_LOGS_ROTATE_TIME=30
```

Maximum allowed for uploading file size in bytes, from 0 (meaning unlimited) to 2147483647 (2GB). Default is 0.

```
MAX_UPLOAD_SIZE=0
```

Timeout before ping Redis Server to check if it is started. Default is 10 sec.

```
REDIS_PING_TIMEOUT=10
```

OnApp Control Panel SSL certificates (please do not change if you aren't familiar with SSL certificates)

* The data below to generate self-signed PEM-encoded X.509 certificate

```
SSL_CERT_COUNTRY_NAME=UK
SSL_CERT_ORGANIZATION_NAME='OnApp Limited'
SSL_CERT_ORGANIZATION_ALUNITNAME='OnApp Cloud'
SSL_CERT_COMMON_NAME=`hostname --fqdn 2>/dev/null`
```

SSLCertificateFile, SSLCertificateKeyFile Apache directives' values

ssl_certificate, ssl_certificate_key Nginx directives' values

```
SSLCERTIFICATEFILE=/etc/pki/tls/certs/ca.crt
SSLCERTIFICATECSRFILE=/etc/pki/tls/private/ca.csr
SSLCERTIFICATEKEYFILE=/etc/pki/tls/private/ca.key
```

* PEM-encoded CA Certificate (if custom one exists)
SSLCACertificateFile, SSLCertificateChainFile Apache directives' values
ssl_client_certificate Nginx directives' values

```
SSLCACERTIFICATEFILE=""
SSLCERTIFICATECHAINFILE=""
```

SSLCipherSuite, SSLProtocol Apache directives' values

ssl_ciphers, ssl_protocols Nginx directives' values

```
SSLCIPHERSUITE=""
SSLPROTOCOL=""
```

5. Run the Control Panel installer:

```
# /onapp/onapp-cp-install/onapp-cp-install.sh --quick-update
```

Please, answer ‘yes’ when installer prompts to initiate images, templates, and ISOs download.

The full list of installer options for Control Panel.

Usage:

```
# /onapp/onapp-cp-install/onapp-cp-install.sh -h
Usage: /onapp/onapp-cp-install/onapp-cp-install.sh [-c CONFIG_FILE] [--
mariadb | --mariadb-custom | --community | --percona | --percona-cluster]
[-m MYSQL_HOST] [--mysql-port=MYSQL_PORT] [--mysql-sock[=MYSQL_SOCK] [-p
MYSQL_PASSWD] [-d MYSQL_DB] [-u MYSQL_USER] [-U ADMIN_LOGIN] [-P
ADMIN_PASSWD] [-F ADMIN_FIRSTNAME] [-L ADMIN_LASTNAME] [-E ADMIN_EMAIL] [-
v ONAPP_VERSION] [-i SNMP_TRAP_IPS] [--redis-host=REDIS_HOST] [--redis-
bind[=REDIS_BIND] [--redis-passwd[=REDIS_PASSWD] [--redis-port=REDIS_PORT]
[--redis-sock[=REDIS_SOCK] [--rbthost RBT_HOST] [--vcdlogin VCD_LOGIN] [--
vcdpasswd VCD_PASSWD] [--vcdvhost VCD_VHOST] [--rbtlogin RBT_LOGIN] [--
rbtpasswd RBT_PASSWD] [-a] [-y] [-D] [-t] [--noservices] [--ha-install] [-
-rake=RAKE_TASKS] [--quick|--quick-update[=SERVICE] [--accept-eula] [-w]
[-h]

    Database server options:
                            Default database SQL server is MySQL Server.

                            Please use one of the following option to
install LOCALLY:
                            --mariadb         : MariaDB Server
                --mariadb-custom  : MariaDB Server (custom for CentOS 7.x
only)
                            --community       : MySQL Community Server
                            --percona         : Percona Server
                            --percona-cluster : Percona Cluster

                            -m MYSQL_HOST   : MySQL host. Default is
'localhost'
                            --mysql-port=MYSQL_PORT    : TCP port where
MySQL Server serves connections.
                                                         Default values is
3306 for the local installation
                            --mysql-sock[=MYSQL_SOCK] : Unix socket on
which MySQL Server serves connections.
                                                         Default values is
/var/lib/mysql/mysql.sock. Used if local server only
                                                         The socket is unset
if the option's argument isn't specified.
                            -p MYSQL_PASSWD : MySQL password. Random is
generated if is not set or specified.
                            -d MYSQL_DB     : OnApp MySQL database name.
Default is 'onapp'
                            -u MYSQL_USER   : MySQL user. Default is 'root'


    Redis Server options:

                            --redis-host=REDIS_HOST : IP address/FQDN where
Redis Server runs. It is used by Control Panel to connect to Redis Server.
                                                       The Redis Server will
be installed and configured on the current box if localhost/127.0.0.1 or
box's public IP address (listed in SNMP_TRAP_IPS) is specified.
                                                       Default value is
127.0.0.1.
                                                       If local Redis, it
will serve as well on the unix socket 'PORT' (if --redis-sock without
argument isn't specified)
                            --redis-bind[=REDIS_BIND] : The IP address for
Redis Server to serve connections (to listen)
                                                         The option isn't
mandatory.

                            --redis-port=REDIS_PORT : Redis Server listen
port.
                                                       Defaults are:
                                                         0 - if local server
```

```
                                                        6379 - if remote
server
                          --redis-passwd[=REDIS_PASSWD] : Redis Server
password to authentificate.
                                                        Random password
is generated if the option's argument isn't specified.
                                                        By default no
password is used for local Redis.
                          --redis-sock[=REDIS_SOCK] : Path to the Redis
Server's socket. Used if local server only.
                                                        Default is
/var/run/redis/redis.sock
                                                        The socket is unset
if the option's argument isn't specified.


    Options to manage OnApp Control Panel administrator account:
                                                    Please note, that these
options are for NEW INSTALL only and not for upgrade

                          -P ADMIN_PASSWD    : CP administrator password
                          -F ADMIN_FIRSTNAME : CP administrator first
name
                          -L ADMIN_LASTNAME  : CP administrator last name
                          -E ADMIN_EMAIL     : CP administrator e-mail


     RabbitMQ Server and vCloud options:

                          --rbthost   RBT_HOST   : IP address/FQDN where
RabbitMQ Server runs.
                                                        The RabbitMQ will be
installed and configured on the current box if localhost/127.0.0.1 or
box's public IP address (enlisted in SNMP_TRAP_IPS)
                                                        Default values is
127.0.0.1.

                            VCD_*      : Options are usefull if
vCloud/RabbitMQ are already installed and configured.

                          --vcdlogin  VCD_LOGIN  : RabbitMQ/vCloud user.
Default value is 'rbtvcd'.
                          --vcdpasswd VCD_PASSWD : RabbitMQ/vCloud user
password. The random password is generated if isn't specified.
                          --vcdvhost  VCD_VHOST  : RabbitMQ/vCloud vhost.
Default value is '/'

                            RBT_*         : Options are used to
configure RabbitMQ manager account. If local RabbitMQ server.

                          --rbtlogin  RBT_LOGIN  : RabbitMQ manager
login. The default value is 'rbtmgr'.
                          --rbtpasswd RBT_PASSWD : RabbitMQ manager
password. The random password is generated if isn't specified.


     General options:

                          --ha-install : Proceed with Control Panel and
Hight Availability components installation
                            RHEL/CentOS 7.x is supported only!

                          --rake RAKE_TASKS : List of OnApp Control Panel
rake tasks (separated with space) to run at the very end of install or
upgrade
```

```
                            -v ONAPP_VERSION : Install custom OnApp CP
version

                            -i SNMP_TRAP_IPS : IP addresses separated with
coma for snmp to trap

                            -y : Update OS packages (except of OnApp
provided) on the box with 'yum update'.

                            -a : Do not be interactive. Process with
automatic installation.
                                 Please note, this will continue OnApp
Control Panel install/upgrade even there is transaction currently running.

                            -t : Add to the database and download Base
Templates. For new installs only.

                            --noservices : Do not start OnApp services:
monit, onapp and httpd
                                           Please note, crond and all
OnApp's cron tasks remain running. They could be disabled by stopping
crond service manually for your own risk.

                            -D : Do not make database dump, and make sure
it is disabled in the cron and not running at the moment

                            -w : Do not disable iptables service.
                                 Is applicable on fresh installs only.

                            --quick|--quick-update[=SERVICE] : Procceed
with quick update procedure.
                                                       This will skip update and
configure for services, like: system packages, MySQL database, Redis
Server, RabbitMQ Server, Monit service
                                                       Set the SERVICE parameter
(space separated list of statements) to define services, which update is
needed.
                                                       Possible reserved
statements are:
                                                           rpms - for 'system
packages' upgrade;
                                                           mysql - for MySQL
databse upgrade ond configuring;
                                                           redis - for ERedis
Server upgrade and configuring;
                                                           rabbitmq - for
RabbitMQ Server upgrade and configuring;
                                                           monit - for Monit
upgrade and configuring.

                --accept-eula : Automatically accept OnApp's End User
License Agreement
                                (DEPRICATED)

                            -c CONFIG_FILE   : Custom installer
configuration file. Otherwise, preinstalled one is used.

                            -h : print this info
```

Where:	
Database server options:	Default database SQL server is MySQL Server. Please use one of the following option to install LOCALLY.

Where:	
--mariadb	MariaDB Server
--community	MySQL Community Server
--percona	Percona Server
--percona-cluster	Percona Cluster
MYSQL_*	Options are useful if MySQL is already installed and configured.
-m MYSQL_HOST	MySQL host. Default is 'localhost'
--mysql-port=MYSQL_PORT	TCP port where MySQL Server serves connections. Default values is 3306 for the local installation
--mysql-sock[=MYSQL_SOCK]	Unix socket on which MySQL Server serves connections. Default values is /var/lib/mysql/mysql.sock. Used if local server only. The socket is unset if the option's argument isn't specified.
-p MYSQL_PASSWD	MySQL password. Random is generated if is not set or specified.
-d MYSQL_DB	OnApp MySQL database name. Default is 'onapp'
-u MYSQL_USER	MySQL user. Default is 'root'
REDIS_*	Options are useful if Redis Server is already installed and configured.
--redis-host=REDIS_HOST	IP address/FQDN where Redis Server runs. It is used by Control Panel to connect to Redis Server. The Redis Server will be installed and configured on the current box if localhost/127.0.0.1 or box's public IP address (listed in SNMP_TRAP_IPS) is specified. Default value is 127.0.0.1. If local Redis, it will serve as well on the unix socket 'PORT' (if --redis-sock without argument isn't specified).
--redis-bind[=REDIS_BIND]	The IP address for Redis Server to serve connections (to listen). The option isn't mandatory.
--redis-port=REDIS_PORT	Redis Server listen port. Defaults are: 0 - if local server 6379 - if remote server
--redis-passwd[=REDIS_PASSWD]	Redis Server password to authentificate. Random password is generated if the option's argument isn't specified. By default no password is used for local Redis.
--redis-sock[=REDIS_SOCK]:	Path to the Redis Server's socket. Used if local server only. Default is /var/run/redis/redis.sock. The socket is unset if the option's argument isn't specified.

Where:	
ADMIN_*	Options are used to configure OnApp Control Panel administrator data. Please note, that these options are for NEW INSTALL only and not for upgrade
-P ADMIN_PASSWD	CP administrator password
-F ADMIN_FIRSTNAME	CP administrator first name
-L ADMIN_LASTNAME	CP administrator last name
-E ADMIN_EMAIL	CP administrator e-mail
--rbthost RBT_HOST	IP address/FQDN where RabbitMQ Server runs. The RabbitMQ will be installed and configured on the current box if localhost/127.0.0.1 or box's public IP address (enlisted in SNMP_TRAP_IPS) Default value is 127.0.0.1.
VCD_*	Options are usefull if vCloud/RabbitMQ are already installed and configured.
--vcdlogin VCD_LOGIN	RabbitMQ/vCloud user. Default value is 'rbtvcd'.
--vcdpasswd VCD_PASSWD	RabbitMQ/vCloud user password. The random password is generated if isn't specified.
--vcdvhost VCD_VHOST	RabbitMQ/vCloud vhost. Default value is '/'
RBT_*	Options are used to configure RabbitMQ manager account. If local RabbitMQ server.
--rbtlogin RBT_LOGIN	RabbitMQ manager login. The default value is 'rbtmgr'.
--rbtpasswd RBT_PASSWD	RabbitMQ manager password. The random password is generated if isn't specified.
--rake RAKE_TASKS	List of OnApp Control Panel rake tasks (separated with space) to run at the very end of install or upgrade.
-v ONAPP_VERSION	Install custom OnApp CP version
-i SNMP_TRAP_IPS	IP addresses separated with coma for snmp to trap
-y	Update OS packages (except of OnApp provided) on the box with 'yum update'.
-a	Is not interactive. Process with automatic installation. Please note, this will continue OnApp Control Panel install/upgrade even if there is transaction currently running.
-t	Add to the database and download Base Templates. For new installs only. If this option is not used, then only the following mandatory System Templates will be added by default during fresh install: OnApp CDN Appliance; Load Balancer Virtual Appliance; Application Server Appliance.
--noservices	Do not start OnApp services: monit, onapp and httpd Please note, crond and all OnApp's cron tasks remain

Where:	
	running. They could be disabled by stopping crond service manually for your own risk.
-D	Do not make database dump, and make sure it is disabled in the cron and not running at the moment.
--quick|--quick-update[=SERVICE]	Procceed with quick update procedure. This will skip update and configuration for services, such as system packages, MySQL database, Redis Server, RabbitMQ Server, and Monit service. Set the SERVICE parameter (space separated list of statements) to define services, which need to be updated. Possible reserved statements are: *rpms* - for 'system packages' upgrade; *mysql* - for MySQL databse upgrade ond configuring; *redis* - for ERedis Server upgrade and configuring; *rabbitmq* - for RabbitMQ Server upgrade and configuring; *monit* - for Monit upgrade and configuring.
--accept-eula	Automatically accept OnApp's End User License Agreement.
-c CONFIG_FILE	Custom installer configuration file. Otherwise, preinstalled one is used.
-h	Print this info

4 Upgrade Integrated Storage.

IS version upgrading to	5.5	5.6	5.7	5.8	5.9	5.10	6.0	6.1	6.2	6.3
Upgrade by **Simple Reboot**	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Upgrade by **Migrate and Reboot**	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Upgrade by **Live Upgrade**	Yes	No	No	No	No	No	No	No	No	No

Yes - recommended by OnApp
N/A - not recommended by OnApp, will not update properly CloudBoot OS or Integrated Storage
No - not available in the corresponding release

4.1 General information and recommendations about CloudBoot OS and Integrated Storage upgrades

Starting with OnApp 5.0 LTS, we have made some changes to updates for CloudBoot OS and Integrated Storage. CloudBoot OS upgrades that include security patches, kernel upgrades and updated drivers will be released on a regular basis. If a security patch was released by CentOS, it will be included in the next released RPM. These releases may not include updates for Integrated Storage, a component of CloudBoot OS, as this platform is stable and does not require changes with every release.

For the best experience, stability, and security OnApp recommends that the CloudBoot compute resources should be upgraded by reboot at a convenient time if a new CloudBoot RPM is released. This is required to completely apply the security patches, kernel upgrades and updated drivers.

Integrated Storage as a platform does not strictly require a CloudBoot compute resource to be rebooted after upgrade. However, in case of critical updates and fixes, it may be required to reboot a CloudBoot compute resource for them to take full effect.

4.2 Update Methods

Simple Reboot

This upgrade method requires to reboot CloudBoot compute resources with all virtual servers powered off to apply security patches, kernel upgrades and updated drivers to CloudBoot OS. Simple Reboot is the fastest and the safest way to upgrade but does result in some downtime for virtual servers. Integrated Storage virtual disks do not become degraded. This upgrade method also upgrades the Integrated Storage platform as a component of CloudBoot OS.

Migrate and Reboot

This upgrade method requires to reboot CloudBoot compute resources to apply security patches, kernel upgrades and updated drivers to CloudBoot OS and Integrated Storage. Your virtual servers will remain online, you only need to migrate them from CloudBoot compute resources that will be rebooted. Keep in mind that it is required to repair any degraded virtual disks before proceeding with reboot.

> Please contact our Support team if you are not sure which upgrade method is right for you.

5 Getting Support for Upgrade

You can use the instructions in this guide to upgrade your OnApp Cloud. If you have a full OnApp Cloud license, you can receive free upgrade support from the OnApp Support team. If you prefer to have the Support team perform the upgrade for you, **submit a request** to schedule the upgrade.

You can also refer to the following sources when you need help:

5.1 Professional Services

Get in touch with our **Professional Services** to get expert help from launch to production and beyond.

5.2 OnApp Community

Visit **OnApp Community** that is a public forum where you can share your feedback and product ideas. Only OnApp customers can give suggestions but anyone can explore them.

5.3 Knowledge Base

Visit **Knowledge Base** where you can find a lot of how-to articles to resolve questions that you may face while working with OnApp.

5.4 Documentation

You are now located in one of the OnApp documentation spaces that is **Upgrade Guide**. Go to **Documentation Home** to browse other available spaces.