

Exinda How to Guide: Dynamic Disk Partitioning

Exinda Firmware Version 6.1

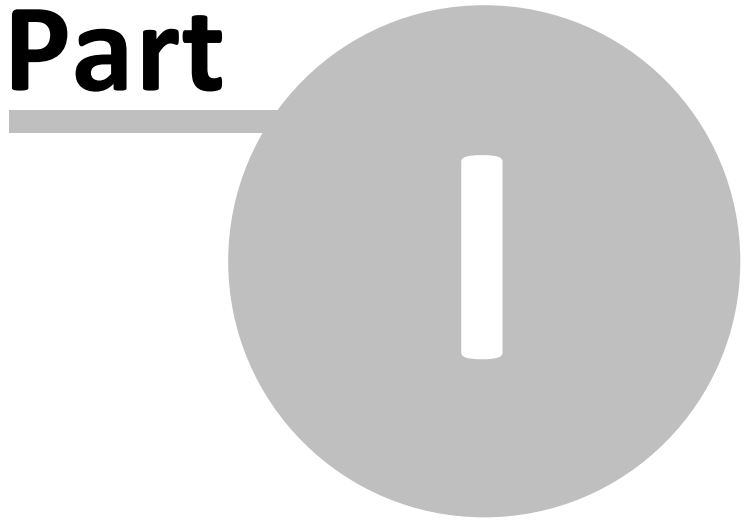
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Part



1 Introduction

Dynamic Disk Partitioning

Exinda Firmware Version: 6.1

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1.1 Using this Guide

Throughout the manual the following text styles are used to highlight important points:

- Useful features, hints and important issues are called "notes" and they are identified in a light blue background.

Note: This is a note.

- Practical examples are presented throughout the manual for deeper understanding of specific concepts. These are called "examples" and are identified with a light green background.

This is an example.

- Warnings that can cause damage to the device are included when necessary. These are indicated by the word "caution" and are highlighted in yellow.

Caution: This is a caution.

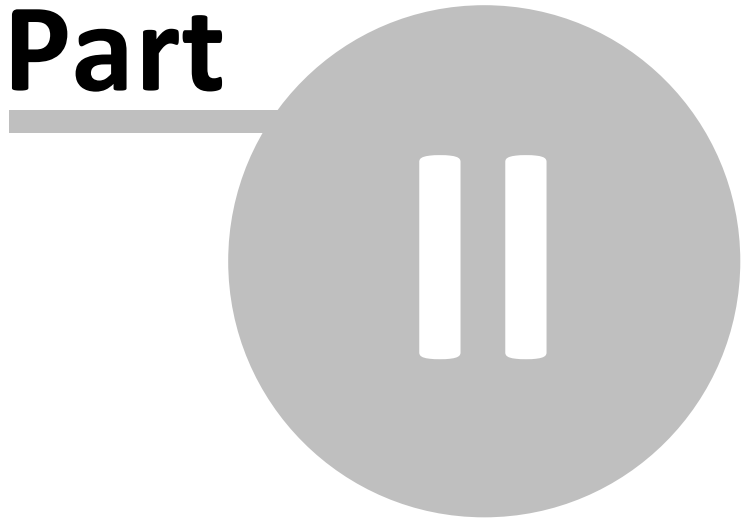
1.2 Further Reading

In addition to this How to Guide, the following relevant user documentation is available and should be read in conjunction with this guide:

- Exinda CLI Reference Guide (**storage** commands)

Please visit <http://www.exinda.com> for more information.

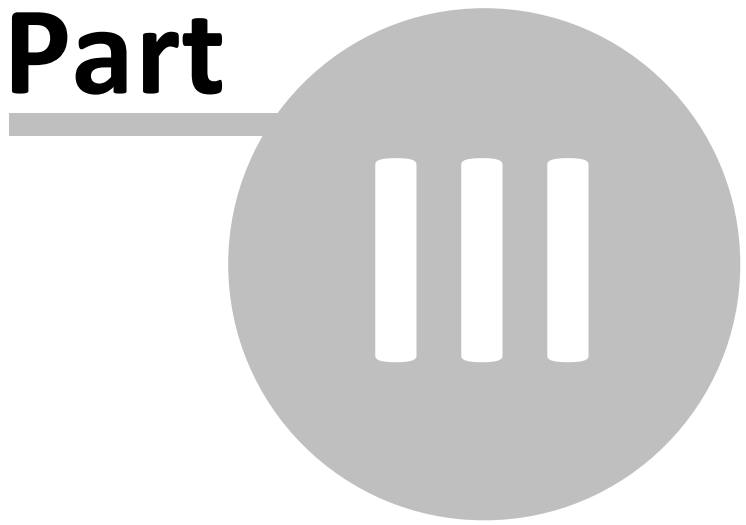
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2 Overview

Starting with firmware version 6.1, the Exinda appliance has the capability to dynamically change the amount of storage allocated to system services. Users can resize and reallocate disk space as required.

Part



3 Configuring Storage

The formula used to allocate a default storage size for each system service is shown in the table below, together with some examples for different platforms.

<p>Formula: HDD size: M GB, X GiB¹ Base OS: 14GiB Data Storage: X – 14</p> <p>By default, the data storage is divided up as follows:</p> <p>CIFS: 15% Monitor: 10GiB User DB: 1GiB Virt: 50GiB (not available on 2060) WM: 70% Edge Cache: 15%</p>	<p>2060: HDD size: 160GB (149GiB) Base OS: 14GiB Data Storage: 149 – 14 = 135GiB</p> <p>CIFS: 15% = 19GiB Monitor: 10GiB User DB: 1GiB Virt: 0GB (does not support virt) WM: 70% = 86GiB Edge Cache: 15% = 19GiB</p>	<p>4061: HDD size: 250GB (233GiB) Base OS: 14GiB Data Storage: 233 – 14 = 219GiB</p> <p>CIFS: 15% = 24GiB Monitor: 10GiB User DB: 1GiB Virt: 50GiB (supports virt) WM: 70% = 110GiB Edge Cache: 15% = 24GiB</p>
<p>6060: HDD size: 500GB (466GiB) Base OS: 14GiB Data Storage: 466 – 14 = 452GiB</p> <p>CIFS: 15% = 58GiB Monitor: 10GiB User DB: 1GiB Virt: 50GiB (supports virt) WM: 70% = 270GiB Edge Cache: 15% = 58GiB</p>	<p>8060: HDD size: 1500GB (1396GiB) Base OS: 14GiB Data Storage: 1396 – 14 = 1382GiB</p> <p>CIFS: 15% = 198GiB Monitor: 10GiB User DB: 1GiB Virt: 50GiB (supports virt) WM: 70% = 920GiB Edge Cache: 15% = 198GiB</p>	<p>10060: HDD size: 1500GB (1396GiB) Base OS: 14GiB Data Storage: 1396 – 14 = 1382GiB</p> <p>CIFS: 15% = 198GiB Monitor: 10GiB User DB: 1GiB Virt: 50GiB (supports virt) WM: 70% = 920GiB Edge Cache: 15% = 198GiB</p>

Table 1: Default storage sizes

Fixed amounts (e.g. Monitor, User DB, Virt) are allocated first, then the percentages are used to distribute the remainder.

To change amount of storage allocated to system services, use the CLI 'storage' command.

Example: A 4061 is to be used for Optimization, Monitoring and Edge Cache only. Redistribute the default storage allocated for Virt, CIFS and WM to the Monitor and Edge Cache services.

To show the amount of storage allocated to each service, use the 'show storage' CLI command:

```
(config) # show storage
Services:
  cifs: available - 23.17G free of 23.71G total
  edge-cache: available - 23.16G free of 23.7G total
  monitor: available - 9898.96M free of 10G total
  users: available - 974.62M free of 1024M total
  virt: available - 49.04G free of 50G total
  wan-memory: available - 108.69G free of 110.61G total
```

Disks:

```
Total: 219.02G
Unallocated: 0
```

To redistribute the Virt, CIFS and WM storage, first shrink the amount of storage allocated to these services to the minimum. The minimum size for each service is shown in the table below:

Service	Minimum Size
cifs	1 GiB
edge-cache	1 GiB
monitor	5 GiB or current usage, whichever is larger.
users	500 MiB or current usage, whichever is larger
virt	500 MiB or current usage, whichever is larger
wan-memory	5 GiB

Table 2: Minimum service sizes

To resize a storage service, use the 'storage service <svc> size' command. Use the 'show storage tasks' command to check the commands progress:

```
(config) # storage service virt size 500M
(config) # show storage tasks
Storage tasks:
  Resize virt to 500M: executing
(config) # show storage tasks
No pending tasks
```

Similarly resize the storage for wan-memory and cifs services:

```
(config) # storage service cifs 1G
(config) # storage service wan-memory 5G

(config) # show storage
Services:
  cifs: available - 859.91M free of 1024M total
  edge-cache: available - 23.16G free of 23.7G total
  monitor: available - 9890.97M free of 10G total
  users: available - 974.62M free of 1024M total
  virt: available - 351.91M free of 500M total
  wan-memory: available - 4879.63M free of 5120M total
```

Disks:

```
Total:      219.02G
Unallocated: 177.83G
```

There is now 177.83G of storage which can be allocated to the edge-cache and monitor services. We will increase the monitor space by 40G to 50G and use the remaining space (approx. 137G) to increase edge-cache to 160G.

```
(config) # storage service monitor size 50G
(config) # show storage service monitor
Service: monitor
  Status: growing
  Free:   45.58G
  Size:   50G
```

Note: The status field is shown as 'growing' whilst the resize operation is in progress. When the operation is complete, the status will change to 'available'.

```
(config) # storage service edge-cache size 160G
```

Finally, use the 'show storage' command to see the redistributed storage sizes:

```
(config) # show storage
Services:
  cifs: available - 859.91M free of 1024M total
  edge-cache: available - 157.31G free of 160G total
  monitor: available - 49.02G free of 50G total
  users: available - 974.62M free of 1024M total
  virt: available - 351.91M free of 500M total
  wan-memory: available - 4879.63M free of 5120M total

Disks:

Total:          219.02G
Unallocated: 1564M
```

¹ HDD manufacturers label storage capacity using a base 10 convention, where 1GB = 1,000,000,000 bytes. On the Exinda appliance storage sizes are represented in GiB, where 1 GiB = 1,073,741,824 bytes. So the actual storage of a hard disk, when represented in GiB, is less than what is labelled.

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