



Elastifile 2.0.x

Dedicated Storage Mode (DSM)

Site Preparation Guide

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1. Document Scope

This guide describes the procedures for preparing a site for deploying Elastifile2.0.x systems based on Dedicated Storage Mode (DSM).

After completing the procedures in this guide, submit the site preparation report ([Section 7 - Site Preparation Report](#)) to Elastifile Inc. to enable deployment to proceed on your site.



For site preparation requirements in a HyperConverged Infrastructure (HCI) environment, see the *Elastifile HyperConverged Infrastructure (HCI) Site Preparations Guide*.

2. Installation Overview

There are two main types of entities in an Elastifile system:

- Elastifile Management System (EMS) - the Elastifile management machine that controls the Elastifile system.
- Controller - a server acting as an Elastifile controller node.

EMSs are installed on virtual or physical hosts and controllers are installed on physical servers.



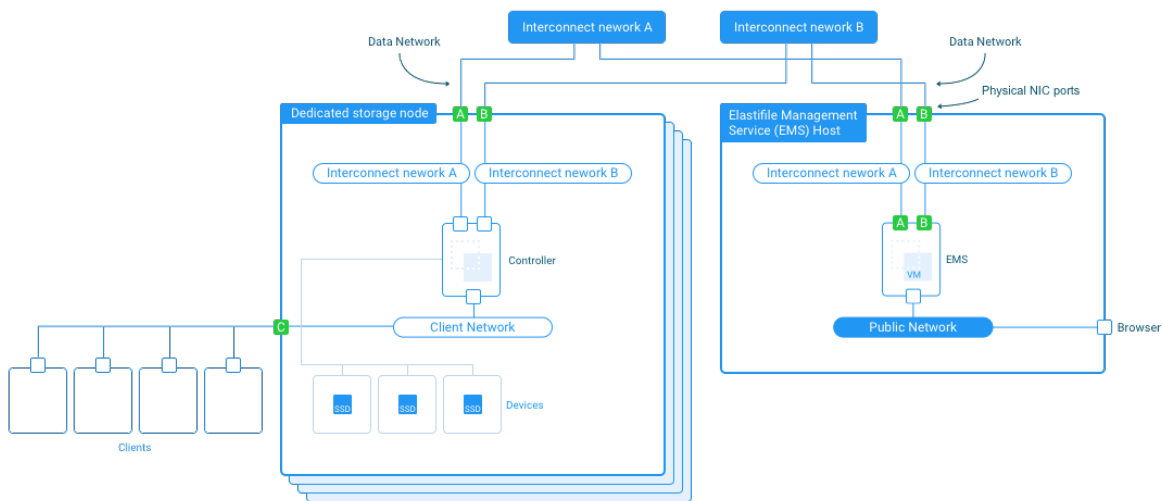
- For detailed information on installation options, see the *Elastifile DSM Installation Guide*.
- For hardware requirements, see the *Elastifile DSM Hardware Requirements Guide*.

3. Network Topology

The Elastifile system is managed through a web-based interface called the Management Console (MC), which runs on the Elastifile Management Service (EMS). The Elastifile system administrator connects to the MC through the public network.

The following diagram illustrates the Elastifile system in an - environment. The Elastifile Data Network handles traffic between the controllers comprising the Elastifile system, as well as control traffic between the EMS and the controllers.

The clients are connected to their respective controllers through the Client Network's VIPs.



4. Basic/High Performance Preparation

Elastifile can work with most servers' "out of the box" settings. However, in many cases the default server settings are not optimized. This may lead to sub-optimal performance, increased CPU overhead and limited monitoring of device endurance.

There are three main optimization areas to consider, all of which may require BIOS settings changes:

- Using PCI Pass-through (VMDirectPath I/O) for PCI and NVMe storage devices.
- Using SR-IOV for 10GbE NICs.
- General CPU performance optimizations.



Changing the storage devices settings at a later stage may require reformatting the system.

5. Basic Preparation

5.1 Servers

5.1.1 Servers

5.1.1.1 EMS Hosts

1. Make sure you have access to two VMs or servers that comply with the requirements described in the *Elastifile Hardware Requirements Guide*.

5.1.1.2 Controller Servers

- Each controller server must comply with the requirements described in the *Elastifile Hardware Requirements Guide*.
- Each server should be able to boot from a 64GB bootable SSD.

5.1.2 Storage Devices

- EMS image store - 64GB on one of the available datastores accessible within the host running EMS VM (for high availability and crash recovery support, use only a shared datastore).
- Elastifile data devices - between one to six dedicated local SSD or flash memory devices. It is highly recommended that the SSD devices will be accessed directly and not through a RAID controller (see the *Elastifile Hardware Requirements Guide*).

5.1.3 NICs

Make sure each server includes at least two 10GbE ports for the data network (for LAB deployments, only one NIC port is required), and one 1GbE port for the client network.

The network and IP requirements are as follows:

- Four independent subnets/VLAN are required:
 - MGMT for EMS public interface
 - Client for client traffic
 - DATA1 for Elastifile controller interconnect
 - DATA2 for Elastifile controller interconnect
- EMS (for each EMS server, 1 required, 2nd optional for secondary EMS)
 - 1 IP for EMS public interface (static or DHCP)
 - ◆ DNS entry recommended for public IP
 - 2 IPs for data interconnect (1 per NIC, 2 NIC required), IPs dynamically assigned.

- Controller - each controller requires:
 - 2 IPs for data interconnect (1 per NIC, 2 NIC required), IPs dynamically assigned.
 - Client network for client connections:
 - ◆ For Layer 2 networks, define one client VIP.
 - ◆ For Layer 3 networks, define 20 client VIPs.

5.2 Network

5.2.1 DNS

No DNS requirements or configurations are mandatory. However, to simplify the use of the web-based management system, Elastifile recommends that you assign a DNS name for the EMS Virtual IP (VIP).

5.2.2 Management Network IP Type

For the management network, you can either assign a static IP or use a DHCP service.



1. Request (from your IT department) IP addresses for the following:
 - If you will use a Management Network with a static IP:
 - ◆ Primary EMS IP
 - ◆ Secondary EMS IP
 - ◆ EMS virtual IP (VIP)
 - ◆ EMS physical network mask
 - ◆ Management network gateway
 - If you will use a Management Network with a DHCP service:
 - ◆ EMS virtual IP address network mask
 - ◆ EMS virtual IP (VIP)

5.2.3 Physical Switch

Perform the following steps on all Elastifile designated data ports:

1. Make sure the port is synced to 10GbE speed - mandatory.
2. Configure MTU 9000 - highly recommended.
3. Make sure the designated VLAN is tagged and enabled for the port (trunk mode) - highly recommended.

6. High Performance Optimizations

The following procedures are not mandatory for the deployment of Elastifile, but are highly recommended for optimizing its performance.

6.1 BIOS

1. Disable HyperThreading (usually under a sub-menu for features such as CPU, Processor, Performance, Advanced BIOS, CPU Feature, Tweaker).
2. Set CPU power mode to **Full Performance**.
3. Enable Pass-through mode for the RAID controller. This is required to be able to assign specific drivers to Elastifile, and to let Elastifile control the drivers properly.

7. Site Preparation Report

1. Open the [DSM Site Preparation Report](#).
2. Complete and submit the report.