

Veritas Flex Appliance FAQ

With Flex Appliances, you can create new NetBackup deployments in minutes tailored to meet specific business unit needs. This document addresses many common questions related to the new deployment of Flex Appliances.

General Flex Questions

What is the difference between NetBackup Appliances (NBA) and NetBackup Flex Appliances?

- While there are many major differences from an architectural standpoint the one major difference of relevance is that the NetBackup Appliance's operating system is executing the NBU software while the Flex Appliance operating system is not executing the NetBackup software. Instead, a Flex Appliance utilizes containers/instances to run the NetBackup software and create virtual NetBackup servers.
- The NetBackup Appliance (NBA) can only be assigned one role: either that of a NetBackup Primary or Media Server. With Flex Appliances, it is possible to create multiple NetBackup instances utilizing multiple versions of NetBackup.
- The NBA appliance can only house one deduplication storage unit and have only one version of NetBackup installed.
- Flex Appliances utilizing multiple NetBackup instances makes it possible to have multiple NetBackup deduplication storage units on a Flex Appliance and attached storage.
- As each container executes its own NetBackup processes, each container can be a member of a different NetBackup domain.

What version of NBU runs on a Flex Appliance, and do we need to keep NBU updated independently of Flex updates?

- There is no specific version of NBU installed on a Flex appliance. The Flex Appliance can run multiple versions of NBU software, each in its own container referred to as an Application Instance.
- NBU versions are available for download from the Veritas Support Downloads Center. Each package is downloaded and uploaded to the Flex Repository in the Flex Appliance via the Flex Web UI. The Repository is a Flex Appliance partition where various NBU Primary/Media/WORM application releases are staged.
- NetBackup product is a separate application package updated independently of the Flex Appliance. For example, the current NetBackup release available for Flex Appliances is 10.2.0.1, while the current release of Flex Appliance is 3.3.

What is a Container?

- A container is a standalone software application run-time environment combined into a single package with all its dependencies, such as tools, libraries, and settings. All components needed for each role are included in the associated container image; for example, all NetBackup Primary Server 'parts and pieces' are in the Primary Server container image.
- Unlike virtual machines, containers do not include an OS.
- Containers are platform agnostic, lightweight, and can be run anywhere.
- Through the implementation of container technology, Flex Appliance abstracts Veritas software solutions from the appliance's enterprise hardware platform and OS.
- NetBackup server instances running as containers on a Flex Appliance are known as Application Instances.
- Container technology is optimized by Veritas and integrated into the Flex platform.
- This abstraction allows each application instance to run independently on the Flex Appliance, without the overhead of requiring each instance to include its own OS.
- The hardware compute resources available in the Flex Appliance are automatically shared and balanced across the application instances running on the Flex Appliance.

What is a Tenant as referenced to a Flex Appliance?

- The Flex Tenant allows for data isolation across multiple NBU domains.
 - It's critical to understand that data isolation doesn't require a separate tenant for each unique NBU domain. Two NetBackup domains can be created, each using the same tenant, while the data for each domain remains isolated.
- Multiple NetBackup domains with a unique Tenant can isolate data transmission.
- A Flex Tenant is assigned per NetBackup domain when the initial instance is created. All subsequent instances created for that domain must use the same tenant.
- A Tenant can include a list of hostnames assigned to it by editing the host file entry while configuring a Tenant in the Flex Appliance Console.
- Each tenant includes a specific DNS Search Domain. Example: Tenant1 Search Domain = lab.pvt, Tenant2 Search Domain = Veritas.com, etc.
- If a media server instance is created with a tenant different than the primary server, it will not be able to communicate with the primary server.

Can a Media Server container be created without a Master Server Container on the same Flex Appliance?

- A NetBackup Media Server container may be deployed within the Veritas Flex Appliance without creating a NetBackup Master server container within the same appliance. The NetBackup Media server will need to be a member of an existing NetBackup domain that is hosted on a separate Flex Appliance, or external "Build-Your-Own (BYO) server.

Flex Networking

How Many IP Addresses are required for installation and how many are required for configuration?

- Each model of the Flex Appliances has varying I/O configurations.
- Basic Installation (No Container Configuration)
 - IPMI IP (Out-of-band management)
 - All models require one 1G (Copper) cable for IPMI per node.
 - Management IP (Flex Web UI/Console)
 - 5250 Models: One IP and 1G (Cat6) cable for host0 interface.
 - 5260 Models: One IP and 1G-10G (Cat6, Cat6a) cable for host0 interface
 - 5350 Models (per node): One IP and two 1G (Cat6) cables for host0 and host1 interfaces
 - 5360 Models (per node): One IP and two 1G (Cat6) up to 10G (Cat6a) cables for host0 and host1 interfaces
 - **HA models require an extra IP for Web Console**

About Veritas

Veritas Technologies is a leader in multi-cloud data management. Over 80,000 customers—including 95 percent of the Fortune 100—rely on Veritas to help ensure the protection, recoverability, and compliance of their data. Veritas has a reputation for reliability at scale, which delivers the resilience its customers need against the disruptions threatened by cyberattacks, like ransomware. No other vendor is able to match the ability of Veritas to execute, with support for 800+ data sources, 100+ operating systems, 1,400+ storage targets, and 60+ clouds through a single, unified approach. Powered by Cloud Scale Technology, Veritas is delivering today on its strategy for Autonomous Data Management that reduces operational overhead while delivering greater value. Learn more at [veritas.com](https://www.veritas.com). Follow us on Twitter at @veritastechllc.

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- Advanced Configuration (Instance/Container Configuration)
 - 52x0 Appliances
 - All remaining interfaces are available for instance/container creation based on the I/O ordered. Bonding of the interfaces is at the discretion of the customer.
 - A minimum of 1 virtual IP is required for each container/instance created.
 - 53x0 Appliances
 - Between 4-8 interfaces are available on the PCIe cards per node based on the I/O configuration ordered.
 - Bonding the interfaces is at the discretion of the customer.

Does an interface need an IP address, and why?

- Yes. The IPMI and Management interfaces will require a physical IP address assigned to these interfaces.
- The data interfaces used for the instance/containers will require virtual IPs to be available in the network. The physical interfaces will not be assigned an IP; a network interface will be assigned to the interface/bond, and a virtual IP will be used inside the container/instance.

What are the uses for Eth0-Eth3 interfaces, and can we configure containers/instances using these interfaces?

- 52x0 Appliances
 - Eth0 is the dedicated in-band management interface used to manage the Flex appliance. This interface is referred to as the “host0” interface.
 - Eth1-Eth3 are the remaining on-board interfaces which are assigned NIC0, NIC1, and NIC2. These interfaces can be used when creating the containers/instances.
- 53x0 Appliances
 - Eth0 and Eth1 are the dedicated in-band management interfaces used to manage the Flex appliance. These interfaces are host1 (eth0) and host0 (eth1). The OS bonds them together during the configuration.
 - Eth2 and Eth3 are the private network ports and are configured as privnic0 (Eth2) and privnic1 (Eth3). These interfaces are used in multi-node configurations only to communicate between the nodes. These interfaces cannot be used to configure containers/instances and should not have any cables connected if not in a multi-node setup.

What SFPs are used in the Flex Appliances for the PCIe NICs, and are SFPs sent for the switch also?

- By default, 1G/10GB Dual-Rate SFP+ transceivers are shipped for all PCIe NIC interfaces, and it is recommended to use OM4 optical cable.
 - SFPs are not sent by default to be utilized in the network switch.
- If necessary, a 25G SFP28 is available to replace the 10GB SFPs in the PCIe cards and be used in corresponding network switches. It is recommended to use OM4 optical cable.

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The Veritas logo consists of the word "VERITAS" in a bold, red, sans-serif font. The letters are evenly spaced and have a slight shadow effect.

Do the subnets need to be the same?

- Unlike the NetBackup appliance, the Flex Appliance allows for multiple network interfaces, and each can utilize a different subnet.

Does a bond need an IP address?

- Any bond created on the data interfaces (NICs) will not require a physical IP address to be assigned. Instead, a virtual IP will be utilized to establish a connection with the instances/containers.

What is VLAN tagging used for with Flex Appliances? Is it needed?

- Using VLAN tagging allows for a single interface (or bond) to carry traffic for multiple VLANs. In practice, this allows the NetBackup instance to be connected to multiple VLANs/subnets via one interface.
 - Using VLANs can reduce the amount of data traffic sent to the routers as the container/instance likely has a presence on VLANs where most clients are present. The effect is to reduce the amount of traffic sent to the gateway routers.

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