

Working with Block Volumes/configuring attachments.txt

Configuring Attachments to Ultra High Performance Volumes

When you attach a volume configured for the Ultra High Performance level, to achieve the optimal performance, the volume attachment must be multipath-enabled. The Block Volume service attempts to enable the attachment for multipath when the volume is being attached. If not all of the prerequisites are met, the attachment is not multipath-enabled. To determine if the volume attachment is multipath-enabled, see [Checking if a Volume Attachment is Multipath-Enabled](#).

This topic describes the prerequisites and the steps you can take to ensure the volume attachment is multipath-capable.

For iSCSI attachments, see [Multipath-Enabled iSCSI Attachments](#). After you have confirmed that the iSCSI attachment is multipath-enabled,

For paravirtualized attachments, see [Multipath-Enabled Paravirtualized Attachments](#).

Multipath-Enabled iSCSI Attachments

The section describes the prerequisites and steps required to configure multipath-enabled iSCSI volume attachments.

Prerequisites

Following is a list of prerequisites and requirements for multipath-enabled iSCSI attachments.

The instance must be based on a supported shape. See [Supported Compute Shapes for Multipath-Enabled iSCSI Attachments](#) for more information.

The instance must be running a supported image, see [Supported Images for Multipath-Enabled iSCSI Attachments](#) for more information.

The instance does not have another multipath-enabled attachment on the same instance.

The Block Volume Management plugin must be enabled for the instance. See [Enabling the Block Volume Management Plugin](#) for more information.

The compute instance must have either a public IP address or a service gateway for the Block Volume Management plugin to be able to connect. Permissions must be configured to allow the Block Volume Management plugin to report the iSCSI setup results for multipath-enabled iSCSI attachments. The volume attachment must be configured to use a consistent device path. See [Connecting to Volumes With Consistent Device Paths](#) for more information.

Important

You can use `oci-utils` or `oci-iscsi-config` when configuring and working with iSCSI attached volumes, however you should ensure that you do not use both.

Supported Images for Multipath-Enabled iSCSI Attachments

For multipath-enabled attachments, the attached instance must be running a Linux-based image.

Note

Multipath-enabled attachments are not supported for Windows instances or Oracle Autonomous Linux instances.

Required Custom Image Configuration to Support Multipath-Enabled iSCSI Attachments

For a custom image to support multipath-enabled iSCSI attachments, the Unbreakable Enterprise Kernel (UEK) version must be UEK6U1 or higher.

After you have verified that the custom image UEK version is one that supports multipath-enabled attachments, you need to update the Storage configuration.

Supported Compute Shapes for Multipath-Enabled iSCSI Attachments

This section identifies the Compute shapes that support multipath-enabled iSCSI attachments. For more details, such as performance characteristics, see [Performance Details for Instance Shapes](#).

VM Shapes

Current VM shapes configured for 16 cores or more support multipath-enabled attachments. See [VM Shapes for iSCSI-Attached Volumes](#) for more information.

Bare Metal Shapes

All current bare metal shapes support multipath-enabled iSCSI attachments. See [Bare Metal Shapes for Performance Characteristics](#) for more information.

Multipath-Enabled Paravirtualized Attachments

The section describes the prerequisites and steps required to configure multipath-enabled paravirtualized volume attachments.

Prerequisites

Following is a list of prerequisites and requirements for multipath-enabled paravirtualized attachments.

The instance must be based on a supported shape. See [Supported Compute Shapes for Multipath-Enabled Paravirtualized Attachments](#) for more information.

The instance must be running a supported image, see [Supported Images for Multipath-Enabled Paravirtualized Attachments](#) for more information.

The instance does not have another multipath-enabled attachment on the same instance.

Supported Images for Multipath-Enabled Paravirtualized Attachments

For multipath-enabled attachments, the attached instance must be running one of the following images or a custom image based on one of the following images.

Oracle Linux

Ubuntu

CentOS

Windows

Note

Multipath-enabled attachments are not supported for Oracle Autonomous Linux instances.

Supported Compute Shapes for Multipath-Enabled Paravirtualized Attachments

Current VM shapes configured for 16 cores or more support multipath-enabled attachments. See [VM Shapes for Paravirtualized Attached Volumes](#) for more information.

Note

Multipath-enabled attachments to bare metal instances only support iSCSI attachments.

For more details, such as performance characteristics and maximum number of attachments, see [Performance Details for Instance Shapes](#).