



# Network configuration

## HCI

Michael Wallis, Ann-Marie Grissino, Dave Bagwell  
May 26, 2021

# Table of Contents

Network configuration. . . . . 1  
    Configuration option A: Two cables for compute nodes . . . . . 1

# Network configuration

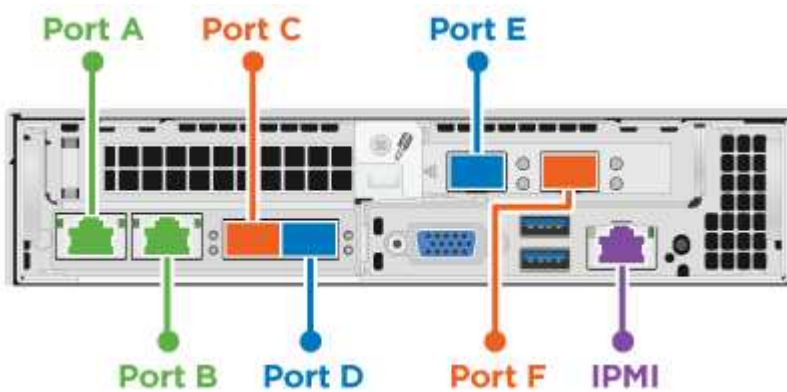
NetApp HCI can utilize multiple different network cabling and VLAN configurations. The first configuration, option A, uses two network cables for each compute node.

## Configuration option A: Two cables for compute nodes

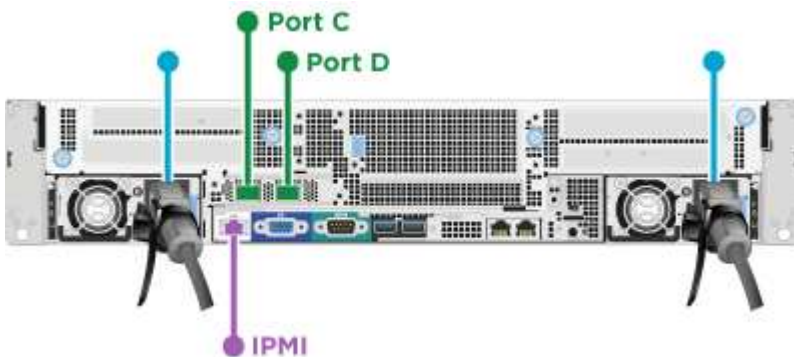
The NetApp H410C, H610C, and H615C compute nodes support using two network cables for connectivity to all NetApp HCI networks. This configuration requires that the storage, vMotion and any virtual machine networks use VLAN tagging. All compute and storage nodes must use the same VLAN ID scheme. This configuration uses vSphere Distributed Switches that require VMware vSphere Enterprise Plus licensing.

NetApp HCI documentation uses letters to refer to network ports on the back panel of H-series nodes.

Here are the network ports and locations on the H410C storage node:



Here are the network ports and locations on the H610C compute node:



Here are the network ports and locations on the H615C compute node:



This configuration uses the following network ports on each node:

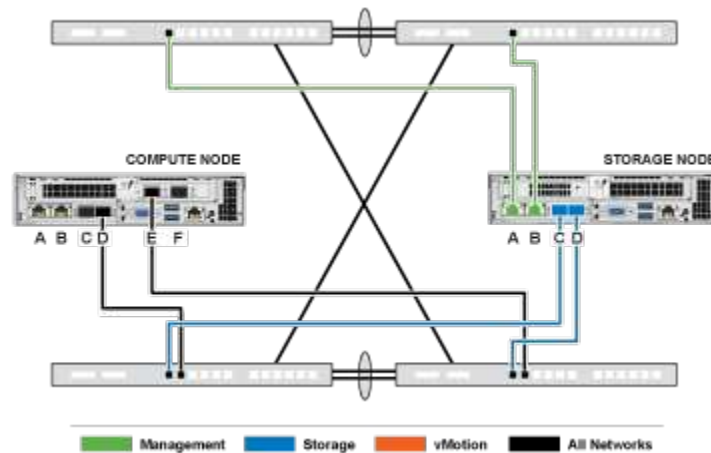
Node	Network ports used
H410C	D and E
H610C	C and D
H615C	A and B

## VLAN configuration

As a best practice, you should configure the required network segments on all switch ports that the nodes are using. For example:

Network name	VLAN ID	Switch port configuration
Management	100	Native
Storage	105	Tagged
vMotion	107	Tagged
Virtual machines	200, 201	Tagged

The following illustration shows the recommended cabling configuration for two-cable H410C compute nodes and four-cable H410S storage nodes. All switch ports in this example share the same configuration.



## Example switch commands

You can use the following example commands to configure all switch ports used for NetApp HCI nodes. These commands are based on a Cisco configuration, but might require only small changes to apply to Mellanox switches. See your switch documentation for the specific commands you need to implement this configuration. Replace the interface name, description, and VLANs with the values for your environment.

```
interface {interface name, such as EthernetX/Y or GigabitEthernetX/Y/Z}
description {desired description, such as NetApp-HCI-NodeX-PortY}
mtu 9216
switchport mode trunk
switchport trunk native vlan 100
switchport trunk allowed vlan 105,107,200,201
```

spanning-tree port type edge trunk



Some switches might require inclusion of the native VLAN in the allowed VLAN list. See the documentation for your specific switch model and software version.

## Find more information

- [NetApp HCI Resources page](#)
- [NetApp Element Plug-in for vCenter Server](#)

## Copyright Information

Copyright © 2021 NetApp, Inc. All rights reserved. Printed in the U.S. No part of this document covered by copyright may be reproduced in any form or by any means-graphic, electronic, or mechanical, including photocopying, recording, taping, or storage in an electronic retrieval system-without prior written permission of the copyright owner.

Software derived from copyrighted NetApp material is subject to the following license and disclaimer:

THIS SOFTWARE IS PROVIDED BY NETAPP "AS IS" AND WITHOUT ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE HEREBY DISCLAIMED. IN NO EVENT SHALL NETAPP BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

NetApp reserves the right to change any products described herein at any time, and without notice. NetApp assumes no responsibility or liability arising from the use of products described herein, except as expressly agreed to in writing by NetApp. The use or purchase of this product does not convey a license under any patent rights, trademark rights, or any other intellectual property rights of NetApp.

The product described in this manual may be protected by one or more U.S. patents, foreign patents, or pending applications.

RESTRICTED RIGHTS LEGEND: Use, duplication, or disclosure by the government is subject to restrictions as set forth in subparagraph (c)(1)(ii) of the Rights in Technical Data and Computer Software clause at DFARS 252.277-7103 (October 1988) and FAR 52-227-19 (June 1987).

## Trademark Information

NETAPP, the NETAPP logo, and the marks listed at <http://www.netapp.com/TM> are trademarks of NetApp, Inc. Other company and product names may be trademarks of their respective owners.