# IP address requirements

HCI

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### IP address requirements

NetApp HCI has specific IP address requirements that depend on the size of your deployment. Note that by default the initial IP addresses you assign to each node before using the NetApp Deployment Engine to deploy the system are temporary and cannot be reused. You need to set aside a second permanent set of unused IP addresses that you can assign during final deployment.

# Number of IP addresses needed per NetApp HCI deployment

The NetApp HCI storage network and management network should each use separate contiguous ranges of IP addresses. Use the following table to determine how many IP addresses you need for your deployment:

System component	Management network IP addresses needed	Storage network IP addresses needed	vMotion network IP addresses needed	Total IP addresses needed per component
Compute node	1	2	1	4
Storage node	1	1		2
Storage cluster	1	1		2
VMware vCenter	1			1
Management node	1	1		2
Witness Node	1	1		2 per Witness Node (two Witness Nodes are deployed for each two-node or three- node storage cluster)

### IP addresses reserved by NetApp HCI

NetApp HCI reserves the following IP address ranges for system components. When planning your network, avoid using these IP addresses:

IP address range	Description
10.0.0.0/24	Docker overlay network

IP address range	Description
10.0.1.0/24	Docker overlay network
10.255.0.0/16	Docker swarm ingress network
169.254.100.1/22	Docker bridge network
169.254.104.0/22	Docker bridge network

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