Manage network IP interfaces

REST API reference

NetApp
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Network IP interfaces endpoint overview

Overview

The following operations are supported:

- Creation: POST network/ip/interfaces
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- Instance Patch: PATCH network/ip/interfaces/{uuid}
- Instance Delete: DELETE network/ip/interfaces/{uuid}

Retrieving network interface information

The IP interfaces GET API retrieves and displays relevant information pertaining to the interfaces configured in the cluster. The response can contain a list of multiple interfaces or a specific interface. The fields returned in the response vary for different interfaces and configurations.

Examples

Retrieving all interfaces in the cluster

The following example shows the list of all interfaces configured in a cluster.

```
# The API:
/api/network/ip/interfaces

# The call:
curl -X GET "https://<mgmt-ip>/api/network/ip/interfaces" -H "accept:
application/hal+json"

# The response:
{
"records": [
  {
    "uuid": "14531286-59fc-11e8-ba55-005056b4340f",
    "name": "user-cluster-01_mgmt1",
    "_links": {
      "self": {
        "href": "/api/network/ip/interfaces/14531286-59fc-11e8-ba55-
005056b4340f"
      }
```

```
    }
  },
  {
    "uuid": "145318ba-59fc-11e8-ba55-005056b4340f",
    "name": "user-cluster-01_clus2",
    "_links": {
      "self": {
        "href": "/api/network/ip/interfaces/145318ba-59fc-11e8-ba55-
005056b4340f"
      }
    }
  },
  {
    "uuid": "14531e45-59fc-11e8-ba55-005056b4340f",
    "name": "user-cluster-01_clus1",
    "_links": {
      "self": {
        "href": "/api/network/ip/interfaces/14531e45-59fc-11e8-ba55-
005056b4340f"
      }
    }
  },
  {
    "uuid": "245979de-59fc-11e8-ba55-005056b4340f",
    "name": "cluster_mgmt",
    "_links": {
      "self": {
        "href": "/api/network/ip/interfaces/245979de-59fc-11e8-ba55-
005056b4340f"
      }
    }
  },
  {
    "uuid": "c670707c-5a11-11e8-8fcb-005056b4340f",
    "name": "lif1",
    "_links": {
      "self": {
        "href": "/api/network/ip/interfaces/c670707c-5a11-11e8-8fcb-
005056b4340f"
      }
    }
  }
],
"num_records": 5,
"_links": {
  "self": {
```

```
    "href": "/api/network/ip/interfaces"
  }
}
}
```

Retrieving a specific Cluster-scoped interface

The following example shows the response when a specific Cluster-scoped interface is requested. The system returns an error when there is no interface with the requested UUID. SVM information is not returned for Cluster-scoped interfaces.

```
# The API:
/api/network/ip/interfaces/{uuid}

# The call:
curl -X GET "https://<mgmt-ip>/api/network/ip/interfaces/245979de-59fc-
11e8-ba55-005056b4340f" -H "accept: application/hal+json"

# The response:
{
"uuid": "245979de-59fc-11e8-ba55-005056b4340f",
"name": "cluster_mgmt",
"ip": {
  "address": "10.63.41.6",
  "netmask": "18",
  "family": "ipv4",
},
"enabled": true,
"state": "up",
"scope": "cluster",
"ipspace": {
  "uuid": "114ecfb5-59fc-11e8-ba55-005056b4340f",
  "name": "Default",
  "_links": {
    "self": {
            "href": "/api/network/ipspaces/114ecfb5-59fc-11e8-ba55-
005056b4340f"
    }
  }
},
"services": [
  "management_core",
  "management_autosupport",
```

```
    "management_access"
  ],
  "location": {
    "is_home": true,
    "auto_revert": false,
    "failover": "broadcast_domain_only",
    "node": {
      "uuid": "c1db2904-1396-11e9-bb7d-005056acfcbb",
      "name": "user-cluster-01-a",
      "_links": {
        "self": {
          "href": "/api/cluster/nodes/c1db2904-1396-11e9-bb7d-005056acfcbb"
        }
      }
    },
    "port": {
      "uuid": "c84d5337-1397-11e9-87c2-005056acfcbb",
      "name": "e0d",
      "node": {
        "name": "user-cluster-01-a"
      },
      "_links": {
        "self": {
          "href": "/api/network/ethernet/ports/c84d5337-1397-11e9-87c2-
005056acfcbb"
        }
      }
    },
    "home_node": {
      "uuid": "c1db2904-1396-11e9-bb7d-005056acfcbb",
      "name": "user-cluster-01-a",
      "_links": {
        "self": {
          "href": "/api/cluster/nodes/c1db2904-1396-11e9-bb7d-005056acfcbb"
        }
      }
    },
    "home_port": {
      "uuid": "c84d5337-1397-11e9-87c2-005056acfcbb",
      "name": "e0d",
      "node": {
        "name": "user-cluster-01-a"
      },
      "_links": {
        "self": {
          "href": "/api/network/ethernet/ports/c84d5337-1397-11e9-87c2-
```

```
005056acfcbb"
      }
    }
  }
},
"service_policy": {
  "uuid": "9e0f4151-141b-11e9-851e-005056ac1ce0",
  "name": "default-management"
},
"vip": false,
"_links": {
  "self": {
    "href": "/api/network/ip/interfaces/245979de-59fc-11e8-ba55-
005056b4340f"
  }
}
}
```

Retrieving a specific SVM-scoped interface using a filter

The following example shows the response when a specific SVM-scoped interface is requested. The SVM object is only included for SVM-scoped interfaces.

```
# The API:
/api/network/ip/interfaces

# The call:
curl -X GET "https://<mgmt-
ip>/api/network/ip/interfaces?name=lif1&fields=*" -H "accept:
application/hal+json"

# The response:
{
"records": [
  {
    "uuid": "c670707c-5a11-11e8-8fcb-005056b4340f",
    "name": "lif1",
    "ip": {
      "address": "10.10.10.11",
      "netmask": "24",
      "family": "ipv4",
    },
    "enabled": true,
```

```
    "state": "up",
    "scope": "svm",
    "ipspace": {
      "uuid": "114ecfb5-59fc-11e8-ba55-005056b4340f",
      "name": "Default",
      "_links": {
        "self": {
          "href": "/api/network/ipspaces/114ecfb5-59fc-11e8-ba55-
005056b4340f"
        }
      }
    },
    "svm": {
      "uuid": "c2134665-5a11-11e8-8fcb-005056b4340f",
      "name": "user_vs0",
      "_links": {
        "self": {
          "href": "/api/svm/svms/c2134665-5a11-11e8-8fcb-005056b4340f"
        }
      }
    },
    "services": [
      "data_core",
      "data_nfs",
      "data_cifs",
      "data_flexcache"
    ],
    "location": {
      "is_home": true,
      "auto_revert": false,
      "failover": "broadcast_domain_only",
      "node": {
        "uuid": "c1db2904-1396-11e9-bb7d-005056acfcbb",
        "name": "user-cluster-01-a",
        "_links": {
          "self": {
            "href": "/api/cluster/nodes/c1db2904-1396-11e9-bb7d-
005056acfcbb"
          }
        }
      },
      "port": {
        "uuid": "c84d5337-1397-11e9-87c2-005056acfcbb",
        "name": "e0d",
        "node": {
          "name": "user-cluster-01-a"
```

```
        },
        "_links": {
          "self": {
            "href": "/api/network/ethernet/ports/c84d5337-1397-11e9-87c2-
005056acfcbb"
          }
        }
      },
      "home_node": {
        "uuid": "c1db2904-1396-11e9-bb7d-005056acfcbb",
        "name": "user-cluster-01-a",
        "_links": {
          "self": {
            "href": "/api/cluster/nodes/c1db2904-1396-11e9-bb7d-
005056acfcbb"
          }
        }
      },
      "home_port": {
        "uuid": "c84d5337-1397-11e9-87c2-005056acfcbb",
        "name": "e0d",
        "node": {
          "name": "user-cluster-01-a"
        },
        "_links": {
          "self": {
            "href": "/api/network/ethernet/ports/c84d5337-1397-11e9-87c2-
005056acfcbb"
          }
        }
      }
    },
    "service_policy": {
      "uuid": "9e53525f-141b-11e9-851e-005056ac1ce0",
      "name": "default-data-files"
    },
    "vip": false,
    "_links": {
      "self": {
        "href": "/api/network/ip/interfaces/c670707c-5a11-11e8-8fcb-
005056b4340f"
      }
    }
  }
],
"num_records": 1,
```

```
"_links": {
  "self": {
    "href": "/api/network/ip/interfaces?name=lif1&fields=*"
  }
}
}
```

Retrieving specific fields and limiting the output using filters

The following example shows the response when a filter is applied (location.home_port.name=e0a) and only certain fields are requested. Filtered fields are in the output in addition to the default fields and requested fields.

```
# The API:
/api/network/ip/interfaces

# The call:
curl -X GET "https://<mgmt-
ip>/api/network/ip/interfaces?location.home_port.name=e0a&fields=location.
home_node.name,service_policy.name,ip.address,enabled" -H "accept:
application/hal+json"

# The response:
{
"records": [
  {
    "uuid": "1d1c9dc8-4f17-11e9-9553-005056ac918a",
    "name": "user-cluster-01-a_clus1",
    "ip": {
      "address": "192.168.170.24"
    },
    "enabled": true,
    "location": {
      "home_node": {
        "name": "user-cluster-01-a"
      },
      "home_port": {
        "name": "e0a"
      }
    },
    "service_policy": {
      "name": "default-cluster"
    },
```

```
    "_links": {
      "self": {
        "href": "/api/network/ip/interfaces/1d1c9dc8-4f17-11e9-9553-
005056ac918a"
      }
    }
  },
  {
    "uuid": "d07782c1-4f16-11e9-86e7-005056ace7ee",
    "name": "user-cluster-01-b_clus1",
    "ip": {
      "address": "192.168.170.22"
    },
    "enabled": true,
    "location": {
      "home_node": {
        "name": "user-cluster-01-b"
      },
      "home_port": {
        "name": "e0a"
      }
    },
    "service_policy": {
      "name": "default-cluster"
    },
    "_links": {
      "self": {
        "href": "/api/network/ip/interfaces/d07782c1-4f16-11e9-86e7-
005056ace7ee"
      }
    }
  }
],
"num_records": 2,
"_links": {
  "self": {
    "href":
"/api/network/ip/interfaces?location.home_port.name=e0a&fields=location.ho
me_node.name,service_policy.name,ip.address,enabled"
  }
}
}
```

Creating IP interfaces

You can use the IP interfaces POST API to create IP interfaces as shown in the following examples.

Examples

Creating a Cluster-scoped IP interface using names

The following example shows the record returned after the creation of an IP interface on "e0d".

```
# The API:
/api/network/ip/interfaces

# The call:
curl -X POST "https://<mgmt-
ip>/api/network/ip/interfaces?return_records=true" -H "accept:
application/hal+json" -d '{ "name": "cluster_mgmt", "ip": { "address":
"10.63.41.6", "netmask": "18" }, "enabled": true, "scope": "cluster",
"ipspace": { "name": "Default" }, "location": { "auto_revert": false,
"failover": "broadcast_domain_only", "home_port": { "name": "e0d", "node":
{ "name": "user-cluster-01-a" } } }, "service_policy": { "name": "default-
management" } }'

# The response:
{
"num_records": 1,
"records": [
  {
    "uuid": "245979de-59fc-11e8-ba55-005056b4340f",
    "name": "cluster_mgmt",
    "ip": {
      "address": "10.63.41.6",
      "netmask": "18"
    },
    "enabled": true,
    "scope": "cluster",
    "ipspace": {
      "name": "Default"
    },
    "location": {
      "auto_revert": false,
      "failover": "broadcast_domain_only",
      "home_port": {
        "name": "e0d",
```

```
        "node": {
          "name": "user-cluster-01-a"
        }
      },
    },
    "service_policy": {
      "name": "default-management"
    },
    "_links": {
      "self": {
        "href": "/api/network/ip/interfaces/245979de-59fc-11e8-ba55-
005056b4340f"
      }
    }
  }
]
}
```

Creating a SVM-scoped IP interface using a mix of parameter types

The following example shows the record returned after the creation of a IP interface by specifying a broadcast domain as the location.

```
# The API:
/api/network/ip/interfaces

# The call:
curl -X POST "https://<mgmt-
ip>/api/network/ip/interfaces?return_records=true" -H "accept:
application/hal+json" -d '{ "name": "Data1", "ip": { "address":
"10.234.101.116", "netmask": "255.255.240.0" }, "enabled": true, "scope":
"svm", "svm": { "uuid": "137f3618-1e89-11e9-803e-005056a7646a" },
"location": { "auto_revert": true, "broadcast_domain": { "name": "Default"
} }, "service_policy": { "name": "default-data-files" } }'

# The response:
{
"num_records": 1,
"records": [
  {
    "uuid": "80d271c9-1f43-11e9-803e-005056a7646a",
    "name": "Data1",
    "ip": {
```

```
      "address": "10.234.101.116",
      "netmask": "20"
    },
    "enabled": true,
    "scope": "svm",
    "svm": {
      "uuid": "137f3618-1e89-11e9-803e-005056a7646a",
      "name": "vs0",
      "_links": {
        "self": {
          "href": "/api/svm/svms/137f3618-1e89-11e9-803e-005056a7646a"
        }
      }
    },
    "location": {
      "auto_revert": true
    },
    "service_policy": {
      "name": "default-data-files"
    },
    "_links": {
      "self": {
        "href": "/api/network/ip/interfaces/80d271c9-1f43-11e9-803e-
005056a7646a"
      }
    }
  }
]
}
```

Creating a Cluster-scoped IP interface without specifying the scope parameter

The following example shows the record returned after creating an IP interface on "e0d" without specifying the scope parameter. The scope is "cluster" if an "svm" is not specified.

```
# The API:
/api/network/ip/interfaces

# The call:
curl -X POST "https://<mgmt-
ip>/api/network/ip/interfaces?return_records=true" -H "accept:
application/hal+json" -d '{ "name": "cluster_mgmt", "ip": { "address":
"10.63.41.6", "netmask": "18" }, "enabled": true, "ipspace": { "name":
```

```
"Default" }, "location": { "auto_revert": false, "home_port": { "name":
"e0d", "node": { "name": "user-cluster-01-a" } } }, "service_policy": {
"name": "default-management" } }'

# The response:
{
"num_records": 1,
"records": [
  {
    "uuid": "245979de-59fc-11e8-ba55-005056b4340f",
    "name": "cluster_mgmt",
    "ip": {
      "address": "10.63.41.6",
      "netmask": "18"
    },
    "enabled": true,
    "scope": "cluster",
    "ipspace": {
      "name": "Default"
    },
    "location": {
      "auto_revert": false,
      "home_port": {
        "name": "e0d",
        "node": {
          "name": "user-cluster-01-a"
        }
      }
    },
    "service_policy": {
      "name": "default-management"
    },
    "_links": {
      "self": {
        "href": "/api/network/ip/interfaces/245979de-59fc-11e8-ba55-
005056b4340f"
      }
    }
  }
]
}
```

Creating an SVM-scoped IP interface without specifying the scope parameter

The following example shows the record returned after creating an IP interface on "e0d" without specifying the scope parameter. The scope is "svm" if the "svm" field is specified.

```
# The API:
/api/network/ip/interfaces

# The call:
curl -X POST "https://<mgmt-
ip>/api/network/ip/interfaces?return_records=true" -H "accept:
application/hal+json" -d '{ "name": "Data1", "ip": { "address":
"10.234.101.116", "netmask": "255.255.240.0" }, "enabled": true, "svm": {
"uuid": "137f3618-1e89-11e9-803e-005056a7646a" }, "location": {
"auto_revert": true, "broadcast_domain": { "name": "Default" } },
"service_policy": { "name": "default-data-files" } }'

# The response:
{
"num_records": 1,
"records": [
  {
    "uuid": "80d271c9-1f43-11e9-803e-005056a7646a",
    "name": "Data1",
    "ip": {
      "address": "10.234.101.116",
      "netmask": "20"
    },
    "enabled": true,
    "scope": "svm",
    "svm": {
      "uuid": "137f3618-1e89-11e9-803e-005056a7646a",
      "name": "vs0",
      "_links": {
        "self": {
          "href": "/api/svms/137f3618-1e89-11e9-803e-005056a7646a"
        }
      }
    },
    "location": {
      "auto_revert": true
    },
    "service_policy": {
      "name": "default-data-files"
    },
```

```
    "_links": {
      "self": {
        "href": "/api/network/ip/interfaces/80d271c9-1f43-11e9-803e-
005056a7646a"
      }
    }
  }
]
}
```

Creating an SVM-scoped IP interface using a subnet

The following example shows the record returned after the creation of a IP interface by allocating an IP address from a subnet.

```
# The API:
/api/network/ip/interfaces

# The call:
curl -X POST "https://<mgmt-
ip>/api/network/ip/interfaces?return_records=true" -H "accept:
application/hal+json" -d '{ "name": "Data1", "subnet": { "name":
"Subnet10" }, "enabled": true, "scope": "svm", "svm": { "uuid": "137f3618-
1e89-11e9-803e-005056a7646a" }, "location": { "auto_revert": true,
"broadcast_domain": { "name": "Default" } }, "service_policy": { "name":
"default-data-files" } }'

# The response:
{
"num_records": 1,
"records": [
  {
    "uuid": "80d271c9-1f43-11e9-803e-005056a7646a",
    "name": "Data1",
    "enabled": true,
    "scope": "svm",
    "svm": {
      "uuid": "137f3618-1e89-11e9-803e-005056a7646a",
      "name": "vs0",
      "_links": {
        "self": {
          "href": "/api/svm/svms/137f3618-1e89-11e9-803e-005056a7646a"
        }
```

```
      }
    },
    "location": {
      "auto_revert": true
    },
    "service_policy": {
      "name": "default-data-files"
    },
    "subnet": {
      "name": "testSubnet"
    },
    "_links": {
      "self": {
        "href": "/api/network/ip/interfaces/80d271c9-1f43-11e9-803e-
005056a7646a"
      }
    }
  }
]
}
```

Updating IP interfaces

You can use the IP interfaces PATCH API to update the attributes of an IP interface.

Examples

Updating the auto revert flag of an IP interface

The following example shows how the PATCH request changes the auto revert flag to 'false'.

```
# The API:
/api/network/ip/interfaces/{uuid}

# The call:
curl -X PATCH "https://<mgmt-ip>/api/network/ip/interfaces/80d271c9-1f43-
11e9-803e-005056a7646a" -H "accept: application/hal+json" -d '{
"location": { "auto_revert": "false" } }'
{
}
```

Updating the service policy of an IP interface

The following example shows how the PATCH request changes the service policy to 'default-management'.

```
# The API:
/api/network/ip/interfaces/{uuid}

# The call:
curl -X PATCH "https://<mgmt-ip>/api/network/ip/interfaces/80d271c9-1f43-
11e9-803e-005056a7646a" -H "accept: application/hal+json" -d '{
"service_policy": { "name": "default-management" }}'
{
}
```

Deleting IP interfaces

You can use the IP interfaces DELETE API to delete an IP interface in the cluster.

Example

Deleting an IP Interface

The following DELETE request deletes a network IP interface.

```
# The API:
/api/network/ip/interfaces/{uuid}

# The call:
curl -X DELETE "https://<mgmt-ip>/api/network/ip/interfaces/80d271c9-1f43-
11e9-803e-005056a7646a"
{
}
```

Retrieve all IP interface details

GET `/network/ip/interfaces`

Introduced In: 9.6

Retrieves the details of all IP interfaces.

Related ONTAP Commands

- `network interface show`

Parameters

Name	Type	In	Required	Description
location.home_port.uuid	string	query	False	Filter by location.home_port.uuid
location.home_port.name	string	query	False	Filter by location.home_port.name
location.home_port.node.name	string	query	False	Filter by location.home_port.node.name
location.failover	string	query	False	Filter by location.failover
location.is_home	boolean	query	False	Filter by location.is_home
location.node.name	string	query	False	Filter by location.node.name
location.node.uuid	string	query	False	Filter by location.node.uuid
location.port.uuid	string	query	False	Filter by location.port.uuid
location.port.name	string	query	False	Filter by location.port.name
location.port.node.name	string	query	False	Filter by location.port.node.name
location.home_node.name	string	query	False	Filter by location.home_node.name

Name	Type	In	Required	Description
location.home_node.uuid	string	query	False	Filter by location.home_node.uuid
location.auto_revert	boolean	query	False	Filter by location.auto_revert
subnet.name	string	query	False	Filter by subnet.name • Introduced in: 9.11
subnet.uuid	string	query	False	Filter by subnet.uuid • Introduced in: 9.11
vip	boolean	query	False	Filter by vip
scope	string	query	False	Filter by scope
name	string	query	False	Filter by name
dns_zone	string	query	False	Filter by dns_zone • Introduced in: 9.9
metric.throughput.total	integer	query	False	Filter by metric.throughput.total • Introduced in: 9.8
metric.throughput.write	integer	query	False	Filter by metric.throughput.write • Introduced in: 9.8

Name	Type	In	Required	Description
metric.throughput.read	integer	query	False	Filter by metric.throughput.read • Introduced in: 9.8
metric.status	string	query	False	Filter by metric.status • Introduced in: 9.8
metric.duration	string	query	False	Filter by metric.duration • Introduced in: 9.8
metric.timestamp	string	query	False	Filter by metric.timestamp • Introduced in: 9.8
services	string	query	False	Filter by services
enabled	boolean	query	False	Filter by enabled
ip.address	string	query	False	Filter by ip.address
ip.family	string	query	False	Filter by ip.family
ip.netmask	string	query	False	Filter by ip.netmask
svm.uuid	string	query	False	Filter by svm.uuid
svm.name	string	query	False	Filter by svm.name
service_policy.name	string	query	False	Filter by service_policy.name
service_policy.uuid	string	query	False	Filter by service_policy.uuid
uuid	string	query	False	Filter by uuid

Name	Type	In	Required	Description
rdma_protocols	string	query	False	Filter by rdma_protocols • Introduced in: 9.10
state	string	query	False	Filter by state
ipspace.uuid	string	query	False	Filter by ipspace.uuid
ipspace.name	string	query	False	Filter by ipspace.name
probe_port	integer	query	False	Filter by probe_port • Introduced in: 9.10
ddns_enabled	boolean	query	False	Filter by ddns_enabled • Introduced in: 9.9
statistics.status	string	query	False	Filter by statistics.status • Introduced in: 9.8
statistics.timestamp	string	query	False	Filter by statistics.timestamp • Introduced in: 9.8
statistics.throughput_raw.total	integer	query	False	Filter by statistics.throughput_raw.total • Introduced in: 9.8

Name	Type	In	Required	Description
statistics.throughput_raw.write	integer	query	False	Filter by statistics.throughput_raw.write • Introduced in: 9.8
statistics.throughput_raw.read	integer	query	False	Filter by statistics.throughput_raw.read • Introduced in: 9.8
fields	array[string]	query	False	Specify the fields to return.
max_records	integer	query	False	Limit the number of records returned.
return_records	boolean	query	False	The default is true for GET calls. When set to false, only the number of records is returned. • Default value: 1
return_timeout	integer	query	False	The number of seconds to allow the call to execute before returning. When iterating over a collection, the default is 15 seconds. ONTAP returns earlier if either max records or the end of the collection is reached. • Default value: 1 • Max value: 120 • Min value: 0

Name	Type	In	Required	Description
order_by	array[string]	query	False	Order results by specified fields and optional [asc

Response

```
Status: 200, Ok
```

Name	Type	Description
_links	_links	
num_records	integer	Number of records
records	array[ip_interface]	

Example response


```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "num_records": 1,
  "records": [
    {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "dns_zone": "storage.company.com",
      "fail_if_subnet_conflicts": true,
      "ip": {
        "address": "10.10.10.7",
        "family": "string",
        "netmask": "24"
      },
      "ipspace": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "exchange",
        "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
      },
      "location": {
        "failover": "string",
        "home_node": {
          "_links": {
            "self": {
              "href": "/api/resourcelink"
            }
          },
          "name": "node1",
          "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
        },
```

```
      "home_port": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "e1b",
        "node": {
          "name": "node1"
        },
        "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
      },
      "node": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "node1",
        "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
      },
      "port": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "e1b",
        "node": {
          "name": "node1"
        },
        "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
      }
    },
    "metric": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "duration": "PT15S",
      "status": "ok",
      "throughput": {
        "read": 200,
        "total": 1000,
        "write": 100
```

```
      },
      "timestamp": "2017-01-25 06:20:13 -0500"
    },
    "name": "dataLif1",
    "probe_port": 64001,
    "rdma_protocols": [
      "roce"
    ],
    "scope": "string",
    "service_policy": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "default-intercluster",
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    },
    "services": [
      "data_nfs"
    ],
    "state": "string",
    "statistics": {
      "status": "ok",
      "throughput_raw": {
        "read": 200,
        "total": 1000,
        "write": 100
      },
      "timestamp": "2017-01-25 06:20:13 -0500"
    },
    "subnet": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "subnet1",
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    },
    "svm": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
```

```
        "name": "svm1",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      },
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    }
  ]
}
```


Error

```
Status: Default, Error
```

Name	Type	Description
error	returned_error	

Example error


```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```


Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

Name	Type	Description
next	href	
self	href	

_links

Name	Type	Description
self	href	

ip_info

IP information

Name	Type	Description
address	string	IPv4 or IPv6 address
family	string	IPv4 or IPv6
netmask	string	Input as netmask length (16) or IPv4 mask (255.255.0.0). For IPv6, the default value is 64 with a valid range of 1 to 127. Output is always netmask length.

ipspace

Either the UUID or name must be supplied on POST for cluster-scoped objects.

Name	Type	Description
_links	_links	
name	string	IPspace name
uuid	string	IPspace UUID

broadcast_domain

Broadcast domain UUID along with a readable name.

Name	Type	Description
_links	_links	
name	string	Name of the broadcast domain, scoped to its IPspace
uuid	string	Broadcast domain UUID

home_node

Name	Type	Description
_links	_links	
name	string	
uuid	string	

node

Name	Type	Description
name	string	Name of node on which the port is located.

home_port

Port UUID along with readable names. Either the UUID or both names may be supplied on input.

Name	Type	Description
_links	_links	
name	string	
node	node	
uuid	string	

node

Name	Type	Description
_links	_links	
name	string	
uuid	string	

port

Port UUID along with readable names. Either the UUID or both names may be supplied on input.

Name	Type	Description
_links	_links	
name	string	
node	node	
uuid	string	

location

Current or home location can be modified. Specifying a port implies a node. Specifying a node allows an appropriate port to be automatically selected. Ports are not valid and not shown for VIP interfaces. For POST, broadcast_domain can be specified alone or with home_node. For PATCH, set is_home to true to revert a LIF back to its home port.

Name	Type	Description
auto_revert	boolean	
failover	string	Policy that defines where an interface is permitted to move on failover. The policy named “default” implements the recommended best practice for NAS LIFs on the current platform and cluster, and was known as “system_defined” in the CLI.
home_node	home_node	
home_port	home_port	Port UUID along with readable names. Either the UUID or both names may be supplied on input.
is_home	boolean	
node	node	
port	port	Port UUID along with readable names. Either the UUID or both names may be supplied on input.

throughput

The rate of throughput bytes per second observed at the interface.

Name	Type	Description
read	integer	Performance metric for read I/O operations.

Name	Type	Description
total	integer	Performance metric aggregated over all types of I/O operations.
write	integer	Peformance metric for write I/O operations.

metric

The most recent sample of I/O metrics for the interface.

Name	Type	Description
_links	_links	
duration	string	The duration over which this sample is calculated. The time durations are represented in the ISO-8601 standard format. Samples can be calculated over the following durations:
status	string	Errors associated with the sample. For example, if the aggregation of data over multiple nodes fails, then any partial errors might return "ok" on success or "error" on an internal uncategorized failure. Whenever a sample collection is missed but done at a later time, it is back filled to the previous 15 second timestamp and tagged with "backfilled_data". "inconsistent_delta_time" is encountered when the time between two collections is not the same for all nodes. Therefore, the aggregated value might be over or under inflated. "Negative_delta" is returned when an expected monotonically increasing value has decreased in value. "inconsistent_old_data" is returned when one or more nodes do not have the latest data.
throughput	throughput	The rate of throughput bytes per second observed at the interface.

Name	Type	Description
timestamp	string	The timestamp of the performance data.

service_policy

Name	Type	Description
_links	_links	
name	string	
uuid	string	

throughput_raw

Throughput bytes observed at the interface. This can be used along with delta time to calculate the rate of throughput bytes per unit of time.

Name	Type	Description
read	integer	Performance metric for read I/O operations.
total	integer	Performance metric aggregated over all types of I/O operations.
write	integer	Peformance metric for write I/O operations.

statistics

The real time I/O statistics for the interface.

Name	Type	Description
status	string	Errors associated with the sample. For example, if the aggregation of data over multiple nodes fails, then any partial errors might return "ok" on success or "error" on an internal uncategorized failure. Whenever a sample collection is missed but done at a later time, it is back filled to the previous 15 second timestamp and tagged with "backfilled_data". "inconsistent_delta_time" is encountered when the time between two collections is not the same for all nodes. Therefore, the aggregated value might be over or under inflated. "Negative_delta" is returned when an expected monotonically increasing value has decreased in value. "inconsistent_old_data" is returned when one or more nodes do not have the latest data.
throughput_raw	throughput_raw	Throughput bytes observed at the interface. This can be used along with delta time to calculate the rate of throughput bytes per unit of time.
timestamp	string	The timestamp of the performance data.

ip_subnet_reference

A named subnet. Either UUID or name can be supplied on input.

Name	Type	Description
_links	_links	
name	string	The name of the subnet. If only the name is provided, the IPspace scope must be provided by the object this object is embedded in.

Name	Type	Description
uuid	string	The UUID that uniquely identifies the subnet.

svm

Applies only to SVM-scoped objects. Either the UUID or name must be supplied on POST.

Name	Type	Description
_links	_links	
name	string	The name of the SVM. This field cannot be specified in a PATCH method.
uuid	string	The unique identifier of the SVM. This field cannot be specified in a PATCH method.

ip_interface

Name	Type	Description
_links	_links	
ddns_enabled	boolean	Indicates whether or not dynamic DNS updates are enabled. Defaults to true if the interface supports "data_nfs" or "data_cifs" services, otherwise false.
dns_zone	string	Fully qualified DNS zone name
enabled	boolean	The administrative state of the interface.
ip	ip_info	IP information
ipspace	ipspace	Either the UUID or name must be supplied on POST for cluster-scoped objects.

Name	Type	Description
location	location	Current or home location can be modified. Specifying a port implies a node. Specifying a node allows an appropriate port to be automatically selected. Ports are not valid and not shown for VIP interfaces. For POST, broadcast_domain can be specified alone or with home_node. For PATCH, set is_home to true to revert a LIF back to its home port.
metric	metric	The most recent sample of I/O metrics for the interface.
name	string	Interface name
probe_port	integer	Probe port for Cloud load balancer
rdma_protocols	array[string]	Supported RDMA offload protocols
scope	string	Set to "svm" for interfaces owned by an SVM. Otherwise, set to "cluster".
service_policy	service_policy	
services	array[string]	The services associated with the interface.
state	string	The operational state of the interface.
statistics	statistics	The real time I/O statistics for the interface.
subnet	ip_subnet_reference	A named subnet. Either UUID or name can be supplied on input.
svm	svm	Applies only to SVM-scoped objects. Either the UUID or name must be supplied on POST.

Name	Type	Description
uuid	string	The UUID that uniquely identifies the interface.
vip	boolean	True for a VIP interface, whose location is announced via BGP.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

returned_error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Create a new cluster-scoped or SVM-scoped interface

POST `/network/ip/interfaces`

Introduced In: 9.6

Creates a new Cluster-scoped or SVM-scoped interface.

Required properties

- `name` - Name of the interface to create.
- `ip` or `subnet`
  - `ip.address` - IP address for the interface.
  - `ip.netmask` - IP subnet of the interface.
  - `subnet.uuid` or `subnet.name`
- `ipspace.name` or `ipspace.uuid`

    - Required for Cluster-scoped interfaces.
    - Optional for SVM-scoped interfaces.
- `svm.name` or `svm.uuid`
    - Required for an SVM-scoped interface.
    - Invalid for a Cluster-scoped interface.
- `location.home_port` or `location.home_node` or `location.broadcast_domain` - One of these properties must be set to a value to define where the interface will be located.

Recommended property values

- `service_policy`
    - `for SVM scoped interfaces`
        - *default-data-files* for interfaces carrying file-oriented NAS data traffic
        - (DEPRECATED) *default-data-blocks* for interfaces carrying block-oriented SAN data traffic
        - *default-data-iscsi* for interfaces carrying iSCSI data traffic
        - *default-management* for interfaces carrying SVM management requests
    - `for Cluster scoped interfaces`
        - *default-intercluster* for interfaces carrying cluster peering traffic
        - *default-management* for interfaces carrying system management requests
        - *default-route-announce* for interfaces carrying BGP peer connections

Default property values

If not specified in POST, the following default property values are assigned:

- `scope`
    - *svm* if svm parameter is specified.
    - *cluster* if svm parameter is not specified
- `enabled` - *true*
- `location.auto_revert` - *true*
- `service_policy`
    - *default-data-files* if scope is `svm`
    - *default-management* if scope is `cluster` and IPspace is not `Cluster`
    - *default-cluster* if scope is `cluster` and IPspace is `Cluster`
- `failover` - Selects the least restrictive failover policy supported by all the services in the service policy.
- `ddns_enabled`
    - *true* if the interface supports *data_nfs* or *data_cifs* services
    - *false* otherwise
- `fail_if_subnet_conflicts` - *true*

Related ONTAP commands

- `network interface create`

Parameters

Name	Type	In	Required	Description
return_records	boolean	query	False	The default is false. If set to true, the records are returned. • Default value:

Request Body

Name	Type	Description
ddns_enabled	boolean	Indicates whether or not dynamic DNS updates are enabled. Defaults to true if the interface supports "data_nfs" or "data_cifs" services, otherwise false.
dns_zone	string	Fully qualified DNS zone name
enabled	boolean	The administrative state of the interface.
fail_if_subnet_conflicts	boolean	This command fails if the specified IP address falls within the address range of a named subnet. Set this value to false to use the specified IP address and to assign the subnet owning that address to the interface.
ip	ip_info	IP information
ipspace	ipspace	Either the UUID or name must be supplied on POST for cluster-scoped objects.

Name	Type	Description
location	location	Current or home location can be modified. Specifying a port implies a node. Specifying a node allows an appropriate port to be automatically selected. Ports are not valid and not shown for VIP interfaces. For POST, broadcast_domain can be specified alone or with home_node. For PATCH, set is_home to true to revert a LIF back to its home port.
name	string	Interface name
probe_port	integer	Probe port for Cloud load balancer
rdma_protocols	array[string]	Supported RDMA offload protocols
scope	string	Set to "svm" for interfaces owned by an SVM. Otherwise, set to "cluster".
service_policy	service_policy	
services	array[string]	The services associated with the interface.
state	string	The operational state of the interface.
subnet	ip_subnet_reference	A named subnet. Either UUID or name can be supplied on input.
svm	svm	Applies only to SVM-scoped objects. Either the UUID or name must be supplied on POST.
uuid	string	The UUID that uniquely identifies the interface.
vip	boolean	True for a VIP interface, whose location is announced via BGP.

Example request


```
{
  "dns_zone": "storage.company.com",
  "ip": {
    "address": "10.10.10.7",
    "netmask": "24"
  },
  "ipspace": {
    "name": "exchange",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "location": {
    "broadcast_domain": {
      "name": "bd1",
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    },
    "failover": "string",
    "home_node": {
      "name": "node1",
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    },
    "home_port": {
      "name": "e1b",
      "node": {
        "name": "node1"
      },
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    },
    "is_home": true
  },
  "name": "dataLif1",
  "probe_port": 64001,
  "rdma_protocols": [
    "roce"
  ],
  "scope": "string",
  "service_policy": {
    "name": "default-intercluster",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "services": [
    "data_nfs"
  ],
  "state": "string",
  "subnet": {
```

```
    "name": "subnet1",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "svm": {
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  },
  "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
}
```


Response

```
Status: 201, Created
```

Name	Type	Description
num_records	integer	Number of records
records	array[ip_interface]	

Example response


```
{
  "num_records": 1,
  "records": [
    {
      "dns_zone": "storage.company.com",
      "ip": {
        "address": "10.10.10.7",
        "netmask": "24"
      },
      "ipspace": {
        "name": "exchange",
        "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
      },
      "location": {
        "broadcast_domain": {
          "name": "bd1",
          "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
        },
        "failover": "string",
        "home_node": {
          "name": "node1",
          "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
        },
        "home_port": {
          "name": "e1b",
          "node": {
            "name": "node1"
          },
          "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
        },
        "is_home": true
      },
      "name": "dataLif1",
      "probe_port": 64001,
      "rdma_protocols": [
        "roce"
      ],
      "scope": "string",
      "service_policy": {
        "name": "default-intercluster",
        "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
      },
      "services": [
        "data_nfs"
```

```
      ],
      "state": "string",
      "subnet": {
        "name": "subnet1",
        "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
      },
      "svm": {
        "name": "svm1",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      },
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    }
  ]
}
```


Headers

Name	Description	Type
Location	Useful for tracking the resource location	string

Error

```
Status: Default
```

ONTAP Error Response Codes

Error Code	Description
1376656	Cluster interfaces must be in the same subnet. Verify the address and netmask are set to the correct values.
1376663	All LIFs from a single DNS zone must be in the same SVM.
1376663	Cannot add interface to DNS zone because all interfaces from a single DNS zone must be in the same SVM.
1376963	Duplicate IP address.
1376976	The specified port is not capable of hosting this LIF.
1377583	Failed to create the interface because the broadcast domain of the specified subnet is different from the specified broadcast domain.
1377666	Subnet does not have any addresses available.

Error Code	Description
1966138	The same IP address may not be used for both a mgmt interface and a gateway address.
1966140	An interface with the same name already exists.
1966141	Invalid DNS zone name.
1966142	Only data LIFs can be assigned a DNS zone.
1966191	The interface could not be created because interface identifier creation failed.
1966267	IPv6 addresses must have a prefix length between 1 and 127.
1966269	IPv4 addresses must have a prefix length between 1 and 32.
1966270	Operation not support on SAN LIFs.
1966300	The LIF name is too long. The maximum number of characters allowed for iSCSI and FC LIF names is 254.
1966373	Failed to create interface because the home-port is not in the IPspace associated with the SVM.
1966454	A port on the node is not a member of a broadcast domain.
1966476	DNS Update is supported only on data LIFs.
1966477	DNS Update is supported only on LIFs configured with the NFS or CIFS protocol.
1966987	The Vserver Broadcast-Domain Home-Node and Home-Port combination is not valid.
1967081	The specified SVM must exist in the specified IPspace.
1967082	The specified ipspace.name does not match the IPspace name of ipspace.uuid.
1967102	POST operation might have left configuration in an inconsistent state. Check the configuration.
1967106	The specified location.home_port.name does not match the specified port name of location.home_port.uuid.
1967107	The location.home_port.uuid specified is not valid.
1967108	The specified location.home_node.name does not match the node name of location.home_node.uuid.
1967109	The specified location.home_port.node.name does not match the node name of location.home_node.uuid.

Error Code	Description
1967110	The specified location.home_port.node.name does not match location.home_node.name.
1967111	Home node must be specified by at least one location.home_node, location.home_port, or location.broadcast_domain field.
1967112	The specified location.home_node.name does not match the node name of location.home_port.uuid.
1967120	The specified service_policy.name does not match the specified service policy name of service_policy.uuid.
1967121	Invalid service_policy.uuid specified.
1967122	The specified location.broadcast_domain.name does not match the specified broadcast domain name of location.broadcast_domain.uuid.
1967123	The specified IPspace does not match the IPspace name of location.broadcast_domain.uuid.
1967124	The location.broadcast_domain.uuid specified is not valid.
1967127	svm.uuid or svm.name must be provided if scope is "svm".
1967128	ipspace.uuid or ipspace.name must be provided if scope is "cluster".
1967129	The specified location.home_port.uuid is not valid.
1967130	The specified location.home_port.name is not valid.
1967131	The specified location.home_port.uuid and location.home_port.name are not valid.
1967135	The specified location.broadcast_domain.uuid is not valid.
1967136	The specified location.broadcast_domain.name (and ipspace name) is not valid.
1967137	The specified location.broadcast_domain.uuid and location.broadcast_domain.name (and IPspace name) are not valid.
1967145	The specified location.failover is not valid.
1967146	The specified svm.name is not valid.
1967147	The specified svm.uuid is not valid.
1967153	No suitable port exists on location.home_node to host the interface.
1967154	Interfaces cannot be created on ports that are down. If a broadcast domain is specified, ensure that it contains at least one port that is operationally up.

Error Code	Description
1967381	Post VIP interfaces requires an effective cluster version of 9.7 or later.
1967382	VIP interfaces only reside in SVM scope.
1967383	Neither location.home_port.uuid or location.home_port.name should be set with vip=true.
1967384	Failed to create VIP interface because the home node does not have active BGP sessions to support Virtual IP (VIP) traffic.
1967385	VIP interfaces with an IPv4 address must use ip.netmask=32. VIP interfaces with an IPv6 address must use ip.netmask=128.
1967387	The specified IP address is in use by a subnet in this IPspace.
1967391	Setting the DNS zone requires an effective cluster version of 9.9.1 or later.
1967392	Setting the DDNS enable parameter requires an effective cluster version of 9.9.1 or later.
1967394	Setting the probe port parameter requires an effective cluster version of 9.10.1 or later.
1967396	The specified subnet.name does not match the subnet name of subnet.uuid.
1967397	The specified subnet.uuid does not match any configured subnet.";
1967398	Address must be specified by either ip.address and ip.netmask, or at least one subnet field, not both.";
5373966	An iSCSI interface cannot be created in an SVM configured for NVMe.
8847378	Cannot specify DNS zone when DNS updates are enabled for SVM
53281018	Failover policy is not compatible with one or more services in service policy
53281036	Setting the probe port parameter is not allowed on this platform.
53281065	The service_policy does not exist in the SVM.
53281073	IP address and netmask cannot be used because this represents a subnet address rather than a specific host address.
53281086	LIF would exceed the maximum number of supported intercluster LIFs in IPspace.
53281087	Cannot configure SAN LIF on SVM.

Error Code	Description
53281092	Failed to create interface because the home-port does not support the specified protocol.
53281093	The specified parameter is only supported on data SVMs.
53281104	The specified address is in use by the Service Processor
53281106	Failed checking the cluster capabilities.

Also see the table of common errors in the Response body overview section of this documentation.

Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

ip_info

IP information

Name	Type	Description
address	string	IPv4 or IPv6 address
netmask	string	Input as netmask length (16) or IPv4 mask (255.255.0.0). For IPv6, the default value is 64 with a valid range of 1 to 127. Output is always netmask length.

ipspace

Either the UUID or name must be supplied on POST for cluster-scoped objects.

Name	Type	Description
name	string	IPspace name
uuid	string	IPspace UUID

broadcast_domain

Broadcast domain UUID along with a readable name.

Name	Type	Description
name	string	Name of the broadcast domain, scoped to its IPspace
uuid	string	Broadcast domain UUID

home_node

Name	Type	Description
name	string	

Name	Type	Description
uuid	string	

node

Name	Type	Description
name	string	Name of node on which the port is located.

home_port

Port UUID along with readable names. Either the UUID or both names may be supplied on input.

Name	Type	Description
name	string	
node	node	
uuid	string	

node

Name	Type	Description
name	string	
uuid	string	

port

Port UUID along with readable names. Either the UUID or both names may be supplied on input.

Name	Type	Description
name	string	
node	node	
uuid	string	

location

Current or home location can be modified. Specifying a port implies a node. Specifying a node allows an appropriate port to be automatically selected. Ports are not valid and not shown for VIP interfaces. For POST, broadcast_domain can be specified alone or with home_node. For PATCH, set is_home to true to revert a LIF back to its home port.

Name	Type	Description
auto_revert	boolean	

Name	Type	Description
broadcast_domain	broadcast_domain	Broadcast domain UUID along with a readable name.
failover	string	Policy that defines where an interface is permitted to move on failover. The policy named “default” implements the recommended best practice for NAS LIFs on the current platform and cluster, and was known as “system_defined” in the CLI.
home_node	home_node	
home_port	home_port	Port UUID along with readable names. Either the UUID or both names may be supplied on input.

throughput

The rate of throughput bytes per second observed at the interface.

Name	Type	Description
read	integer	Performance metric for read I/O operations.
total	integer	Performance metric aggregated over all types of I/O operations.
write	integer	Peformance metric for write I/O operations.

metric

The most recent sample of I/O metrics for the interface.

Name	Type	Description
duration	string	The duration over which this sample is calculated. The time durations are represented in the ISO-8601 standard format. Samples can be calculated over the following durations:

Name	Type	Description
status	string	Errors associated with the sample. For example, if the aggregation of data over multiple nodes fails, then any partial errors might return "ok" on success or "error" on an internal uncategorized failure. Whenever a sample collection is missed but done at a later time, it is back filled to the previous 15 second timestamp and tagged with "backfilled_data". "inconsistent_delta_time" is encountered when the time between two collections is not the same for all nodes. Therefore, the aggregated value might be over or under inflated. "Negative_delta" is returned when an expected monotonically increasing value has decreased in value. "inconsistent_old_data" is returned when one or more nodes do not have the latest data.
throughput	throughput	The rate of throughput bytes per second observed at the interface.
timestamp	string	The timestamp of the performance data.

service_policy

Name	Type	Description
name	string	
uuid	string	

throughput_raw

Throughput bytes observed at the interface. This can be used along with delta time to calculate the rate of throughput bytes per unit of time.

Name	Type	Description
read	integer	Performance metric for read I/O operations.

Name	Type	Description
total	integer	Performance metric aggregated over all types of I/O operations.
write	integer	Peformance metric for write I/O operations.

statistics

The real time I/O statistics for the interface.

Name	Type	Description
status	string	Errors associated with the sample. For example, if the aggregation of data over multiple nodes fails, then any partial errors might return "ok" on success or "error" on an internal uncategorized failure. Whenever a sample collection is missed but done at a later time, it is back filled to the previous 15 second timestamp and tagged with "backfilled_data". "inconsistent_delta_time" is encountered when the time between two collections is not the same for all nodes. Therefore, the aggregated value might be over or under inflated. "Negative_delta" is returned when an expected monotonically increasing value has decreased in value. "inconsistent_old_data" is returned when one or more nodes do not have the latest data.
throughput_raw	throughput_raw	Throughput bytes observed at the interface. This can be used along with delta time to calculate the rate of throughput bytes per unit of time.
timestamp	string	The timestamp of the performance data.

ip_subnet_reference

A named subnet. Either UUID or name can be supplied on input.

Name	Type	Description
name	string	The name of the subnet. If only the name is provided, the IPspace scope must be provided by the object this object is embedded in.
uuid	string	The UUID that uniquely identifies the subnet.

svm

Applies only to SVM-scoped objects. Either the UUID or name must be supplied on POST.

Name	Type	Description
name	string	The name of the SVM. This field cannot be specified in a PATCH method.
uuid	string	The unique identifier of the SVM. This field cannot be specified in a PATCH method.

ip_interface

Name	Type	Description
ddns_enabled	boolean	Indicates whether or not dynamic DNS updates are enabled. Defaults to true if the interface supports "data_nfs" or "data_cifs" services, otherwise false.
dns_zone	string	Fully qualified DNS zone name
enabled	boolean	The administrative state of the interface.
fail_if_subnet_conflicts	boolean	This command fails if the specified IP address falls within the address range of a named subnet. Set this value to false to use the specified IP address and to assign the subnet owning that address to the interface.
ip	ip_info	IP information

Name	Type	Description
ipspace	ipspace	Either the UUID or name must be supplied on POST for cluster-scoped objects.
location	location	Current or home location can be modified. Specifying a port implies a node. Specifying a node allows an appropriate port to be automatically selected. Ports are not valid and not shown for VIP interfaces. For POST, broadcast_domain can be specified alone or with home_node. For PATCH, set is_home to true to revert a LIF back to its home port.
name	string	Interface name
probe_port	integer	Probe port for Cloud load balancer
rdma_protocols	array[string]	Supported RDMA offload protocols
scope	string	Set to "svm" for interfaces owned by an SVM. Otherwise, set to "cluster".
service_policy	service_policy	
services	array[string]	The services associated with the interface.
state	string	The operational state of the interface.
subnet	ip_subnet_reference	A named subnet. Either UUID or name can be supplied on input.
svm	svm	Applies only to SVM-scoped objects. Either the UUID or name must be supplied on POST.
uuid	string	The UUID that uniquely identifies the interface.

Name	Type	Description
vip	boolean	True for a VIP interface, whose location is announced via BGP.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

returned_error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Delete an IP interface

DELETE `/network/ip/interfaces/{uuid}`

Introduced In: 9.6

Deletes an IP interface.

Related ONTAP commands

- `network interface delete`

Parameters

Name	Type	In	Required	Description
uuid	string	path	True	IP interface UUID

Response

```
Status: 200, Ok
```

Error

```
Status: Default
```

ONTAP Error Response Codes

Error Code	Description
1966465	LIF cannot be removed because it is required to maintain quorum on the node.
5376953	The interface is part of one or more portsets. Remove the interface from all portsets before deleting it.
53281039	Failed to delete the interface because it has an associated BGP peer group.

Also see the table of common errors in the Response body overview section of this documentation.

Retrieve details for an IP interface

GET `/network/ip/interfaces/{uuid}`

Introduced In: 9.6

Retrieves details for a specific IP interface.

Related ONTAP commands

- `network interface show`

Parameters

Name	Type	In	Required	Description
uuid	string	path	True	IP interface UUID
fields	array[string]	query	False	Specify the fields to return.

Response

```
Status: 200, Ok
```

Name	Type	Description
_links	_links	
ddns_enabled	boolean	Indicates whether or not dynamic DNS updates are enabled. Defaults to true if the interface supports "data_nfs" or "data_cifs" services, otherwise false.
dns_zone	string	Fully qualified DNS zone name
enabled	boolean	The administrative state of the interface.
ip	ip_info	IP information
ipspace	ipspace	Either the UUID or name must be supplied on POST for cluster-scoped objects.
location	location	Current or home location can be modified. Specifying a port implies a node. Specifying a node allows an appropriate port to be automatically selected. Ports are not valid and not shown for VIP interfaces. For POST, broadcast_domain can be specified alone or with home_node. For PATCH, set is_home to true to revert a LIF back to its home port.
metric	metric	The most recent sample of I/O metrics for the interface.
name	string	Interface name
probe_port	integer	Probe port for Cloud load balancer
rdma_protocols	array[string]	Supported RDMA offload protocols
scope	string	Set to "svm" for interfaces owned by an SVM. Otherwise, set to "cluster".

Name	Type	Description
service_policy	service_policy	
services	array[string]	The services associated with the interface.
state	string	The operational state of the interface.
statistics	statistics	The real time I/O statistics for the interface.
subnet	ip_subnet_reference	A named subnet. Either UUID or name can be supplied on input.
svm	svm	Applies only to SVM-scoped objects. Either the UUID or name must be supplied on POST.
uuid	string	The UUID that uniquely identifies the interface.
vip	boolean	True for a VIP interface, whose location is announced via BGP.

Example response


```
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "dns_zone": "storage.company.com",
  "fail_if_subnet_conflicts": true,
  "ip": {
    "address": "10.10.10.7",
    "family": "string",
    "netmask": "24"
  },
  "ipspace": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "exchange",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "location": {
    "failover": "string",
    "home_node": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "node1",
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    },
    "home_port": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "e1b",
      "node": {
        "name": "node1"
      },
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
```

```
    },
    "node": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "node1",
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    },
    "port": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "e1b",
      "node": {
        "name": "node1"
      },
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    }
  },
  "metric": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "duration": "PT15S",
    "status": "ok",
    "throughput": {
      "read": 200,
      "total": 1000,
      "write": 100
    },
    "timestamp": "2017-01-25 06:20:13 -0500"
  },
  "name": "dataLif1",
  "probe_port": 64001,
  "rdma_protocols": [
    "roce"
  ],
  "scope": "string",
  "service_policy": {
    "_links": {
```

```
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "default-intercluster",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "services": [
    "data_nfs"
  ],
  "state": "string",
  "statistics": {
    "status": "ok",
    "throughput_raw": {
      "read": 200,
      "total": 1000,
      "write": 100
    },
    "timestamp": "2017-01-25 06:20:13 -0500"
  },
  "subnet": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "subnet1",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  },
  "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
}
```


Error

```
Status: Default, Error
```

Name	Type	Description
error	returned_error	

Example error


```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```


Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

Name	Type	Description
self	href	

ip_info

IP information

Name	Type	Description
address	string	IPv4 or IPv6 address
family	string	IPv4 or IPv6
netmask	string	Input as netmask length (16) or IPv4 mask (255.255.0.0). For IPv6, the default value is 64 with a valid range of 1 to 127. Output is always netmask length.

ipspace

Either the UUID or name must be supplied on POST for cluster-scoped objects.

Name	Type	Description
_links	_links	
name	string	IPspace name
uuid	string	IPspace UUID

broadcast_domain

Broadcast domain UUID along with a readable name.

Name	Type	Description
_links	_links	

Name	Type	Description
name	string	Name of the broadcast domain, scoped to its IPspace
uuid	string	Broadcast domain UUID

home_node

Name	Type	Description
_links	_links	
name	string	
uuid	string	

node

Name	Type	Description
name	string	Name of node on which the port is located.

home_port

Port UUID along with readable names. Either the UUID or both names may be supplied on input.

Name	Type	Description
_links	_links	
name	string	
node	node	
uuid	string	

node

Name	Type	Description
_links	_links	
name	string	
uuid	string	

port

Port UUID along with readable names. Either the UUID or both names may be supplied on input.

Name	Type	Description
_links	_links	

Name	Type	Description
name	string	
node	node	
uuid	string	

location

Current or home location can be modified. Specifying a port implies a node. Specifying a node allows an appropriate port to be automatically selected. Ports are not valid and not shown for VIP interfaces. For POST, broadcast_domain can be specified alone or with home_node. For PATCH, set is_home to true to revert a LIF back to its home port.

Name	Type	Description
auto_revert	boolean	
failover	string	Policy that defines where an interface is permitted to move on failover. The policy named “default” implements the recommended best practice for NAS LIFs on the current platform and cluster, and was known as “system_defined” in the CLI.
home_node	home_node	
home_port	home_port	Port UUID along with readable names. Either the UUID or both names may be supplied on input.
is_home	boolean	
node	node	
port	port	Port UUID along with readable names. Either the UUID or both names may be supplied on input.

throughput

The rate of throughput bytes per second observed at the interface.

Name	Type	Description
read	integer	Performance metric for read I/O operations.
total	integer	Performance metric aggregated over all types of I/O operations.

Name	Type	Description
write	integer	Peformance metric for write I/O operations.

metric

The most recent sample of I/O metrics for the interface.

Name	Type	Description
_links	_links	
duration	string	The duration over which this sample is calculated. The time durations are represented in the ISO-8601 standard format. Samples can be calculated over the following durations:
status	string	Errors associated with the sample. For example, if the aggregation of data over multiple nodes fails, then any partial errors might return "ok" on success or "error" on an internal uncategorized failure. Whenever a sample collection is missed but done at a later time, it is back filled to the previous 15 second timestamp and tagged with "backfilled_data". "inconsistent_delta_time" is encountered when the time between two collections is not the same for all nodes. Therefore, the aggregated value might be over or under inflated. "Negative_delta" is returned when an expected monotonically increasing value has decreased in value. "inconsistent_old_data" is returned when one or more nodes do not have the latest data.
throughput	throughput	The rate of throughput bytes per second observed at the interface.
timestamp	string	The timestamp of the performance data.

service_policy

Name	Type	Description
_links	_links	
name	string	
uuid	string	

throughput_raw

Throughput bytes observed at the interface. This can be used along with delta time to calculate the rate of throughput bytes per unit of time.

Name	Type	Description
read	integer	Performance metric for read I/O operations.
total	integer	Performance metric aggregated over all types of I/O operations.
write	integer	Peformance metric for write I/O operations.

statistics

The real time I/O statistics for the interface.

Name	Type	Description
status	string	Errors associated with the sample. For example, if the aggregation of data over multiple nodes fails, then any partial errors might return "ok" on success or "error" on an internal uncategorized failure. Whenever a sample collection is missed but done at a later time, it is back filled to the previous 15 second timestamp and tagged with "backfilled_data". "inconsistent_delta_time" is encountered when the time between two collections is not the same for all nodes. Therefore, the aggregated value might be over or under inflated. "Negative_delta" is returned when an expected monotonically increasing value has decreased in value. "inconsistent_old_data" is returned when one or more nodes do not have the latest data.
throughput_raw	throughput_raw	Throughput bytes observed at the interface. This can be used along with delta time to calculate the rate of throughput bytes per unit of time.
timestamp	string	The timestamp of the performance data.

ip_subnet_reference

A named subnet. Either UUID or name can be supplied on input.

Name	Type	Description
_links	_links	
name	string	The name of the subnet. If only the name is provided, the IPspace scope must be provided by the object this object is embedded in.

Name	Type	Description
uuid	string	The UUID that uniquely identifies the subnet.

svm

Applies only to SVM-scoped objects. Either the UUID or name must be supplied on POST.

Name	Type	Description
_links	_links	
name	string	The name of the SVM. This field cannot be specified in a PATCH method.
uuid	string	The unique identifier of the SVM. This field cannot be specified in a PATCH method.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

returned_error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Update an IP interface

PATCH `/network/ip/interfaces/{uuid}`

Introduced In: 9.6

Updates an IP interface.

Related ONTAP commands

- `network interface migrate`
- `network interface modify`
- `network interface rename`
- `network interface revert`

Parameters

Name	Type	In	Required	Description
uuid	string	path	True	IP interface UUID

Request Body

Name	Type	Description
ddns_enabled	boolean	Indicates whether or not dynamic DNS updates are enabled. Defaults to true if the interface supports "data_nfs" or "data_cifs" services, otherwise false.
dns_zone	string	Fully qualified DNS zone name
enabled	boolean	The administrative state of the interface.
fail_if_subnet_conflicts	boolean	This command fails if the specified IP address falls within the address range of a named subnet. Set this value to false to use the specified IP address and to assign the subnet owning that address to the interface.
ip	ip_info	IP information

Name	Type	Description
location	location	Current or home location can be modified. Specifying a port implies a node. Specifying a node allows an appropriate port to be automatically selected. Ports are not valid and not shown for VIP interfaces. For POST, broadcast_domain can be specified alone or with home_node. For PATCH, set is_home to true to revert a LIF back to its home port.
name	string	Interface name
rdma_protocols	array[string]	Supported RDMA offload protocols
service_policy	service_policy	
services	array[string]	The services associated with the interface.
state	string	The operational state of the interface.
subnet	ip_subnet_reference	A named subnet. Either UUID or name can be supplied on input.
uuid	string	The UUID that uniquely identifies the interface.

Example request


```
{
  "dns_zone": "storage.company.com",
  "ip": {
    "address": "10.10.10.7",
    "netmask": "24"
  },
  "location": {
    "failover": "string",
    "home_node": {
      "name": "node1",
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    },
    "home_port": {
      "name": "e1b",
      "node": {
        "name": "node1"
      },
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    },
    "node": {
      "name": "node1",
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    },
    "port": {
      "name": "e1b",
      "node": {
        "name": "node1"
      },
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    }
  },
  "name": "dataLif1",
  "rdma_protocols": [
    "roce"
  ],
  "service_policy": {
    "name": "default-intercluster",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "services": [
    "data_nfs"
  ],
  "state": "string",
  "subnet": {
```

```
    "name": "subnet1",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412",
  "vip": true
}
```


Response

```
Status: 200, Ok
```

Error

```
Status: Default
```

ONTAP Error Response Codes

Error Code	Description
262196	Field cannot be set in this operation.
1376663	Cannot add interface to DNS zone because all interfaces from a single DNS zone must be in the same SVM.
1376963	Duplicate IP address.
1376976	The specified port is not capable of hosting this LIF.
1376986	The interface could not migrate because no additional interfaces can be hosted on the specified node.
1376997	Interface failed to migrate because the node hosting the port is not healthy.
1376998	The specified location.node does not own any ports in the same broadcast domain as the home port of the interface.
1376999	Interface failed to migrate because port is in the down admin state.
1377607	The specified location.port is not in the same broadcast domain as the home port of the interface.
1377666	Subnet does not have any addresses available.
1966081	Failed to lookup the port on the node.
1966133	The netmask cannot represent the entire IP subnet.

Error Code	Description
1966135	Cluster configuration can only be changed from node where the cluster LIF resides.
1966138	The same IP address may not be used for both a mgmt interface and a gateway address.
1966141	Invalid DNS zone name.
1966142	Only data LIFs can be assigned a DNS zone.
1966191	The interface could not be created because interface identifier creation failed.
1966197	Migration of cluster interfaces must be done from the local node.
1966238	Cannot change the home-node or home-port of an active SAN or NVMe data interface.
1966267	IPv6 addresses must have a prefix length between 1 and 127.
1966269	IPv4 addresses must have a prefix length between 1 and 32.
1966419	Subnet not found in the IPspace of the SVM.
1966476	DNS Update is supported only on data interfaces.
1966477	DNS Update is supported only on interfaces configured with the NFS or CIFS protocol.
1966507	A port on the node has been identified as potentially unhealthy.
1966685	There are no ports on the node that are in the broadcast domain associated with the IPspace.
1967106	The specified location.home_port.name does not match the specified port name of location.home_port.uuid.
1967107	The specified location.home_port.uuid is not valid.
1967111	A home node must be specified by at least one location.home_node, location.home_port, or location.broadcast_domain field.
1967113	The specified location.port.name does not match the port name of location.port.uuid.
1967114	The specified location.port.uuid is not valid.
1967115	The specified location.node.name does not match the node name of location.node.uuid.
1967116	The specified location.port.node.name does not match the node name of location.node.uuid.
1967117	The specified location.port.node.name does not match location.node.name.

Error Code	Description
1967118	A node must be specified by at least one location.node or location.port field.
1967119	The specified location.node.name does not match the node name of location.port.uuid.
1967120	The specified service_policy.name does not match the specified service policy name of service_policy.uuid.
1967121	The specified service_policy.uuid is not valid.
1967125	You cannot patch the "location.node" or "location.port" fields to migrate interfaces using the iSCSI data protocol. Instead perform the following PATCH operations on the interface: set the "enabled" field to "false"; change one or more "location.home_port" fields to migrate the interface; and then set the "enabled" field to "true".
1967129	The specified location.home_port.uuid is not valid.
1967130	The specified location.home_port.name is not valid.
1967131	The specified location.home_port.uuid and location.home_port.name are not valid.
1967132	The specified location.port.uuid is not valid.
1967133	The specified location.port.name is not valid.
1967134	The specified location.port.uuid and location.port.name are not valid.
1967138	Cannot patch port for a VIP interface. The specified parameter location.port.uuid is not valid.
1967139	Cannot patch port for a VIP interface. The specified parameter location.port.name is not valid.
1967140	Cannot patch port for a VIP interface. The specified parameters location.port.uuid and location.port.name are not valid.
1967141	Cannot patch home_port for a VIP interface. The specified parameter location.home_port.uuid is not valid.
1967142	Cannot patch home_port for a VIP interface. The specified parameter location.home_port.name is not valid.
1967143	Cannot patch home_port for a VIP interface. The specified parameters location.home_port.uuid and location.home_port.name are not valid.
1967145	The specified location.failover is not valid.
1967153	No suitable port exists on location.home_node to host the interface.

Error Code	Description
1967380	Cannot patch home_port for a VIP interface. The specified parameter location.home_port.node.name is not valid. Consider using location.home_node.name instead.
1967385	VIP interface address and netmask error.
1967386	Cannot patch port for a VIP interface. The specified parameter location.port.node.name is not valid. Consider using location.node.name instead.
1967387	The specified IP address is in use by a subnet in this IPspace.
1967389	Patching location.is_home to the value "false" is not supported. The value "true" would revert a network interface to its home port if the current value is "false".
1967390	Cannot patch a LIF revert as it requires an effective cluster version of 9.9.1 or later.
1967391	Patching the DNS zone requires an effective cluster version of 9.9.1 or later.
1967392	Patching the DDNS enable parameter requires an effective cluster version of 9.9.1 or later.
1967396	The specified subnet.name does not match the subnet name of subnet.uuid.
1967397	The specified subnet.uuid does not match any configured subnet.";
1967398	Address must be specified by either ip.address and ip.netmask, or at least one subnet field, not both.";
2621574	This operation is not permitted on an SVM that is configured as the destination of a MetroCluster SVM relationship.
53281018	Failover policy is not compatible with one or more services in service policy
53281065	The service_policy does not exist in the SVM.
53281072	The failover policy is not valid for interfaces in the SVM.
53281086	LIF would exceed the maximum number of supported intercluster LIFs in IPspace.
53281087	SVM must have an NVMe service to perform this operation.
53281089	LIF on SVM cannot be updated to use service policy because that service policy includes SAN services and the target LIF is not home.
53281093	The specified parameter is only supported on data SVMs.

Error Code	Description
53281096	LIF could not be modified because the current port does not support the specified rdma-protocols.
53281106	Failed checking the cluster capabilities.
53281109	The interface could not be updated to use the service policy because the interface is currently associated with BGP peer group.
53281111	Cannot update the service policy because the interface is associated with a BGP peer-group.

Also see the table of common errors in the Response body overview section of this documentation.

Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

ip_info

IP information

Name	Type	Description
address	string	IPv4 or IPv6 address
netmask	string	Input as netmask length (16) or IPv4 mask (255.255.0.0). For IPv6, the default value is 64 with a valid range of 1 to 127. Output is always netmask length.

ipspace

Either the UUID or name must be supplied on POST for cluster-scoped objects.

Name	Type	Description
name	string	IPspace name
uuid	string	IPspace UUID

broadcast_domain

Broadcast domain UUID along with a readable name.

Name	Type	Description
name	string	Name of the broadcast domain, scoped to its IPspace
uuid	string	Broadcast domain UUID

home_node

Name	Type	Description
name	string	

Name	Type	Description
uuid	string	

node

Name	Type	Description
name	string	Name of node on which the port is located.

home_port

Port UUID along with readable names. Either the UUID or both names may be supplied on input.

Name	Type	Description
name	string	
node	node	
uuid	string	

node

Name	Type	Description
name	string	
uuid	string	

port

Port UUID along with readable names. Either the UUID or both names may be supplied on input.

Name	Type	Description
name	string	
node	node	
uuid	string	

location

Current or home location can be modified. Specifying a port implies a node. Specifying a node allows an appropriate port to be automatically selected. Ports are not valid and not shown for VIP interfaces. For POST, broadcast_domain can be specified alone or with home_node. For PATCH, set is_home to true to revert a LIF back to its home port.

Name	Type	Description
auto_revert	boolean	

Name	Type	Description
failover	string	Policy that defines where an interface is permitted to move on failover. The policy named “default” implements the recommended best practice for NAS LIFs on the current platform and cluster, and was known as “system_defined” in the CLI.
home_node	home_node	
home_port	home_port	Port UUID along with readable names. Either the UUID or both names may be supplied on input.
is_home	boolean	
node	node	
port	port	Port UUID along with readable names. Either the UUID or both names may be supplied on input.

throughput

The rate of throughput bytes per second observed at the interface.

Name	Type	Description
read	integer	Performance metric for read I/O operations.
total	integer	Performance metric aggregated over all types of I/O operations.
write	integer	Peformance metric for write I/O operations.

metric

The most recent sample of I/O metrics for the interface.

Name	Type	Description
duration	string	The duration over which this sample is calculated. The time durations are represented in the ISO-8601 standard format. Samples can be calculated over the following durations:
status	string	Errors associated with the sample. For example, if the aggregation of data over multiple nodes fails, then any partial errors might return "ok" on success or "error" on an internal uncategorized failure. Whenever a sample collection is missed but done at a later time, it is back filled to the previous 15 second timestamp and tagged with "backfilled_data". "inconsistent_delta_time" is encountered when the time between two collections is not the same for all nodes. Therefore, the aggregated value might be over or under inflated. "Negative_delta" is returned when an expected monotonically increasing value has decreased in value. "inconsistent_old_data" is returned when one or more nodes do not have the latest data.
throughput	throughput	The rate of throughput bytes per second observed at the interface.
timestamp	string	The timestamp of the performance data.

service_policy

Name	Type	Description
name	string	
uuid	string	

throughput_raw

Throughput bytes observed at the interface. This can be used along with delta time to calculate the rate of throughput bytes per unit of time.

Name	Type	Description
read	integer	Performance metric for read I/O operations.
total	integer	Performance metric aggregated over all types of I/O operations.
write	integer	Peformance metric for write I/O operations.

statistics

The real time I/O statistics for the interface.

Name	Type	Description
status	string	Errors associated with the sample. For example, if the aggregation of data over multiple nodes fails, then any partial errors might return "ok" on success or "error" on an internal uncategorized failure. Whenever a sample collection is missed but done at a later time, it is back filled to the previous 15 second timestamp and tagged with "backfilled_data". "inconsistent_delta_time" is encountered when the time between two collections is not the same for all nodes. Therefore, the aggregated value might be over or under inflated. "Negative_delta" is returned when an expected monotonically increasing value has decreased in value. "inconsistent_old_data" is returned when one or more nodes do not have the latest data.
throughput_raw	throughput_raw	Throughput bytes observed at the interface. This can be used along with delta time to calculate the rate of throughput bytes per unit of time.
timestamp	string	The timestamp of the performance data.

ip_subnet_reference

A named subnet. Either UUID or name can be supplied on input.

Name	Type	Description
name	string	The name of the subnet. If only the name is provided, the IPspace scope must be provided by the object this object is embedded in.
uuid	string	The UUID that uniquely identifies the subnet.

svm

Applies only to SVM-scoped objects. Either the UUID or name must be supplied on POST.

Name	Type	Description
name	string	The name of the SVM. This field cannot be specified in a PATCH method.
uuid	string	The unique identifier of the SVM. This field cannot be specified in a PATCH method.

ip_interface

Name	Type	Description
ddns_enabled	boolean	Indicates whether or not dynamic DNS updates are enabled. Defaults to true if the interface supports "data_nfs" or "data_cifs" services, otherwise false.
dns_zone	string	Fully qualified DNS zone name
enabled	boolean	The administrative state of the interface.

Name	Type	Description
fail_if_subnet_conflicts	boolean	This command fails if the specified IP address falls within the address range of a named subnet. Set this value to false to use the specified IP address and to assign the subnet owning that address to the interface.
ip	ip_info	IP information
location	location	Current or home location can be modified. Specifying a port implies a node. Specifying a node allows an appropriate port to be automatically selected. Ports are not valid and not shown for VIP interfaces. For POST, broadcast_domain can be specified alone or with home_node. For PATCH, set is_home to true to revert a LIF back to its home port.
name	string	Interface name
rdma_protocols	array[string]	Supported RDMA offload protocols
service_policy	service_policy	
services	array[string]	The services associated with the interface.
state	string	The operational state of the interface.
subnet	ip_subnet_reference	A named subnet. Either UUID or name can be supplied on input.
uuid	string	The UUID that uniquely identifies the interface.

Retrieve interface historical performance metrics

GET `/network/ip/interfaces/{uuid}/metrics`

Introduced In: 9.8

Retrieves historical performance metrics for an interface.

Parameters

Name	Type	In	Required	Description
throughput.total	integer	query	False	Filter by throughput.total
throughput.write	integer	query	False	Filter by throughput.write
throughput.read	integer	query	False	Filter by throughput.read
status	string	query	False	Filter by status
duration	string	query	False	Filter by duration
timestamp	string	query	False	Filter by timestamp
uuid	string	path	True	Unique identifier of the interface.

Name	Type	In	Required	Description
interval	string	query	False	The time range for the data. Examples can be 1h, 1d, 1m, 1w, 1y. The period for each time range is as follows: • 1h: Metrics over the most recent hour sampled over 15 seconds. • 1d: Metrics over the most recent day sampled over 5 minutes. • 1w: Metrics over the most recent week sampled over 30 minutes. • 1m: Metrics over the most recent month sampled over 2 hours. • 1y: Metrics over the most recent year sampled over a day. • Default value: 1 • enum: ["1h", "1d", "1w", "1m", "1y"]

Name	Type	In	Required	Description
return_timeout	integer	query	False	The number of seconds to allow the call to execute before returning. When iterating over a collection, the default is 15 seconds. ONTAP returns earlier if either max records or the end of the collection is reached. • Default value: 1 • Max value: 120 • Min value: 0
fields	array[string]	query	False	Specify the fields to return.
max_records	integer	query	False	Limit the number of records returned.
order_by	array[string]	query	False	Order results by specified fields and optional [asc
desc] direction. Default direction is 'asc' for ascending.	return_records	boolean	query	False

Response

```
Status: 200, Ok
```

Name	Type	Description
_links	_links	
num_records	integer	Number of records
records	array[records]	

Example response


```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "num_records": 1,
  "records": [
    {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "duration": "PT15S",
      "status": "ok",
      "throughput": {
        "read": 200,
        "total": 1000,
        "write": 100
      },
      "timestamp": "2017-01-25 06:20:13 -0500",
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    }
  ]
}
```


Error

```
Status: Default
```

ONTAP Error Response Codes

Error Code	Description
8585947	No metrics are available for the requested object.
8586225	An unexpected error occurred retrieving metrics for the requested object.

Also see the table of common errors in the Response body overview section of this documentation.

Name	Type	Description
error	returned_error	

Example error

```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```

Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

Name	Type	Description
next	href	
self	href	

_links

Name	Type	Description
self	href	

throughput

The rate of throughput bytes per second observed at the interface.

Name	Type	Description
read	integer	Performance metric for read I/O operations.
total	integer	Performance metric aggregated over all types of I/O operations.
write	integer	Peformance metric for write I/O operations.

records

Throughput performance for the interfaces.

Name	Type	Description
_links	_links	
duration	string	The duration over which this sample is calculated. The time durations are represented in the ISO-8601 standard format. Samples can be calculated over the following durations:

Name	Type	Description
status	string	Errors associated with the sample. For example, if the aggregation of data over multiple nodes fails, then any partial errors might return "ok" on success or "error" on an internal uncategorized failure. Whenever a sample collection is missed but done at a later time, it is back filled to the previous 15 second timestamp and tagged with "backfilled_data". "inconsistent_delta_time" is encountered when the time between two collections is not the same for all nodes. Therefore, the aggregated value might be over or under inflated. "Negative_delta" is returned when an expected monotonically increasing value has decreased in value. "inconsistent_old_data" is returned when one or more nodes do not have the latest data.
throughput	throughput	The rate of throughput bytes per second observed at the interface.
timestamp	string	The timestamp of the performance data.
uuid	string	The UUID that uniquely identifies the interface.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

returned_error

Name	Type	Description
arguments	array[error_arguments]	Message arguments

Name	Type	Description
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

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