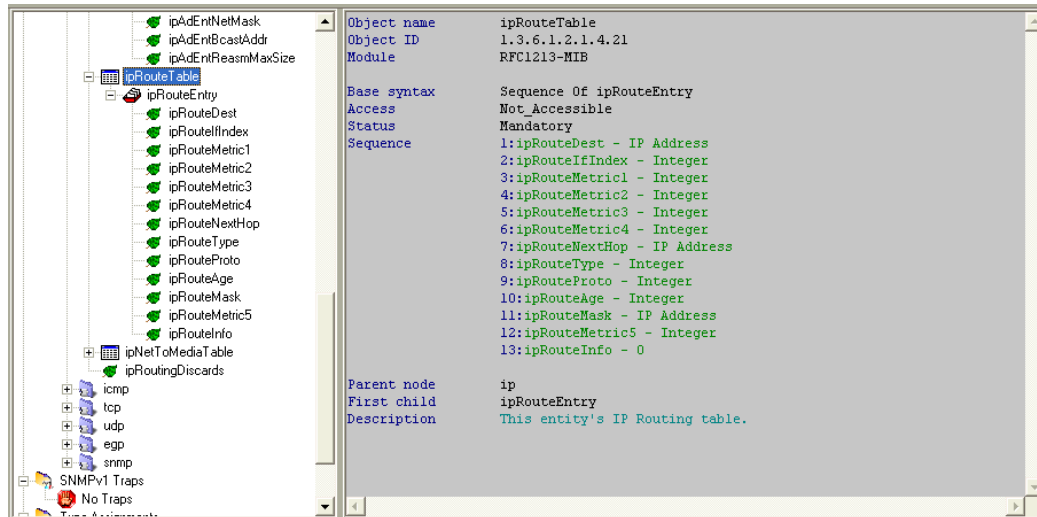


How to get IP routing table information with SNMP command

Follow the command below to get the information.

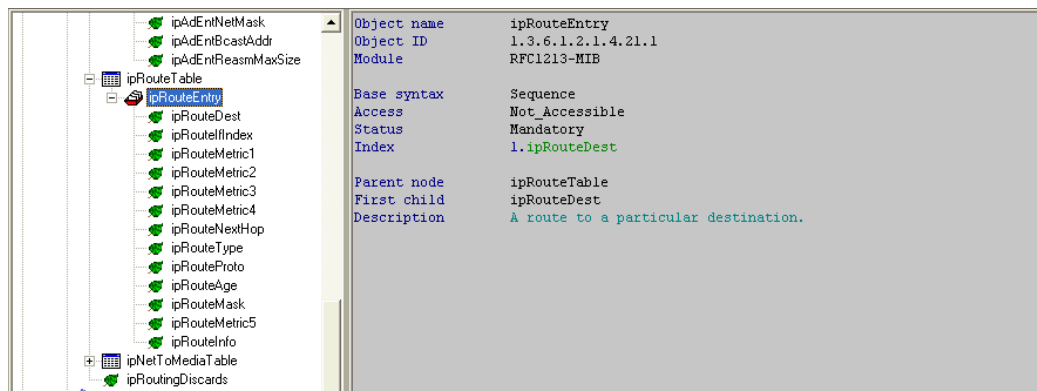
```
#snmpwalk -v 2c -c private 192.168.1.24 1.3.6.1.2.1.4.20
```

Please refer the following the description for IPIF OID meaning



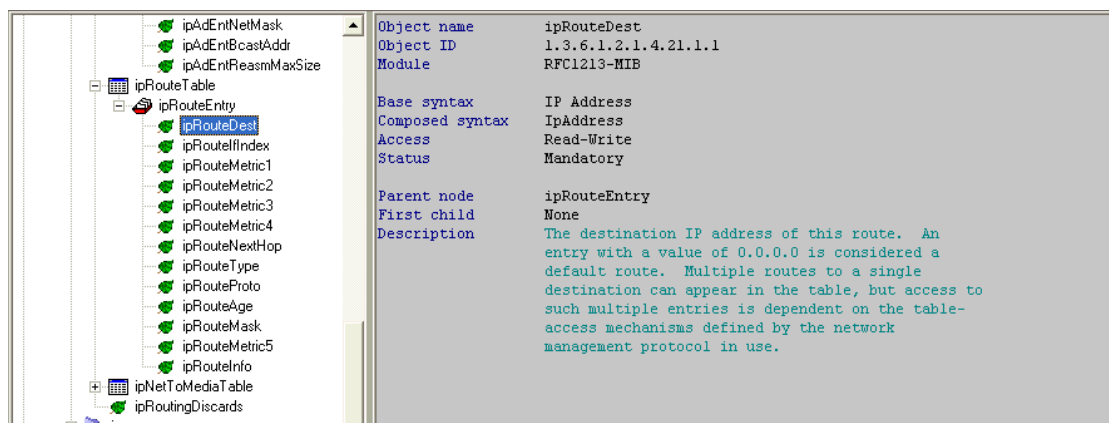
The screenshot shows a tree view of SNMP MIBs on the left. The 'ipRouteTable' node is selected. The right pane displays the following details:

Object name	ipRouteTable
Object ID	1.3.6.1.2.1.4.21
Module	RFC1213-MIB
Base syntax	Sequence Of ipRouteEntry
Access	Not_Accessible
Status	Mandatory
Sequence	1:ipRouteDest - IP Address 2:ipRouteIfIndex - Integer 3:ipRouteMetric1 - Integer 4:ipRouteMetric2 - Integer 5:ipRouteMetric3 - Integer 6:ipRouteMetric4 - Integer 7:ipRouteNextHop - IP Address 8:ipRouteType - Integer 9:ipRouteProto - Integer 10:ipRouteAge - Integer 11:ipRouteMask - IP Address 12:ipRouteMetric5 - Integer 13:ipRouteInfo - 0
Parent node	ip
First child	ipRouteEntry
Description	This entity's IP Routing table.



The screenshot shows the 'ipRouteEntry' node selected in the tree view. The right pane displays the following details:

Object name	ipRouteEntry
Object ID	1.3.6.1.2.1.4.21.1
Module	RFC1213-MIB
Base syntax	Sequence
Access	Not_Accessible
Status	Mandatory
Index	1.ipRouteDest
Parent node	ipRouteTable
First child	ipRouteDest
Description	A route to a particular destination.



The screenshot shows the 'ipRouteDest' node selected in the tree view. The right pane displays the following details:

Object name	ipRouteDest
Object ID	1.3.6.1.2.1.4.21.1.1
Module	RFC1213-MIB
Base syntax	IP Address
Composed syntax	IpAddress
Access	Read-Write
Status	Mandatory
Parent node	ipRouteEntry
First child	None
Description	The destination IP address of this route. An entry with a value of 0.0.0.0 is considered a default route. Multiple routes to a single destination can appear in the table, but access to such multiple entries is dependent on the table-access mechanisms defined by the network management protocol in use.

	Object name	ipRouteIfIndex
	Object ID	1.3.6.1.2.1.4.21.1.2
	Module	RFC1213-MIB
	Base syntax	Integer
	Composed syntax	INTEGER
	Access	Read-Write
	Status	Mandatory
	Parent node	ipRouteEntry
	First child	None
	Description	The index value which uniquely identifies the local interface through which the next hop of this route should be reached. The interface identified by a particular value of this index is the same interface as identified by the same value of ifIndex.

	Object name	ipRouteMetric1
	Object ID	1.3.6.1.2.1.4.21.1.3
	Module	RFC1213-MIB
	Base syntax	Integer
	Composed syntax	INTEGER
	Access	Read-Write
	Status	Mandatory
	Parent node	ipRouteEntry
	First child	None
	Description	The primary routing metric for this route. The semantics of this metric are determined by the routing-protocol specified in the route's ipRouteProto value. If this metric is not used, its value should be set to -1.

	Object name	ipRouteMetric2
	Object ID	1.3.6.1.2.1.4.21.1.4
	Module	RFC1213-MIB
	Base syntax	Integer
	Composed syntax	INTEGER
	Access	Read-Write
	Status	Mandatory
	Parent node	ipRouteEntry
	First child	None
	Description	An alternate routing metric for this route. The semantics of this metric are determined by the routing-protocol specified in the route's ipRouteProto value. If this metric is not used, its value should be set to -1.

	Object name	ipRouteMetric3
	Object ID	1.3.6.1.2.1.4.21.1.5
	Module	RFC1213-MIB
	Base syntax	Integer
	Composed syntax	INTEGER
	Access	Read-Write
	Status	Mandatory
	Parent node	ipRouteEntry
	First child	None
	Description	An alternate routing metric for this route. The semantics of this metric are determined by the routing-protocol specified in the route's ipRouteProto value. If this metric is not used, its value should be set to -1.

<ul style="list-style-type: none"> ipAdEntNetMask ipAdEntBcastAddr ipAdEntReasmMaxSize ipRouteTable <ul style="list-style-type: none"> ipRouteEntry <ul style="list-style-type: none"> ipRouteDest ipRouteIfIndex ipRouteMetric1 ipRouteMetric2 ipRouteMetric3 ipRouteMetric4 ipRouteNextHop ipRouteType ipRouteProto ipRouteAge ipRouteMask ipRouteMetric5 ipRouteInfo ipNetToMediaTable 	<p>Object name ipRouteMetric4</p> <p>Object ID 1.3.6.1.2.1.4.21.1.6</p> <p>Module RFC1213-MIB</p> <p>Base syntax Integer</p> <p>Composed syntax INTEGER</p> <p>Access Read-Write</p> <p>Status Mandatory</p> <p>Parent node ipRouteEntry</p> <p>First child None</p> <p>Description An alternate routing metric for this route. The semantics of this metric are determined by the routing-protocol specified in the route's ipRouteProto value. If this metric is not used, its value should be set to -1.</p>
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<ul style="list-style-type: none"> ipAdEntNetMask ipAdEntBcastAddr ipAdEntReasmMaxSize ipRouteTable <ul style="list-style-type: none"> ipRouteEntry <ul style="list-style-type: none"> ipRouteDest ipRouteIfIndex ipRouteMetric1 ipRouteMetric2 ipRouteMetric3 ipRouteMetric4 ipRouteNextHop ipRouteType ipRouteProto ipRouteAge ipRouteMask ipRouteMetric5 ipRouteInfo ipNetToMediaTable ipRoutingDiscards 	<p>Object name ipRouteNextHop</p> <p>Object ID 1.3.6.1.2.1.4.21.1.7</p> <p>Module RFC1213-MIB</p> <p>Base syntax IP Address</p> <p>Composed syntax IpAddress</p> <p>Access Read-Write</p> <p>Status Mandatory</p> <p>Parent node ipRouteEntry</p> <p>First child None</p> <p>Description The IP address of the next hop of this route. (In the case of a route bound to an interface which is realized via a broadcast media, the value of this field is the agent's IP address on that interface.)</p>
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<ul style="list-style-type: none"> ipAdEntNetMask ipAdEntBcastAddr ipAdEntReasmMaxSize ipRouteTable <ul style="list-style-type: none"> ipRouteEntry <ul style="list-style-type: none"> ipRouteDest ipRouteIfIndex ipRouteMetric1 ipRouteMetric2 ipRouteMetric3 ipRouteMetric4 ipRouteNextHop ipRouteType ipRouteProto ipRouteAge ipRouteMask ipRouteMetric5 ipRouteInfo ipNetToMediaTable ipRoutingDiscards icmp tcp udp egp snmp SNMPv1 Traps <ul style="list-style-type: none"> No Traps Type Assignments <ul style="list-style-type: none"> DisplayString PhysAddress Textual Conventions <ul style="list-style-type: none"> No Textual Conventions 	<p>Object name ipRouteType</p> <p>Object ID 1.3.6.1.2.1.4.21.1.8</p> <p>Module RFC1213-MIB</p> <p>Base syntax Integer</p> <p>Composed syntax INTEGER</p> <p>Access Read-Write</p> <p>Status Mandatory</p> <p>Value list 1 : other(1) 2 : invalid(2) 3 : direct(3) 4 : indirect(4)</p> <p>Parent node ipRouteEntry</p> <p>First child None</p> <p>Description The type of route. Note that the values direct(3) and indirect(4) refer to the notion of direct and indirect routing in the IP architecture.</p> <p>Setting this object to the value invalid(2) has the effect of invalidating the corresponding entry in the ipRouteTable object. That is, it effectively disassociates the destination identified with said entry from the route identified with said entry. It is an implementation-specific matter as to whether the agent removes an invalidated entry from the table. Accordingly, management stations must be prepared to receive tabular information from agents that corresponds to entries not currently in use. Proper interpretation of such entries requires examination of the relevant ipRouteType object.</p>
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Object name ipRouteProto
Object ID 1.3.6.1.2.1.4.21.1.9
Module RFC1213-MIB

Base syntax Integer
Composed syntax INTEGER
Access Read-Only
Status Mandatory
Value list
 1 : other(1)
 2 : local(2)
 3 : netmgmt(3)
 4 : icmp(4)
 5 : egp(5)
 6 : ggp(6)
 7 : hello(7)
 8 : rip(8)
 9 : is-is(9)
 10 : es-is(10)
 11 : ciscoIgrp(11)
 12 : bbnSpfIgp(12)
 13 : ospf(13)
 14 : bgp(14)

Parent node ipRouteEntry
First child None
Description The routing mechanism via which this route was learned. Inclusion of values for gateway routing protocols is not intended to imply that hosts should support those protocols.

Object name ipRouteAge
Object ID 1.3.6.1.2.1.4.21.1.10
Module RFC1213-MIB

Base syntax Integer
Composed syntax INTEGER
Access Read-Write
Status Mandatory

Parent node ipRouteEntry
First child None
Description The number of seconds since this route was last updated or otherwise determined to be correct. Note that no semantics of 'too old' can be implied except through knowledge of the routing protocol by which the route was learned.

Object name ipRouteMask
Object ID 1.3.6.1.2.1.4.21.1.11
Module RFC1213-MIB

Base syntax IP Address
Composed syntax IPAddress
Access Read-Write
Status Mandatory

Parent node ipRouteEntry
First child None
Description Indicate the mask to be logical-ANDed with the destination address before being compared to the value in the ipRouteDest field. For those systems that do not support arbitrary subnet masks, an agent constructs the value of the ipRouteMask by determining whether the value of the correspondent ipRouteDest field belong to a class-A, B, or C network, and then using one of:

mask	network
255.0.0.0	class-A
255.255.0.0	class-B
255.255.255.0	class-C

If the value of the ipRouteDest is 0.0.0.0 (a default route), then the mask value is also 0.0.0.0. It should be noted that all IP routing subsystems implicitly use this mechanism.

<ul style="list-style-type: none"> ipAdEntNetMask ipAdEntBcastAddr ipAdEntReasmMaxSize ipRouteTable <ul style="list-style-type: none"> ipRouteEntry <ul style="list-style-type: none"> ipRouteDest ipRouteIfIndex ipRouteMetric1 ipRouteMetric2 ipRouteMetric3 ipRouteMetric4 ipRouteNextHop ipRouteType ipRouteProto ipRouteAge ipRouteMask ipRouteMetric5 ipRouteInfo ipNetToMediaTable ipRoutingDiscards 	Object name ipRouteMetric5 Object ID 1.3.6.1.2.1.4.21.1.12 Module RFC1213-MIB
	Base syntax Integer Composed syntax INTEGER Access Read-Write Status Mandatory Parent node ipRouteEntry First child None Description An alternate routing metric for this route. The semantics of this metric are determined by the routing-protocol specified in the route's ipRouteProto value. If this metric is not used, its value should be set to -1.

<ul style="list-style-type: none"> ipAdEntNetMask ipAdEntBcastAddr ipAdEntReasmMaxSize ipRouteTable <ul style="list-style-type: none"> ipRouteEntry <ul style="list-style-type: none"> ipRouteDest ipRouteIfIndex ipRouteMetric1 ipRouteMetric2 ipRouteMetric3 ipRouteMetric4 ipRouteNextHop ipRouteType ipRouteProto ipRouteAge ipRouteMask ipRouteMetric5 ipRouteInfo ipNetToMediaTable ipRoutingDiscards icmp 	Object name ipRouteInfo Object ID 1.3.6.1.2.1.4.21.1.13 Module RFC1213-MIB
	Base syntax Object Identifier Composed syntax OBJECT IDENTIFIER Access Read-Only Status Mandatory Parent node ipRouteEntry First child None Description A reference to MIB definitions specific to the particular routing protocol which is responsible for this route, as determined by the value specified in the route's ipRouteProto value. If this information is not present, its value should be set to the OBJECT IDENTIFIER (0 0), which is a syntactically valid object identifier, and any conformant implementation of ASN.1 and BER must be able to generate and recognize this value.