



## **IbexOS Release Notes**

*Release 6.11.4-0*

**Westermo Network Technologies AB**

June 27, 2024

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## 1 General Information

### Company

Westermo Network Technologies AB

### Contact Support

[www.westermo.com](http://www.westermo.com)

### Release Number

6.11.4-0

### Software Build Number

0fd788aed9be625dd6383df55ec3c960e272fac4

### Date of this build

June 27, 2024

## 2 Release Highlights

### 2.1 6.11.4-0

- Wireless: Add support for Dynamic VLAN
- Wireless: Add support for Inter-Carriage Link (ICL) on 802.11ax products (Ibex-1510, Ibex-3510)

## 3 Limitations

- When the device is reconfigured to Mesh with SAE as encryption, the device has to be rebooted after applying the configuration (802.11n products only)
- Multi-SSID with DFS channels does not work (802.11n products only)
- It is recommended to operate the wave 1 card (radio1) with a maximum of 60 active clients. (802.11ac products only)

## 4 Configuration Parameter Changes

The following configuration items have been added, changed, removed, deprecated or obsoleted:

- `cfgWlan802dot1xDynamicVlan` (added)
- `cfgGnssDevDebugEnabled` (added)
- `cfgWlanDevQmrrString` (changed)
- `cfgWlanIfaceBitrates` (changed)
- `cfgWlanIfaceInactivityTimeout` (changed)
- `cfgWlan802dot1xCiphers` (changed)
- `cfgWlan802dot1xCalds` (changed)
- `cfgRouteTableRoutingTables` (changed)

- [cfgRouteDhcpRoutingTables](#) (changed)
- [cfgDhcpDnsmasqDnsRebindDomainOk](#) (changed)
- [cfgHttpAdminPasswordHash](#) (changed)
- [cfgHttpMonitorPasswordHash](#) (changed)
- [cfgHttpTlsCiphers](#) (changed)
- [cfgLldpDescription](#) (changed)
- [cfgMdnsNetwork](#) (changed)
- [cfgCellDeviceOperatorSpn](#) (changed)
- [cfgScepCaIdentifier](#) (changed)
- [cfgScepChallengePassword](#) (changed)
- [cfgScepCsrC](#) (changed)
- [cfgScepCsrST](#) (changed)
- [cfgScepCsrL](#) (changed)
- [cfgScepCsrO](#) (changed)
- [cfgScepCsrOU](#) (changed)
- [cfgVpnOpenvpnAuth](#) (changed)
- [cfgVpnOpenvpnCipher](#) (changed)
- [cfgVpnOpenvpnVerifyX509String](#) (changed)
- [cfgVpnOpenvpnCalds](#) (changed)
- [cfgVpnIpsecIke](#) (changed)
- [cfgVpnIpsecEsp](#) (changed)
- [cfgVpnIpsecPassword](#) (changed)
- [cfgVpnIpsecCalds](#) (changed)
- [cfgVpnIpsecGliblCustomOptions](#) (changed)

- `cfgVpnWgPEndpoint` (changed)
- `cfgVpnWgPAllowedIps` (changed)
- `cfgLdapTlsCiphers` (changed)
- `cfgAfmRedundantName` (changed)
- `cfgAfmNeighbourName` (changed)
- `setWlanDevIndex` (changed)
- `setTlsCltTlsCiphers` (changed)

## 5 Supported Cellular Firmware

This release supports and has been tested with the following cellular firmwares:

### 5.1 Ibex-RT-330, Ibex-RT-630

- EM12GPAR01A20M4G\_01.003.01.003
- EM12GPAR01A21M4G\_01.200.01.200

### 5.2 Ibex-RT-330-5G, Ibex-RT-630-5G

- RM520NGLAAR03A01M4G\_01.202.01.202
- RM520NGLAAR03A03M4G\_01.201.01.201

Other cellular firmware versions are not supported.

## 6 Changed Configuration Parameter Descriptions

### 6.1 MIB Reference: WESTERMO-SW6-MIB

#### 6.1.1 cfgScepCsrC

##### C (Country) field for CSR

If set to 'none', C is not used for CSR.

##### Example:

- CH

Applies to STA.

<i>Type</i>	DisplayString
<i>Range</i>	1 - 4
<i>Access</i>	readwrite
<i>OID</i>	1.3.6.1.4.1.16177.1.400.1.1.1002.2.1.13

#### 6.1.2 cfgScepCsrST

##### ST (State) field for CSR

If set to 'none', ST is not used for CSR.

##### Example:

- Zurich

Applies to STA.

<i>Type</i>	DisplayString
<i>Range</i>	1 - 63
<i>Access</i>	readwrite
<i>OID</i>	1.3.6.1.4.1.16177.1.400.1.1.1002.2.1.14

#### 6.1.3 cfgScepCsrL

##### L (Locality) field for CSR

If set to 'none', L is not used for CSR.

## Example:

- Bubikon

Applies to STA.

<i>Type</i>	DisplayString
<i>Range</i>	1 - 63
<i>Access</i>	readwrite
<i>OID</i>	1.3.6.1.4.1.16177.1.400.1.1.1002.2.1.15

## 6.1.4 cfgScepCsrO

### O (Organization) field for CSR

If set to 'none', O is not used for CSR.

Applies to STA.

<i>Type</i>	DisplayString
<i>Range</i>	1 - 255
<i>Access</i>	readwrite
<i>OID</i>	1.3.6.1.4.1.16177.1.400.1.1.1002.2.1.16

## 6.1.5 cfgScepCsrOU

### OU (Organizational Unit) field for CSR

If set to 'none', OU is not used for CSR.

Applies to STA.

<i>Type</i>	DisplayString
<i>Range</i>	1 - 255
<i>Access</i>	readwrite
<i>OID</i>	1.3.6.1.4.1.16177.1.400.1.1.1002.2.1.17



## 6.1.6 cfgScepCaldentifier

### CA Identifier

Certification authority (CA) issuer identifier (if your SCEP server requires it). A CA Identifier is any string that is understood by the SCEP server (e.g. a domain name).

If set to 'none', CA Identifier is not used.

Applies to STA.

<i>Type</i>	DisplayString
<i>Range</i>	1 - 255
<i>Access</i>	readwrite
<i>OID</i>	1.3.6.1.4.1.16177.1.400.1.1.1002.2.1.3

## 6.1.7 cfgScepChallengePassword

### SCEP Challenge Password

If set to 'none', Challenge Password is not used.

Applies to STA.

<i>Type</i>	DisplayString
<i>Range</i>	1 - 255
<i>Access</i>	readwrite
<i>OID</i>	1.3.6.1.4.1.16177.1.400.1.1.1002.2.1.5

## 6.1.8 cfgVpnOpenvpnVerifyX509String

### X.509 Certificate Verification String

If a X.509 certificate verification method is enabled (see `cfgVpnOpenvpnVerifyX509Name`), this parameter defines the string to be compared by the verification method.

<i>Type</i>	DisplayString
<i>Range</i>	1 - 255
<i>Access</i>	readwrite
<i>OID</i>	1.3.6.1.4.1.16177.1.400.1.1.1003.1.1.1.22

## 6.1.9 cfgVpnOpenvpnCalds

### OpenVPN CA ID(s)

This value contain the id(s) to reference the ca certificate in the certificate store.

<i>Type</i>	DisplayString
<i>Range</i>	1 - 255
<i>Access</i>	readwrite
<i>OID</i>	1.3.6.1.4.1.16177.1.400.1.1.1003.1.1.1.25

## 6.1.10 cfgVpnOpenvpnAuth

### Packet Authentication

Authenticate packets with a Hash-based Message Authentication Code HMAC using the given message digest algorithm.

In static-key encryption mode, the HMAC key is included in the key file. In TLS mode, the HMAC key is dynamically generated and shared between peers via the TLS control channel.

### Examples:

- **SHA256**
- **SHA3-512**
- **SHA1**: according to blank `auth` entry in `ovpn` config file
- **none**: to disable HMAC packet authentication

For a full list of supported algorithms please consult the user manual or execute **openvpn --show-digests** on a device.

<i>Type</i>	DisplayString
<i>Range</i>	1 - 255
<i>Access</i>	readwrite
<i>OID</i>	1.3.6.1.4.1.16177.1.400.1.1.1003.1.1.1.8

## 6.1.11 cfgVpnOpenvpnCipher

### Data-Channel Encryption Cipher List

Colon separated list of ciphers to allow for the OpenVPN data-channel encryption.

Set to 'none' to disable packet encryption.

## Examples:

- **AES-256-GCM:AES-128-GCM**
- **AES-256-CBC**
- **AES-256-GCM**
- **none**: to disable packet encryption

For a full list of supported algorithms please consult the user manual.

<i>Type</i>	DisplayString
<i>Range</i>	1 - 255
<i>Access</i>	readwrite
<i>OID</i>	1.3.6.1.4.1.16177.1.400.1.1.1003.1.1.1.9

## 6.1.12 cfgVpnIpseclke

### IKE/ISAKMP SA Encryption/Authentication Algorithms

Comma-separated list of IKE/ISAKMP SA encryption/authentication algorithms to be used, e.g. aes128-sha256-modp3072. The notation is encryption-integrity[-prf]-dhgroup. In IKEv2, multiple algorithms and proposals may be included, such as aes128-aes256-sha1-modp3072-modp2048,3des-sha1-md5-modp1024.

It is possible to configure a PRF algorithm different to that defined for integrity protection. If no PRF is configured, the algorithms defined for integrity are proposed as PRF. The prf keywords are the same as the integrity algorithms, but have a prf prefix (such as prfsha1, prfsha256 or prfaesxcbc).

Defaults to aes128-sha256-modp3072 (aes128-sha1-modp2048,3des-sha1-modp1536 before 5.4.0) for IKEv1. The daemon adds its extensive default proposal to this default or the configured value. To restrict it to the configured proposal an exclamation mark (!) can be added at the end.

Refer to IKEv1CipherSuites and IKEv2CipherSuites for a list of valid keywords.

Note: As a responder both daemons accept the first supported proposal received from the peer. In order to restrict a responder to only accept specific cipher suites, the strict flag (!, exclamation mark) can be used, e.g: aes256-sha512-modp4096!

<i>Type</i>	DisplayString
<i>Range</i>	1 - 255
<i>Access</i>	readwrite
<i>OID</i>	1.3.6.1.4.1.16177.1.400.1.1.1003.2.1.1.104

## 6.1.13 `cfgVpnIpssecEsp`

### ESP Encryption/Authentication Algorithms

Comma-separated list of ESP encryption/authentication algorithms to be used for the connection, e.g. `aes128-sha256`. The notation is `encryption-integrity[-dhgroup][-esnmode]`. For IKEv2, multiple algorithms (separated by `-`) of the same type can be included in a single proposal. IKEv1 only includes the first algorithm in a proposal. Only either the `ah` or the `esp` keyword may be used, AH+ESP bundles are not supported.

Defaults to `aes128-sha256`. The daemon adds its extensive default proposal to this default or the configured value. To restrict it to the configured proposal an exclamation mark (!) can be added at the end.

Note: As a responder, the daemon defaults to selecting the first configured proposal that's also supported by the peer. By disabling `charon.prefer_configured_proposals` in `strongswan.conf` this may be changed to selecting the first acceptable proposal sent by the peer instead. In order to restrict a responder to only accept specific cipher suites, the `strict` flag (!, exclamation mark) can be used, e.g: `aes256-sha512-modp4096!`

If `dh-group` is specified, `CHILD_SA` rekeying and initial negotiation include a separate Diffie-Hellman exchange (this also applies to IKEv1 Quick Mode). However, for IKEv2, the keys of the `CHILD_SA` created implicitly with the `IKE_SA` will always be derived from the `IKE_SA`'s key material. So any DH group specified here will only apply when the `CHILD_SA` is later rekeyed or is created with a separate `CREATE_CHILD_SA` exchange. Therefore, a proposal mismatch might not immediately be noticed when the SA is established, but may later cause rekeying to fail.

Valid values for `esnmode` are `esn` and `noesn`. Specifying both negotiates extended sequence number support with the peer, the default is `noesn`.

Refer to `IKEv1CipherSuites` and `IKEv2CipherSuites` for a list of valid keywords.

<i>Type</i>	DisplayString
<i>Range</i>	1 - 255
<i>Access</i>	readwrite
<i>OID</i>	1.3.6.1.4.1.16177.1.400.1.1.1003.2.1.1.105

## 6.1.14 `cfgVpnIpssecPassword`

### IPsec Password

When `cfgVpnIpssecRightAuth` is set to **psk**.

A preshared secret is most conveniently represented as a sequence of characters. The sequence

cannot contain newline or double-quote characters. Alternatively, preshared secrets can be represented as hexadecimal or Base64 encoded binary values. A character sequence beginning with 0x is interpreted as sequence hexadecimal digits. Similarly, a character sequence beginning with 0s is interpreted as Base64 encoded binary data.

<i>Type</i>	DisplayString
<i>Range</i>	1 - 255
<i>Access</i>	readwrite
<i>OID</i>	1.3.6.1.4.1.16177.1.400.1.1.1003.2.1.1.113

## 6.1.15 cfgVpnIpsecCalds

### IPsec CA Certificate ID

This value contains the id(s) to reference the ca certificate in the certificate store.

<i>Type</i>	DisplayString
<i>Range</i>	1 - 255
<i>Access</i>	readwrite
<i>OID</i>	1.3.6.1.4.1.16177.1.400.1.1.1003.2.1.1.116

## 6.1.16 cfgVpnIpsecGlblCustomOptions

### Custom Global IPsec Options

Set to none when no additional options shall be added.

When setting multiple options, separate them with a semicolon ;.

Example to enable aggressive mode for PSK with IKEv1:

- `charon.i_dont_care_about_security_and_use_aggressive_mode_psk=yes`

For a full list of all available options, please see: <https://wiki.strongswan.org/projects/strongswan/wiki/StrongswanCustomGlobalIPsecOptions>

<i>Type</i>	DisplayString
<i>Range</i>	1 - 255
<i>Access</i>	readwrite
<i>OID</i>	1.3.6.1.4.1.16177.1.400.1.1.1003.2.2.2

## 6.1.17 cfgVpnWgPEndpoint

### Wireguard Peer Endpoint

Specifies the remote end by IP and port.

Set to 0.0.0.0:0, when the local peer accepts connections, but does not initiate by itself.

#### Examples:

- 192.168.1.20:51820
- 0.0.0.0:0

<i>Type</i>	DisplayString
<i>Range</i>	1 - 255
<i>Access</i>	readwrite
<i>OID</i>	1.3.6.1.4.1.16177.1.400.1.1.1003.5.2.1.5

## 6.1.18 cfgVpnWgPAllowedIps

### Wireguard Peer Allowed IPs

The Allowed IPs refers to the addresses inside the tunnel. It has two meanings:

In TX direction it acts as routing table. Frames with a destination matching the Allowed IPs are encrypted. All other frames that are routed to the interface but don't match the Allowed IPs are dropped.

In RX direction it acts as ACL. Only frames where the source matches the Allowed IPs are accepted. Everything else is dropped.

Multiple space and/or comma separated networks in CIDR notation may be specified.

When set to `none`, no frames will be sent nor received.

#### Examples:

- none
- 0.0.0.0/0
- 192.168.0.0/16, 172.16.0.0/12, 10.0.0.0/8

Type	DisplayString
Range	1 - 255
Access	readwrite
OID	1.3.6.1.4.1.16177.1.400.1.1.1003.5.2.1.6

## 6.1.19 cfgLdapTlsCiphers

### OpenSSL Cipher String for LDAP

Specify which OpenSSL ciphers to use for the LDAP connection.

Please read the user manual and the OpenSSL documentation for a list of available ciphers and used syntax.

Set to 'none' to disable restriction.

#### Examples:

- ECDHE-RSA-AES256-GCM-SHA384:DHE-RSA-AES256-GCM-SHA384
- DHE-RSA-AES256-GCM-SHA384
- ECDHE-RSA-AES256-GCM-SHA384:ECDSA-AES256-GCM-SHA384:ECDSA-AES256-SHA384
- none

Applies to AP and STA.

Type	DisplayString
Range	1 - 255
Access	readwrite
OID	1.3.6.1.4.1.16177.1.400.1.1.1005.17

## 6.1.20 cfgCellDeviceOperatorSpn

### Operator Selection Service Provider Name (SPN)

Name of the operator if the selection mode `cfgCellDeviceOperatorMode` is set to **fix(1)** or **fixWith-FallbackAuto(2)**.

Long format alphanumeric up to 16 characters. The string of the currently connected provider can be read from `swCellServiceName`.

**Note:** If the service provider name is not defined or is incorrect, the modem cannot connect to the mobile network and remote access is lost.

Applies to cellular products only.

<i>Type</i>	DisplayString
<i>Range</i>	1 - 16
<i>Access</i>	readwrite
<i>OID</i>	1.3.6.1.4.1.16177.1.400.1.1.101.7.1.5

## 6.1.21 cfgDhcpDnsmasqDnsRebindDomainOk

### Allowed Domains for DNS Rebind Protection

This entry is active when `cfgDhcpDnsmasqDnsStopDnsRebind` is enabled.

Enter a space and/or comma separated list of domains which are allowed to resolve to private addresses (RFC1918).

No Domains are excepted when set to none.

#### Examples:

- example.com, example.net, example.org
- yourdomain.com anotherdomain.com

**Note:** Subdomains are included when excepting domains. e.g when domain.net is set, then subdomain1.domain.net and subdomain2.domain.net are excepted as well.

<i>Type</i>	DisplayString
<i>Range</i>	1 - 255
<i>Access</i>	readwrite
<i>OID</i>	1.3.6.1.4.1.16177.1.400.1.1.13.2.1.9

## 6.1.22 cfgHttpMonitorPasswordHash

### Monitor Password Hash

Used for configuration import/export only.

Use WebAPI or Web Interface to change the Password.

<i>Type</i>	DisplayString
<i>Range</i>	1 - 255
<i>Access</i>	readwrite
<i>OID</i>	1.3.6.1.4.1.16177.1.400.1.1.15.11



## 6.1.23 `cfgHttpTlsCiphers`

### OpenSSL Cipher and Ciphersuites String for HTTPS server

Specify which OpenSSL ciphers and ciphersuites to use for HTTPS connections.

Please read the user manual and the OpenSSL documentation for a list of available ciphers, ciphersuites and used syntax.

Up to TLSv1.2, OpenSSL uses ciphers, while with TLSv1.3 ciphersuites are used. The format for this parameter is as follows: `[|]`, i.e. the pipe (`|`) sign is used to separate the ciphers from the ciphersuites.

If ciphers or ciphersuites is left empty, no restrictions are applied and all of the related built-ins are available. If ciphers is set with the special string `'disable'`, the support for TLSv1.2 and below is disabled, while `'disable'` given as ciphersuites disables TLSv1.3.

Set to `'none'` to disable restriction.

#### Examples:

- **`ECDHE-RSA-AES256-GCM-SHA384:DHE-RSA-AES256-GCM-SHA384`**

limit TLSv1.2 to the selected two ciphers, leave TLSv1.3 ciphersuites all enabled

- **`DHE-RSA-AES256-GCM-SHA384|TLS_AES_256_GCM_SHA384`**

limit TLSv1.2 to one cipher and TLSv1.3 to one ciphersuite

- **`DHE-RSA-AES256-GCM-SHA384|disable`**

limit TLSv1.2 to one cipher and disable TLSv1.3 support

- **`disable|TLS_AES_256_GCM_SHA384`**

disable TLSv1.2 support and limit TLSv1.3 to one ciphersuite

- **`|TLS_AES_256_GCM_SHA384`**

leave all TLSv1.2 enabled, limit TLSv1.3 to one ciphersuite

- **`|disable`**

leave all TLSv1.2 ciphers enabled, disable TLSv1.3 support

- **`disable|`**

disable TLSv1.2 support, leave all TLSv1.3 ciphersuites enabled

- **none**

no restrictions for TLSv1.2 and TLSv1.3

<i>Type</i>	DisplayString
<i>Range</i>	1 - 255
<i>Access</i>	readwrite
<i>OID</i>	1.3.6.1.4.1.16177.1.400.1.1.15.14

## 6.1.24 cfgHttpAdminPasswordHash

### Admin Password Hash

Used for configuration import/export only.

Use WebAPI or Web Interface to change the Password.

<i>Type</i>	DisplayString
<i>Range</i>	1 - 255
<i>Access</i>	readwrite
<i>OID</i>	1.3.6.1.4.1.16177.1.400.1.1.15.9

## 6.1.25 cfgLldpDescription

### LLDP Description

Applies to AP and STA.

<i>Type</i>	DisplayString
<i>Range</i>	1 - 255
<i>Access</i>	readwrite
<i>OID</i>	1.3.6.1.4.1.16177.1.400.1.1.16.2

## 6.1.26 cfgMdnsNetwork

### mDNS Aware Network Interfaces

When set to the keyword `all` it will bind to all valid interfaces.

Multiple interfaces may be specified as a space and/or comma separated list.

**Examples:**

- br0.vlan0
- br0.vlan0, br0.vlan7, br0.vlan99
- br0.vlan0 br0.vlan66

<i>Type</i>	DisplayString
<i>Range</i>	1 - 255
<i>Access</i>	readwrite
<i>OID</i>	1.3.6.1.4.1.16177.1.400.1.1.17.2

### 6.1.27 cfgWlanDevQmrrString

**A list of rate controller quadruples per queue.**

Each quadruple consist of (mcs-rate [0-31], tries [0-15], rts\_cts [0-1], sgi [0-1]) with 4 entries per queue.

16 values together are for a single queue.

The values are in the form: rate1, try1, rts\_cts1, sgi1, rate2, . . . , rate4, try4, rts\_cts4, sgi4.

The order of the queues is VO, VI, BE, BK.

QMRR override for a specific queue is disabled when its respective try1 value is 0.

When QMRR override is disabled, the normal minstrel or other configured overrides, are used.

Frames in the VO queue are never aggregated.

All characters other than numbers are ignored

**Example:**

```
[(7 1 0 0) (4 2 0 0) (2 3 0 0) (0 4 1 0)] [(7 1 0 0) (4 1 0 1) (2 1 0 1) (0 1 1 1)] [(7 1 0 0) (4 1 0 0) (0 0 0 0) (0 0 0 0)] [(7 1 0 0) (0 0 0 0) (0 0 0 0) (0 0 0 0)]
```

Applies to AP and STA. 802.11n products only.

<i>Type</i>	DisplayString
<i>Range</i>	1 - 255
<i>Access</i>	readwrite
<i>OID</i>	1.3.6.1.4.1.16177.1.400.1.1.3.1.1.26

## 6.1.28 cfgWlan802dot1xCiphers

### OpenSSL Cipher String for the RADIUS Client

This is an OpenSSL specific configuration option for configuring the default cipher.

Please read the documentation for a list of all available ciphers and used syntax.

Used only if `cfgWlanIfaceEncryption` is **eap(6)**, **eap2(10)** or **eap192(11)**.

#### Examples:

- ECDHE-RSA-AES128-GCM-SHA256
- DHE-RSA-AES128-GCM-SHA256
- ECDHE-RSA-AES256-GCM-SHA384:ECDHE-ECDSA-AES256-GCM-SHA384:ECDHE-RSA-AES256-SHA384
- none

Applies to STA.

<i>Type</i>	DisplayString
<i>Range</i>	1 - 255
<i>Access</i>	readwrite
<i>OID</i>	1.3.6.1.4.1.16177.1.400.1.1.3.10.1.21

## 6.1.29 cfgWlan802dot1xCalds

### Certificate Authority (CA) IDs

Reference to the CA which should be used.

Multiple CAs may be referenced by writing the ids of the CAs as space and/or comma separated list. The order of the list is the order how the CAs will be concatenated.

Setting the CA ID to -1 disables the CA verification.

#### Examples:

- -1
- 12
- 1, 3, 4
- 1 3 4

Applies to STA.

Type	DisplayString
Range	1 - 255
Access	readwrite
OID	1.3.6.1.4.1.16177.1.400.1.1.3.10.1.25

## 6.1.30 cfgWlan802dot1xDynamicVlan

### Dynamic VLAN

This parameter is only active when the wlan interface is bridged using `cfgNetWlanBridge`. Dynamic VLAN can not be used together with 802.11r (`cfgWlan802dot11rEnabled`).

Allow the RADIUS authentication server to decide which VLAN is used for the stations. This information is parsed from following RADIUS attributes based on RFC 3580 and RFC 2868: Tunnel-Type (value 13 = VLAN), Tunnel-Medium-Type (value 6 = IEEE 802) Tunnel-Private-Group-ID (value VLANID as a string).

- **disabled(0)**: No dynamic VLANs are used
- **optional(1)**: Use default interface if the RADIUS server does not include a VLAN ID
- **required(2)**: Reject authentication if the RADIUS server does not include a VLAN ID

Applies to AP.

Enumeration	disabled (0), optional (1), required (2)
Access	readwrite
OID	1.3.6.1.4.1.16177.1.400.1.1.3.10.1.28

## 6.1.31 cfgWlanifaceBitrates

### Fixed MCS Index For 802.11n Rates

Set to -1 to not force an MCS index (auto-rate).

Allows multiple space and/or comma separated indices which are then used in auto rate.

This entry is only active when `cfgWlanDevModulation` is set to **ng(10)** or **na(12)**

### Examples:

- -1
- 0 1 2 3 4 5 6 7
- 0, 4, 7, 8, 12, 15

Applies to AP and STA. 802.11n products only.

<i>Type</i>	DisplayString
<i>Range</i>	1 - 255
<i>Access</i>	readwrite
<i>OID</i>	1.3.6.1.4.1.16177.1.400.1.1.3.2.1.11

## 6.1.32 `cfgWlanInactivityTimeout`

### Allowed idle time before station is removed

If a station does not send anything in `ap_max_inactivity` seconds, an empty data frame is sent to it in order to verify whether it is still in range. If this frame is not ACKed, the station will be disassociated and then deauthenticated. This feature is used to clear the station table of old entries when the STAs move out of range.

Applies to AP. 802.11n products only.

<i>Range</i>	15 - 65535
<i>Access</i>	readwrite
<i>OID</i>	1.3.6.1.4.1.16177.1.400.1.1.3.2.1.23

## 6.1.33 `cfgRouteTableRoutingTables`

### Routing Tables on Which Route are Created

This is a space and/or comma separated list of tables on which the route will be created.

Specify 254 to create routes on the `main` table.

Valid values are  $> 0$  and  $< 2000000000$ . However in this range there are reserved values that may not be used:

- 128: prelocal
- 253: default
- 255: local

Use `cfgRouteRuleTable` to create policies which use the tables specified here.

### Examples:

- 5000
- 254, 7000

- 100 254, 8000

<i>Type</i>	DisplayString
<i>Range</i>	1 - 255
<i>Access</i>	readwrite
<i>OID</i>	1.3.6.1.4.1.16177.1.400.1.1.4.2.1.11

## 6.1.34 `cfgRouteDhcpRoutingTables`

### Routing Tables on Which Received Routes are Created

This is a space and/or comma separated list of tables on which the route will be created.

Specify 254 to create routes on the main table.

Valid values are > 0 and < 2000000000. However in this range there are reserved values that may not be used:

- 128: prelocal
- 253: default
- 255: local

Use `cfgRouteRuleTable` to create policies which use the table specified here.

### Examples:

- 5000
- 254, 7000
- 100 254, 8000

<i>Type</i>	DisplayString
<i>Range</i>	1 - 255
<i>Access</i>	readwrite
<i>OID</i>	1.3.6.1.4.1.16177.1.400.1.1.4.5.1.5

## 6.1.35 `setWlanDevIndex`

### Table Entry Index

<i>Range</i>	0 - 2
<i>Access</i>	noaccess
<i>OID</i>	1.3.6.1.4.1.16177.1.400.1.4.3.1.1.1

## 6.1.36 setTlsCltTlsCiphers

### OpenSSL Cipher String for the TLS Client

This is an OpenSSL specific configuration option for configuring the cipher.

Please read the user manual and the OpenSSL documentation for a list of available ciphers and used syntax.

Set to 'none' to disable restriction.

#### Examples:

- ECDHE-RSA-AES256-GCM-SHA384:DHE-RSA-AES256-GCM-SHA384
- DHE-RSA-AES256-GCM-SHA384
- ECDHE-RSA-AES256-GCM-SHA384:ECDHE-ECDSA-AES256-GCM-SHA384:ECDHE-RSA-AES256-SHA384
- none

<i>Type</i>	DisplayString
<i>Range</i>	1 - 255
<i>Access</i>	readwrite
<i>OID</i>	1.3.6.1.4.1.16177.1.400.1.4.9.5

## 6.2 MIB Reference: WESTERMO-SW6-NWM-MIB

### 6.2.1 cfgAfmRedundantName

#### Name of the Redundant Area Frequency Manager

Applies to AP. 802.11n products only.

<i>Type</i>	DisplayString
<i>Range</i>	1 - 255
<i>Access</i>	readwrite
<i>OID</i>	1.3.6.1.4.1.16177.1.400.2.3.1.7.10.2

### 6.2.2 cfgAfmNeighbourName

#### Name of the Neighbour (Adjacent) Area Frequency Manager

Applies to AP. 802.11n products only.



<i>Type</i>	DisplayString
<i>Range</i>	1 - 255
<i>Access</i>	readwrite
<i>OID</i>	1.3.6.1.4.1.16177.1.400.2.3.1.7.20.1.3

## 6.3 MIB Reference: WESTERMO-SW6-GNSS-MIB

### 6.3.1 cfgGnssDevDebugEnabled

#### Disable or Enable Debug Messages

Applies to cellular products only.

<i>Enumeration</i>	disabled (0), enabled (1)
<i>Access</i>	readwrite
<i>OID</i>	1.3.6.1.4.1.16177.1.400.2.10.1.1.2.4