



## Table Based Configuration

The table-based video is a local session management that provisions using CLI. The statically allocated local video sessions can be either unicast or multicast video stream.

- [Information About Table Based Configuration, on page 1](#)
- [Configuring Table Based Session, on page 1](#)
- [Virtual Edge Input Bundling, on page 2](#)
- [Feature Information for Table Based Configuration, on page 4](#)

## Information About Table Based Configuration

Table-based video session configuration can be performed for a range or an individual session under each Quadrature Amplitude Modulation (QAM) carrier that is being assigned to a table-based Logical Edge Device (LED). In cBR-8, you can create multiple LEDs for table-based video sessions; each LED manages one set of QAM carriers for table-based sessions. Table-based sessions can be configured as a pass-through, remap, or a data piping session.

## Configuring Table Based Session

To configure the encryption type for a VOD session, perform the following steps:

```
enable
configure terminal
cable video
table-based
vcg vcg-name
rf-channel n-m
session sess-name input-port id start-udp-port udp port number
num-sessions-per-qam 1-80 processing-type remap start-program n jitter
10-200 msec [cbr | vbr]
exit
```

## Configuration Example

The following is a sample in which two sessions are created per RF channel, HBO-1 and HBO-2 are for channel 0, HBO-3 and HBO-4 are for channel 1. The destination IP address is obtained from VCG (if any), otherwise from the LED broadcast.

```
Router(config)#cable video
Router(config-video)#table-based
Router(config-video-tb)#vcg bcast
Router(config-video-tb-vcg)#rf-channel 0-1
Router(config-video-tb-vcg-sess)# session HBO input-port 10 start-udp-port 1
num-sessions-per-qam 2 processing-type remap start-program 1 jitter 100 cbr
Router(config-video-tb-vcg-sess)# session HBO bundle-id 1 start-udp-port 49152
num-sessions-per-qam 2 processing-type program start-program 1 jitter 100 cbr
```

## Virtual Edge Input Bundling

Virtual Edge Input Bundling assists with load balancing from the Head End. This allows multiple VEIs to be accessed via a gateway, since it is unknown at the time of configuration which VEI the stream will come in on. Thus, when the Head End sends a stream to the gateway, it enters the cBR-8 in on any VEI in the bundle. VEI bundling can be performed only if table based protocol is used for a particular LED.

To bundle the VEIs, perform the following steps:

### Before You Begin

- All video sessions must have unique UDP ports for the Head End.
- Create two or more Virtual Edge Inputs using the following command:

```
virtual-edge-input-ip ipaddr vrf vrfname input-port-number #
```




---

**Note** Same IP address cannot be used in more than one bundle.

---

```
enable
configure terminal
cable video
logical-edge-device
protocol table-based
vei-bundle id input-port-number #
exit
```

## Verifying Virtual Edge Input Data

To verify the VEI data, use the following command:

```
Router# show cable video logical-edge-device [all | id | name]
```

Example:

```
Router# show cable video logical-edge-device id 1
Logical Edge Device: led-vei
Id: 1
Protocol: Table-based
Service State: Active
```

```
Discovery State: Disable
Number of Virtual Carrier Groups: 1
Number of Share Virtual Edge Input: 5
Number of Physical Qams: 5
Number of Sessions: 0
No Reserve PID Range
```

## Virtual Edge Input:

Input Port ID	VEI IP	Slot/Bay	Bundle ID	Gateway IP
11	11.11.11.11	7/0	-	-
22	22.22.22.22	7/0	-	-
66	66.66.66.66	7/0	40000	177.0.10.3
77	77.77.77.77	7/0	40000	177.0.10.3
222	222.222.222.222	7/0	40000	177.0.10.3

## Virtual Carrier Group:

ID	Name	Total VEI	Total RF-channel	Service-Distribution-Group Name	Service-Distribution-Group ID
1	vcg-vei	5	5	sdg-vei	1

Integrated Cable	Physical QAM ID	Admin State	Operational State	TSID	ONID	Output Port	VCG ID	SDG ID	Encryption Capable
7/0/3:0	208	ON	UP	0	0	1	1	1	clear
7/0/3:1	209	ON	UP	1	0	2	1	1	clear
7/0/3:2	210	ON	UP	2	0	3	1	1	clear
7/0/3:3	211	ON	UP	3	0	4	1	1	clear
7/0/3:4	212	ON	UP	4	0	5	1	1	clear

## Verifying VEI Bundles

To view the VEI bundles, use the following command:

```
Router# show cable video vei-bundle all
```

Example:

This is a sample output of the show command that displays the VEI bundle details.

```
Router# show cable video vei-bundle all
```

```
Total VEI Bundles: 1
```

Bundle ID	LED ID	Input Port ID	VEI IP	Slot/Bay	Gateway IP
40000	1	33	33.33.33.33	7/0	177.0.10.3
40000	1	44	44.44.44.44	7/0	177.0.10.3
40000	1	66	66.66.66.66	7/0	177.0.10.3
40000	1	77	77.77.77.77	7/0	177.0.10.3
40000	1	222	222.222.222.222	7/0	177.0.10.3

## Configuration Example

The following is a sample in which five VEIs are created on VCG and bundled:

```
cable video
  service-distribution-group sdg-vei id 1
```

```

rf-port integrated-cable 7/0/3
virtual-carrier-group vcg-vei id 1
  virtual-edge-input-ip 111.111.111.111 input-port-number 111
  virtual-edge-input-ip 222.222.222.222 input-port-number 222
  virtual-edge-input-ip 33.33.33.33 input-port-number 33
  virtual-edge-input-ip 44.44.44.44 input-port-number 44
  virtual-edge-input-ip 55.55.55.55 vrf Video-VOD-Vrf input-port-number 55
  rf-channel 0-4 tsid 0-4 output-port-number 1-5
virtual-carrier-group vcg-veil id 2
  virtual-edge-input-ip 111.111.111.111 input-port-number 111
  virtual-edge-input-ip 222.222.222.222 input-port-number 222
  virtual-edge-input-ip 33.33.33.33 input-port-number 33
  virtual-edge-input-ip 44.44.44.44 input-port-number 44
  rf-channel 5-10 tsid 5-10 output-port-number 5-10
bind-vcg
  vcg vcg-vei sdg sdg-vei
  vcg vcg-veilsg sdg-vei
logical-edge-device led-vei id 1
  protocol table-based
    virtual-edge-input-ip 11.11.11.11 input-port-number 11
    virtual-edge-input-ip 22.22.22.22 input-port-number 22
    virtual-edge-input-ip 66.66.66.66 input-port-number 66
    virtual-edge-input-ip 77.77.77.77 input-port-number 77
    virtual-edge-input-ip 222.222.222.222 vrf Mgmt-MPEG-video-intf-vrf input-port-number
222
  vcg vcg-vei
  vei-bundle 40000 input-port-number 33,44,66,77,222
active

```

## Feature Information for Table Based Configuration

**Table 1: Feature Information for Table Based Configuration**

Feature Name	Releases	Feature Information
Table based configuration	Cisco IOS XE Everest 16.6.1	This feature was integrated on the Cisco cBR Series Converged Broadband Routers.