1.11.2

- :
  - wireless-controller
- BRAS:
  - BRAS VRF L3
  - Option 82 DHCP
  - BRAS SNMP
- SNMP
  - softgre
- :
  - CLI:
    - merge , c candidate-config
    - Bridge
    - object-groups c
    -
    - route-maps
    -
    -
  - SLA:
    - IP SLA ICMP-ECHO

- :
  - wireless-controller

> (1.11.0):
>
>) Master( ) ===> Backup( ) , ;
>
>) Master( ) ===> Backup( ) , . Backup( ) .

:

1.11.0->1.11.2 , . APTD :

```
2020-06-16T17:52:12+07:00 %APTD-D-DEBUG: <aptd_tunnels_deserialize> converting state version 1 to
current 2
```

1.11.2->1.11.2 . APTD :

```
2020-06-16T18:00:55+07:00 %APTD-D-DEBUG: <aptd_tunnels_deserialize> acquired recent state version 2
```

1.11.2->1.11.0

```
2020-06-16T18:22:07+07:00 %APTD-E-ERROR: The acquired state version 2 can't be handled by this
version of aptd! The most recent supported version is 1.
```

- BRAS:
  - BRAS VRF L3
    L2 BRAS VRF L3.
  - Option 82 DHCP

    , Option 82, BRAS DHCP Option 82 .

```
Frame 8: 350 bytes on wire (2800 bits), 350 bytes captured (2800 bits)
Ethernet II, Src: EltexEnt_d8:f2:03 (e0:d9:e3:d8:f2:03), Dst: 02:00:ef:41:23:8c (02:00:ef:41:
23:8c)
Internet Protocol Version 4, Src: 192.168.20.2, Dst: 10.10.5.50
User Datagram Protocol, Src Port: 67, Dst Port: 67
Bootstrap Protocol (Discover)
    Message type: Boot Request (1)
    Hardware type: Ethernet (0x01)
    Hardware address length: 6
    Hops: 1
    Transaction ID: 0x6f2cfbd3
    Seconds elapsed: 0
    Bootp flags: 0x0000 (Unicast)
    Client IP address: 0.0.0.0
    Your (client) IP address: 0.0.0.0
    Next server IP address: 0.0.0.0
    Relay agent IP address: 172.13.0.2
    Client MAC address: CrispAut_35:00:2a (00:00:2b:35:00:2a)
    Client hardware address padding: 00000000000000000000
    Server host name not given
    Boot file name not given
    Magic cookie: DHCP
    Option: (53) DHCP Message Type (Discover)
    Option: (55) Parameter Request List
    Option: (61) Client identifier
    Option: (82) Agent Information Option
        Length: 45
        Option 82 Suboption: (1) Agent Circuit ID
            Length: 35
            Agent Circuit ID: 636c75737465725f4d4553353332345f302e372065746820...
        Option 82 Suboption: (2) Agent Remote ID
            Length: 6
            Agent Remote ID: e0d9e3cc0dc0
    Option: (255) End
    Padding: 0000
```

```
Frame 1: 571 bytes on wire (4568 bits), 571 bytes captured (4568 bits)
Ethernet II, Src: EltexEnt_d8:f2:03 (e0:d9:e3:d8:f2:03), Dst: 02:00:ef:41:23:8c (02:00:ef:41:
23:8c)
Internet Protocol Version 4, Src: 10.10.11.1, Dst: 10.10.5.50
User Datagram Protocol, Src Port: 34106, Dst Port: 31813
RADIUS Protocol
    Code: Accounting-Request (4)
    Packet identifier: 0xe9 (233)
    Length: 529
    Authenticator: a08595b61a1d45cc465d36c80c987901
    Attribute Value Pairs
        AVP: t=User-Name(1) l=10 val=INTERNET
        AVP: t=Vendor-Specific(26) l=39 vnd=ciscoSystems(9)
        AVP: t=Acct-Session-Id(44) l=22 val=11277013466935722319
        AVP: t=Vendor-Specific(26) l=46 vnd=ciscoSystems(9)
        AVP: t=Acct-Status-Type(40) l=6 val=Start(1)
        AVP: t=Vendor-Specific(26) l=28 vnd=ciscoSystems(9)
        AVP: t=Event-Timestamp(55) l=6 val=Sep  7, 2020 12:42:13.000000000 +07
        AVP: t=NAS-Port-Id(87) l=18 val=location APUSER6
        AVP: t=Called-Station-Id(30) l=27 val=A8-F9-4B-AB-2F-00:APUSER6
        AVP: t=Vendor-Specific(26) l=47 vnd=ciscoSystems(9)
        AVP: t=Vendor-Specific(26) l=29 vnd=Eltex Enterprise, Ltd.(35265)
        AVP: t=Vendor-Specific(26) l=51 vnd=The Broadband Forum(3561)
            Type: 26
            Length: 51
            Vendor ID: The Broadband Forum (3561)
            VSA: t=ADSL-Agent-Circuit-Id(1) l=37 val=cluster_MES5324_0.7 eth 100/11:3030
                Type: 1
                Length: 37
                [Length: 45]
                ADSL-Agent-Circuit-Id: cluster_MES5324_0.7 eth 100/11:3030
            VSA: t=ADSL-Agent-Remote-Id(2) l=8 val=\340\331\343\314\r\300
                Type: 2
                Length: 8
                [Length: 45]
                ADSL-Agent-Remote-Id: \340\331\343\314\r\300
        AVP: t=Vendor-Specific(26) l=44 vnd=ciscoSystems(9)
        AVP: t=Vendor-Specific(26) l=56 vnd=ciscoSystems(9)
        AVP: t=Vendor-Specific(26) l=28 vnd=ciscoSystems(9)
        AVP: t=NAS-Identifier(32) l=21 val=ESR1200-ALFA-BR-VRF
        AVP: t=Framed-IP-Address(8) l=6 val=172.13.206.235
        AVP: t=Calling-Station-Id(31) l=19 val=00-00-2B-35-00-2A
        AVP: t=NAS-IP-Address(4) l=6 val=10.10.11.1
```

- BRAS SNMP

VRF .

```
tester@loadstend:~$ snmpwalk -v2c -c public11 10.10.11.1 eltexBrasSessionAllNumber
ELTEX-BRAS-MIB::eltexBrasSessionAllNumber."__all" = Counter64: 6
ELTEX-BRAS-MIB::eltexBrasSessionAllNumber."dpi_1" = Counter64: 1
ELTEX-BRAS-MIB::eltexBrasSessionAllNumber."dpi_2" = Counter64: 2
ELTEX-BRAS-MIB::eltexBrasSessionAllNumber."__default" = Counter64: 3
```

```
tester@loadstend:~$ snmpwalk -v2c -c public11 10.10.11.1  eltexBrasServiceTable
ELTEX-BRAS-MIB::eltexBrasServiceActiveNumber."__all"."WELCOME" = Counter64: 1
ELTEX-BRAS-MIB::eltexBrasServiceActiveNumber."__all"."INTERNET" = Counter64: 4
ELTEX-BRAS-MIB::eltexBrasServiceActiveNumber."dpi_1"."INTERNET" = Counter64: 1
ELTEX-BRAS-MIB::eltexBrasServiceActiveNumber."dpi_2"."INTERNET" = Counter64: 1
ELTEX-BRAS-MIB::eltexBrasServiceActiveNumber."__default"."WELCOME" = Counter64: 1
ELTEX-BRAS-MIB::eltexBrasServiceActiveNumber."__default"."INTERNET" = Counter64: 2
ELTEX-BRAS-MIB::eltexBrasServiceNotActiveNumber."__all"."WELCOME" = Counter64: 0
ELTEX-BRAS-MIB::eltexBrasServiceNotActiveNumber."__all"."INTERNET" = Counter64: 1
ELTEX-BRAS-MIB::eltexBrasServiceNotActiveNumber."dpi_1"."INTERNET" = Counter64: 0
ELTEX-BRAS-MIB::eltexBrasServiceNotActiveNumber."dpi_2"."INTERNET" = Counter64: 0
ELTEX-BRAS-MIB::eltexBrasServiceNotActiveNumber."__default"."WELCOME" = Counter64: 0
ELTEX-BRAS-MIB::eltexBrasServiceNotActiveNumber."__default"."INTERNET" = Counter64: 1
```

- SNMP
  - softgre

snmpset snmpset, ESR .

> ⚠ ESR
>
> snmp-server enable traps wifi wifi-tunnels-operation

:

```
snmpset -v 2c -c private1 10.10.11.1 tunnelWiFiOpAddressType.1 i ipv4 tunnelWiFiOpRemoteAddress.1
x 647C0024 tunnelWiFiOpOperation.1 i clear
```

:

```
snmpset -v 2c -c private1 10.10.11.1 tunnelWiFiOpOperation.1 i clear
```

:

```
tester@loadstend:~$ snmpwalk -v 2c -c private1 10.10.11.1 tunnelWiFiOpTable
ELTEX-TUNNEL-MIB::tunnelWiFiOpTunnelIndex.1 = Gauge32: 0
ELTEX-TUNNEL-MIB::tunnelWiFiOpIfIndex.1 = INTEGER: 0
ELTEX-TUNNEL-MIB::tunnelWiFiOpDescr.1 = STRING:
ELTEX-TUNNEL-MIB::tunnelWiFiOpAddressType.1 = INTEGER: ipv4(1)
ELTEX-TUNNEL-MIB::tunnelWiFiOpLocalAddress.1 = Hex-STRING: 00 00 00 00
ELTEX-TUNNEL-MIB::tunnelWiFiOpRemoteAddress.1 = Hex-STRING: 64 7C 00 24
ELTEX-TUNNEL-MIB::tunnelWiFiOpOperation.1 = INTEGER: clear(0)
ELTEX-TUNNEL-MIB::tunnelWiFiOpStatus.1 = INTEGER: success(0)
ELTEX-TUNNEL-MIB::tunnelWiFiOpStatusDescr.1 = STRING: Success
ELTEX-TUNNEL-MIB::tunnelWiFiOpErrorStatus.1 = INTEGER: noError(0)
```

- :
  - CLI:
    - **merge , c candidate-config**

merge candidate-config, , .

```
esr-1700# merge tftp://100.110.0.65:/alfa1700.cfg system:candidate-config
```

⚠ #!/usr/bin/clish
#18
#1.11.2
#18/09/2020
#17:57:44

- **Bridge**

```
esr-1700# sh run bridges 10
bridge 10
  ip vrf forwarding dpi_1
  description "APUSER1"
  vlan 10
  unknown-unicast-forwarding disable
  security-zone user_d1
  ip firewall disable
  ip address 172.10.0.2/16
  ip helper-address 10.10.5.50
  ip helper-address vrrp-group 1
  vrrp id 10
  vrrp ip 172.10.0.1/32
  vrrp priority 200
  vrrp group 1
  vrrp preempt disable
  vrrp preempt delay 120
  vrrp
  ip tcp adjust-mss 1400
  service-subscriber-control any
  location APUSER1
  ipv6 enable
  protected-ports local
  protected-ports exclude vlan
  ports vrrp filtering enable
  ports vrrp filtering exclude vlan
  rate-limit arp-broadcast
  enable
exit
```

- **object-groups c**

```
esr-1700# sh run object-groups network ap1
object-group network ap1
  ip address-range 172.10.0.4-172.10.255.254
exit
ESR1700-ALFA-BR-VRF1# sh run object-groups service snmp
object-group service snmp
  port-range 161
exit
```

-

```
esr-1700# sh run tunnels softgre 1.1
tunnel softgre 1.1
  bridge-group 3
  enable
exit
```

- **route-maps**

```
esr-1700# show running-config routing route-maps out_BGP_DPI
object-group network APGRE
  ip prefix 10.10.10.0/24
exit
object-group network INTERNET
  ip prefix 172.11.0.0/16
  ip prefix 172.12.0.0/16
exit
object-group network MNG
  ip prefix 172.10.0.0/16
  ip prefix 172.11.0.0/16
exit
object-group network clients_dpi_1
  ip prefix 172.13.0.0/16
  ip prefix 172.14.0.0/16
  ip prefix 172.10.0.0/16
exit
object-group network clients_dpi_2
  ip prefix 172.15.0.0/16
  ip prefix 172.116.0.0/16
exit

route-map out_BGP_DPI
  rule 1
    match ip address object-group clients_dpi_1
    action set as-path prepend 65000 track 2
    action permit
  exit
exit
```

-

```
esr-1700# dir flash:backup/
Name                                                    Type         Size
------------------------------------------------------  ----------   --------   --
config_20200630_175725_admin                            File         20.71      KB
config_20200630_180032_user1                            File         20.71      KB
config_20200720_095153_techsupport                      File         23.94      KB
```

-

```
esr-1700# sh configuration changes flash:backup/config_20200720_094003_admin flash:backup
/config_20200707_180257_user1
- hostname esr-1700
+ hostname ESR1700-ALFA
```

- SLA:
  - **IP SLA ICMP-ECHO**
    SLA ICMP-ECHO, ip . IP SLA ICMP-ECHO.