



## Base Generic CM Feature & State Capsule

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1		AAA	Banner	DHCP	DNS	Interface	Netflow	NTP	QoS	Routing	Services	SNMP	Switching	Syslog	Username
2	Check Point														
3	Gaia	Y	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y
4															
5	Cisco														
6	ASA (Legacy)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
7	IOS / IOS XE Router	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
8	IOS / IOS XE Switch	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
9	IOS-XR	N	N	N	N	N	N	N	N	Y	N	N	Y	N	N
10	NXOS	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
11	WLC (AireOS)	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y
12	WLC C9800 (IOS XE)	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y
13															
14	Dell														
15	DNOS	Y	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y
16															
17	F5														
18	TMOS (LTM)	Y	Y	Y	Y	Y	N	N	N	N	Y	Y	N	Y	Y
19															
20	Fortinet														
21	FortiOS (Fortigate)	N	N	N	N	N	N	N	N	Y	N	N	Y	N	N
22															
23	HPE/Aruba														
24	ArubaOS (Wireless)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
25	ArubaOS-CX	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
26															
27	Juniper														
28	JunOS (MX Router)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
29	JunOS (SRX Router)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
30	JunOS (EX Switch)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
31	JunOS (QFX Switch)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
32															
33	Palo Alto														
34	PANOS	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y



This package is designed to be deployed in organizations where no Config Modeling Features have been created for the features listed below. If the below features are being utilized in your environment it is recommended to reach out to [support@gluware.com](mailto:support@gluware.com) for additional assistance. Additionally, it is recommended to backup the Gluware Control organization where this capsule is being applied.

## Features

The following features are part of this package:

- **AAA**

Form:

```
"aaa" : [
  {
    "name" : "MyAAAGroup",
    "tacacs" : [
      {
        "name" : "TacacsServer",
        "ip" : "255.255.255.255",
        "key" : "test",
        "timeout" : 30
      }
    ],
    "srcInt" : {
      "@ref" : null
    },
    "vrf" : {
      "@ref" : null
    },
  },
]
```



## CLI Example:

```
aaa group server tacacs+ $context.aaa[*].name
server name $context.aaa[*].tacacs[*].name
ip tacacs source-interface $context.aaa[*].srcInt
```

- **Banner**
- **DHCP**

```
"dhcp" : [
  {
    "pool" : "dhcpPool",
    "intf" : {
      "@ref" : "/org/instance/construct/global/lanInterface/LAN1.json"
    },
    "vrf" : {
      "@ref" : null
    }
  }
]
```

- **DNS**

```
"dns" : {
  "domainName" : "gluware.com",
  "server" : [
    {
      "ip" : "255.255.255.255"
    },
    {
      "ip" : "255.255.255.255"
    }
  ]
}
```

- **Interface**



- **Netflow**

```
"flow" : {
  "record" : {
    "name" : "netflowRecord",
    "description" : "netflow demo"
  },
  "exporter" : [
    {
      "name" : "mgm1",
      "description" : "management",
      "srcInt" : {
        "@ref" : "/org/instance/construct/global/lanInterface/LAN1.json"
      },
      "destination" : {
        "ip" : "255.255.255.255",
        "port" : "123"
      }
    }
  ],
  "monitor" : {
    "name" : "MonitorName",
    "description" : "Monitor description",
    "inactive" : 100,
    "active" : 100,
    "entries" : 5
  }
}
```

- **NTP**

```
"ntp" : {
  "srcInt" : {
    "@ref" : "/org/instance/construct/global/lanInterface/LAN1.json"
  },
  "peer" : [
    {
      "ip" : "255.255.255.255",
      "version" : 4,
      "key" : "123"
    }
  ],
  "server" : [
    {
      "ip" : "255.255.255.255",
      "version" : 4,
      "key" : "12321"
    }
  ]
}
```

- **QoS**

```
"intf" : {
  "bandwidth" : 20
}
```



- **Routing**

```
"distributionLayer" : {
  "ipv4" : {
    "routingProtocol" : {
      "bgp" : {
        "asn" : 6500,
        "routerId" : "255.255.255.255",
        "advertise" : [
        ],
        "peering" : [
          {
            "vrf" : {
              "@ref" : null
            },
            "neighbors" : [
              {
                "ip" : "255.255.255.255",
                "remoteAsn" : 6500,
                "peerGroup" : "",
                "distance" : null,
                "password" : "",
                "description" : "",
                "options" : {
                  "timers" : {
                    "hellotime" : 20,
                    "holdtime" : 60
                  }
                }
              }
            ]
          }
        ]
      }
    }
  }
}
```



- **Services**

- **SNMP**

```
"snmp" : {  
  "location" : "ny",  
  "contact" : "admin",  
  "version" : {  
    "v2c" : {  
      "community" : [  
        {  
          "name" : "communityName",  
          "accessList" : "1",  
          "accessType" : "RO",  
          "host" : [  
            {  
              "ip" : "255.255.255.255"  
            }  
          ]  
        }  
      ]  
    }  
  }  
}
```

- **Switching**



- **Syslog**

```
"syslog" : {  
  "level" : "debugging",  
  "srcInt" : {  
    "@ref" : "/org/instance/construct/global/lanInterface/LAN1.json"  
  },  
  "bufferSize" : 16640,  
  "mode" : "basic",  
  "server" : [  
    {  
      "ip" : "255.255.255.255"  
    }  
  ]  
}
```

- **Username**

```
"user" : [  
  {  
    "name" : "username",  
    "password" : "password",  
    "hash" : "cleartext",  
    "view" : "",  
    "privilege" : "15"  
  }  
]  
}
```



## CLI State Items

The naming convention for CLI State Items is as follows:

- {OS}\_{Major OS}\_{Device Type}\_{command}\_context
  - OS - The vendor OS this CLI State Item is designed for.
  - Major OS (optional) - If show command is version specific or only tested on a specific version.
  - Device Type (optional) - If show command is for a specific device type.
  - command - The show command.
  - context (optional) - If the CLI State Item is expecting a variable as part of the show command.

**\*\*NOTE\*\***

To be able to use the CLI State Items provided a CLI State Assessment Policy will need to be created. To learn more about CLI State Item and CLI State Assessment please go to HELP section in your Gluware Control and in the search bar search for “CLI State Item”

The screenshot displays the Gluware Control web interface. On the left, a sidebar menu is visible with the 'state item' section selected. The main content area shows a guide titled 'Create a CLI State Assessment Policy'. The guide explains that a CLI State Assessment Policy is used to assess the running state of a node and lists 12 steps for creating one. Below the guide, the 'Instance' configuration window is open, showing fields for 'Name', 'Arguments', and 'Include Pattern'. The 'Include Pattern' field is set to 'show'. The 'Arguments' field is set to 'show'. The 'Include Pattern' field is set to 'show'.



The following CLI State Items are part of this package:

- IOS\_ip\_route\_0
  - Show command: sh ip route 0.0.0.0 0.0.0.0
  - Capture group: default\_route
    - table
      - type
      - destination
      - ad
      - c
      - nextHop
- IOS\_16\_ping
  - Show command: ping google.com
  - Capture group: ping
    - result
      - ipAddr

- IOS\_show\_bgp\_neighbors\_context
  - Show command: show ip bgp neighbors #context.ipBgpNeighbor
  - Capture group: bgpNeighbors
    - peers
      - ipAddress
      - remoteAS
      - linkType
      - remoteRouterId
      - bgpState
      - uptime
      - bgpSent
      - bgpRcvd
- IOS\_17\_show\_cdp\_neigh\_detail
  - Show command: show cdp neighbors detail
  - Capture group: cdp
    - neighbors
      - deiveId
      - locaIntf
      - remoteIntf
      - platform
      - holdTime
      - version
      - build
      - vtpDomain
- IOS\_17\_show\_cdp\_neigh
  - Show command: show cdp neighbors
  - Capture group: cdp
    - neighbors
      - deviceId



- localPort
- holdtime
- capability
- platform
- remotePort

- IOS\_show\_interface\_context
  - Show command: show interface #context.interfaceName
  - Capture group: interface
    - status
      - name
      - adminState
      - link
      - speed
      - type
      - description
      - macAddress
      - ipAddress
      - bandwidth
      - delay
      - totalOutputDrops
      - inputErrors
      - crc
      - outputErrors
      - collisions
      - interfaceResets
      - poMembers
- IOS\_17\_show\_interface\_status
  - Show command: show interface status
  - Capture group: interface
    - status
      - id
      - desc
      - status
      - vlan
      - duplex
      - speed
      - type

- IOS\_17\_show\_ip\_interface\_brief
  - Show command: show ip interface brief
  - Capture group: interfaces
    - status
      - name
      - ipAddress
      - status
      - protocolStatus

**REGULAR EXPRESSION**

```

/ ( (?name) ( (?ipAddress) (?status) (?protocolStatus) ) ) /gm

```

**TEST STRING**

```

C0300-48uXM show ip int-brief
Interface-----IP-Address-----OK? Method Status-----Protocol
Vlan1-----unassigned-----YES NVRAM up-----up
Vlan1200-----unassigned-----YES unset up-----down
GigabitEthernet0/0-----10.150.1.10-----YES NVRAM up-----up
Te1/0/1-----unassigned-----YES unset up-----up

```

**EXPLANATION**

**MATCH INFORMATION**

Match	Match Information
Match 1	<p>112-186 Vlan1</p> <p>Group name: 112-117 Vlan1</p> <p>Group ipAddress: 135-145 unassigned</p> <p>Group status: 162-164 up</p> <p>Group protocolStatus: 184-186 up</p>
Match 2	<p>187-263 Vlan1200</p> <p>Group name: 187-195 Vlan1200</p> <p>Group ipAddress: 218-220 unassigned</p> <p>Group status: 237-239 up</p> <p>Group protocolStatus: 259-263 down</p>
Match 3	<p>264-338 GigabitEthernet0/0</p> <p>Group name: 264-338 GigabitEthernet0/0</p> <p>Group ipAddress: 281-283 10.150.1.10</p> <p>Group status: 300-302 up</p> <p>Group protocolStatus: 320-322 up</p>

- IOS\_16\_show\_logging
  - Show command: show logging
  - Capture group: syslog
    - line (Regex to gather only if changes were made to config through console)
      - date
      - clock
      - facility
      - user



- console
  - srcIp
- interfaceStatus (Regex to gather only interface status changes)
  - date
  - clock
  - facility
  - interface
  - state

- messages
  - date
  - clock
  - facility
  - message
- IOS\_16\_show\_ntp\_status
  - Show command: show ntp status
  - Capture group: ntp
    - status
      - ip
- IOS\_16\_show\_proc\_cpu
  - Show command: sh processes cpu
  - Capture group: cpu
    - status
      - cpuId
      - cpu5sec
      - cpu1min
      - cpu5min
- IOS\_16\_show\_proc\_memory
  - Show command: show proc memory
  - Capture group: memory
    - status
      - total
      - used



- free
  - indiv
  - total
  - used
  - free
- IOS\_16\_show\_spanning-tree\_root
  - Show command: sh spanning-tree root
  - Capture group: stp
    - vlan
      - vlan
      - priority
      - macAddress
      - port
- IOS\_16\_show\_spanning-tree
  - Show command: show spanning-tree
  - Capture group: stp
    - vlan
      - rootMac
      - bridgeMac

- IOS\_16\_17\_show\_switch
  - Show command: show switch
  - Capture group: stack
    - members
      - id
      - role
      - macAddress
      - priority
      - version
      - state
- NXOS\_show\_cdp\_neigh\_detail
  - Show command: show cdp neighbors detail
  - Capture group: cdp
    - neighbors
      - deviceId
      - localIntf
      - remoteIntf
      - holdTime
      - version
      - vtpDomain

- NXOS\_show\_fcoe\_database
  - Show command: show fcoe database
  - Capture group: fcoe
    - database
      - fcid
    - flogi
      - count
- NXOS\_show\_flogi\_table
  - Show command: show npv flogi-table
  - Capture group: flogi
    - table
      - count
- NXOS\_show\_int\_status\_CANS
  - Show command: show interface status | inc CANS
  - Capture group: CANS
    - interfaces
      - interface
      - description
      - status
      - vlan
      - duplex
      - speed
      - type

- NXOS\_show\_int\_status\_connected
  - Show command: show interface status | inc connected
  - Capture group: Connected
    - interfaces
      - interface
      - description
      - status
      - vlan
      - duplex
      - speed
      - type
- NXOS\_show\_interface\_context
  - Show command: show interface #context.interfaceName
  - Capture group: interface
    - name
    - line
    - description
    - adminState
    - duplex
    - speed
    - type
    - macAddress
    - ipAddress
    - mtu
    - bandwidth
    - inputErrors
    - outputErrors
    - collisions
    - interfaceResets
    - crc

- NXOS\_show\_mac\_address\_table\_count
  - Show command: show mac address-table count
  - Capture group: MAC
    - dynamic
    - static
    - multicast
    - total
- NXOS\_show\_mac\_addr-table
  - Show command: MACDynamic
  - Capture group: table
    - entryType
    - vlan
    - mac
    - age
    - interface
- NXOS\_show\_npv\_status
  - Show command: show npv status
  - Capture group: NPV
    - details
      - status
      - descriptiveLB
      - externalInterfaces
      - serverInterfaces
- NXOS\_show\_proc\_memory
  - Show command: show processes memory shared
  - Capture group: memory
    - status
      - total
      - used
      - free

- NXOS\_show\_version
  - Show command: show version
  - Capture group: NXOS
    - boot
      - system
      - bootimage
      - devicename
- NXOS\_show\_vpc\_brief
  - Show command: show vpc brief
  - Capture group: vpcBrief
    - Data
      - Domain
      - peerStatus
      - keepAliveStatus
      - perVlanConsistencyStatus
      - inconsistencyReason
      - t2ConsistencyStatus
      - t2InconsistencyStatus
      - role
      - vpcConfiguredCount
      - peerGW
      - dualActiveExcluded
      - gracefulConsistencyCheck
      - autoRecoveryStatus
      - delayRestoreStatus
      - delayRestoreSVIStatus
      - L3PeerRouter

- NXOS\_show\_vpc\_role
  - Show command: show vpc role
  - Capture group: vpcRole
    - vPC
      - role
      - systemMac
      - systemPriority
      - localPriority
- IOS\_WLC\_show\_ap\_summary
  - Show command: show ap summary
  - Capture groups: wlc
    - apSummary
      - name
      - slots
      - model
      - mac
      - location
      - country
      - ip
      - clients
- IOS\_WLC\_show\_wlan\_summary
  - Show command: show wlan summary
  - Capture groups: wlc
    - summary
      - wlanId
      - profile
      - ssid
      - status
      - intf

- Aireos\_show-ap\_summary
  - Show command: show ap summary
  - Capture group: wlc
    - apSummary
    - name
    - slots
    - model
    - mac
    - location
    - country
    - ip
    - clients
- Aireos\_show\_cpu
  - Show command: show cpu
  - Capture group: cpu
    - status
      - cpuLoad
      - individualCpu
- Aireos\_show\_memory\_summary
  - Show command: show memory summary
  - Capture group: wlc
    - apSummary
      - sysTotal
      - sysFree
      - bufferTotal
      - cacheTotal
      - activeTotal
      - wlcPeak
      - wlcVirtual
      - wlcResident
      - wlcSegment



- Aireos\_show\_port\_summary
  - Show command: show port summary
  - Capture group: interface
    - status
      - intId
      - type
      - stpStatus
      - adminMode
      - physMode
      - physStatus
      - linkStatus
      - linkTrap
      - poe
      - sfpType
- Aireos\_show\_wlan\_summary
  - Show command: show wlan summary
  - Capture group: wlc
    - summary
      - wlanId
      - profile
      - ssid
      - status
      - intf
- PANOS\_show\_int\_all
  - Show command: show interface all
  - Capture group: ints
    - int
      - int
      - id
      - dup
      - mac