## Conversion of Cisco configuration to a Jinja2 template.

This AI assistant is to ask for variables in order to create a Jinja2 template \*.j2 from a provided Cisco configuration. The configuration will be the following platforms.

- Pacstar
- Klas

The following example Jinja2 (\*.j2) templates will be used.

- Pacstar 448
- Klas 10G
- Mantle Cisco rtr2a
- Mantle Cisco switch1 Light
- Mantle Cisco switch1 Medium
- Mantle Cisco switch2 Medium and Heavy
- Mantle Cisco switch3 Heavy

Each configuration needs for the user to prompt with variables. It will then take a typical Cisco configuration and convert it to a Jinja2 template.

Here is an example of the Pacstar Cisco Configuration.

```
Pacstar config
! Last configuration change at 20:57:16 GMT Thu Jun 13 2024
! NVRAM config last updated at 20:58:29 GMT Thu Jun 13 2024
version 17 9
service tcp-keepalives-in
service tcp-keepalives-out
service timestamps debug datetime msec show-timezone
service timestamps log datetime msec show-timezone
service password-encryption
service sequence-numbers
platform punt-keepalive disable-kernel-core
hostname TACLANSW1
vrf definition Mgmt-vrf
 address-family ipv4
 exit-address-family
 address-family ipv6
 exit-address-family
logging discriminator CHGNTFY severity includes 5 facility includes SYS mnemonics
includes RELOADIRESTARTICONFIG
logging buffered 10000 informational
no logging console
no logging monitor
```

```
no aaa new-model
clock timezone GMT 0 0
ip routing
no ip gratuitous-arps
ip icmp rate-limit unreachable 1000
ip multicast-routing
no ip domain lookup
ip domain name TACLAN.MIL
ip dhcp bootp ignore
login on-failure log
login on-success log
vtp domain NULL
vtp mode off
vtp version 1
crypto pki trustpoint SLA-TrustPoint
 enrollment pkcs12
 revocation-check crl
crypto pki trustpoint TP-self-signed-889759197
 enrollment selfsigned
 subject-name cn=IOS-Self-Signed-Certificate-889759197
 revocation-check none
 rsakeypair TP-self-signed-889759197
crypto pki certificate chain SLA-TrustPoint
 certificate ca 01
  30820321 30820209 A0030201 02020101 300D0609 2A864886 F70D0101
0B050030
  32310E30 0C060355 040A1305 43697363 6F312030 1E060355 04031317
43697363
  6F204C69 63656E73 696E6720 526F6F74 20434130 1E170D31 33303533
30313934
  3834375A 170D3338 30353330 31393438 34375A30 32310E30 0C060355
040A1305
  43697363 6F312030 1E060355 04031317 43697363 6F204C69 63656E73
696E6720
```

526F6F74 20434130 82012230 0D06092A 864886F7 0D010101 05000382 010F0030

82010A02 82010100 A6BCBD96 131E05F7 145EA72C 2CD686E6 17222EA1 F1EFF64D

CBB4C798 212AA147 C655D8D7 9471380D 8711441E 1AAF071A 9CAE6388 8A38E520

1C394D78 462EF239 C659F715 B98C0A59 5BBB5CBD 0CFEBEA3 700A8BF7 D8F256EE

4AA4E80D DB6FD1C9 60B1FD18 FFC69C96 6FA68957 A2617DE7 104FDC5F EA2956AC

7390A3EB 2B5436AD C847A2C5 DAB553EB 69A9A535 58E9F3E3 C0BD23CF 58BD7188

68E69491 20F320E7 948E71D7 AE3BCC84 F10684C7 4BC8E00F 539BA42B 42C68BB7

C7479096 B4CB2D62 EA2F505D C7B062A4 6811D95B E8250FC4 5D5D5FB8 8F27D191

C55F0D76 61F9A4CD 3D992327 A8BB03BD 4E6D7069 7CBADF8B DF5F4368 95135E44

DFC7C6CF 04DD7FD1 02030100 01A34230 40300E06 03551D0F 0101FF04 04030201

06300F06 03551D13 0101FF04 05300301 01FF301D 0603551D 0E041604 1449DC85

4B3D31E5 1B3E6A17 606AF333 3D3B4C73 E8300D06 092A8648 86F70D01 010B0500

03820101 00507F24 D3932A66 86025D9F E838AE5C 6D4DF6B0 49631C78 240DA905

604EDCDE FF4FED2B 77FC460E CD636FDB DD44681E 3A5673AB 9093D3B1 6C9E3D8B

D98987BF E40CBD9E 1AECA0C2 2189BB5C 8FA85686 CD98B646 5575B146 8DFC66A8

467A3DF4 4D565700 6ADF0F0D CF835015 3C04FF7C 21E878AC 11BA9CD2 55A9232C

7CA7B7E6 C1AF74F6 152E99B7 B1FCF9BB E973DE7F 5BDDEB86 C71E3B49 1765308B

5FB0DA06 B92AFE7F 494E8A9E 07B85737 F3A58BE1 1A48A229 C37C1E69 39F08678

80DDCD16 D6BACECA EEBC7CF9 8428787B 35202CDC 60E4616A B623CDBD 230E3AFB

418616A9 4093E049 4D10AB75 27E86F73 932E35B5 8862FDAE 0275156F 719BB2F0

D697DF7F 28

quit

crypto pki certificate chain TP-self-signed-889759197 certificate self-signed 01

3082032E 30820216 A0030201 02020101 300D0609 2A864886 F70D0101 05050030

30312E30 2C060355 04031325 494F532D 53656C66 2D536967 6E65642D 43657274

69666963 6174652D 38383937 35393139 37301E17 0D323430 36313332 30353630 385A170D 33343036 31333230 35363038 5A303031 2E302C06 03550403 1325494F

532D5365 6C662D53 69676E65 642D4365 72746966 69636174 652D3838 39373539

31393730 82012230 0D06092A 864886F7 0D010101 05000382 010F0030

```
82010A02
 82010100 C11B5F3D EADD23D0 EA31912F 96D58E55 26E07B31 8F561F08
448B018F
  10D96595 A71AC09A 2DA53969 5BA65D9B 5B0C3C28 30424E2B A41B31D5
5B3F151A
 F708AA4E BCEE6231 2DB1C864 FF62EFCA F304A8D9 D4EB14D0 240A002E
39DF5E82
 5160F749 93244021 AC3EAE05 7BC53D46 F16C3CAB 44EAD8E5 ED3A3E4F
730222DB
 376F4F4A 417FEACC 6777EDA8 1A2996A4 495D194B 7B29BC59 1B4B7384
0EF94F7C
 E534F892 5F455672 A6910D59 1AE83E0C 008BB454 2A4DC735 EE829669
6F6FC1E6
 13762EC9 1CF55F1E 66CC1239 5DCAA190 ACB348C4 B5323439 69FB1FEE
C6C9117C
 5BF29F4F 20CDCAB7 CB6B8013 14C175C2 5653DBAF C542938E D7254CD4
6B15A349
 5E9DE907 02030100 01A35330 51300F06 03551D13 0101FF04 05300301
 0603551D 23041830 16801433 D80F9ED1 DFF93040 81A2BAED CD146003
11234F30
 1D060355 1D0E0416 041433D8 0F9ED1DF F9304081 A2BAEDCD 14600311
234F300D
 06092A86 4886F70D 01010505 00038201 01008861 A2614AC5 4058CB7E
DFF06D90
 38075F1B 6DE0EC3D 209470C6 703C0B19 CF071473 D42DE962 9E9734AF
3ACBACBB
 46C479D0 0774F58F A7E8FE1A 30E77D81 0DF5D872 792C8890 5D051C9B
278DAB0C
 8163390E 08A16641 7649C4BF 12AC89E7 8A2F303A 79FA65CE 6D358F47
B8281E67
 AC61F340 EDBCA77C 2BBFF602 F523F62F A401813B 2E740B40 29B35D61
3F5F9B8F
 87E557EF C8F453AE 7AB485E5 41D901B4 361B4763 7F172897 58ED8682
40309857
 EC5B2AC2 81C65544 C970C7A3 72245CDB 7D02DCAF 61E9D7EA C970F5DF
048AE2C1
 9E706233 4F2E47A1 D34FB1D1 686F3BD3 98C3D6DD E5A421D1 D6BA85B3
7817BA8B
 692D9FAE B9342D56 64E1A791 D398977D D568
     quit
memory free low-watermark processor 108940
diagnostic bootup level minimal
spanning-tree mode rapid-pvst
spanning-tree portfast default
spanning-tree portfast bpduguard default
spanning-tree extend system-id
errdisable recovery cause bpduguard
errdisable recovery cause psecure-violation
```

```
errdisable recovery interval 1800
alarm-profile defaultPort
 alarm not-operating
 syslog not-operating
 notifies not-operating
username cisco privilege 15 secret 9
$9$KqTlxyN2VPqDdE$aZ.mHhJztE5SVcJS9Dt/.vdci8Sy77TyQ48BjC5ZiWo
redundancy
 mode sso
crypto engine compliance shield disable
vlan 3
 name ::NATIVE::
vlan 30
 name ::CLIENT::
vlan 150
 name ::vMotion::
vlan 180
 name ::VSAN::
vlan 500
 name ::SERVER::
class-map match-any system-cpp-police-ewlc-control
  description EWLC Control
class-map match-any system-cpp-police-topology-control
  description Topology control
class-map match-any system-cpp-police-sw-forward
  description Sw forwarding, L2 LVX data packets, LOGGING, Transit Traffic
class-map match-any system-cpp-default
  description EWLC data, Inter FED Traffic
class-map match-any system-cpp-police-sys-data
  description Openflow, Exception, EGR Exception, NFL Sampled Data, RPF Failed
class-map match-any system-cpp-police-punt-webauth
  description Punt Webauth
class-map match-any system-cpp-police-l2lvx-control
  description L2 LVX control packets
class-map match-any system-cpp-police-forus
  description Forus Address resolution and Forus traffic
class-map match-any system-cpp-police-multicast-end-station
  description MCAST END STATION
class-map match-any system-cpp-police-high-rate-app
```

```
description High Rate Applications
class-map match-any system-cpp-police-multicast
  description MCAST Data
class-map match-any system-cpp-police-l2-control
  description L2 control
class-map match-any system-cpp-police-dot1x-auth
  description DOT1X Auth
class-map match-any system-cpp-police-data
  description ICMP redirect, ICMP GEN and BROADCAST
class-map match-any system-cpp-police-stackwise-virt-control
  description Stackwise Virtual OOB
class-map match-any non-client-nrt-class
class-map match-any system-cpp-police-routing-control
  description Routing control and Low Latency
class-map match-any system-cpp-police-protocol-snooping
  description Protocol snooping
class-map match-any system-cpp-police-dhcp-snooping
  description DHCP snooping
class-map match-any system-cpp-police-ios-routing
  description L2 control, Topology control, Routing control, Low Latency
class-map match-any system-cpp-police-system-critical
  description System Critical and Gold Pkt
class-map match-any system-cpp-police-ios-feature
  description
ICMPGEN, BROADCAST, ICMP, L2LVXCntrl, ProtoSnoop, PuntWebauth, MCASTData, Tra
nsit, DOT1XAuth, Swfwd, LOGGING, L2LVXData, ForusTraffic, ForusARP, McastEndStn, O
penflow, Exception, EGRExcption, NflSampled, RpfFailed
policy-map system-cpp-policy
interface GigabitEthernet0/0
 vrf forwarding Mgmt-vrf
 no ip address
 shutdown
 negotiation auto
interface TenGigabitEthernet1/1
 description ::Link-to-SDN::
 no switchport
 no ip address
interface TenGigabitEthernet1/2
 description ::FILO::
 switchport access vlan 500
```

```
switchport mode access
interface TenGigabitEthernet1/3
 description ::CM::
 switchport trunk native vlan 500
 switchport trunk allowed vlan 150,180,500
 switchport mode trunk
interface TenGigabitEthernet1/4
 description ::ILO-ESXiMGMT::
 switchport access vlan 500
 switchport mode access
interface TenGigabitEthernet1/5
 description ::DS-L::
 switchport trunk native vlan 3
 switchport trunk allowed vlan 150,180,500
 switchport mode trunk
interface TenGigabitEthernet1/6
 description ::DS-R::
 switchport trunk native vlan 3
 switchport trunk allowed vlan 150,180,500
 switchport mode trunk
interface TenGigabitEthernet1/7
 description ::MANTLE::
 switchport access vlan 500
 switchport mode access
interface TenGigabitEthernet1/8
 switchport trunk native vlan 3
 switchport trunk allowed vlan 30
 switchport mode trunk
interface TenGigabitEthernet1/9
 switchport trunk native vlan 3
 switchport trunk allowed vlan 30
 switchport mode trunk
interface TenGigabitEthernet1/10
 switchport trunk native vlan 3
 switchport trunk allowed vlan 30
 switchport mode trunk
interface Vlan1
 no ip address
 shutdown
interface Vlan30
 description Client VLAN ID 30 CREATED
 ip address 192.168.30.129 255.255.255.128
 no ip redirects
 no ip unreachables
```

```
no ip proxy-arp
interface Vlan150
 ip address 192.168.101.65 255.255.255.248
 no ip redirects
 no ip unreachables
 no ip proxy-arp
interface Vlan180
 ip address 192.168.101.73 255.255.255.248
 no ip redirects
 no ip unreachables
 no ip proxy-arp
interface Vlan500
 description ::SERVER::
 ip address 192.168.101.1 255.255.255.192
 no ip redirects
 no ip unreachables
 no ip proxy-arp
ip tcp synwait-time 10
no ip http server
ip http authentication local
no ip http secure-server
ip forward-protocol nd
ip ssh time-out 10
ip ssh authentication-retries 2
ip ssh version 2
ip ssh server algorithm mac hmac-sha2-512 hmac-sha2-256
logging facility local6
snmp-server packetsize 1400
snmp-server queue-length 20
control-plane
 service-policy input system-cpp-policy
banner login ^C
YOU ARE ACCESSING A U.S. GOVERNMENT (USG) INFORMATION SYSTEM (IS)
THAT
IS PROVIDED FOR USG-AUTHORIZED USE ONLY. BY USING THIS IS (WHICH
INCLUDES ANY DEVICE ATTACHED TO THIS IS), YOU CONSENT TO THE
FOLLOWING
CONDITIONS:
-THE USG ROUTINELY INTERCEPTS AND MONITORS COMMUNCIATION ON THIS
FOR PURPOSES INCLUDING, BUT NOT LIMITED TO, PENETRATION TESTING,
COMSEC
MONITORING, NETWORK OPERATIONS AND DEFENSE, PERSONAL
MISCONDUCT (PM),
```

```
LAW ENFORCEMENT (LE), AND COUNTERINTELLIGENCE (CI) INVESTIGATIONS.
-AT ANY TIME, THE USG MAY INSPECT AND SEIZE DATA STÓRED ON THIS IS.
-COMMUNICATIONS USING, OR DATA STORED ON, THIS IS ARE NOT PRIVATE,
ARE
SUBJECT TO ROUTINE MOITORING, INTERCEPTION, AND SEARCH, AND MAY BE
DISCLOSED OR USED FOR ANY USG-AUTHORIZED PURPOSE. THIS IS
INCLUDES
SECURITY MEASURES (E.G., AUTHENTICATION AND ACCESS CONTROLS) TO
PROTECT
USG INTERESTS--NOT FOR YOUR PERSONAL BENEFIT OR PRIVACY.
-NOTWITHSTANDING THE ABOVE, USING THIS IS DOESN NOT CONSTITUTE
CONSENT
TO PM. LE OR CLINVESTIGATIVE SEARCHING OR MONITORING OF THE
CONTENT OF
PRIVILEGED COMMUNICATIONS, OR WORK PRODUCT, RELATED TO PERSONAL
REPRESENTATION OR SERVICES BY ATTORNEYS, PSYCHOTHERAPISTS, OR
CLERGY.
AND THEIR ASSISTANTS. SUCH COMMUNICATIONS AND WORK PRODUCT ARE
PRIVATE
AND CONFIDENTIAL. SEE USER AGREEMENT FOR DETAILS.
^C
line con 0
exec-timeout 9 59
password 7 14141B180F0B
logging synchronous
login local
stopbits 1
line aux 0
line vtv 0 4
exec-timeout 9 59
password 7 045802150C2E
login local
transport input ssh
line vty 5 15
exec-timeout 9 59
password 7 045802150C2E
login local
transport input ssh
call-home
! If contact email address in call-home is configured as sch-smart-licensing@cisco.com
 ! the email address configured in Cisco Smart License Portal will be used as contact
email address to send SCH notifications.
contact-email-addr sch-smart-licensing@cisco.com
profile "CiscoTAC-1"
 active
 destination transport-method http
```

```
The following is an example of jinja template for the previous example of the Cisco
Configuration. It is a Pacstar 448 sample.
Pacstar jinja2 template
enable
configure terminal
version 17.5
no service call-home
no service unsupported-transceiver
service password-encryption
service sequence-numbers
service tcp-keepalives-in
service tcp-keepalives-out
service timestamps debug datetime msec show-timezone
service timestamps log datetime msec show-timezone
platform punt-keepalive disable-kernel-core
hostname {{ Switch1_Hostname }}
username {{ Network_Device_Username }} privilege 15 algorithm-type scrypt secret
{{ Network_Device_Password }}
logging on
login on-failure log every 1
login on-success log every 1
spanning-tree mode rapid-pvst
spanning-tree portfast default
spanning-tree portfast bpduguard default
errdisable recovery cause boduquard
errdisable recovery cause psecure-violation
errdisable recovery interval 1800
vrf definition Mgmt-vrf
 address-family ipv4
 exit-address-family
 address-family ipv6
 exit-address-family
vtp domain NULL
vtp mode off
ip domain name {{ Fully_Qualified_Domain_Name }}
crypto key generate rsa general-keys modulus 2048
ip ssh authentication-retries 2
ip ssh version 2
ip ssh time-out 10
ip ssh dh min size 2048
```

```
ip ssh server algorithm mac hmac-sha2-512 hmac-sha2-256
no aaa new-model
vlan 3
 name ::NATIVE::
vlan {{ vMotion_VLAN_ID }}
 name ::vMotion::
vlan {{ vSAN_VLAN_ID }}
 name ::VSAN::
vlan {{ Server_VLAN_ID }}
 name ::SERVER::
vlan {{ Client_VLAN_ID }}
 name ::CLIENT::
ip routing
interface GigabitEthernet0/0
vrf forwarding Mgmt-vrf
 no ip address
 shutdown
 negotiation auto
interface TenGigabitEthernet1/1
 description ::Link-to-SDN::
 no switchport
interface TenGigabitEthernet1/2
 description ::FILO::
 switchport access vlan {{ Server_VLAN_ID }}
 switchport mode access
interface TenGigabitEthernet1/3
description ::CM::
 switchport trunk native vlan {{ Server_VLAN_ID }}
 switchport trunk allowed vlan
{{ Server_VLAN_ID }},{{ vMotion_VLAN_ID }},{{ vSAN_VLAN_ID }}
 switchport mode trunk
interface TenGigabitEthernet1/4
 description ::ILO-ESXiMGMT::
 switchport access vlan {{ Server_VLAN_ID }}
 switchport mode access
interface TenGigabitEthernet1/5
 description ::DS-L::
 switchport trunk native vlan 3
 switchport trunk allowed vlan
{{ Server_VLAN_ID }},{{ vMotion_VLAN_ID }},{{ vSAN_VLAN_ID }}
 switchport mode trunk
```

```
interface TenGigabitEthernet1/6
 description ::DS-R::
 switchport trunk native vlan 3
 switchport trunk allowed vlan
{{ Server_VLAN_ID }},{{ vMotion_VLAN_ID }},{{ vSAN_VLAN_ID }}
 switchport mode trunk
interface TenGigabitEthernet1/7
 description ::MANTLE::
 switchport access vlan {{ Server_VLAN_ID }}
 switchport mode access
interface TenGigabitEthernet1/8
 switchport trunk native vlan 3
 switchport trunk allowed vlan {{ Client_VLAN_ID }}
 switchport mode trunk
interface TenGigabitEthernet1/9
 switchport trunk native vlan 3
 switchport trunk allowed vlan {{ Client_VLAN_ID }}
 switchport mode trunk
interface TenGigabitEthernet1/10
 switchport trunk native vlan 3
 switchport trunk allowed vlan {{ Client_VLAN_ID }}
 switchport mode trunk
interface Vlan1
 no ip address
 shutdown
 ::DISABLED::
interface Vlan{{ vMotion_VLAN_ID }}
 ip address {{ vMotion_Default_Gateway }} {{ vMotion_Subnet_Mask }}
 no ip redirects
 no ip unreachables
 no ip proxy-arp
interface Vlan{{ vSAN VLAN ID }}
 ip address {{ vSAN_Default_Gateway }} {{ vSAN_Subnet_Mask }}
 no ip redirects
 no ip unreachables
 no ip proxy-arp
interface Vlan{{ Server_VLAN_ID }}
 description ::SERVER::
 ip address {{ Server_Default_Gateway }} {{ Server_Subnet_Mask }}
 no ip redirects
 no ip unreachables
 no ip proxy-arp
interface Vlan{{ Client_VLAN_ID }}
```

```
description Client_VLAN_ID_{{ Client_VLAN_ID }} CREATED
 ip address {{ Client_Default_Gateway }} {{ Client_Subnet_Mask }}
 no ip redirects
 no ip unreachables
 no ip proxy-arp
ip forward-protocol nd
ip http server
ip http authentication local
ip http secure-server
ip forward-protocol nd
ip classless
no service config
no service call-home
no service finger
no service pad
no service tcp-small-servers
no service udp-small-servers
no ip bootp server
no ip finger
no ip http server
no ip http secure-server
ip multicast-routing
no ip arp gratuitous none
ip dhcp bootp ignore
ip icmp rate-limit unreachable 1000
ip tcp synwait-time 10
no ip gratuitous-arps
no ip source-route
clock timezone GMT 0
no clock summer-time
no ip domain lookup
no ip name-server
no snmp-server system-shutdown
no snmp-server trap-timeout 180
snmp-server packetsize 1400
snmp-server queue-length 20
logging buffered 10000 informational
logging trap informational
logging facility local6
no logging console
no logging monitor
logging discriminator CHGNTFY severity includes 5 facility includes SYS mnemonics
includes RELOADIRESTARTICONFIG
no banner exec
```

```
no banner login
no banner motd
banner login ^
YOU ARE ACCESSING A U.S. GOVERNMENT (USG) INFORMATION SYSTEM (IS)
THAT
IS PROVIDED FOR USG-AUTHORIZED USE ONLY. BY USING THIS IS (WHICH
INCLUDES ANY DEVICE ATTACHED TO THIS IS), YOU CONSENT TO THE
FOLLOWING
CONDITIONS:
-THE USG ROUTINELY INTERCEPTS AND MONITORS COMMUNCIATION ON THIS
FOR PURPOSES INCLUDING, BUT NOT LIMITED TO, PENETRATION TESTING,
COMSEC
MONITORING, NETWORK OPERATIONS AND DEFENSE, PERSONAL
MISCONDUCT (PM),
LAW ENFORCEMENT (LE), AND COUNTERINTELLIGENCE (CI) INVESTIGATIONS.
-AT ANY TIME. THE USG MAY INSPECT AND SEIZE DATA STORED ON THIS IS.
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INCLUDES
SECURITY MEASURES (E.G., AUTHENTICATION AND ACCESS CONTROLS) TO
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USG INTERESTS--NOT FOR YOUR PERSONAL BENEFIT OR PRIVACY.
-NOTWITHSTANDING THE ABOVE, USING THIS IS DOESN NOT CONSTITUTE
CONSENT
TO PM. LE OR CLINVESTIGATIVE SEARCHING OR MONITORING OF THE
CONTENT OF
PRIVILEGED COMMUNICATIONS, OR WORK PRODUCT, RELATED TO PERSONAL
REPRESENTATION OR SERVICES BY ATTORNEYS, PSYCHOTHERAPISTS, OR
CLERGY,
AND THEIR ASSISTANTS. SUCH COMMUNICATIONS AND WORK PRODUCT ARE
PRIVATE
AND CONFIDENTIAL. SEE USER AGREEMENT FOR DETAILS.
line console 0
exec-timeout 9 59
logging synchronous
password {{ Network_Device_Password }}
login local
line vty 0 4
password {{ Network_Device_Password }}
login local
exec-timeout 9 59
transport input ssh
line vty 5 15
password {{ Network Device Password }}
login local
exec-timeout 9 59
transport input ssh
```