



Software Defined Access

Architecture

Larissa Overbey

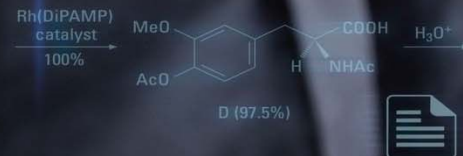
Enterprise Switching Technical Marketing

Enterprise Networks

E-MAIL

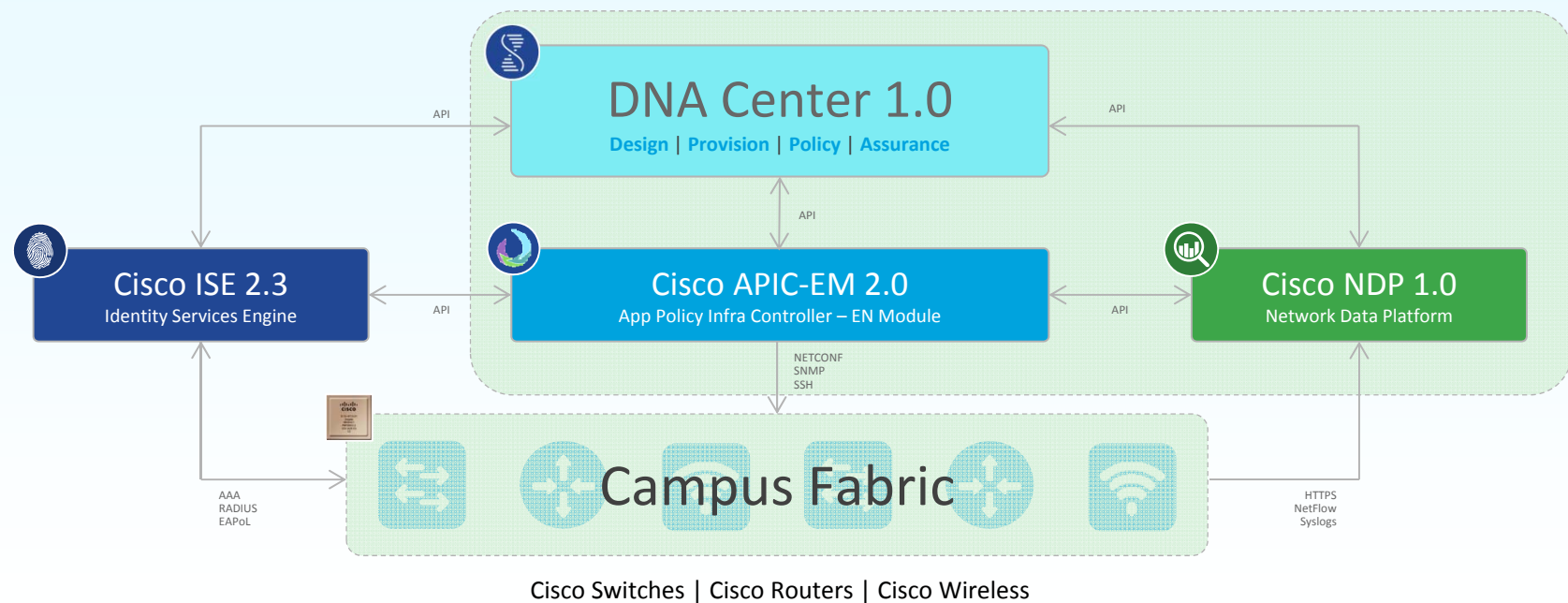
BUSINESS

CONNECTION



SD-Access

DNA Center – Service Components



DNAC – Deployment

Physical Appliance



- Pre-installed DNAC software
- Appliance SKUs: DN1-HW-APL

Cisco DNA Center Appliance

CPU - 44 Core

RAM - 256GB

SSD Drive -6 x 1.9TB (Automation and Analytics, 2 x 480GB (controller/OS))

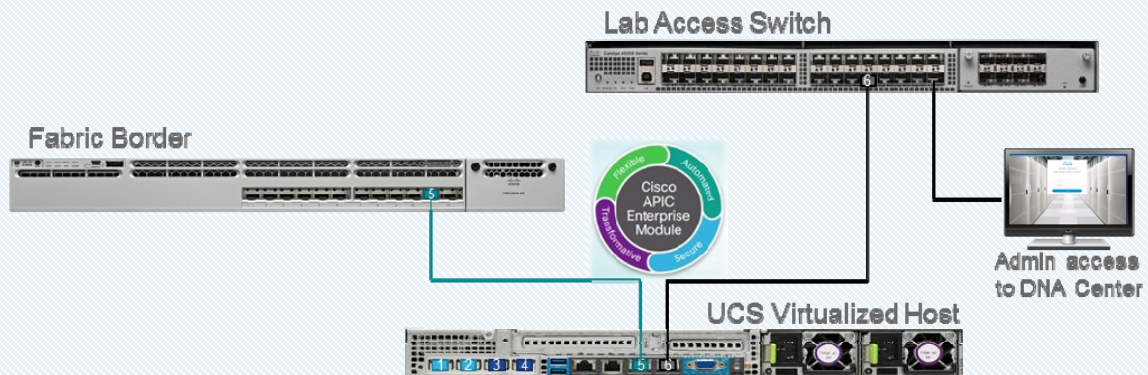
*This Controlled Availability supports 2,500 switches, 2,500 routers, 2,500 APs, 20,000 endpoints



Note: The current APIC-EM 1x. Appliance APIC-EM-APL-G-K9 or APIC-EM-APL-R-K9 are not upgradeable to run DNA Center.

HA or multiple clusters are not supported at the initial release.

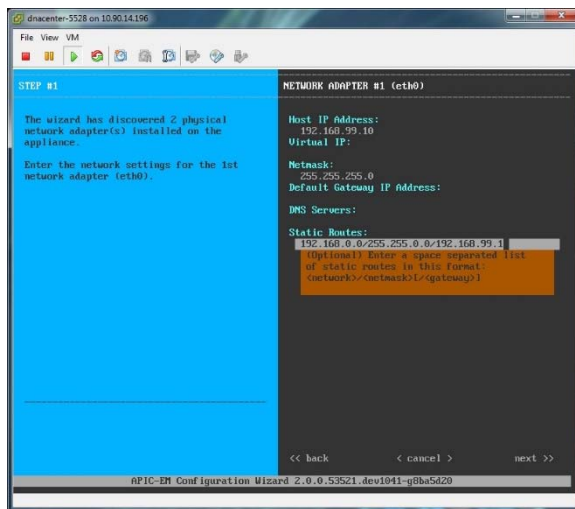
DNAC Placement



Note: Eth0 needs to be able to reach ISE.

DNAC Setup– NIC Config

Add a static route for the DNA Secure Access underlay. For this we will use 192.168.0.0/16 and the default gateway of the border node (192.168.99.1)

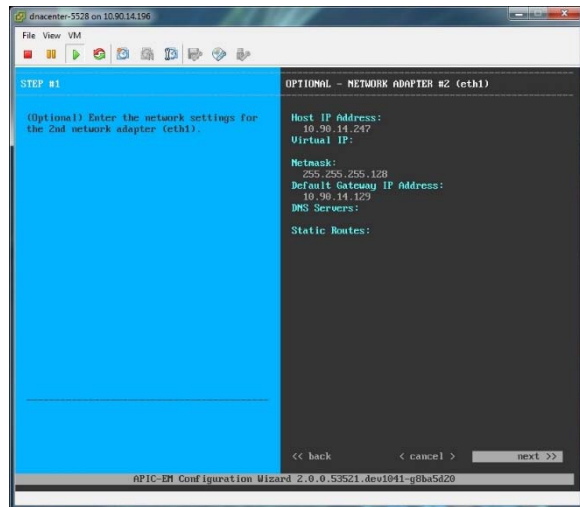


Note: The static route syntax is:
192.168.0.0/255.255.0.0/192.168.99.1

The Virtual IP is for multi host DNAC cluster (not currently supported)- leave blank.

DNAC Setup– NIC Config

On the next screen configure the second NIC. This is vmnic1 and is connected to the local access switch.



Note: The default gateway and DNS server for both interfaces are optional depending on what is available within your environment.

ISE – Deployment

Physical Appliance



- Pre-installed ISE software
- Appliance SKUs: SNS-3595

Secure Network Server
CPU - 1 Core
RAM - 64GB
SSD Drive -4 x 600GB



Downloadable ISO Image



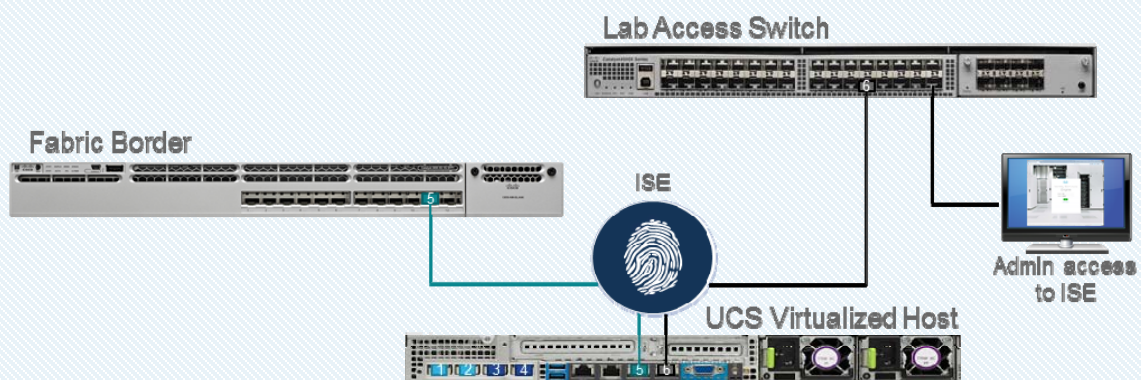
Specifications should be equivalent to the physical appliance

- Deployment Options:
 - Bare-metal install **(recommended)**
 - Virtual machine
- OS: RHEL 7
- VMWare ESX/ESXi 5.x and 6.x available



Note: Multiple node deployment is not supported at initial release.

ISE Placement



ISE Setup

If setting up a virtual ISE instance, the following NICs are supported

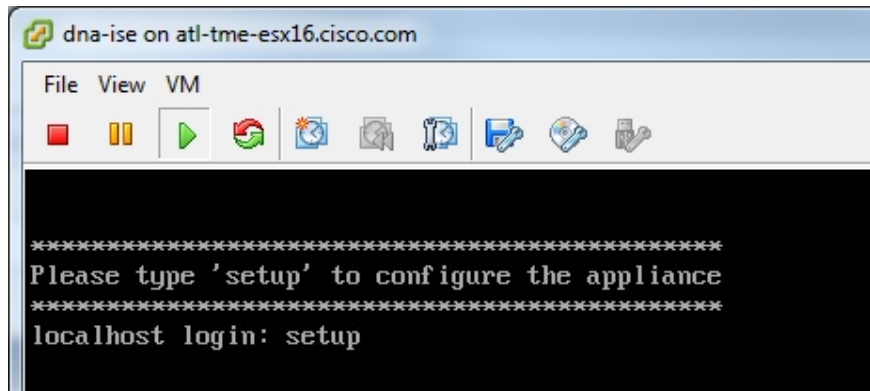
- E1000
- VMXNET3

```

Please select boot device:

Cisco Identity Service Engine
UEFI: Built-in EFI Shell
UEFI: IP4 0100 Intel(R) I350 Gigabit Network Connection
UEFI: IP4 0101 Intel(R) I350 Gigabit Network Connection
UEFI: IP4 0400 Intel(R) I350 Gigabit Network Connection
UEFI: IP4 0401 Intel(R) I350 Gigabit Network Connection
UEFI: IP4 0402 Intel(R) I350 Gigabit Network Connection
UEFI: IP4 0403 Intel(R) I350 Gigabit Network Connection
UEFI: Cisco vKVM-Mapped vDVD1.22
Enter Setup

↑ and ↓ to move selection
ENTER to select boot device
ESC to boot using defaults
```



Note: ISE password requires an uppercase number.

Use lowercase hostnames to ensure certificate authentication is not impacted.

ISE Setup (continued)

Note: Timezone syntax is Coordinated Universal Time (UTC) minus N hours). E.G. PST8PDT

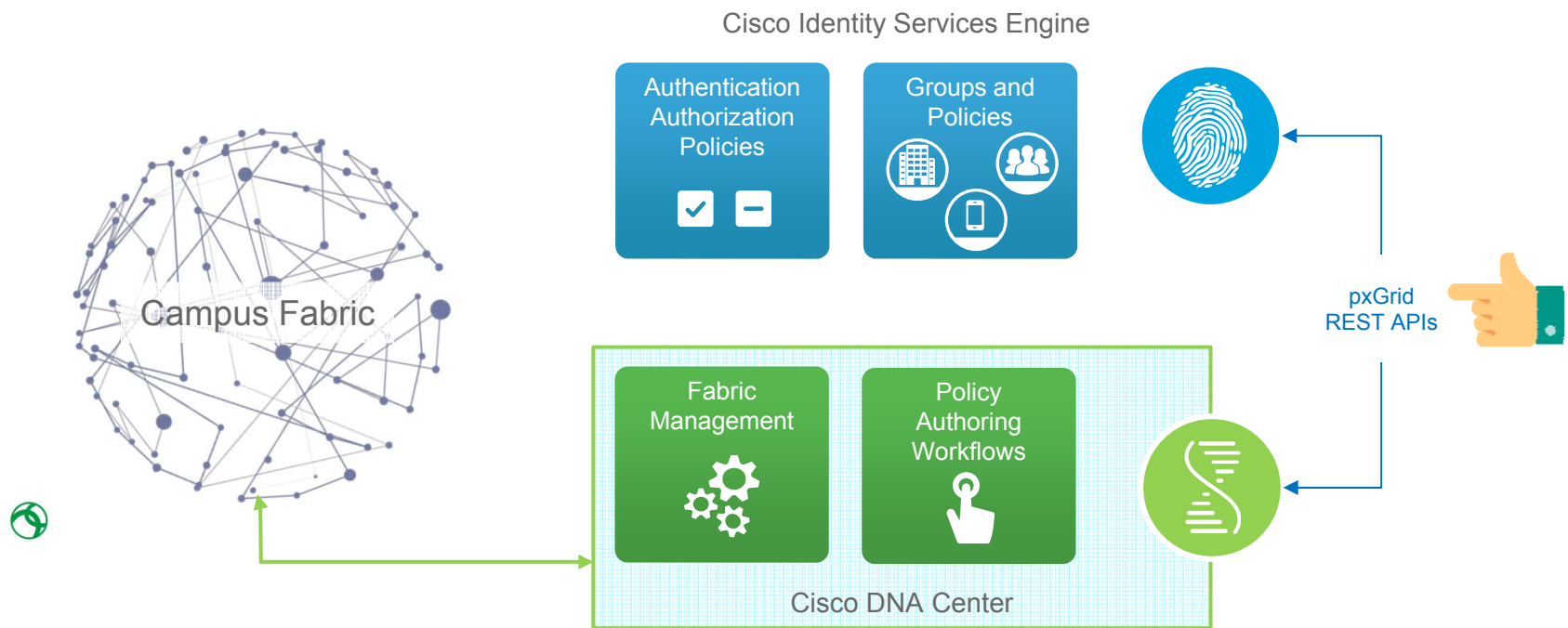
You can run the show timezones command from the Cisco ISE CLI for a complete list of supported time zones.

Note: Once installation and setup are complete, you can view the application status by typing this command.

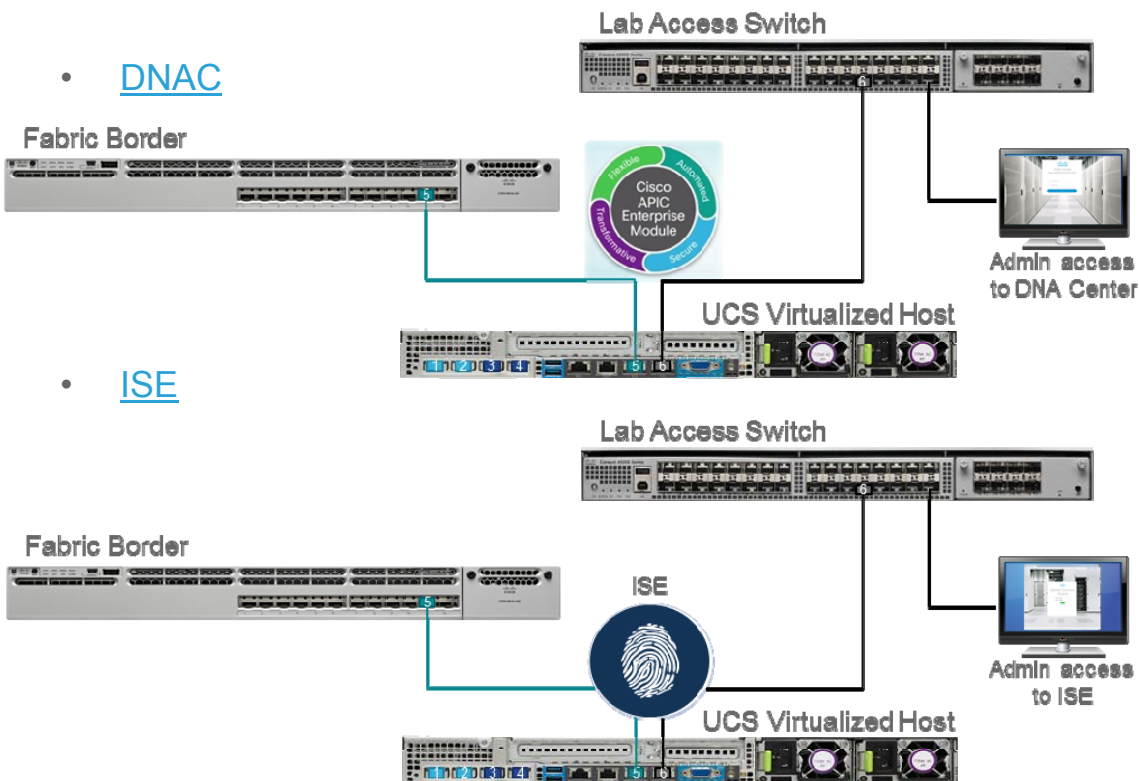
```
sda-ise23/admin# sh app stat ise
```

ISE PROCESS NAME	STATE	PROCESS ID
Database Listener	running	21983
Database Server	running	101 PROCESSES
Application Server	running	26684
%-38s %-16s %-12s\n Profiler Database	running	23732
Profiler Database	running	23732
ISE Indexing Engine	running	28094
AD Connector	running	29584
M&T Session Database	running	23634
M&T Log Collector	running	26828
M&T Log Processor	running	26736
Certificate Authority Service	running	29358
EST Service	running	5388
SXP Engine Service	running	14053
Docker Daemon	running	28563
TC-NAC Service	disabled	
Wifi Setup Helper Container	not running	
pxGrid Infrastructure Service	running	14381
pxGrid Publisher Subscriber Service	running	14596
pxGrid Connection Manager	running	14538
pxGrid Controller	running	14632
PassiveID WMI Service	running	10813
PassiveID Syslog Service	running	11187
PassiveID API Service	running	11563
PassiveID Agent Service	running	11973
PassiveID Endpoint Service	running	12994
PassiveID SPAN Service	running	13423
DHCP Server (dhcpd)	disabled	
DNS Server (named)	disabled	

ISE and DNA-C integration for Policy Automation



Demo – DNAC and ISE Integration



ISE – Deployment

Physical Appliance



- Pre-installed ISE software
- Appliance SKU: SNS-3595

CPU - 1 Core
RAM - 64GB
SSD Drive -4 x 600GB

Minimum write performance of 50 MB/sec
Minimum read performance of 300 MB/sec

Downloadable ISO Image

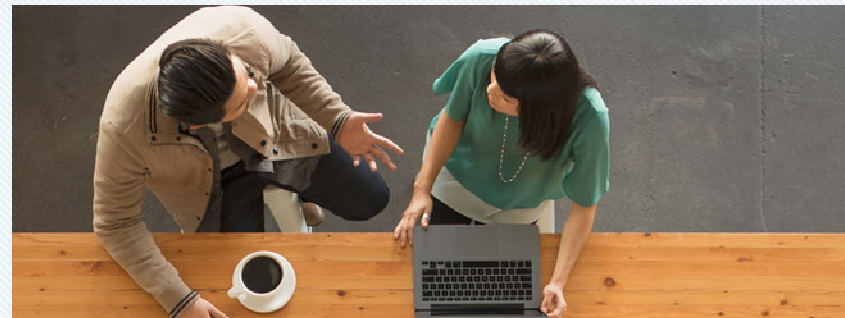


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 - Virtual machine

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