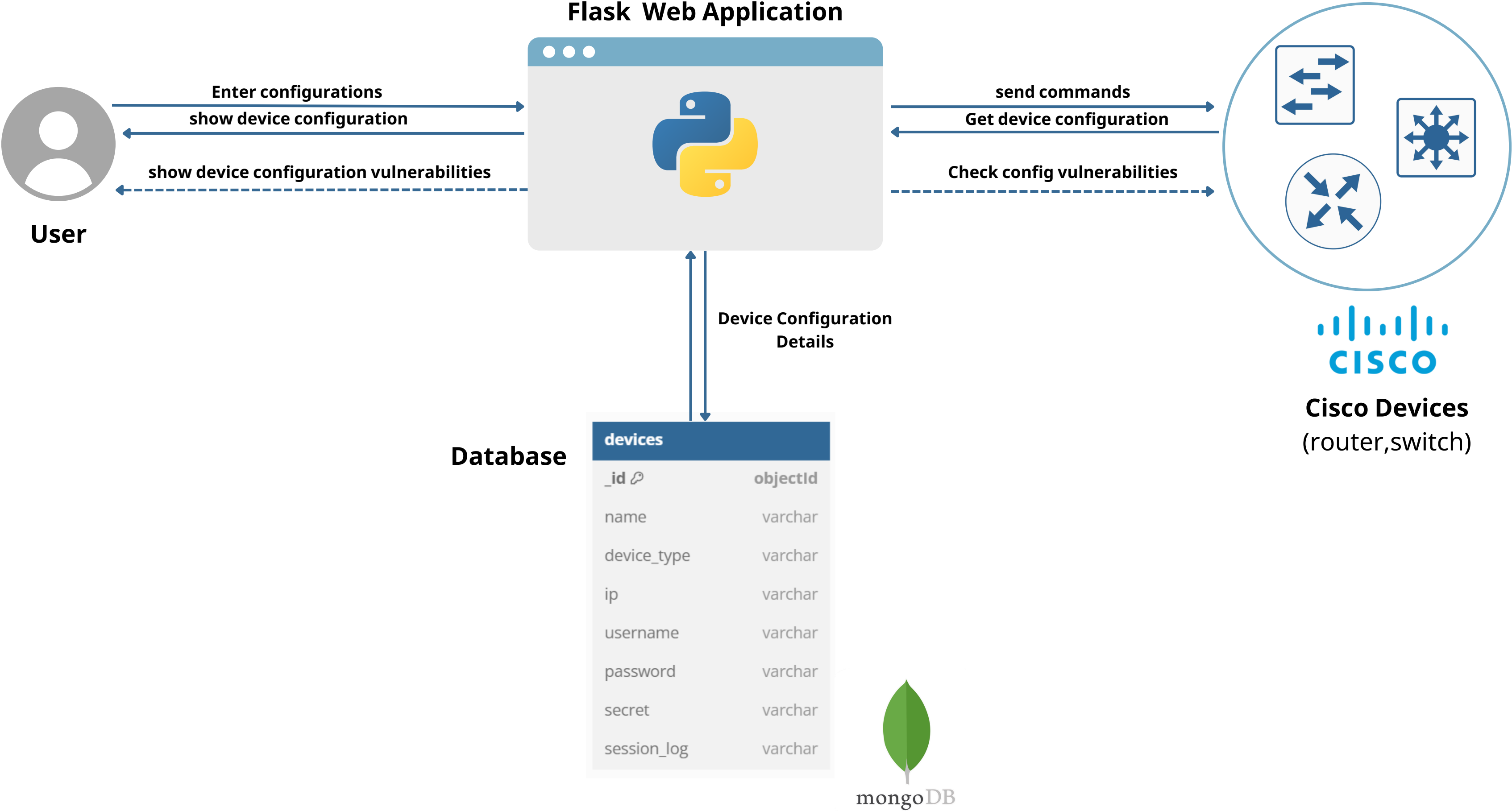


# Network Device Management Workflow Using Flask Web Application



Device Initialization

Device Record Management

Device Information

Configurations >

Routing Configurations >

Erase configuration

View Device Configurations

Security Check

Device Details (SNMP)

DEVICE INITIALIZATION

Console port

Hostname

Domain Name

Privilege Password

username

password

IP Address



( Manual or DHCP )

submit

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## INSERT INFORMATIONS OF DEVICE

Name Device

IP Address

SSH Username

Privilege Password

SSH Password

submit



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## INFORMATION OF DEVICES

Name	IP Address	SSH Username	SSH Password	Privilege Password	Actions
Mockup-Router	10.9.9.9	supawit	admin	P@ssw0rd	delete
Mockup-Switch	192.168.99.99	supawit	admin	P@ssw0rd	delete



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Basic Settings

Network Interface  
Configuration

MANAGEMENT SETTINGS

VLAN MANAGEMENT

SPANNING TREE  
PROTOCOL

AGGREGATION  
PROTOCOLS

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## BASIC SETTING

Select a device

^

v

If more than one device input names of devices here. (separate by comma)

Hostname

Secret Password

Banner

submit

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# NETWORK INTERFACE CONFIGURATION

Select a device

^

v

If more than one device input names of devices here. (separate by comma)

Network Interface

IP Address

Status (Up/Down)

Switchport ( Trunk, Access)

submit

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## MANAGEMENT SETTINGS

Select a device

^

v

If more than one device input names of devices here. (separate by comma)

## CONSOLE LINE SETTINGS

Console Line Password

Exec timeout



Enable Loggin  
Synchronous



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(cont.) Management Settings

VTY SETTINGS

VTY Password

Exec timeout

Transport Input



(Optional) VTY line range



Enable Loggin  
Synchronous

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(cont.) Management Settings

DHCP

Pool name

IP DHCP exclude

DNS Server

NTP

IP Address

Network

Default Router

Domain name

☐

Delete service

Timezone

☐

Delete service

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Device Details (SNMP)

(cont.) Management Settings

SNMP

community string (read-only)

community string (read-write)

CDP



Activate Service



De-activate Service

LLDP



Activate Service



De-activate Service

submit

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Device Details (SNMP)

## VLAN MANAGEMENT

Select a device

^

v

If more than one device input names of devices here. (separate by comma)

### Create VLAN

create vlan (e.g., 2-6)

vlan-name

### Delete VLAN

vlan (e.g., 2-6)

submit

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## SPANNING TREE PROTOCOL

Select a device 

If more than one device input names of devices here. (separate by comma)

### Spanning Tree Mode

Select a mode 

**OPTIONAL**

☐

Root Primary Bridge

☐

Root Secondary Bridge

vlan id :

### Postfast Function

☐

Enable / Disable

Interface (e.g., fa0/3-5)

(BPDU-Guard will be enable)

submit

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# AGGREGATION PROTOCOLS

Select a device

^

v

If more than one device input names of devices here. (separate by comma)

## Port Aggregation Protocol

Interface (e.g., fa0/3-5)

Channel-group Number

Mode

Desirable

Auto

## Link Aggregation Protocol

Interface (e.g., fa0/3-5)

Channel-group Number

Mode

Active

Passive

submit



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Device Details (SNMP)

Static Route

OSPF

RIPv2

EIGRP

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# STATIC ROUTES

Select a device

^

v

If more than one device input names of devices here. (separate by comma)

Destination Network (e.g., 192.168.1.0/24)

Exit interface or IP next hop

(Optional)Alternate Network

Exit interface or IP next hop

Alternate Network

Exit interface or IP next hop

Alternate Network

Exit interface or IP next hop



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## (cont.) Static route

### DEFAULT ROUTE



Remove Default Route

### REMOVE NETWORK ROUTE

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# OSPF CONFIGURATIONS

Select a device

^

v

If more than one device input names of devices here. (separate by comma)

Process ID		Router ID	
Network	Wildcard Mask	Area	
Network	Wildcard Mask	Area	
Network	Wildcard Mask	Area	

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(cont.) OSPF route

## REMOVE OSPF PROCESS

## REMOVE NETWORK OSPF

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Device Details (SNMP)

"RIP configurations typically have a similar structure."

submit

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**“EIGRP configurations generally follow a similar structure.”**

submit

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## RESET CONFIGURATION

Name	IP Address	Actions
Mockup-Router	10.9.9.9	Reset
Mockup-Switch	192.168.99.99	Reset

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Device Details (SNMP)

# SHOW DEVICE CONFIGURATION

Select a device

^

v

- ☒ SHOW RUNNING-CONFIG
- ☐ SHOW IP INTERFACE BRIEF
- ☐ SHOW INTERFACES
- ☒ SHOW VLAN BRIEF
- ☐ SHOW SPANNING-TREE
- ☐ SHOW CDP NEIGHBORS
- ☐ SHOW LLDP NEIGHBORS
- ☐ SHOW IP ROUTE
- ☐ SHOW NTP STATUS
- ☒ SHOW LOGGING
- ☐ SHOW INTERFACES TRUNK
- ☐ SHOW MAC ADDRESS-TABLE

Manual Input

submit

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## NETWORK DEVICE SECURITY ASSESSMENT

**Mockup-Router:** This configuration is flagged as unsafe.

Warning: Insecure password 'admin' found! Please change it.

Warning: Password encryption is not enabled. Please enable 'service password-encryption'.

Warning: The following ports are down: FastEthernet0/1FastEthernet0/2. Please consider shutting them down for security.

Warning: 'exec-timeout' not set for line con. Please consider adding 'exec-timeout 3'.

**Mockup-Switch:** This configuration is safe.



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## ABOUT DEVICE

Select a device



submit

ROUTER (OR SWITHC): (NAME)

DESCRIPTION:

UPTIME:

CONTACT:

LOCATION:

INTERFACES:

FastEthernet0/1

FastEthernet0/2

FastEthernet0/3

FastEthernet0/4

FastEthernet0/5

FastEthernet0/6

.....