

Cheat Sheet for comprehensive Cisco Certified Internetwork Expert (CCIE)

- Data Center

Data Center Infrastructure

Fabric Interconnects

- **Models:** UCS 6454, UCS 6248UP, UCS 6332

- **Management:**
 - **CLI Access:** `connect host`
 - **WebUI:** `https://<FI-IP>`

- **Configuration:**
 - **Initial Setup:** `ucs-fi# scope fabric`
 - **VLAN Configuration:** `ucs-fi# scope org /org-root`
 - **VSAN Configuration:** `ucs-fi# scope fabric`

UCS Manager

- **Models:** UCS 5108, UCS 220M5

- **Management:**
 - **CLI Access:** `connect host`
 - **WebUI:** `https://<UCSM-IP>`

- **Configuration:**
 - **Initial Setup:** `ucs-manager# scope org /org-root`
 - **Service Profile:** `ucs-manager# scope org /org-root`
 - **Network Control Policy:** `ucs-manager# scope org /org-root`

Network Services

VLANs

- **Creation:**
 - `ucs-fi# scope fabric /fabric`
 - `ucs-fi# create vlan <vlan-id> name <vlan-name>`

- **Assignment:**

- `ucs-fi# scope fabric /fabric`
- `ucs-fi# scope vlan <vlan-id>`
- `ucs-fi# set ports <port-list>`

VSANs

- **Creation:**

- `ucs-fi# scope fabric /fabric`
- `ucs-fi# create vsan <vsan-id> name <vsan-name>`

- **Assignment:**

- `ucs-fi# scope fabric /fabric`
- `ucs-fi# scope vsan <vsan-id>`
- `ucs-fi# set ports <port-list>`

Storage Services

SAN Boot

- **Configuration:**

- `ucs-manager# scope org /org-root`
- `ucs-manager# create san-connectivity-policy <policy-name>`
- `ucs-manager# scope san-connectivity-policy <policy-name>`
- `ucs-manager# create wwn-pool <pool-name>`

Storage Policies

- **Creation:**

- `ucs-manager# scope org /org-root`
- `ucs-manager# create storage-policy <policy-name>`
- `ucs-manager# scope storage-policy <policy-name>`
- `ucs-manager# create storage-profile <profile-name>`

Compute Services

Service Profiles

- **Creation:**

- `ucs-manager# scope org /org-root`
- `ucs-manager# create service-profile <profile-name>`
- `ucs-manager# scope service-profile <profile-name>`
- `ucs-manager# set bios-policy <bios-policy-name>`

Server Pools

- Creation:

- `ucs-manager# scope org /org-root`
- `ucs-manager# create server-pool <pool-name>`
- `ucs-manager# scope server-pool <pool-name>`
- `ucs-manager# set servers <server-list>`

Security

AAA Configuration

- Local Users:

- `ucs-manager# scope security`
- `ucs-manager# create local-user <username> password <password>`

- LDAP Integration:

- `ucs-manager# scope security`
- `ucs-manager# create ldap-provider <provider-name>`
- `ucs-manager# set root-dn <root-dn>`

Certificate Management

- Import Certificate:

- `ucs-manager# scope security`
- `ucs-manager# import certificate <certificate-file>`

- Generate Certificate:

- `ucs-manager# scope security`
- `ucs-manager# generate certificate`

Monitoring and Troubleshooting

Event Logs

- View Logs:

- `ucs-manager# show event-logs`

- Filter Logs:

- `ucs-manager# show event-logs filter <filter-criteria>`

Performance Monitoring

- CPU Utilization:

- `ucs-manager# show performance cpu`
- **Memory Utilization:**
- `ucs-manager# show performance memory`
- **Network Utilization:**
- `ucs-manager# show performance network`

Advanced Features

Multi-Site Configuration

- **Site Creation:**
- `ucs-manager# scope org /org-root`
- `ucs-manager# create site <site-name>`
- **Site Assignment:**
- `ucs-manager# scope org /org-root`
- `ucs-manager# scope site <site-name>`
- `ucs-manager# set servers <server-list>`

High Availability

- **Redundancy Policies:**
- `ucs-manager# scope org /org-root`
- `ucs-manager# create redundancy-policy <policy-name>`
- `ucs-manager# scope redundancy-policy <policy-name>`
- `ucs-manager# set mode <mode>`

Tips and Tricks

CLI Shortcuts

- **Quick Navigation:**
- `ucs-manager# scope org /org-root`
- `ucs-manager# scope service-profile <profile-name>`
- **History:**
- `ucs-manager# show history`

WebUI Tips

- **Quick Search:**
- Use the search bar to quickly find policies, profiles, and servers.

- Dashboard Customization:

- Customize the dashboard to display key performance metrics.

Examples

Example: VLAN Creation

```
ucs-fi# scope fabric /fabric
ucs-fi# create vlan 10 name "Management"
ucs-fi# scope vlan 10
ucs-fi# set ports 1/1-1/10
```

Example: Service Profile Creation

```
ucs-manager# scope org /org-root
ucs-manager# create service-profile "SP-WebServer"
ucs-manager# scope service-profile "SP-WebServer"
ucs-manager# set bios-policy "HighPerformance"
```

Summary

- Key Points:

- **Fabric Interconnects:** Manage VLANs, VSANs, and network policies.
- **UCS Manager:** Configure service profiles, server pools, and storage policies.
- **Security:** Implement AAA, LDAP, and certificate management.
- **Monitoring:** Use event logs and performance monitoring for troubleshooting.
- **Advanced Features:** Configure multi-site and high availability setups.

This cheat sheet provides a comprehensive overview of essential features, shortcuts, tips, and tricks for the Cisco Certified Internetwork Expert (CCIE) - Data Center certification. Use it as a quick reference guide during your studies and practical implementations.

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