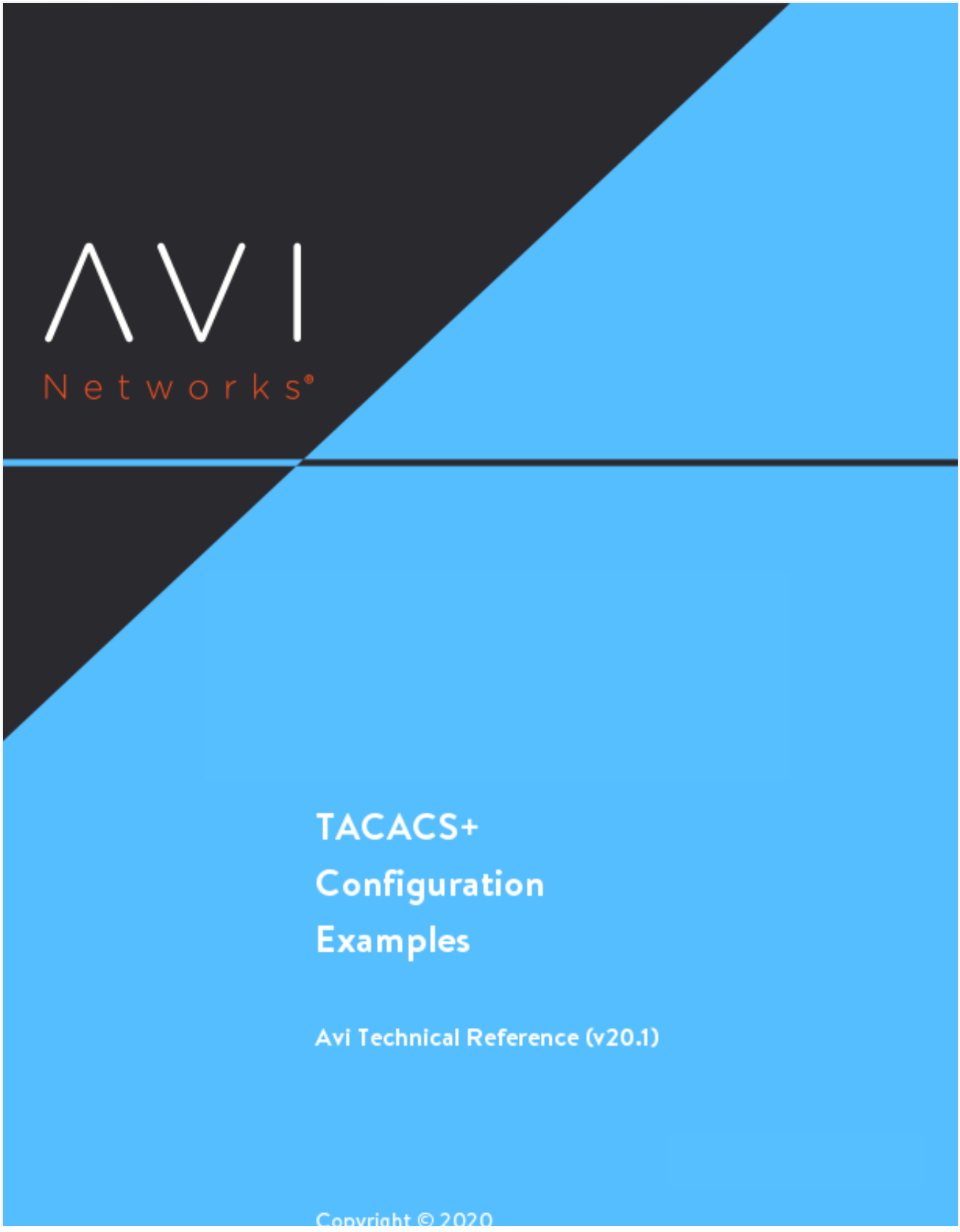


TACACS+ Configuration Examples

Avi Technical Reference (v20.1)

TACACS+ Configuration Examples

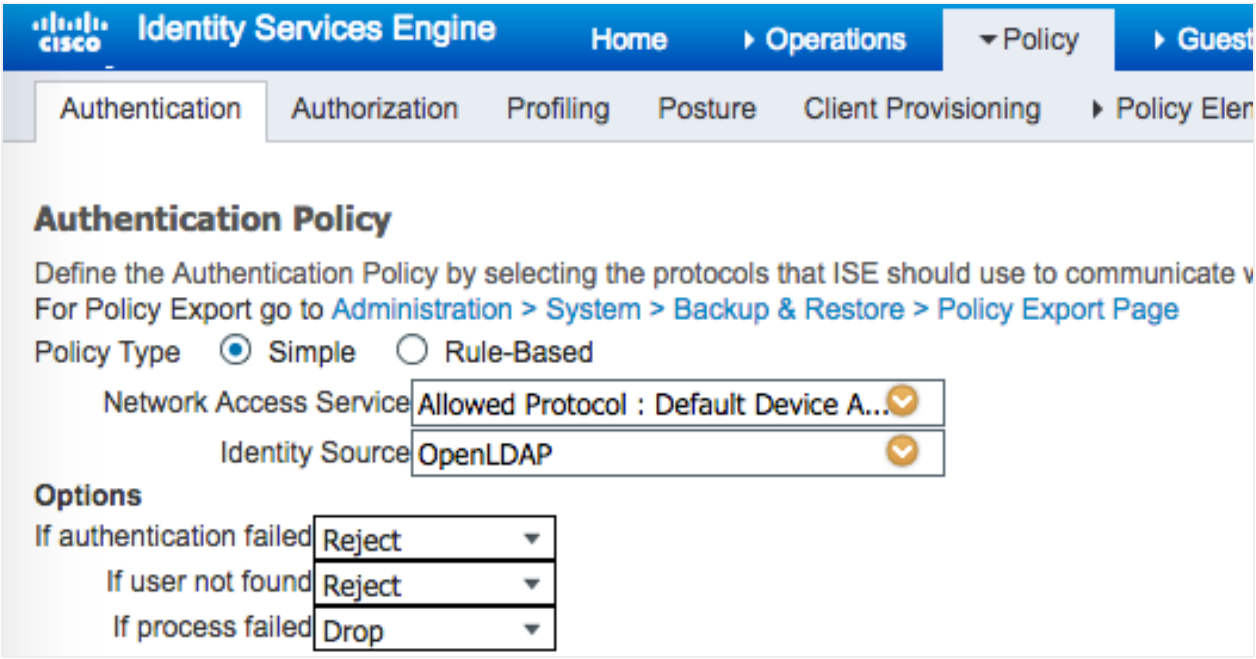
view online

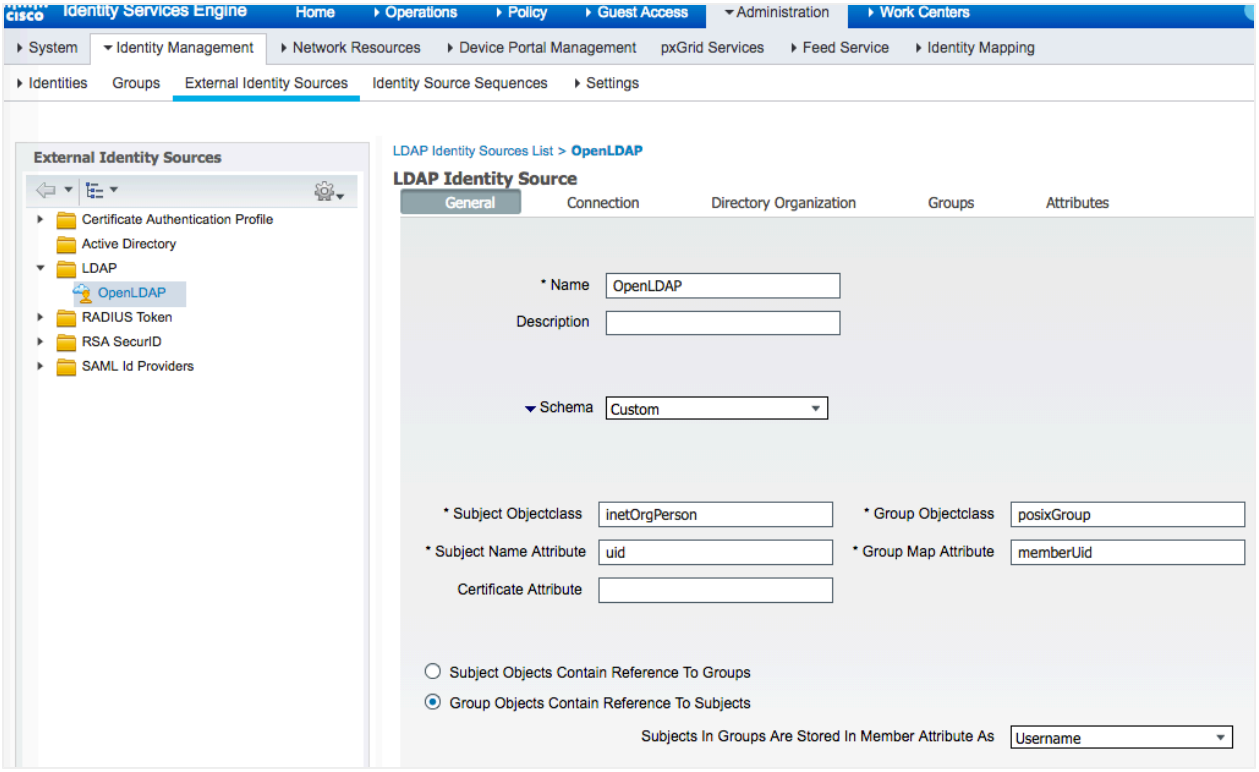
ISE TACACS+ Server

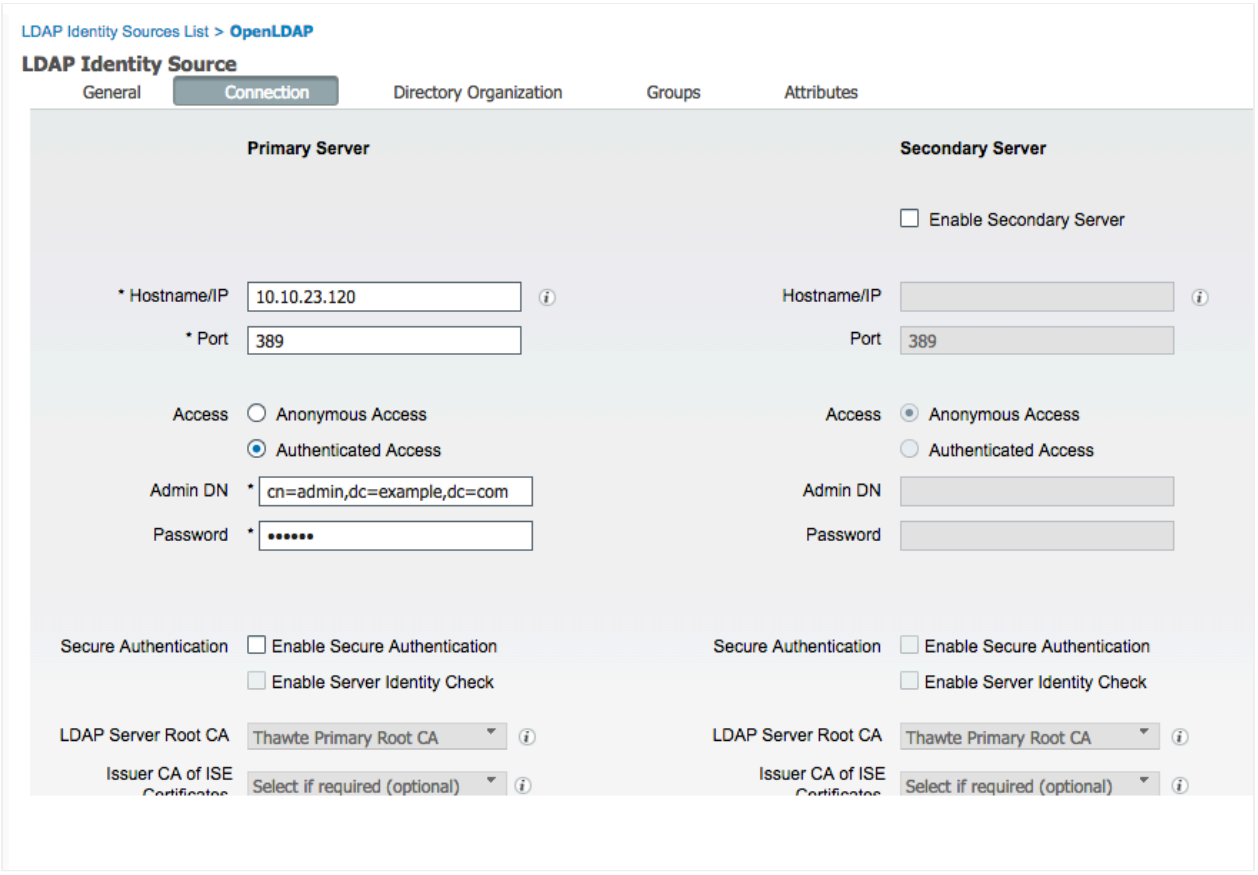
Cisco ISE is a security policy management platform that provides secure access to network resources. Cisco ISE functions as a policy decision point and enables enterprises to ensure compliance, enhance infrastructure security, and streamline service operations.

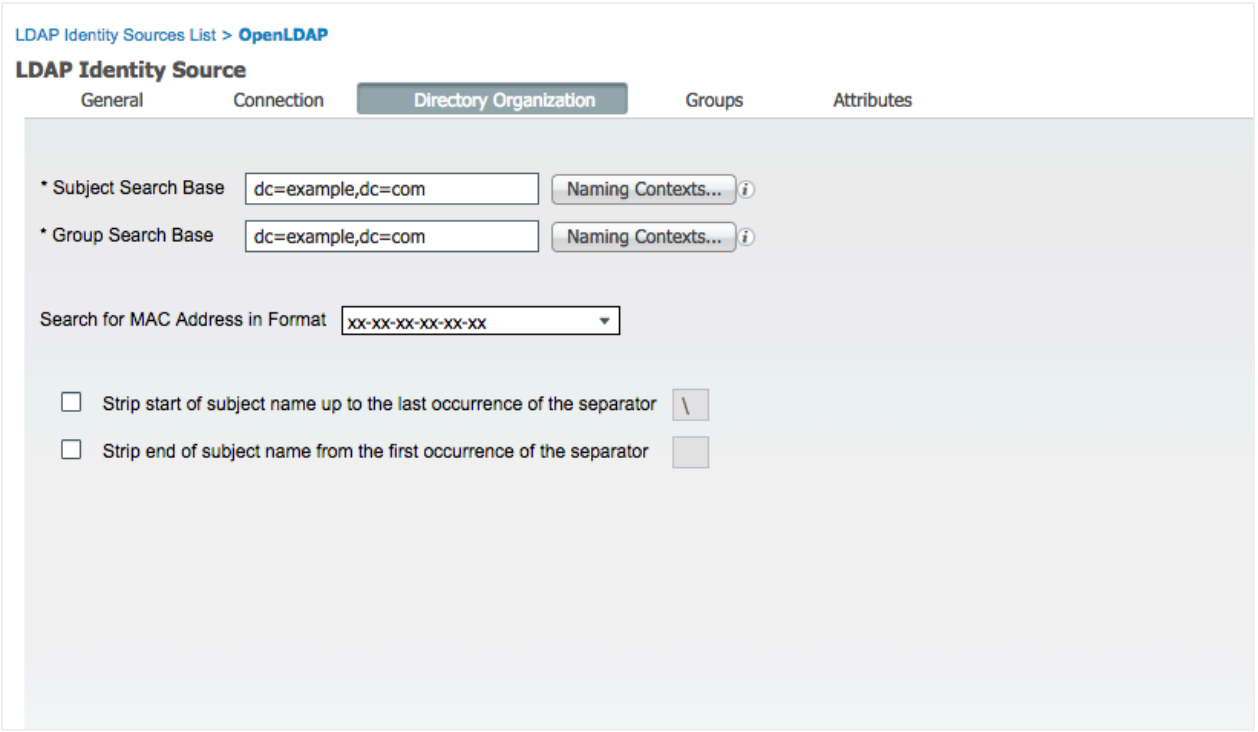
Given below are steps involved in setting up an ISE TACACS+ server as a remote authentication and authorization system for Avi Vantage.

- The ISE server is generally configured with external Identity Sources (in this case OpenLDAP).

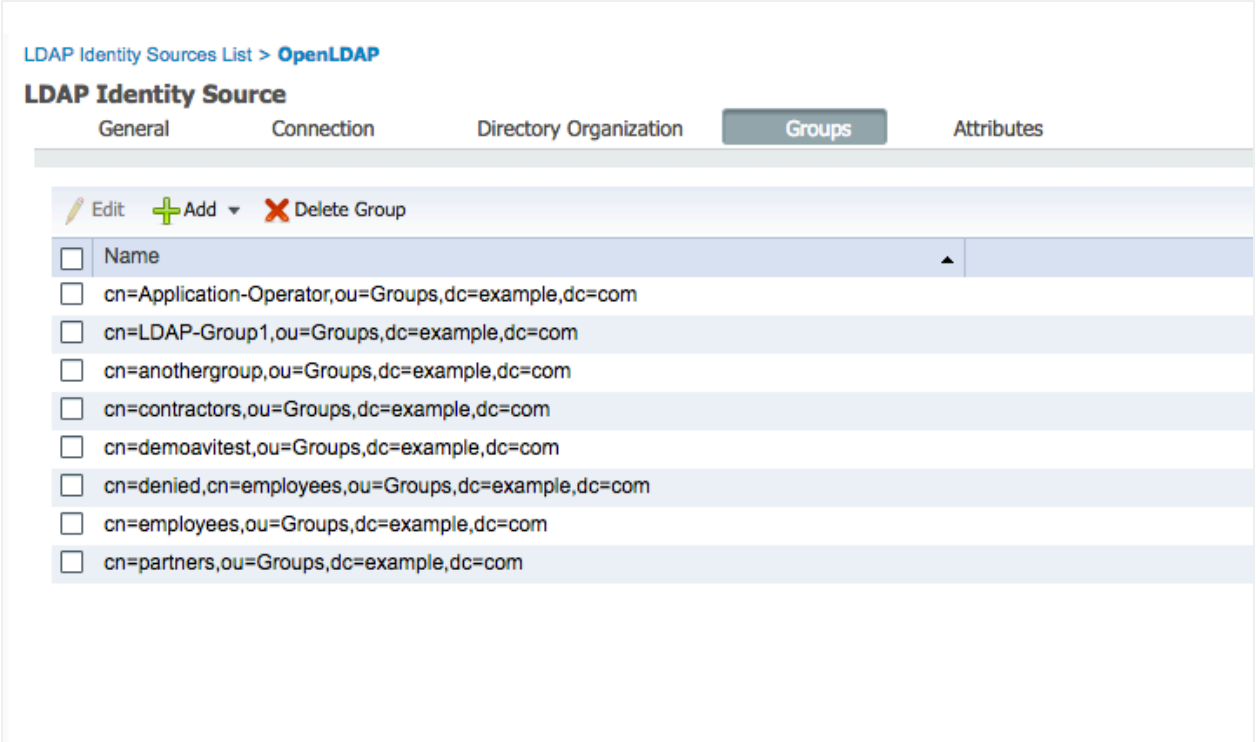




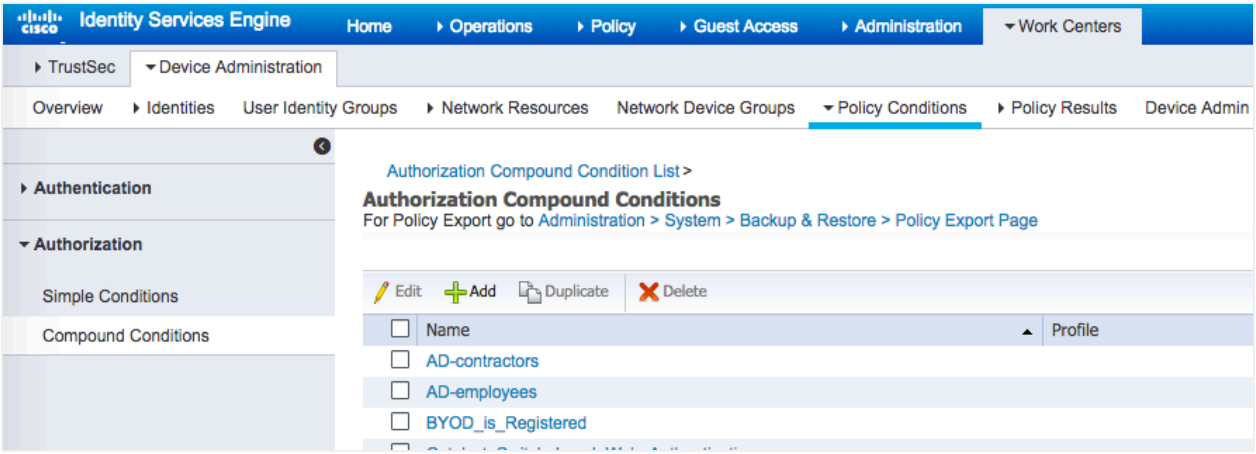


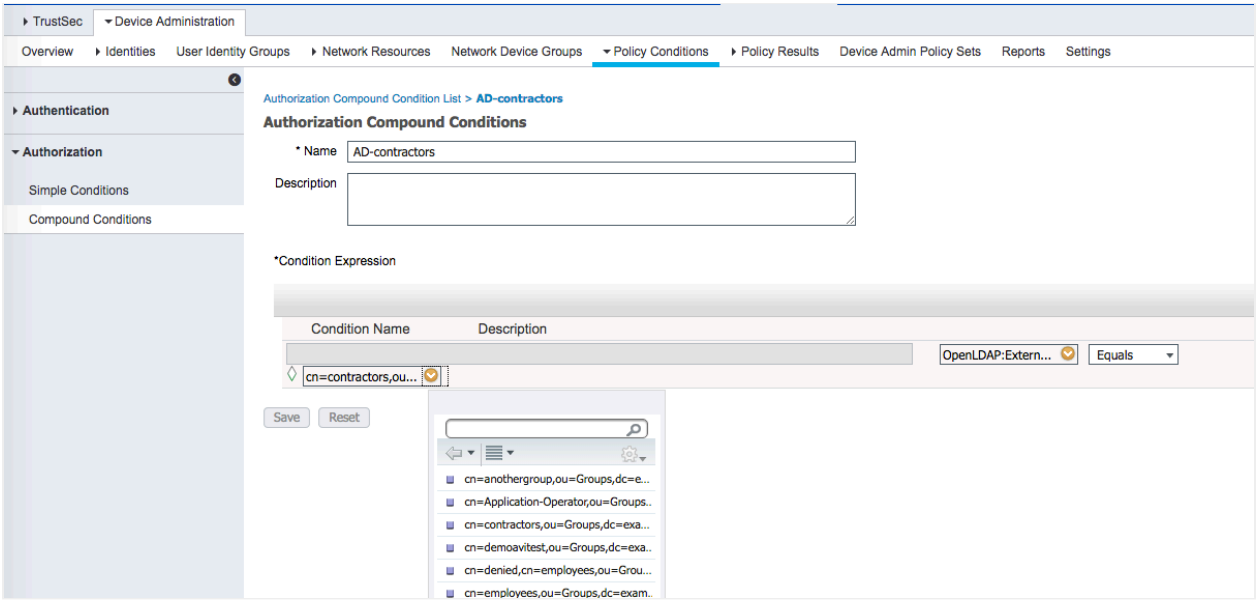


- ISE LDAP settings used to fetch LDAP groups in order to use them for Authorization conditions

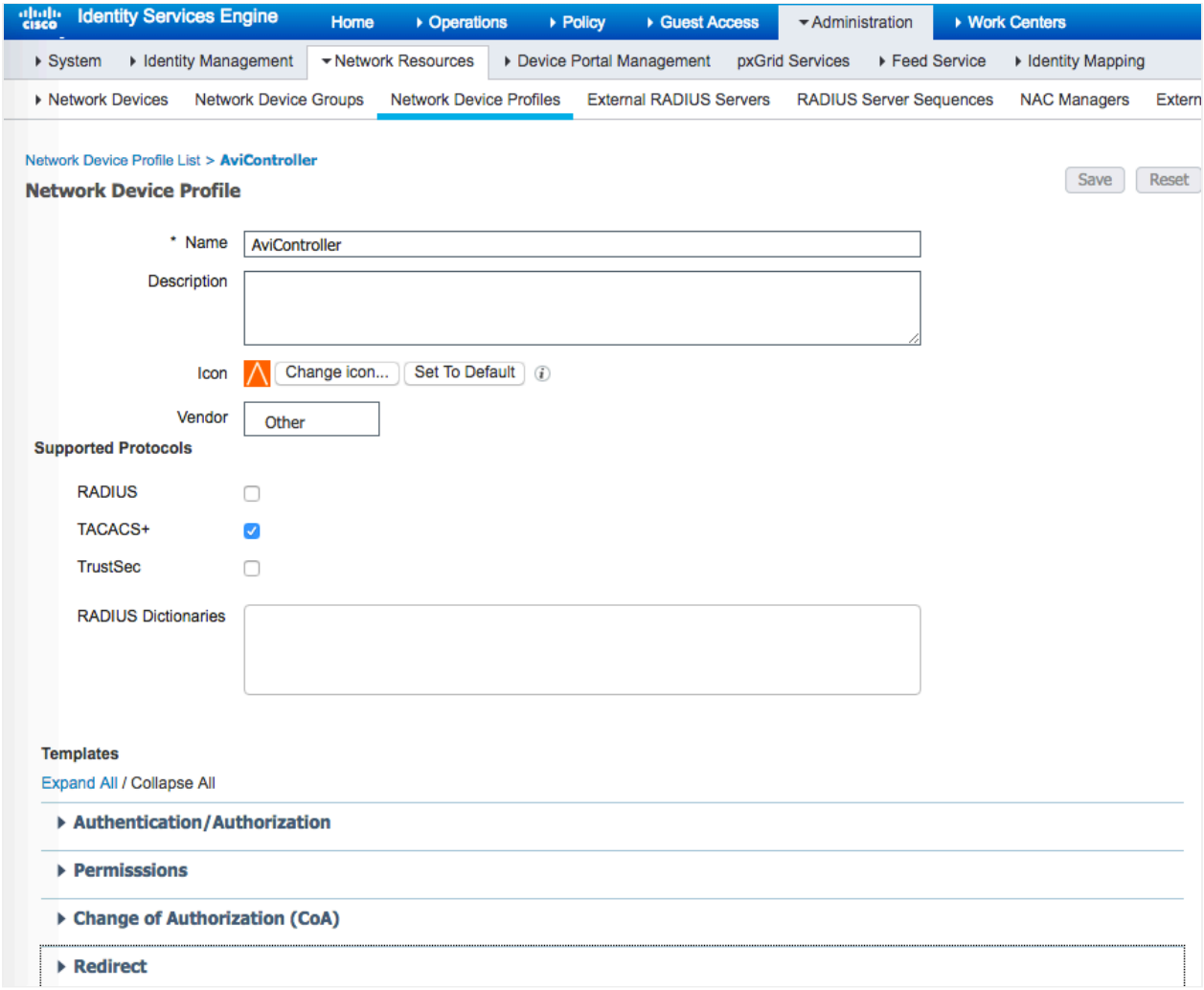


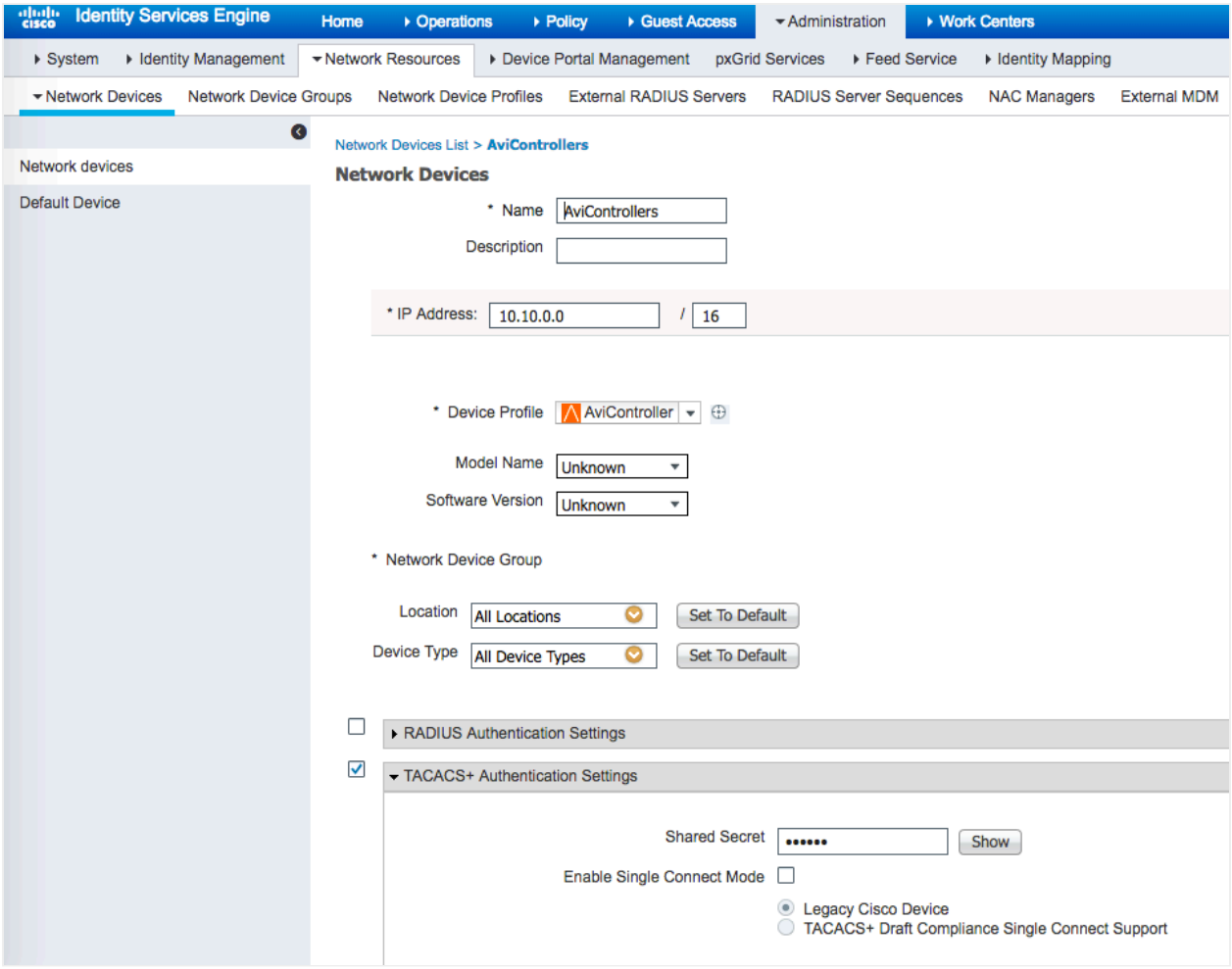
- ISE Authorization conditions added for Users in the AD groups



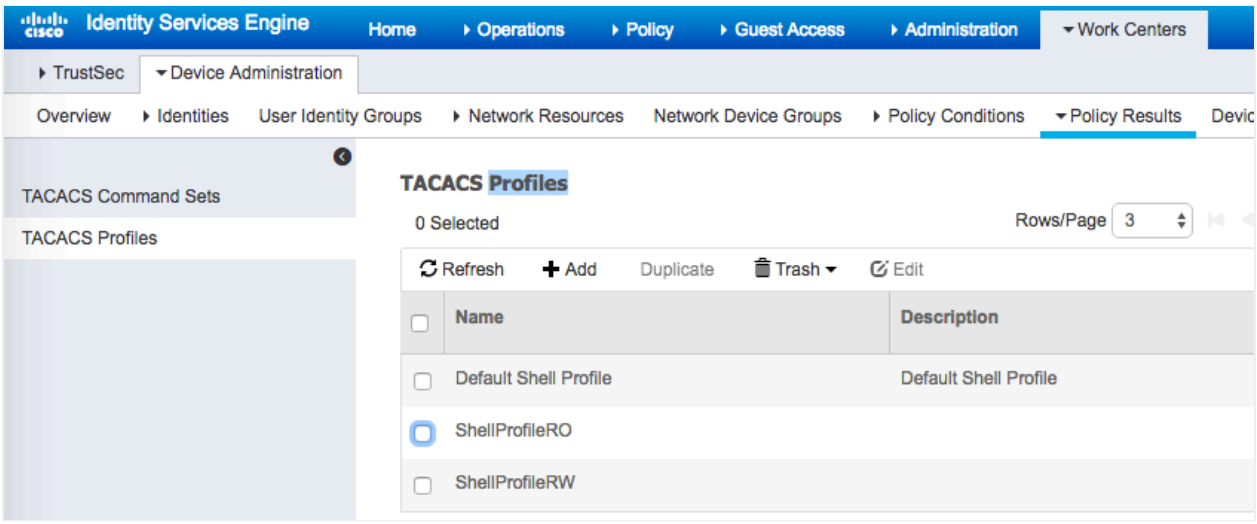


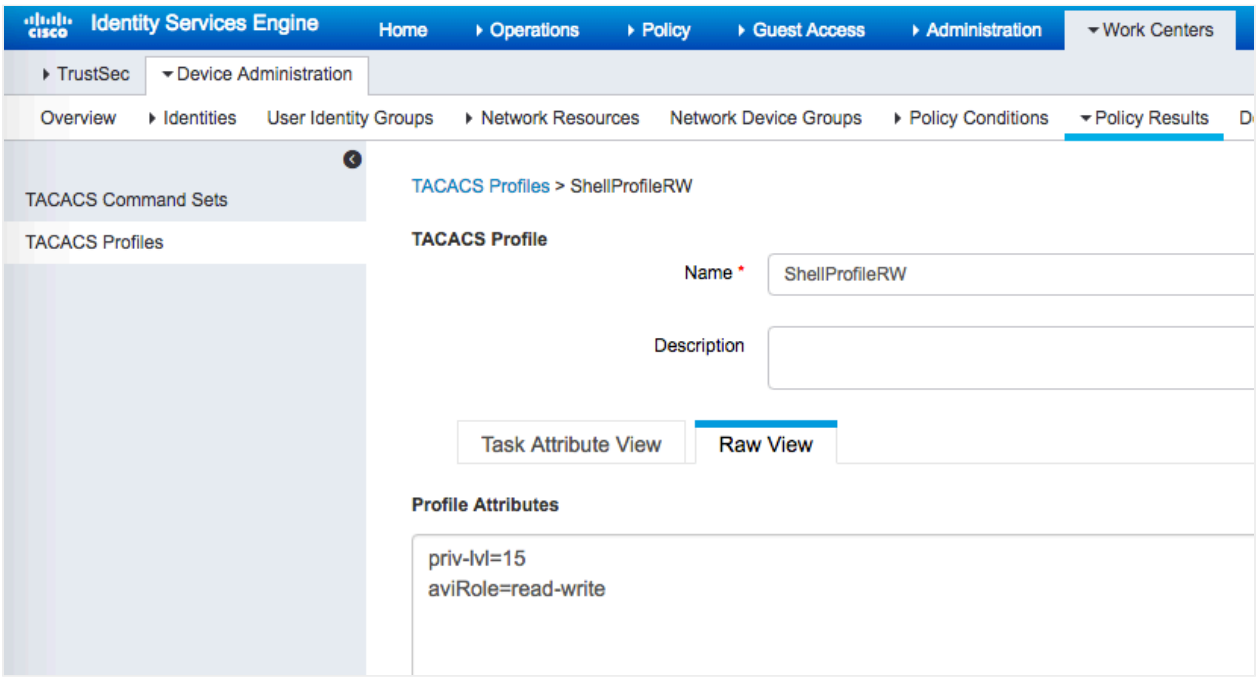
- ISE server should recognize all Avi Vantage Controller cluster nodes as valid Network Devices.



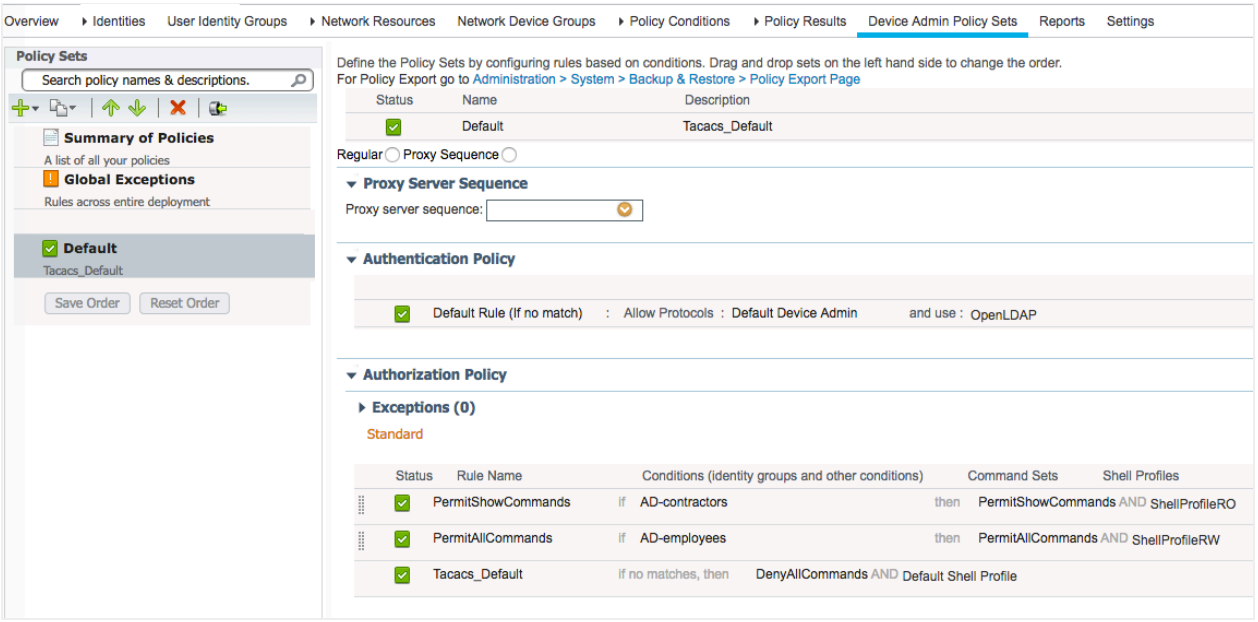


- ISE requires shell profiles and TACACS+ profiles configured.



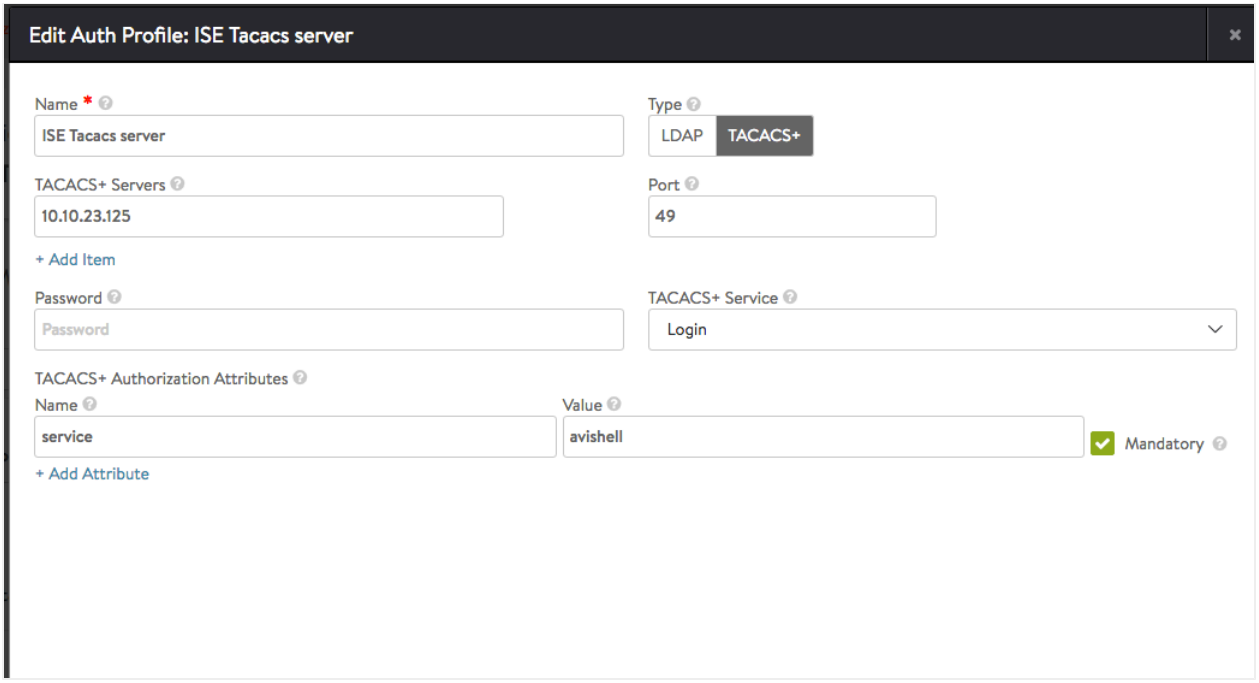


- ISE device policy sets default condition updated to assign different shell profiles based on group membership.



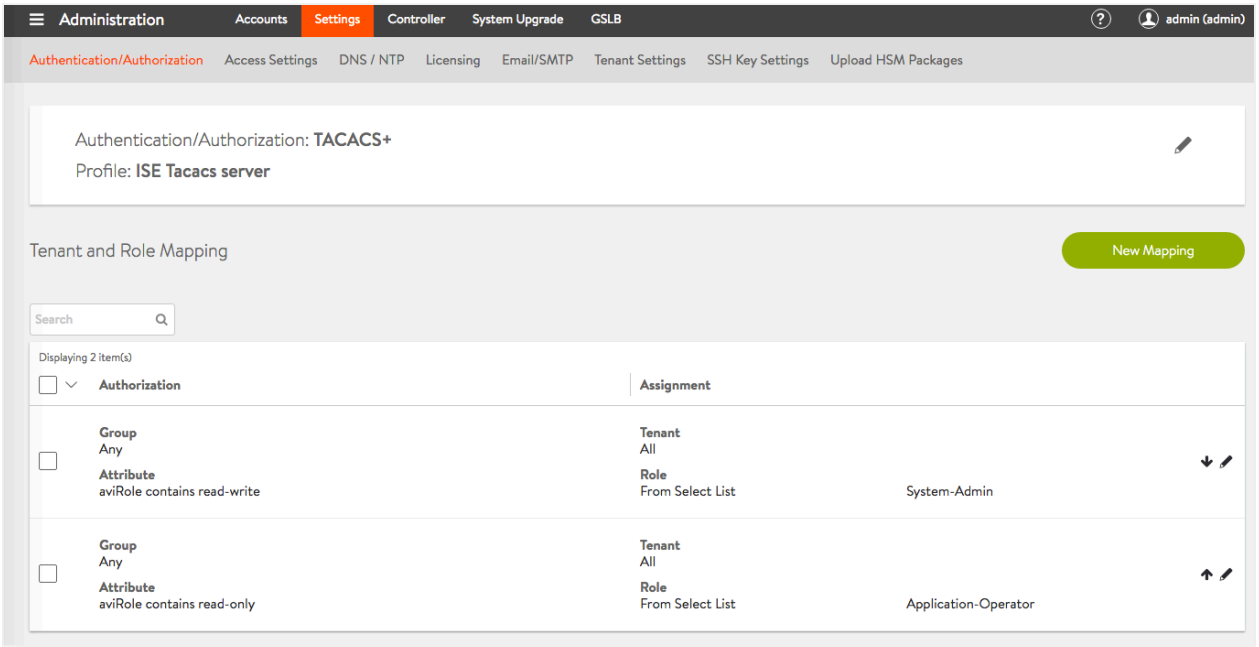
- The Avi Vantage TACACS+ auth profile should be configured with the same shared secret that was assigned to the device in ISE. The "service" attribute is generally required to identify and authorize a Vantage user. Authorization attributes from a TACACS+ server can be used to map Avi Vantage users to various roles and tenants.
  In the case of an ACS server, service=avishell is required for user authorization; while in the case of an ISE server, service=avishell is known to cause authorization failure.

To know more, refer to TACACS+ Authentication



- Avi Vantage TACACS+ authorization role and tenant mapping configured to assign different roles based on TACACS+ attribute value

To know more, refer to User Account Roles.



Shrubbery TAC_PLUS

- TAC_PLUS server is a much simpler alternative to ISE/ACS. This is mostly relevant in development or testing environments. Conceptually, users are assigned to groups and groups have request and response attributes.

```
key = xxxxxxx

group = netadmin {
        default service = permit
        login = file /etc/passwd
        service = exec {
                priv-lvl = 15
        }
}

group = admin {
        default service = permit
}

group = jenkinsattrs {
        default service = permit
        service = jenkins {
                avirole = Tacacs-Admin
                avitenant = Tacacs-Tenant1
        }
}

group = jenkinsunknown {
        default service = permit
        service = jenkins {
                avirole = "Unknown Role"
                avitenant = "Unknown Tenant"
        }
}

group = jenkinsnoattrs {
        default service = permit
        service = jenkins {
        }
}

user = aviuser {
        member = netadmin
}

user = jenkinstest1 {
        login = cleartext "password"
        member = jenkinsattrs
}

user = jenkinstest2 {
        login = cleartext "password"
        member = jenkinsattrs
}
```

```
[[root@localhost ~]# cat /etc/systemd/system/tac_plus.service
[Unit]
Description=TACACS+ Service
After=syslog.target

[Service]
Type=simple
ExecStart=/usr/local/sbin/tac_plus -C /etc/tac_plus/tac_plus.conf -L -p 49 -d 65535 -Gt -l /var/log/tac_plus.log
KillMode=process
Restart=always
ExecReload=/bin/kill -HUP $MAINPID

[Install]
WantedBy=multi-user.target
```

- Avi Vantage TACACS+ auth profile is configured the same way as that for ISE or ACS.

Other Articles of Interest:

Protocol Ports Used by Avi Vantage for Management Communication