Linux Academy

Live! Lab

Using an Existing Authentication Service

Contents

Lab Connection Information

- Labs may take up to five minutes to build
- The IP address of your server is located on the Live! Lab page
- Username: linuxacademy
- Password: 123456
- Root Password: 123456

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Configure a System to Use an Existing Authentication Service for User and Group Information

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Introduction

For many corporations, the ability to use existing identity management services, such as *LDAP* or *Active Directory* (AD), is essential. This lab covers configuring a Red Hat Enterprise Linux 7 (RHEL7) server to accept Active Directory credentials.

The lab provides you with a 2008R2 Windows Active Directory environment, with existing users, and an RHEL7 server.

Access your Red Hat server using the given credentials, ensuring you are logged in as *root* or prepend `sudo` to the below commands as a superuser. You do not need direct access to the Windows Active Directory server.

Testing the Environment

Before installing the needed packages, ensure the Red Hat server is up to date:

```
[root@linuxacademy ~]# yum upgrade
```

Ensure that *ad.linuxacademy.com* resolves to the appropriate IP address, *172.31.19.72*:

```
[root@linuxacademy ~]# ping ad.linuxacademy.com
PING ad.linuxacademy.com (172.31.19.72) 56(84) bytes of data.
64 bytes from ad.linuxacademy.com (172.31.19.72): icmp_seq=1 ttl=128 time=0.694 ms
--- ad.linuxacademy.com ping statistics ---
9 packets transmitted, 9 received, 0% packet loss, time 8005ms
rtt min/avg/max/mdev = 0.694/0.929/1.759/0.304 ms
```

Binding the AD Domain

For us to bind the domain, the server needs to use the `realmd` package. This is not yet installed:

```
[root@linuxacademy ~]# yum install realmd
```

We now need to use the `realm` command to discover our AD domain. This outputs statistics related to the given domain regarding its configuration state and needed packages.

```
[root@linuxacademy ~]# realm discover ad.linuxacademy.com
ad.linuxacademy.com
  type: kerberos
  realm-name: AD.LINUXACADEMY.COM
  domain-name: ad.linuxacademy.com
  configured: no
```

```
server-software: active-directory
client-software: sssd
required-package: oddjob
required-package: oddjob-mkhomedir
required-package: sssd
required-package: adcli
```

Install the required packages:

```
[root@linuxacademy ~]# yum install oddjob oddjob-mkhomedir sssd adcli samba-common
```

We can now join the domain using our Active Directory administrator user and password. The password is *LinuxAcademy123!*.

```
[root@linuxacademy ~]# realm join ad.linuxacademy.com
Password for Administrator:
```

Input the password given above. If successful, there is no other output.

Should you now run the `realm discover ad.linuxacademy.com` command again, the domain shows as configured.

Configuring AD Access

To allow all AD users access to the RHEL7 server, we need to use the `realm permit` command:

```
[root@linuxacademy ~]# realm permit --realm ad.linuxacademy.com --all
```

However, before we can log in using an AD credential, we need to ensure that our SSH configuration is set up to accept Kerberos logins and authentication.

Open your `/etc/ssh/sshd_config` file in your choosen text editor, search for the section on Kerberos, and alter the text to resemble the following settings:

```
# Kerberos options
KerberosAuthentication yes
KerberosOrLocalPasswd yes
KerberosTicketCleanup yes
KerberosGetAFSToken yes
KerberosUseKuserok yes
```

Save and exit, then restart the SSHD daemon:

```
[root@linuxacademy ~]# systemctl restart sshd
```

Testing

To ensure the above processes have worked, open a new terminal window and log into the RHEL7 server using the following credentials:

- **Username**: Test
- **Password**: LinuxAcademy123

We need to use the `-l` flag to specify the fully-qualified domain name for the user, as well as the public IP address. Remember to replace the IP address below with the one you were assigned to your lab.

```
[elle@Penguinbook ~]$ ssh -l test@ad.linuxacademy.com 192.0.2.0
test@ad.linuxacademy.com@192.0.2.0's password:
Creating home directory for test@ad.linuxacademy.com.
```

Once successfully logged in, you have completed the lab!