

ECE Linux Server Introduction

ECE's Linux servers are Dell PowerEdge servers. We use Red Hat Enterprise Linux (RHEL) as OS, NIS domain to manage user identity, group and netgroup, SSSD and Kerberos (pam_krb5 module on RHEL7 and older) for authentication against ESERVICES AD, and X2go-Xfce for "remote desktop". Once an account is created, the user can login using the same UVA password for netbadge or eservices. This way users do not need to remember another set of login & passwords for ECE domain servers. A user will have the same home directory regardless of which server (s)he logs into.

We have about 40 Unix groups on the NIS domain to manage the access to technology PDK tool kits. For some groups, users will need to get approval from their professors and sign non-disclosure agreement (NDA) before granted group memberships.

X2go is an open source remote desktop software for Linux (similar to the commercial product NoMachine). It runs on Windows, Mac, and Linux to access ECE Linux servers from laptops or desktops. With it you get a Linux desktop environment. The default Red Hat desktop environment GNOME does not work well with x2go and it is memory expensive to run. We use Xfce, which is a light duty desktop environment that is sufficient for ECE's practice.

Once nice feature x2go has is that x2go sessions are persistent across connections if you kill the session without purposely logging out. So when you reconnect, your terminal windows, applications, browser windows, etc., will still be where you left them, even your foreground running jobs are not interrupted.

If you do not need a full desktop environment and know a little about Linux, instead of x2go, you may use a simpler X-window client program like MobaXterm (<https://mobaxterm.mobatek.net/>, Home Edition is free). It allows you to run the GUI tools fine and it uses a lot less resources on our Linux server. You may also use the ssh command (eg, 'ssh -X class2.ece.virginia.edu') in a terminal window on macOS X or Windows Subsystem for Linux (WSL) to access ECE Linux servers.