Video - Saving Configurations (7 min)

After you've begun some initial configurations on your switch, you'll want to know how to save your configuration. You can see that I'm using Packet Tracer and I have a command line interface to the switch. Notice the banner message and that I'm being prompted for a password. I'll put in the password "cisco," type "enable", password "class" to get to privileged exec mode. I'll type in "configure terminal" to get to global config mode, and I'll set the host name of the switch to S1. To save the configuration on the switch, I'll go back to privileged exec mode by typing "exit" and pressing Enter. And then from privileged exec mode I put in the command "copy running-config startup-config." This command means copy the running configuration to the startup configuration file. The running configuration is the currently working configuration that's running in RAM memory. The startup configuration file is stored in NVRAM memory. The difference is that RAM is volatile and NVRAM is nonvolatile, so if you copy the configuration to NVRAM, it will be available when the switch is restarted or reloaded. So I'll press Enter, and you can see that I'm prompted for the destination file name. The default name is "startup-config," and you can see it between the brackets. I'll press Enter to accept the name within the brackets. My configuration is now saved. I can verify the location of my saved configuration file by putting in the command "dir" for directory. I'll put a space and a question mark, and you can see that there's two different types of storage that I have access to: flash memory and NVRAM. Both of these are non-volatile. The flash memory holds the IOS operating system, and the NVRAM holds the configuration file. I'll put in NVRAM and a colon and press Enter, and you can see there's the startup-config file.

Now if I was to reload the switch or incur a power failure, my configurations will remain. I'll press the arrow keys on my keyboard and do an up arrow to go back to the command "copy running-config startup-config." There's an easier way of typing this command with command shortening. Instead of having to type out "running-config" and "startup-config," I can simply type "copy run start" and command shortening will finish the command for me. If I reload the switch, I'll put in the reload command. "Proceed with reload." I'll press Enter to confirm. We'll see that after the switch reloads that the host name will remain S1, and we should see the same banner message. You can see there's the banner message. I'm prompted for a password. This indicates that the configuration was saved and the host name or device name shows up on the Command Prompt, also indicating that the configuration was successfully saved and reloaded upon startup. If I wished to erase the configuration, I'll type in "enable," put in my password to get back to privileged exec mode. I can put in the command "erase sta." I'll press the Tab key to finish the command. And the full command is "erase startup-config." I'll press Enter, and I'm given a warning. Do I want to really do this? Do I want to continue? The default answer is confirm, so I'll press Enter. You can see the message output to the screen indicating that the NVRAM has been altered, or in this case, erased. I can now reload the switch, and this time upon reload it should take us directly to the Switch Command Prompt without any authentication required or banner message. I'll press Enter, and you can see that I'm brought directly to the Switch Command Prompt. The host name S1 is no longer there, nor banner message, nor line console 0 password required. Let's say I make some changes to the switch. For instance, I'll type "enable" and "config t" to get to global configuration mode, and I'll change the host name to my switch. You can see the device name is now MySwitch. I'll exit and save the configuration.

So the running configuration has been saved to the startup configuration file. Now let's say I continue with some additional configurations. I get to global config mode, and I set a line console 0, password to cisco. I put in the login command, and let's say I change the host name one more time, this time to S1. Now, I've made these changes. Now, the current state of the switch is that it's running the latest configurations in running configuration. That means the latest configurations are running in RAM memory. Let's say I'm no longer happy with the configurations I've just added to the switch and I want to go back to the last saved state. The last saved state is where the device name was named MySwitch. I've changed it now to S1, but I haven't saved the configuration. I can revert back to the previous saved configuration by exiting to privileged exec mode and copying, in this case, not the running config to the startup config, but the opposite. I'll copy the startup configuration to the running configuration. This will load the startup configuration file into RAM and make it the new running configuration. I'll press Enter, and I'll accept the default, and you can see that the switch has changed names back to MySwitch. The startup config was loaded into the running config, thereby erasing the running configuration. Knowing how to save your configuration and erase a configuration and reload the switch is an important skill to master.