Video Demonstration - Working with IOS 15 Image Licenses (9 min)

Working with IOS 15 Image Licenses on an Integrated Services Generation two router, or ISR-G2 device. By default Cisco routers have the IP base license installed. This gives the routers the capability to use EIGRP, OSPF, RIP, NAP, DHCP, access lists, PPP and more. Additional licensing can be purchased which will unlock added features for the routers. There are three packages, or three additional licenses that you can install. The security license, the unified communications, or UC license, and the data license.

The security license will unlock features like VPN technologies, IP Sec, and intrusion prevention system or IPS technology. The unified communications technology package will unlock voiceover IP, and voice IP capabilities. And the data package will unlock enterprise level functionality, like multi-protocol label switching, or MPLS, and more.

Not all routers support all licensing options. For example the 1941 integrated services router does not support the UC license. There are two main types of licensing with the Cisco IOS. Permanent licensing and evaluation right-to-use licensing. To install or add an additional permanent license to the Cisco router you'll need the product ID number and serial number. Also known as the unique device identifier or UDI. You'll need to purchase a package or feature, also known as a product activation key. And then using the Cisco License Manager, CLM or the Cisco License Portal you can obtain a license file with your unique device identifier, and your product activation key.

Once you have your license file in hand, you can upload it to the router using a TFTP server. And then install the license file. Evaluation right-to-use licensing enables you to install any of the additional licensed features, supported by your router. And use them for up to 60 days. All you have to do is accept the end user license agreement. Put in the license boot module command to activate an additional technology package. Save your configuration, and then reload the router.

Cisco Academies that have signed up for Netacad maintenance are able to use the RTU license beyond the 60 day evaluation period with the security and UC technology packages. Let's see if we can add the security technology package to our Cisco router.

I have a console connection to a Cisco 1941 router using Tera Term. I'll type enable. To get to privileged user mode. And let's put in a show version command. At the bottom of the show version command you can see the license info. License unique device identifier. This is the product ID, Cisco 1941/K9. And then the serial number. You can see the technology package license information below. IP base, security and data. The unified communications package is not listed. As the 1941 integrated services router does not support it.

From this output here we can tell that this router currently has the IP base K9 current package. It's a permanent license. And on the next reboot it's also going to be at the IP base K9. Security package, none. Data package, none. So, we'll try to unlock the security technology package. And add an evaluation right-to-use license to this router. I'll type in a show license all command, and press enter. And you can see in the output, feature IP base K9 permanent license active. Feature security K9, license type evaluation right-to-use. Right now this license is not in use. And the end user license agreement has not been accepted.

So, we'll need to accept that. Let's enter the show license UDI command. In the output from this command you can see the unique device identifier, the product ID, serial number, and that the unique device identifier is the product ID followed by the serial number. To activate the security technology package first I'll need to go to global config mode. And once in global config mode, I'll need to accept the end user license agreement. License accept end user agreement, then press enter. Accept, yes or no? I'll enter y. And you can see here the response. License 6 end user license agreement accept all. The end user license agreement is accepted.

Now to activate the security package I'll type in license boot module. And then I'll put in a space and a question mark. You can see that the module name for this model router is C1900, and it tells me that, right there. So, I'll enter C1900, space, technology-package, and then a space and a question mark. And you can see that I have a choice between the dataK9 technology package, or the securityK9 technology package. So, I'll put in securityK9 and press enter. You can see I'm given a message. Use the right command to make the

license boot config take effect on next boot. So, for this to work we need to now save the configuration. I'll type end, and then copy run start to save the configuration file. I'll press enter to accept.

Let's do a show version command before we reload the router. You can see here at the bottom. Security, the current technology package, says none. But for next reboot, the technology package securityK9 will be activated. So, I'll type reload and press enter. And press enter to confirm. The router has reloaded. I'll type enable. And let's issue the show version command again. And you can see that the security package is now currently activated. Notice under type, EvalRightToUse. There is the evaluation right-to-use license. I'll type in a show license all. And we can also see that the eval right-to-use license for the feature securityK9 is active and in use. If I want to save my license I can type license save flash: and then I'll type router_license_files.

And let's see if we can save our license to flash memory. I'll hit enter. And you can see the license lines saved. And I'll do a show flash command. And at the bottom under line 10 is the saved router license files.