Video – Connect IoT Devices to a Registration Server

Hello everyone. This is our Cisco Packet Tracer connecting IoT devices to a dedicated registration server walkthrough video. This video's going to be great because we're going to step away from the home gateway wireless router and we're switching out to using a server that exists in the Internet, known as a Cloud server. Where do we even find this server? Inside of our categories, we're going to click on end devices, and in end devices, we're going to click on the third item in, which is the server. We've already had the server deployed, so we don't need to deploy another one, so we'll just click on the Cloud server on our screen.

When we click on the Cloud server, we open it up. First place we're at is the physical tab, and in this physical tab, we have a huge list here of different types of network interface cards that we can use on this server. We can use the default wired card that's on there right now, but we have all these different cards so we can connect this server to many different types of networks. Let's go to the services tab. In the services tab, we have tons of options here and features that didn't exist in the home gateway wireless router. We can deploy this server an as HTTP web server. We can have this be a DHCP server at the same time as a DNS server, syslog for logging messages, authentication, accounting, and authorization, and even an email server. Right now we're here to be an IoT registration server. We'll click on IoT, and now we have the ability to turn on or off the registration service for our IoT devices. We'll click on. At this point in time, our devices inside of our house network should now be able to connect and register to this Cloud server on the internet.

We have some configuration to do, but the service is on. Also, there's another cool thing we're going to do on this Cloud server. Instead of having to reference the IP address of the Cloud server, it would be nice to reference the actual, reachable web name of the Cloud server. Let's set it up. I'll go to the desktop tab, IP configuration, and we can see the IP address of our Cloud server. We can just right click on it and we can copy it. I'm going to go back to the services tab and I'm going to click on DNS. We're going to turn on the DNS service on the server. We'll click on the name. What would we like this server to actually be regarding internet reachability? I'd like it to be www.Cisco_IoT.com. And the address that's going to be resolved is going to be the one that we're copying and pasting, the IP address of our Cloud server. I can just paste that in here, and now we can click add. When any of our devices in our house connect out to the web and go to Cisco_IoT.com, they'll be able to reach this Cloud server's IP address. We'll remember that. Let me minimize the cloud server. We'll come back to it later.

At this point in time, we want to make sure we actually configure that Cloud server. To configure the actual IoT registration service on it, we'll open up our tablet PC, and in our tablet PC we're heading to the web browser. So we'll go to desktop, web browser. All we've done at this time is turned on the IoT registration server. We haven't actually set it up yet. So we're going to put in our web address in order to reach that server, Cisco_IoT.com, and I'll hit enter. And now we've remotely accessed and reached that registration server on the internet known as Cloud server. So we need to set up an actual account. We'll click sign up now, and let's create an account. How about a username of admin and we'll choose a kind of secure password of secure dollar sign 220. I'll click create, and I have to remember that password. Secure dollar sign 220. We're going to need it in just a little bit. Right now, the actual IoT registration service is up and running. We're good to go.

There's no devices listed here yet because we have to tell our IoT devices to connect. Let's minimize this tablet PC and now we can take a look at our home smart devices, and we can tell them to register themselves with that Cloud server. Let's do it. I'll click on my smoke detector. We get the basic specifications of what we can do with the smoke detector. I'll go to the config tab, and in the config tab we're in settings, you can scroll to the bottom and there's the remote server. We'll click remote server, and check this out. We'll put in www.Cisco_IoT.com and then for the username, it's admin, and the password is that password we created, secure dollar sign 220. I can hit connect. It's waiting. Awesome, this is going through. Once it says refresh, you know it went through. The smoke detector has now registered itself with that server out on the public web. We can minimize the smoke detector. We'll head over to the door. I can click on my smart door, see the basic specs on it, go to the config tab, scroll to the bottom, and again, remote server. We'll put in that address, Cisco_IoT.com, username and password, just like before. And click connect. And again, once it says refresh, we know it's gone through and actually registered itself with that server. In the meantime, I've already pre-configured the fan and the light, so I can just click on those and tell them to connect. How do we actually see if those devices have connected? We can click on our tablet PC,

and check it out. That tablet PC is still on that webpage for the IoT Cloud server. Here we see the smoke detector, the door, the light, and the fan. You can click on each one of these and you can either take a look at the status of these devices or you can even go to them and be able to control, such as locking the door or unlocking the door, the speed of a fan.

Keep in mind, this is a dedicated server that we have existing on the public Internet. As long as you're on a PC, or a tablet, or a smartphone, that has internet connectivity, you'd be able to manage all of these devices inside of your smart home. Make it your own, play with Cisco Packet Tracer, and enjoy IoT.