

Video – Modifying a Thing in Packet Tracer

Hello, everyone. This is our Cisco Packet Tracer Modifying a Thing walkthrough video. And this video's going to be the best one ever. Why, because we have a wireless access point hooked to a router to a local network down below with a server named Mission Control. You can tell we're going to have some fun.

So let's start it off by going ahead and clicking on Components and then clicking on Thing. It's the blue puzzle piece. When we click on Thing, we'll then put it in our topology somewhere in the cloud. Now this puzzle piece is an IoT device that we're going to custom build. So we'll go ahead and click on it, open it up, we'll resize it so we can work on this a little bit easier, and here we're in the Specifications tab. So here, we'll just type in, this will be a shuttle. You know where we're going with this.

Now, right now, by default, we're in the advanced mode. You can double check that by clicking the Advanced button, watching tabs go away, click the Advanced button again, and they're back. So with our advanced mode, which was the default, we're going to go to input/output config and we want this thing to have a network adapter. So we'll click on the first network adapter and we'll change it to 1W, which includes wireless. For digital slots, I just need one, analog, I don't need any. The physical, the power adapter, we're good to go. We'll hit the Config tab next. In the Config tab, we'll come back here in just a little bit. We don't want to hit the Config tab too early regarding a network connection and the IoT server. So let's move onwards and we'll come back here later. The only thing we should do right now is just name it Shuttle.

So we'll go ahead now to the Thing Editor, and in Thing Editor, component one, we're going to name this Shuttle_Launch. For Slot Mapping, we'll choose digital, and I'm just going to choose number five. Now we actually want to have some graphics here for as the shuttle that we're about to create is going to launch. So we'll click the New button, and I'll go to my desktop, and on my desktop, I have a space shuttle before launch. I'll click the next New button, back to my desktop, a shuttle being launched. So we have both of our graphics for our changing of state of before launch and after launch.

In order to actually be able to interact with these states, I'm going to go to the Rules tab, and in this Rules tab, I have to add in these states. So I'll click Add. In this sub-component, I'll click there and click Shuttle_Launch. When the value's low, I'll have a picture of the shuttle sitting on the launchpad. I'll click Add again, select my Shuttle_Launch, and when the value is high, I'll change that graphic to when the shuttle is being launched. We're now done in the Thing Editor.

We'll head over to Programming, I can double click on that JavaScript code, open it up, and it's a very, very, very basic code here, we don't really have much to interact with. Now instead of us writing this code from scratch, we're going to pull it from somewhere. So let me minimize it, we'll take a look at what we did, and talk about borrowing some code. So if I were to hold down my Alt key on my keyboard and left click on it, I've got no interaction, because my programming code hasn't included that yet. So we need to borrow some code from somewhere. So let's have some fun while we do it. I'm going to click on End Devices, click on Home, and we're going to pull code from a lawn sprinkler. We're going to take a lawn sprinkler, put it on our topology, and we're going to borrow some code here and modify it to make a shuttle launch into space.

This is going to be great. So I'm going to open my Lawn Sprinkler, resize my video a little bit, and let's go to the Advanced button, Programming tab, and let's open up that lawn sprinkler code. To make this easy, we're just going to Ctrl + A, copy it all with the Copy button. Let's head back to the space shuttle code, highlight it all, paste it, and before I run this code, let's make this epic. Let's change the name Lawn Sprinkler to something great, like Shuttle. Much better, and now I'll click Run, and the code is running for my shuttle.

So to see if it actually works, I can minimize my shuttle and I can hold that Alt key and I can left click on the shuttle, and check it out, the shuttle will launch into space. Click it again and it's back on the launchpad. Now, that's great that that works, but it would be nice to be able to remotely send this shuttle into space instead of having to stand right next to it and push a button. So let's hook this shuttle up to the wireless network and have this thing register with the Mission Control server.

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So let's click on that shuttle again, and now, inside of our Config tab, I'm going to go to Wireless. And for the wireless SSID, we're going to change it to LAUNCH. I'll click Static, then I'll click DHCP, they want to make sure that the shuttle receives an address so it's on the network. It is. Also, we'll click on Settings inside of our Config tab, and we're going to tell this shuttle to register with the Mission Control server. So we'll click Remote Server, and that server address is 10.0.0.200. The user name on that server is MCONTROL, all caps, and the password is totally not secure and should never be used: cisco. I'll click Connect and that should then connect the shuttle to the IoT registration server, which is over here, known as Mission Control.

Now, we're going to open up the laptop on that Mission Control network, head over to the Desktop tab, we're going to open a web browser on this laptop, and let's head over to that Mission Control server to remotely launch that shuttle: 10.0.0.200. As we said before, the username was MCONTROL, all caps, and the password was a super-insecure password of cisco. When I click Sign In, I can now control the shuttle from the laptop going into the Mission Control server. I can click on that shuttle and it's time to launch, click the button, it goes green, and the shuttle has launched into orbit, all being done playing around in Cisco Packet Tracer utilizing things, and even borrowing the code from a lawn sprinkler. So take your time with Cisco Packet Tracer, build out your own Internet of things device, and have some fun.