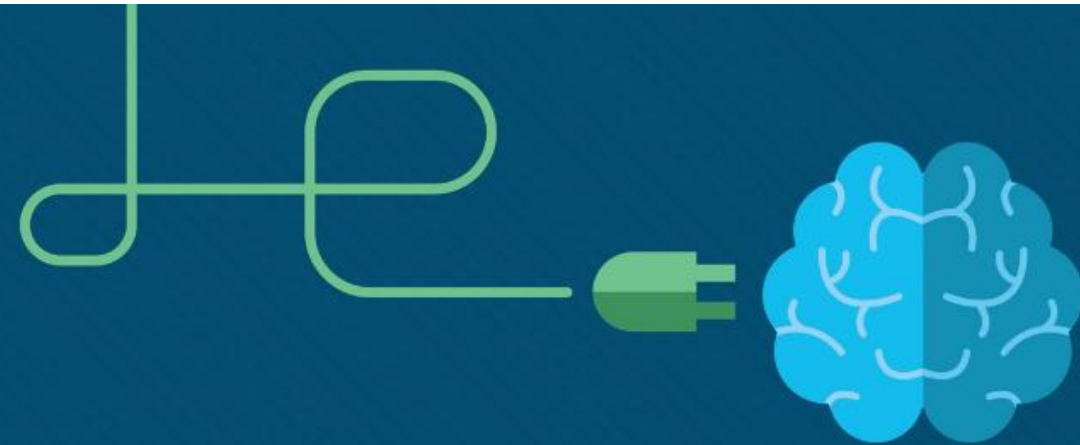




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Packet Tracer 7.1.1

Stefan Platzek
Networking Academy Day 2018
21-Apr-18



Agenda



What's new

- New Devices
- Workspace
- Other Changes

“Hands” on

Physical Workspace

Programming IoT

Activity Sequencer

Activity Code Check

New Devices

3650 MLS
4321 Router
Access Point-AC
2504 WLC
Generic WLC
3702
Generic LW Access Point

Workspace

Containers scale properly
Rack updates/spacing
Patch panels and wall mounts
Power distribution units
High resolution display support

Other Changes

Uniform PDU format

New IOS/IOS-XE

CAPWAP protocol

App support on PC

Export programming project as pkp

Custom user command to PC CLI

MQTT

Activity Sequencer and Editor

Activity Wizard Code Testing

different providers for cellular networks

IoX client support on PC

Cartridge support on 829

ASA security plus license

enhancements to existing protocols

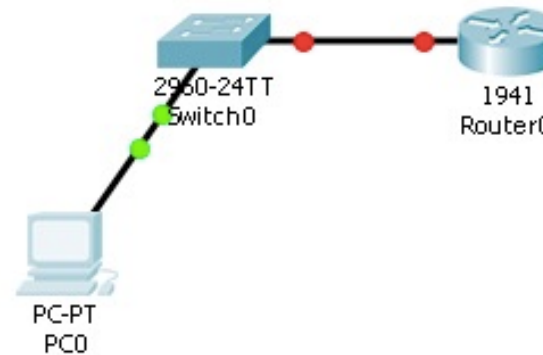
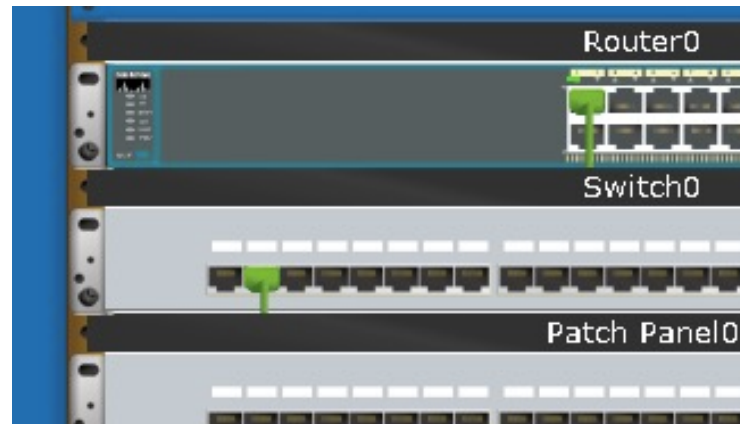
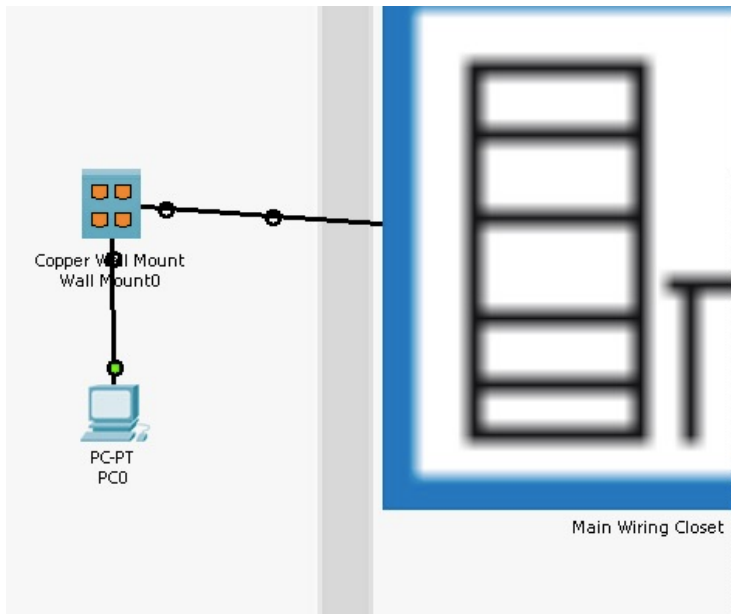


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Demo

Patch Panel





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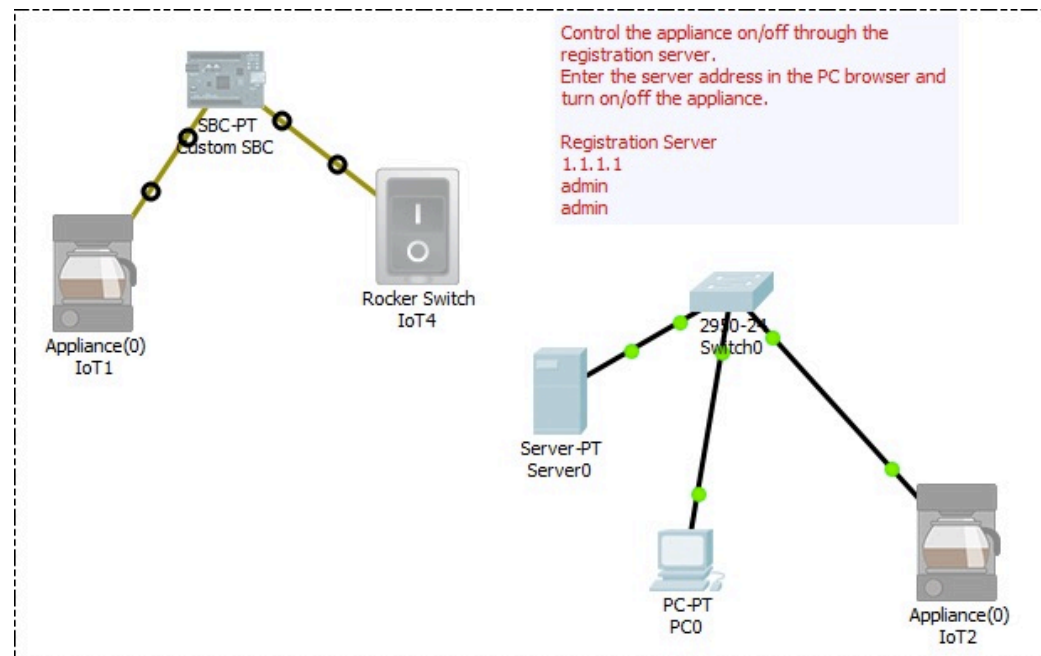


Demo

Programming Internet of Things - 1

- “Smart” Home as example for interdisciplinary teaching

- Use saves boiler-plates
- Start simple
- grow in complexity



Programming Internet of Things - 1

SBC

- Understand the example
 - What does it do?
- Extend the example
 - What to change?

The image shows a network simulation environment. At the top, there are tabs for 'Specifications', 'Physical', 'Config', 'Desktop', 'Programming', and 'Attributes'. The 'Programming' tab is active, showing a Python script named 'main.py' in a code editor. The script contains the following code:

```
1 from gpio import *
2 from time import *
3
4 def main():
5     while True:
6         customWrite(0,digitalRead(1))
7         delay(500)
8
9 if __name__ == "__main__":
10     main()
11
```

Below the code editor, there is a network diagram. A central node labeled 'SBC-PT Custom SBC' is connected to four other nodes: 'Appliance IoT0', 'Appliance(0) IoT1', 'Rocker Switch IoT4', and 'Rocker Switch IoT5'. The connections are represented by yellow lines with circular nodes at the ends.

Programming Internet of Things - 1

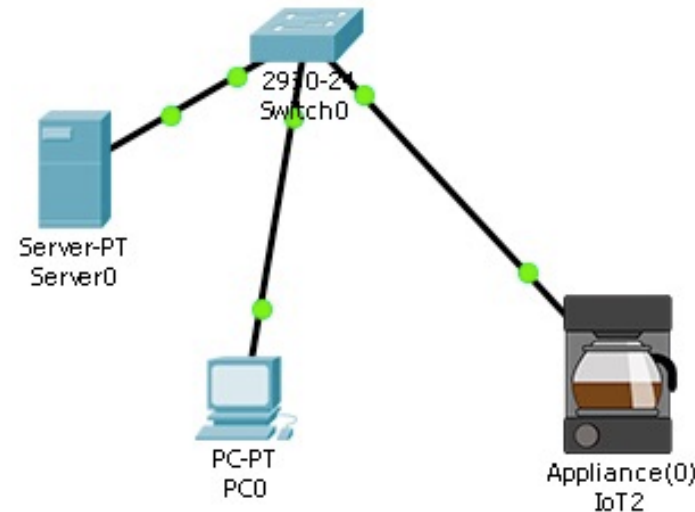
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be  Berlin

it bildungsnetz


Registration Server

- Understand the example
 - What does it do?
 - Start by Turning Appliance(0) on
- Extend the example
 - Add server
 - Turn IoT-Service on
 - Add user
 - Add Appliance
 - Register Appliance





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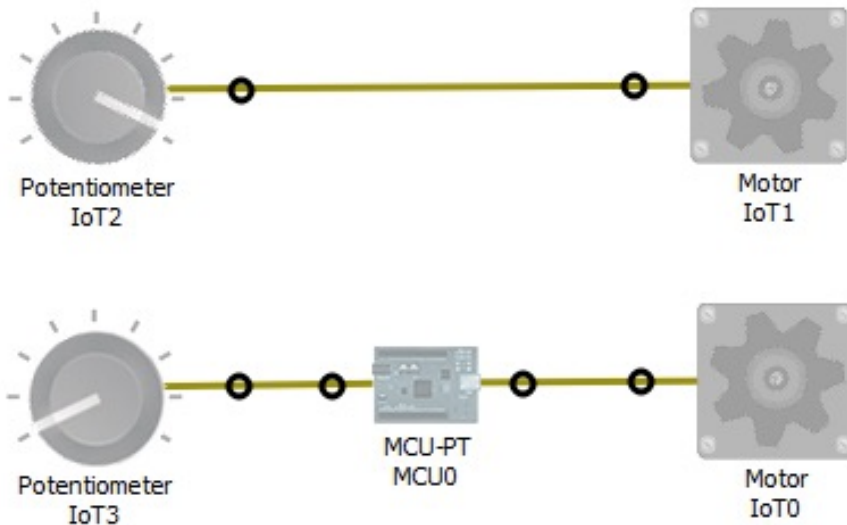
Demo

Programming Internet of Things - 2

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- Use Motor



```
from gpio import *  
  
def main ():  
    while True:  
        analogWrite(1, analogRead(A0)) ;  
  
if __name__ == "__main__":  
    main()
```



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Demo

Activity Sequencer

- Ever heard of?
- What's the idea?
 - Work PKAs one after the other
 - Allow „forks“

Enable Debug Mode: ?
false

Activity Sequence Title: ?
My Sequence 1

Initial Activity Name: ?
A1

Total Activities: ?
1

Activity 1

Activity Name: ?

A1

Activity Filename (.pka): ?

klm.pka

Activity Sequencer

The screenshot displays the 'Activity Sequencer' interface. On the left, a window titled 'Activity Sequencer' shows 'A1' and 'Press Start to begin.' with a 'Start' button. The main area shows a quiz window titled 'My Quiz' with the topic 'Intro Networks' and 'Question 1 of 2'. The question is '1. What is the Broadcast Address of network 100.1.2.77/25' with four radio button options: 100.1.2.96, 100.1.2.100, 100.1.2.127, and 100.1.2.255. A 'Submit' button is at the bottom. A floating window shows a 'Congratulations!' message with a text input field for an email address and 'Cancel' and 'OK' buttons. The floating window also displays 'Time Elapsed: 00:00:47' and 'Great job! Please take the quiz before moving on to the next activity.' and 'Congratulations on completing this activity!'.

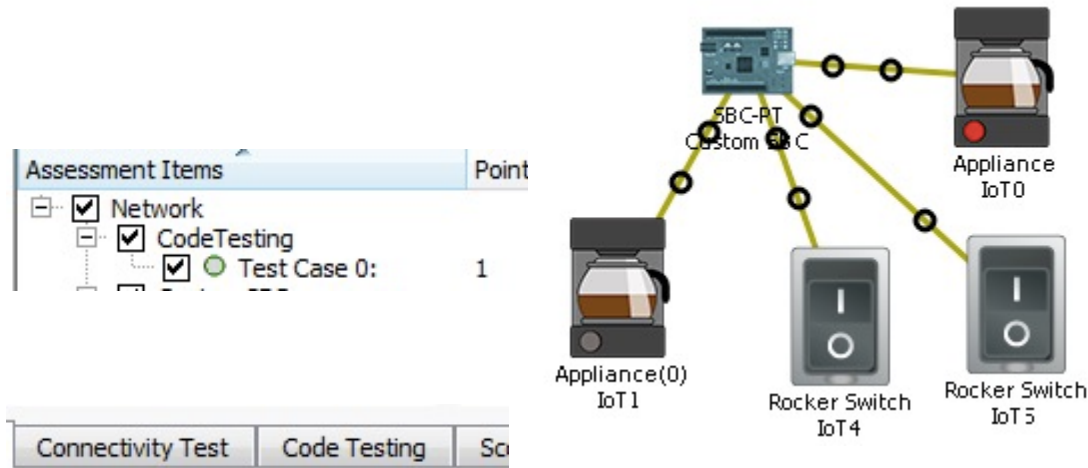


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Demo

Activity Wizard Code Check



Assessment Items	Point
<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Network <input checked="" type="checkbox"/> CodeTesting <input checked="" type="checkbox"/> Test Case 0: 	1

Connectivity Test Code Testing Sc

Device	Application	Condition
IoT4	ch (JavaScript)	Edit

```
function _doCodeTest()
{
    return (GetValue());
}
```

IoT4

Specifications I/O Config Config Thing Editor Programming Attri

Switch (JavaScript) - main.js

Open New Delete Rename Import

main.js

```
1 var is_open = false;
2 var P1 = 0;
```

```
22 }
23 function GetValue() {
24     return (!is_open);
25 }
```



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Thank you.



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Thank you.



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