



**uCertify**

**Lab**

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# About

uCertify Lab provide “hands-on learning” by simulating real-world, 3D, hardware, software, computer programming & command line interface environments.

uCertify Lab offers following four types of simulations:

- Software Simulation
- LiveLab
- Coding Sandbox
- 3D Lab

These Lab can be mapped to any course, textbook and training material, therefore adding value and “hands-on” component to virtually any training.

uCertify Lab provides virtual and live environments where students learn by doing. They are an inexpensive and safe way to explore and learn. uCertify Lab encourage exploration and experimentation in a risk-free environment resulting in a better learning for students. You can get hands-on learning for any subject by providing virtual or simulated environments for:

- Hardware
- Software
- Operating Systems
- Command Line Interfaces
- Over 30 programming languages
- Abstract concepts (over 30 interactive items)
- Real world objects and characters

There are explanations and remediations available with each activity along with the videos remediation. It is accessible and ADA (The Americans with Disabilities Act) compliant that results in better outcomes for learners of special needs.

# Software Simulation

uCertify Software Simulation can be used for self-paced, guided, and instructor-led training within academy or industry. Educators can map software simulation to a textbook and augment their existing credit courses. Educators can also customize Lab to accommodate diverse audiences and education missions. Training delivered through uCertify Lab is designed to engage students through interactivity and instantaneous feedback. Students are presented with a learning path that is continuously optimized based on their performance. uCertify Lab is cloud-based, device-enabled and can be easily integrated with a Learning Management System.

To attempt software simulation, click the **Performance-based Lab** tab on the dashboard or select the **Performance-based Lab** option from the **Course Navigation** menu.

**uCertify** :: CompTIA Network+ Deluxe Study Guide Third Edition (Cour... Hello Student  
My Library ▾ Feedback & Support ▾

- Pre-Assessment**  
Identify areas for improvement with this 95 question assessment before you begin the course.
- Chapters & Lessons**  
Study lessons, complete labs, watch videos and work through flashcards, exercises and quizzes.
- Practice Tests**  
Prepare for your exam in this 360 question simulated test environment.
- Performance-based Lab**  
Learn the real world skills using performance-based lab.
- Post Assessment**  
Gauge your understanding & readiness.
- Graded Assessment**  
Prove your mastery of each topic by completing the graded assessment.

**Link with Instructor**

**Day 332**

**Start** 12-May-17 **2%** **Target** 08-Nov-17

Based on your activity to date, your readiness score is 2%. If you continue at this pace, you will need 542 months, 1 week, 1 day, to achieve a readiness score of 100%. Your current estimated completion date is 16-Jun-63.

**Open Study Planner**

**Certificate of Completion**  
When you achieve a readiness score of 90% or better, you are eligible to receive your certificate of course completion from uCertify.

**Test History & Performance Analytics**  
These reports will allow you to gauge your progress, identify the areas you have mastered and help you focus on areas which need improvement.

**Figure 1.1: Course Dashboard with Performance-based Lab**

Here are the shortcuts and their description for software simulation:

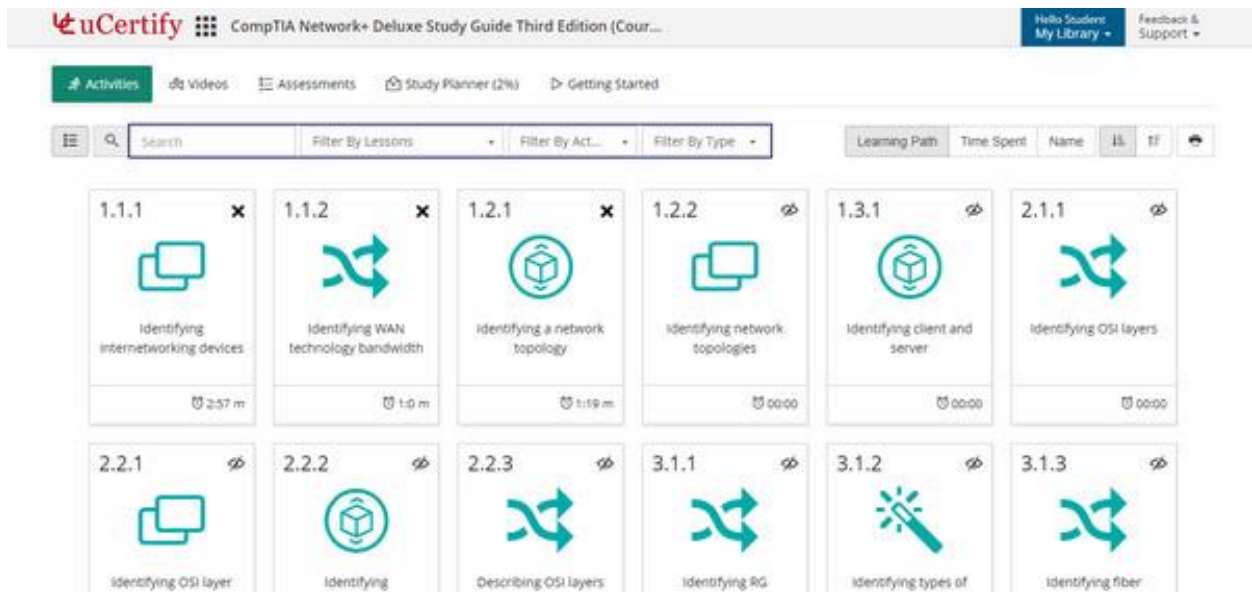
Shortcuts	Description
R	To navigate to the item list
Alt+T	To reset the Lab task
P	To view the previous item or activity
N	To view the next item or activity
D	To open the device tab
X	To open the exercise tab
V	To open the evidence tab
A	To open the answer tab
Up & Down arrow keys	To select the devices in the Lab task
Tab+Enter (After selecting device)	To move the devices in the Lab task
Alt+C	To close the Lab task
Alt+H	To open the help tab in the Lab task

Alt+M	To minimize/maximize the Lab task window
Alt+S	To restore the Lab task window
Alt+I	To print the Lab task activity
Alt+1	To open the Lab task tab in review mode
Alt+2	To open the explanation tab in review mode
Alt+3	To open the answer tab in review mode
C	To mark the answer as correct
I	To mark the answer as incorrect
Alt+V	To open the video
Space Bar	To pause/play the video
M	To mute/unmute the video
Up Arrow	Increase the video volume
Down Arrow	To decrease the video volume

Right Arrow	To forward the video by five seconds
Left Arrow	To move the video back by five seconds

**Table 1.1: Performance-based Lab Shortcuts**

Search a particular Lab using the Search box and filter the search results further using lesson, actions performed, and type of the Lab.



**Figure 1.2: Performance-based Lab Window with Options to Search the Desired Lab**

Click on the desired Lab item to perform it.



**Figure 1.3: Lab Activity**

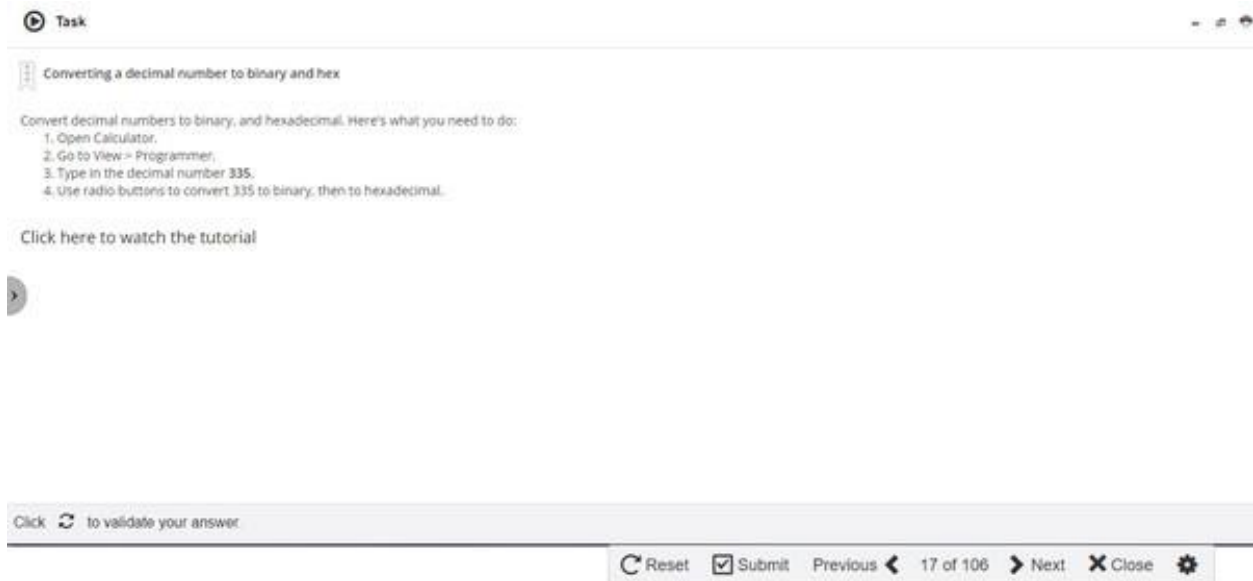
Click on the expand-arrow button, on the task information modal box, to read the information about the task.



**Figure 1.4: Lab Activity Question with the Expand Arrow Button**

Read the required steps mentioned under the task objective to perform the task, or you can watch a video tutorial with voiceover and interactive transcripts by clicking the “Click here to watch the tutorial” link.





**Figure 1.5: Lab Activity Question Window**

Video along with the voiceover will be played in the left pane and its transcript will be shown in the right pane.

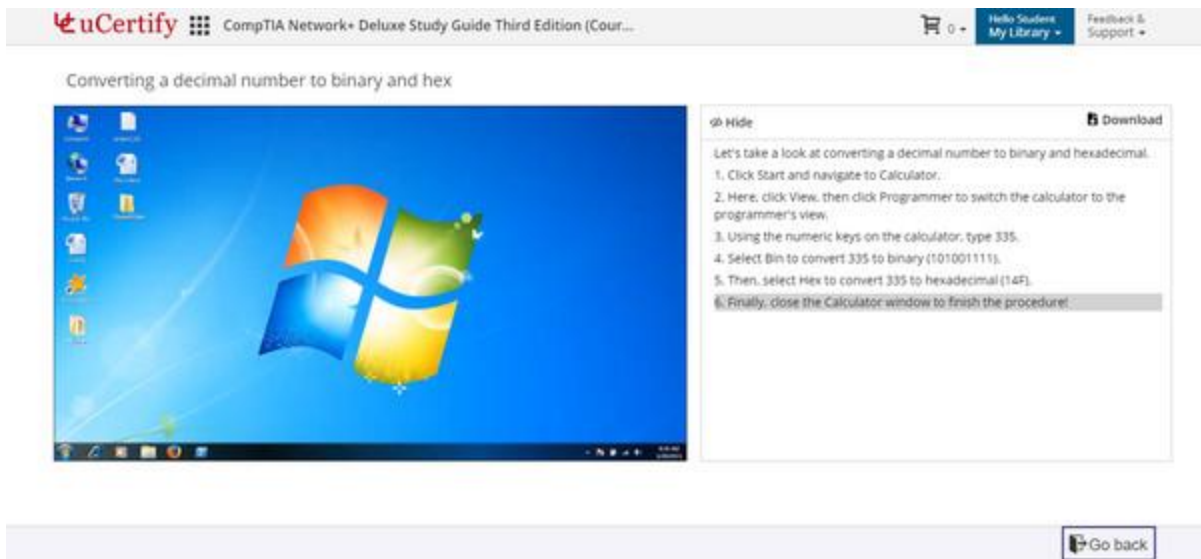
## **Interactive Transcripts**

In interactive transcripts, each word is clickable. You can clip a specific part of the video by clicking on a word or a portion of the text. Also, each step mentioned in the video will be highlighted in the transcripts as per the voiceover.



**Figure 1.6: Lab Video with Interactive Transcript**

After watching the steps required to perform the task, click the **Go back** button.

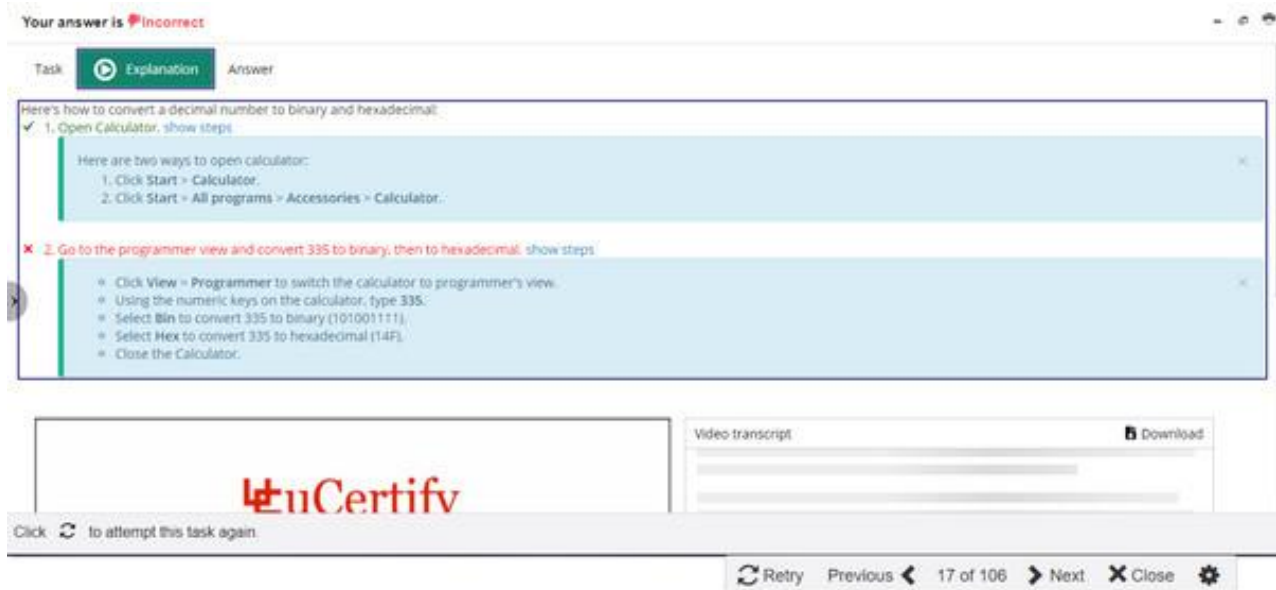


**Figure 1.7: Lab Video Page with the Go Back Button**



**Figure 1.8: Submit Lab Task**

The explanation lines will appear in red and green colors with the show-steps option. The green color refers to correct steps, red color refers to missed or/and incorrect steps, and show-steps provide the process to attempt the task.



**Figure 1.9: Explanation Tab With Correct and Incorrect Answers and Method to Perform the Lab**

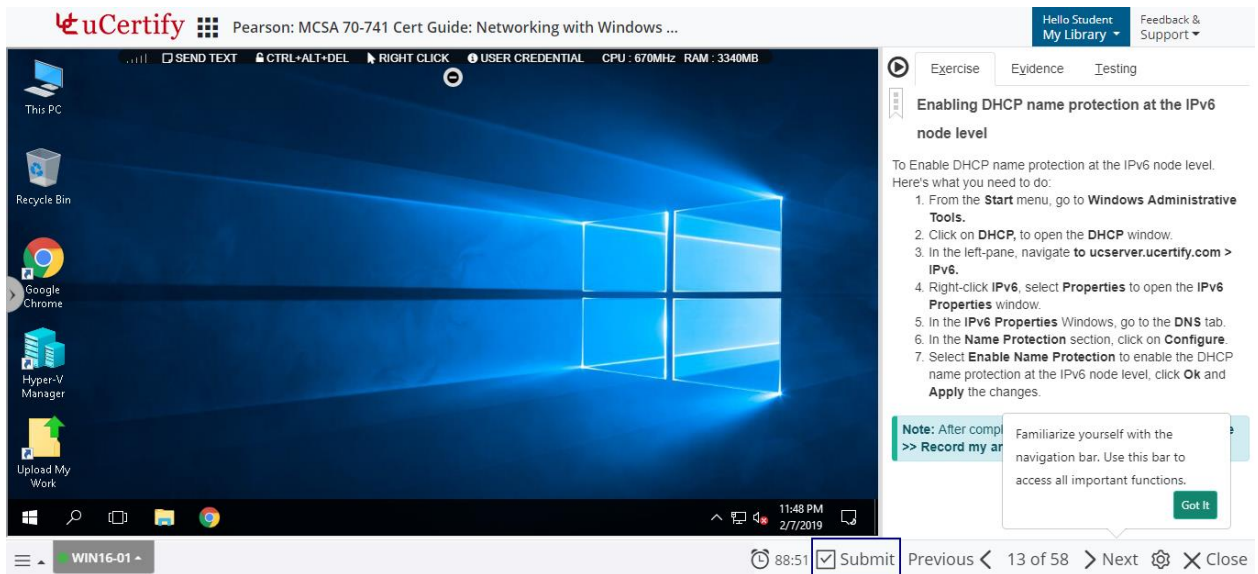
Click the **Minimize** button. Attempt the Lab and click the **Submit** button to validate your task performed.

## LiveLab

uCertify LiveLab is a real computer hardware, networked together and conveniently accessible via a web browser. It allows students to experiment and configure hardware such as a computer, server, switch or router in a risk-free environment.

uCertify provides a comprehensive way of learning through LiveLab. Here is how to perform LiveLab:

- In the library page, click the **Open** button of the LiveLab. You will be redirected to the course dashboard.
- Click **Performance Lab**. You can search the desired Lab using the **search** box.
- To filter your search results further, click the **lesson, action, or type** dropdown and select your desired options.
- Click on the desired virtual Lab activity and then click the device name button and select the **On** option.
- Now attempt the Lab as per the instructions. Click the **Submit** button and select the **Evaluate** option to see if you have performed the virtual Lab correctly.



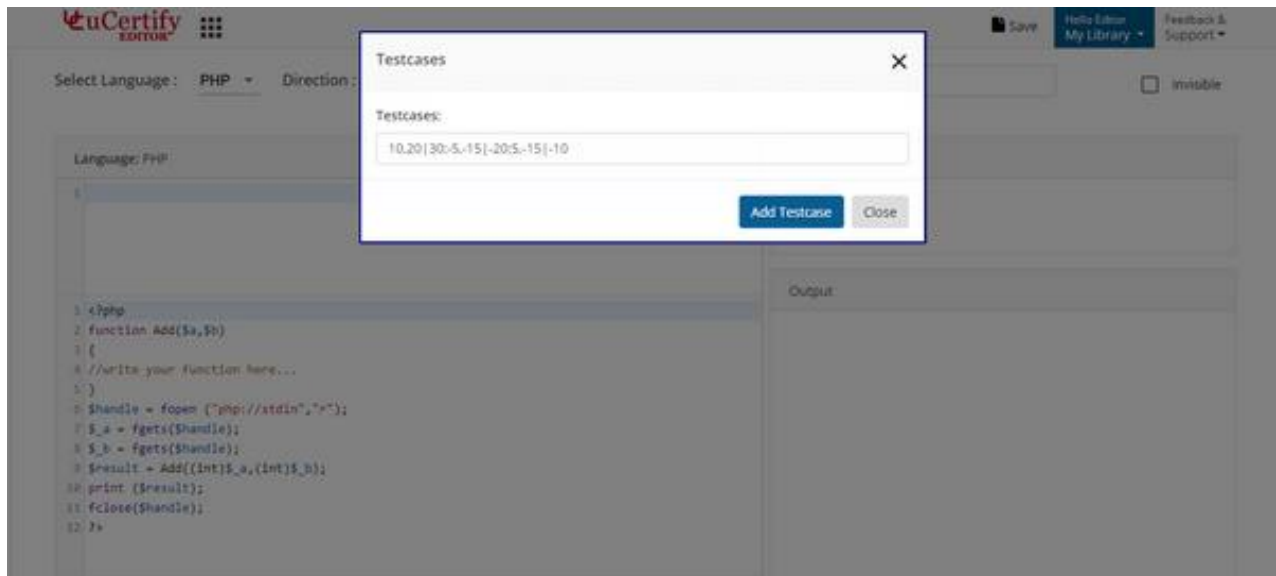
**Figure 2.1: LiveLab Activity with the Submit Button**

- To hide the explanation, click the **Submit** button and select the hide explanation option. To upload any resource related to the task, click the **Evidence** tab and click the choose button to select the desired file. Finally click the **Upload** button.
- To view the task in full screen, auto fit the task, share virtual machine, take a screenshot of the task, record the task, change font and color settings, and view keyboard shortcuts, click the **settings** icon at the bottom and select the desired option.
- Click the **Close** button to end the Lab activity.

# Coding Sandbox

uCertify Coding Sandbox provides a virtual coding environment, where students can write code in about 49 languages. It challenges students to learn and practice their coding skills hands-on in an integrated development environment (IDE) with immediate feedback and code validation. Authors can create coding sandbox that students will attempt later on. To create coding sandbox, follow the below steps:

- Visit <https://www.ucertify.com/editor/?action=new>, and on the left side panel, click the **search** button. Type Evalpro in the **Search here** box. Click the arrow icon to minimize the side panel and click the **Evalpro** item type.
- Provide the title of your question in the **Title** section and question in the **Stem**.
- Select the programming language from the **Select Language** drop-down at the left corner.
- There is an already created program in the **Language** box. Provide the line numbers in the “Enter line no to enable box” to allow the learner to edit the lines of the program. Click the **Add Testcase** button at the right side of the Language box. The **Testcases** modal box will open. Provide the numbers in the **Inputs** box on which the function is to be performed. Provide their answers in the **Result** box. Click the **Add Testcase** button.



**Figure 3.1: Evalpro Editor Area with the Testcases Modal Box**

- Click the **Run** button to check your answer.
- Provide the explanation of the correct answer in **Remediation**.
- Click the **Save** button at the top right side to create your framed question. A confirmation modal box appears; click the **Save** button to confirm.

Here is how to attempt coding sandbox:

- Open the desired course in your course library, and click the **Pre-Assessment** tab or the **Practice Set** tab to attempt the Programming Language questions or you may attempt it through Connect the Idea.
- Click the desired Test Set. Each test set has three learning modes: Learn, Test, and Review. Click the desired mode to attempt the test set.
- Read the questions carefully and write the programming functions accordingly.
- Click the **Next** button to view another question. Attempt the questions and click the **End Test** button. To confirm your action, click the **End Test**



button. You will then be redirected to the result page, where you can review your test results.

## 3D Avatar Based Simulation

Learners constantly need to absorb and apply visual data to make decisions on the job, therefore, uCertify offers 3D avatar based simulations in its courses to provide them with the same experience. uCertify 3D avatar based simulations is the imitation of the real world in virtual space by computer programs, allowing for the virtual interaction of users, walking through a computer-generated environment. It offers users immersion, navigation, and manipulation with realistic effects.

Use of 3D is an asset in the teaching-learning process as it provides interactivity and experimentation, an enabler of knowledge and analysis of various situations. To attempt 3D avatar based simulation, perform the following steps:

- Open the desired 3D avatar based simulation from **My Library**.
- Click the **Chapter and Lessons** tab on the dashboard.
- Click the desired chapter from the **Table of Content**.
- Now, click the **Start** button parallel to the 3D avatar based simulation name.
- The 3D avatar based simulation will open. Now, click the **Play** button and attempt the simulation as per the instructions.



**Figure 4.1: 3D Avatar Based Simulation**

- After the simulation will be completed, you will get result and score percentage. You can also view your performance in each question by clicking the **Check Individual Result** button.
- Finally to end the simulation, click the **End Game** button at the bottom and click the **Yes** button to confirm.