



Virginia Cyber Range Exercise Area *Cyber Basics* Faculty Quick-Start Guide

September 2017

This guide is intended to get faculty quickly up and running using the Virginia Cyber Range exercise area and the Cyber Basics curriculum and exercises.

A. Accessing Cyber Basics content in Virginia Cyber Range Courseware Repository

For access to Cyber Basics courseware, which includes lesson plans, slides, and exercise documents, faculty should follow these steps.

1. Register for an account in the Virginia Cyber Range courseware repository at this URL:
<https://virginiacyberrange.org/user/register>.

Notes:

- a. Accounts are only available for faculty in Virginia public high schools, community colleges, and universities. If you fall outside that group but would like an account, please send an email describing your situation to contact@virginiacyberrange.org.*
 - b. Note that teachers can browser the courseware repository without registering for an account, but must have an account to access downloadable documents.*
2. Access the Virginia Cyber Range courseware repository at
<https://virginiacyberrange.org/courseware>.
 3. Enter 'Cyber Basics' into the search bar at the top of the page to find corresponding courseware.

Any credentials you will need to log in to a virtual environment in the Virginia Cyber Range exercise area will be in an exercise document you can download from the courseware repository. When you select an exercise (step B.4. below) you will be able to follow a link back to the courseware repository to a page where you can download the associated exercise document.






B. Setting up your class for the Cyber Basics exercises in the Virginia Cyber Range Exercise Area

Before you can set up your course in the exercise area, you will need to contact the Virginia Cyber Range team to have your course provisioned. Send an email to accounts@virginiacyberrange.org that includes your full name, position, and school. Please also provide the name of the course that you intend to use the exercise area for and a one-to-two sentence description. We will use that information to provision your course.

Once your course has been provisioned, you will receive an email from contact@virginiacyberrange.org with an invitation to join your course as an instructor. When you've accepted your course invitation, follow these steps to get your students' environments set up in the Virginia Cyber Range exercise area.



1. Log in to your Virginia Cyber Range exercise area account. On first login, you will be prompted to associate your account with an OpenID provider (Google or Facebook). In the future you should always log in to your exercise area account using that provider.
2. Select your course. The course page will appear with the course title, description, and an empty list of exercises. Menu options on the upper-right corner of the page provide basic instructor functionality, which provides pages for the following.

	Edit course – this page lets you change your course name, description, and edit the email that will be sent to students you invite into your course.
	Invite Others – this menu item lets you invite students and teacher’s assistants (TAs) into your course.
	Add exercise – this page lets you add exercises and exercise environments to your course.
	Manage teams This page provides functionality to group students into teams. When students are organized in teams, they all have access to the same exercise resources instead of each student having their own copy. The default behavior when adding students to a course is that each student is put into their own team. This page also shows which students have not accepted their invitation to your course (student names with unaccepted course invitations are shown in red)
	List members – this menu item lists the students, TAs, and teachers in your course.

3. Add students to your course.
 - a. Click the ‘Invite Others’ button.
 - b. Enter your first student’s full name on the ‘Name’ line and email address on the ‘Email Address’ line (leave the ‘Team’ entry blank; the default behavior will be that each student will be a team of 1).
 - c. Click the ‘SEND INVITE’ button. Your invitation will be sent and you will be returned to the ‘Invitations’ page.
 - d. Continue to invite each of you students, entering their full name and email address and selecting ‘SEND INVITE.’ If you click on the ‘Manage Teams’ menu item you will see your list of invited students. Student name will appear in red until they accept their course invitation.

Note: There is also an option to upload students in bulk using a comma-separated list (.csv file). You will find this option at the bottom of the ‘Invite Others’ page. Simply download the example .csv file, modify it with your students’ names and email addresses, save the file, and drag it onto the page. If you leave the ‘role’ column blank it will default to ‘STUDENT.’ If you don’t assign teams, students will each be placed into their own team and get their own copies of each exercise.

4. Add Laboratory Exercise: Cyber Basics – Reconnaissance and Networks Scanning Lab. This laboratory environment is sufficient for students to run all of the Cyber Basics exercises, so



there is no need to add the other Cyber Basics exercises to your course. (They are made available in the exercise list in case any faculty choose a specific exercise instead of using them all.)

- a. Click the 'Add Exercise' button.
 - b. The 'Course' field will be pre-populated with the name of your course and is not editable.
 - c. From the list of available exercises, select *Cyber Basics – Reconnaissance and Network Scanning Lab*.
 - d. In the 'Team' field, leave the default 'All Teams' entry selected. This will ensure the exercise is deployed to all of your students. (Another option is just provision the exercise to 'Team Instructor' so that you can test it beforehand. You can then delete your test copy of the exercise before you provision it again to 'All Teams'.)
 - e. If you would like you can edit the start date/time and end date/time the exercise will be available to your students. It is probably fine for now to leave the default values – you can change them later if you would like.
 - f. Click the 'CREATE EXERCISE' button. You will be returned to your course page and the exercise will be added to your course.
5. Start your new exercise.
- a. On your course page you should now see the exercise(s) that you have provisioned for your course. Click an exercise title to go the page for that exercise.
 - b. Click the 'START' button to provision and start the virtual machines used for your instructor copy of this exercise.

When you first create the exercise, and depending on the level of complexity, you (and your students) should wait up to 30 minutes or so for the exercise environments to be deployed. When the environment is ready, your Start button will be replaced with 'JOIN', 'STOP', 'RESET', 'SNAPSHOT' buttons.

Note: In the future when you click the 'START' button, it will only take 15 – 20 seconds for your virtual machines to start. You only have to wait the first time when the systems are being initially provisioned.

- c. Click the 'JOIN' button to open your virtual machine desktop in a new browser tab. The credentials you need to log in to your new exercise are included in the exercise document you can download from the courseware repository.

Note: Your exercise will not open if your browser is blocking pop-up windows. Be sure to disable your pop-up blocker for the [virginiacyberrange.net](https://portal.virginiacyberrange.net) domain.

C. Have your students access their copies of the exercise in their Virginia Cyber Range accounts.

Students should use these steps to gain access to their Virginia Cyber Range resources.

- a. Log in to the Virginia Cyber Range exercise area (<https://portal.virginiacyberrange.net/>) using OpenID credentials.



- b. Select your course from the options listed (students will only see courses in the range in which they are enrolled, so most will only see one course option).
- c. Select the appropriate exercise from the list provided. Clicking on an exercise will expose a link to “View Team X’s exercise”.
- d. Click through to see the exercise title and description, along with a ‘START’ button.
- e. Click the ‘START’ button to start the virtual machines used for your copy of this exercise. It will take 10 to 15 seconds for the systems in your virtual environment to boot, after with the ‘START’ button will be replaced with ‘JOIN’ and ‘STOP’ buttons.
- f. Click the ‘JOIN’ button to open your virtual machine desktop in a new browser tab.

Note: Your exercise will not open if your browser is blocking pop-up windows. Be sure to disable your pop-up blocker for the virginiacyberrange.net domain.

- g. User credentials for the cloud-based virtual machine will be provided by your instructor.