

Hands-on Cybersecurity Exercises that are Easy to Access

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The critical shortage of cyber security professionals has driven faculty interest in adding this to the curriculum, and it was added to the ACM/ IEEE Model Curriculum of 2013. This is a subject that demands hands-on exercises. There has been a modest increase in the number of such exercises, but the limit is usability. Most faculty do not have the time to create their own exercises, modify and install VMs, and set up assessment mechanisms. EDURange is a framework for accessing, developing and assessing interactive cybersecurity exercises. It has a range of exercises from introductory to advanced. We will demo an introductory exercise about using the command line and an advanced exercise about network scanning. We want to reach and engage as many faculty as possible, so that they can develop their own exercises. EDURange uses VMs in the cloud. Students only need an ssh-client. We have built tools to give faculty detailed information on how students are doing. This allows instructors to more easily see when students are stuck or heading in the wrong direction. The exercises we have created have manuals that instructors can use. Information about EDURange can be found at <https://edurange.org>.