

Carnegie Mellon University | Software Engineering Institute

# CyberForce User Guide

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# Introducing CyberForce

Welcome to CyberForce. At the highest level, CyberForce is a learning system where cyber training content is *produced* and *consumed* by authenticated users. CyberForce cyber training content comes in many forms: instructional videos, documents, hands-on labs, tactical sandboxes, quizzes, and performance-based assessments (PBAs). Training content can be rated, reviewed, and discussed within the CyberForce system. Motivational features for learners like competitions, badges, endorsements, and leaderboards are all part of the CyberForce system.

If you are new to CyberForce, start by reviewing our [Quick Start](#).

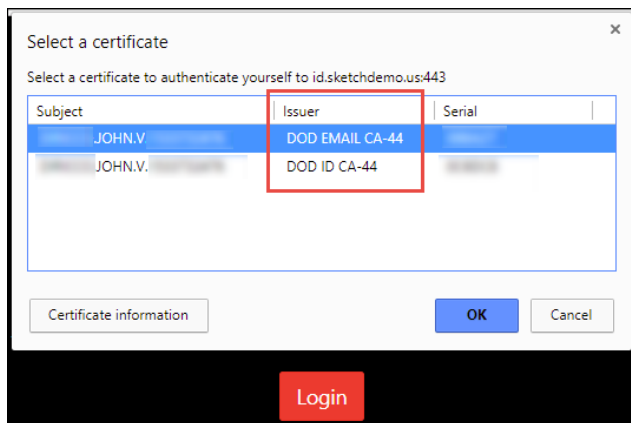
## Key concepts

- **CyberForce Core:** A marketplace for cyber operations training. Here, users are matched to mission-focused and community-curated training content.
- **Extension:** A program that extends the capability of the CyberForce core. Some of these extensions enable creation of training content – ranging from courses to cyber exercises. Other platform extensions enable social learning and collaboration. Examples of extensions to the core include:
  - Cartographer: used to build exercise topologies
  - STEP Exercise Player: STEP "classic" lab and exercise player
  - Moodle: free open-source learning management system ([moodle.org](https://moodle.org))
  - Chat: an instant messenger that allows CyberForce users to communicate in real time
  - TopoMojo: used to build a virtual lab and publish to CyberForce
  - Quizzes and assessments
  - YouTube: used to share videos
  - Discourse: an open source discussion platform
  - And others...
- **Content:** Includes instructional videos and documents, hands-on labs, tactical sandboxes, quizzes, and PBAs.
- **Producer vs consumer:** A "producer" is the person or group who makes or supplies the content found in CyberForce. A "consumer" is the person who uses the content.
- **Learning Record Store:** Stores learning and performance data recorded in CyberForce.
- **Group:** A number of people who have something in common who are organized into a group of users.
- **Channel:** A feed that distributes training content. Users create channels, add content to channels, search for content within channels, and launch content from channels. Channels have *subscriptions*; groups have *memberships*.
- **Order Portal:** A core component of the CyberForce platform which enables users to request new training scenario development and schedule events.

# Logging in with a CAC

This topic explains how to log into CyberForce using your Common Access Card (CAC). It assumes that you have never logged into CyberForce with your CAC and card reader.

1. Insert your CAC into the reader. Make sure you insert the card before clicking the link to access CyberForce.
2. Go to: **<https://browser.cyberforce.site>**.
3. At the **Welcome to CyberForce** page, click **Login**.
4. At the **Select a certificate** screen, select a certificate to authenticate yourself to CyberForce. You can select either Issuer, but you must select the same one the next time you log in.






5. Enter your **Smart Card PIN** and click **OK**.
6. Click **Login**.

7. If prompted by the CyberForce Browser for granting permissions, leave the default permissions checked - including **Remember My Decision** - and click **Yes, Allow**.

**Sketch Browser** is requesting your permission

Uncheck the permissions you do not wish to grant.

 <b>Personal Information</b>
<input checked="" type="checkbox"/> <b>OpenId Connect</b> <i>(required)</i> Claims: openid
<input checked="" type="checkbox"/> <b>Profile Info</b> Claims: name, picture, timezone
<input checked="" type="checkbox"/> <b>Email Address</b> Claims: email, email_verified
<input checked="" type="checkbox"/> <b>Organization Info</b> Claims: company, company_logo, unit, unit_logo
 <b>Application Access</b>
<input checked="" type="checkbox"/> <b>Sketch Common Scope</b>
<input checked="" type="checkbox"/> <b>Remember My Decision</b>

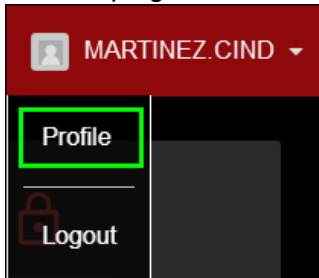
**Yes, Allow** **No, Do Not Allow**  **Sketch Browser**

You are now logged into CyberForce and are viewing the **CyberForce dashboard**.

# Changing your profile

After your initial login to CyberForce (and at any time after), you may want to take a moment to update your profile.

1. In the top right corner of the navigation bar, select your username, then **Profile**.



2. Click **Edit**. In the Edit Profile screen, you can update your:
  - Name
  - Organization (branch of service)
  - Unit Name
  - Avatar
  - Unit Logo
3. After updating your Profile Properties, click **Save**.

## Uploading an Avatar and Unit Logo

1. Under Avatar, click **Choose File**.
2. Browse to an image file you have saved locally. Your image is saved by CyberForce at 200x200 pixels.
3. Click **Upload**.
4. Click **Save**. Your changes are saved to your Profile and are visible in CyberForce. Your new avatar is displayed in place of the default gray and white figure seen above.

Follow the same procedures to upload an image to be used for a unit logo. Your unit logo image is saved by CyberForce at 200x200 pixels.

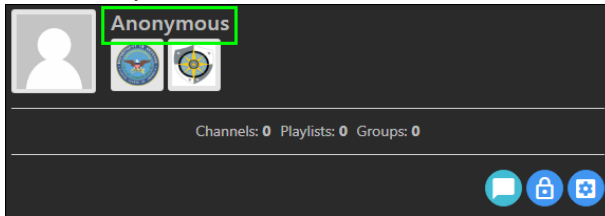
### Note

Updating a profile may require you to logout of CyberForce and then login again to see your change.

## Changing another person's profile

A CyberForce administrator can change another person's profile to designate that person as a **Power User** or **Administrator** or to take away the Power User or Administrator role from that person. To change another person's role in their profile, an administrator should:

1. Locate the person in CyberForce. (Having trouble locating something in CyberForce? See [Browsing and searching in CyberForce](#) for additional help.)
2. Click their profile link.

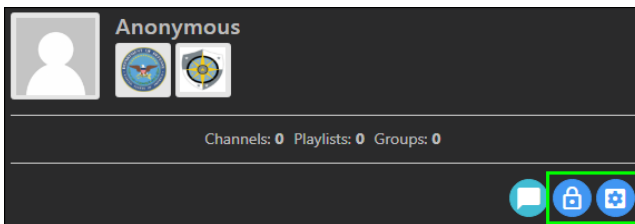


3. Click **Make Administrator** to make the user a CyberForce administrator.
4. Click **Make Power User** to make the user a CyberForce power user.

The blue Make Administrator and Make Power User icons turn to red Remove Administrator and Remove Power User icons.



Alternatively, an administrator can make (and remove) **Administrator** and **Power User** roles from the person's tile.



## Administrator vs Power User Roles

- An **Administrator** can: create system notifications, manage settings, content, channels, and groups; take away and designate Power User and Administrator roles; view disabled content.
- A **Power User** can: view disabled content; manage content, channels, and groups.



# Reviewing the user interface

## Are you logged in?

Assuming that you are a registered CyberForce user with an authorized account and password, start at the CyberForce homepage: **browser.cyberforce.site**.

1. Click **Login**.
2. If prompted, select a certificate to authenticate yourself.
3. Click **OK**.

Look in the top-right corner of your CyberForce screen. When you are logged in, you will see your username.

## The top navigation bar

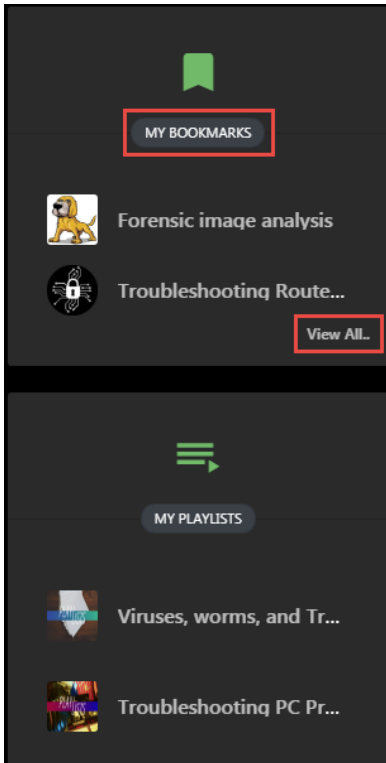


After you have logged into CyberForce, the navigation bar at the top of the page shows you, from left to right:

1. The **CyberForce** link to return to your dashboard.
2. The **Browse** by Content, Channels, Playlists, Groups, and tags.
3. **Leaderboards**
4. **Extensions**
5. **People**
6. **Calendar** feature. Training events are scheduled and automatically added to each participant's dashboard calendar.
7. **Order Portal** feature.
8. **Search** feature. You can use the dropdown to narrow your search results by Content, Channels, Playlists, Groups, and People. Searching by people provides you with a list of matching links to user profile pages. Click the link to view the profile.
9. System **notifications** tell you when there are updates from the CyberForce system.
10. Communicate via **Chat** with other CyberForce users.
11. **Add New** Content, Channel, Group, or Playlist.
12. Your **username**, which links to your profile page and to the Help documentation.

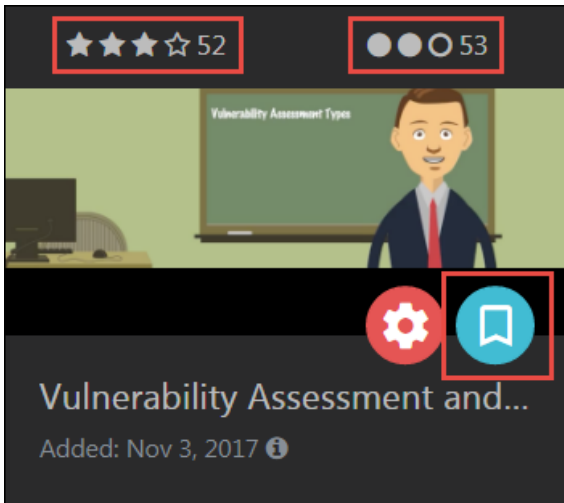
## The right-navigation pane

The right-navigation pane appears at the right of the CyberForce screen and contains links to CyberForce features such as Bookmarks, Playlists, Channels, and Groups. Click **View All** to see all of the items in one of your lists.



## Tiles

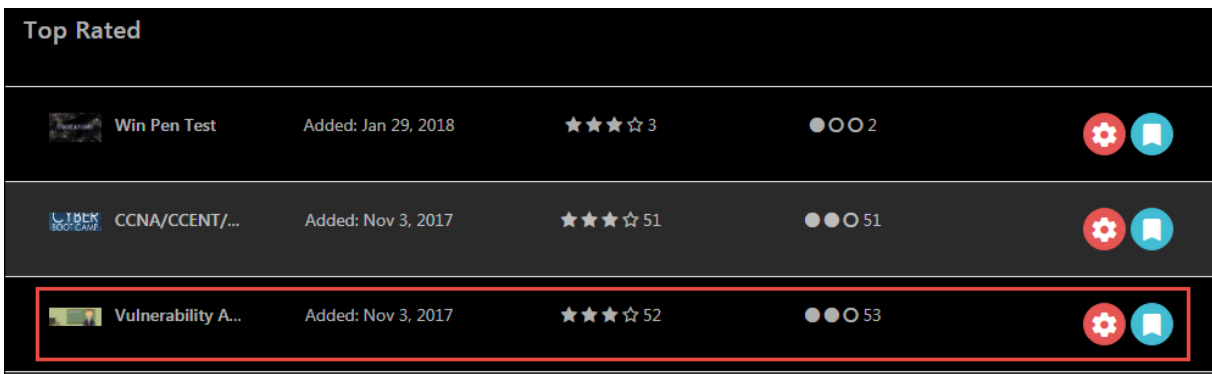
CyberForce *content* is displayed in tiles or cards by default. In this example, 52 CyberForce users have given this content a rating of 3 out of 4 stars. 53 CyberForce users have found this content to be of a Difficulty Level of Intermediate. To bookmark this piece of content, click the blue bookmark. To go to this piece of content, click the tile.



To display CyberForce content in List view, toggle the **List view** icon.



Here is that same piece of content when List view is turned on.



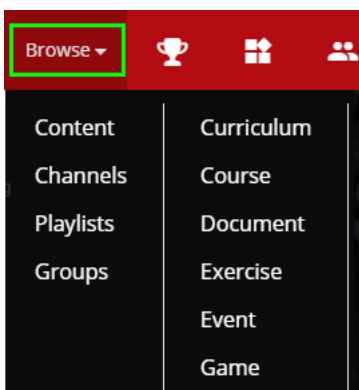
## Browsing and searching

There are a couple of ways to find what you are looking for in CyberForce. Upon logging in, Featured content is displayed in the **Featured Content Carousel**. Featured content is denoted by a blue flag:

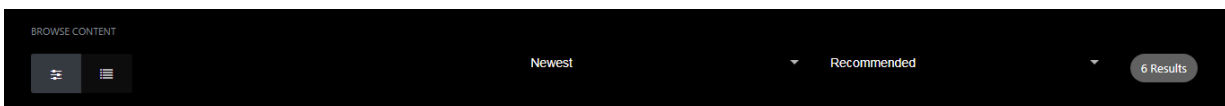


CyberForce recommends content and displays it below the Featured Content Carousel for you to browse through. CyberForce also displays **New Content**, **Top Rated** content, **Exercises**, **Labs**, **Courses**, and **Curriculum**s on the dashboard for you to browse through. Click a content "tile" to go to that content item's detail page.

In the top navigation bar you have the option to select **Browse** and choose from one of the available categories:



After selecting a category, you can sort and filter your results as you browse.



You can make a more targeted search in CyberForce using the **Search** field in the top navigation bar. You can use the dropdown to narrow your search results by **Content**, **Channels**, **Playlists**, **Groups**, and **People**. In the example below, we are searching for "IT" related content.



1. Select a category from the dropdown.
2. Type what you want into the **Search** field.
3. Click the **magnifying glass** icon.

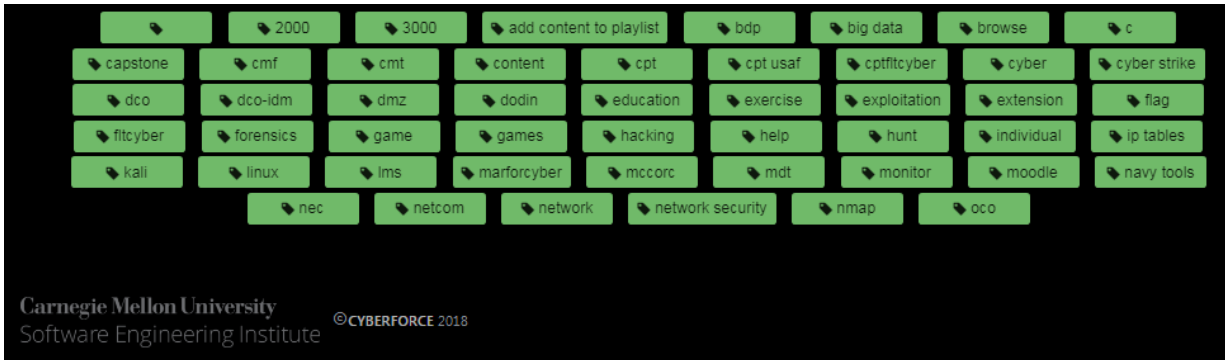
Searching by people provides you with a list of matching links to user profile pages. Click the link to view the profile. For additional **Help** on profiles and changing a profile, see [Changing your profile](#)

## Finding content using tags

When a user adds content to CyberForce, they are required to add tags; that is, words or short phrases that categorize their content. Tags are displayed in the content details.

Tags are also displayed at the very, very bottom of the CyberForce home page.

When a user clicks on a tag they are taken to the content search results where all the content items with that tag are listed.



For additional **Help** on tagging when adding content, see: [Adding content](#).

# Quick Start

Welcome to the **CyberForce Quick Start Guide**! This guide will help you learn the basics of CyberForce and get started with things like searching for content, rating content, understanding extensions, chatting with other CyberForce users, and making a playlist.

The Quick Start is available in two formats: as a chapter in the more comprehensive **CyberForce User Guide** and as a stand-alone document.

## What is CyberForce?

*CyberForce is a marketplace for cyber operations training that matches users to mission-focused and community-curated training content.*

CyberForce connects you with training content hosted on a variety of learning platforms. Single sign-on authentication and a marketplace interface allow members to interact with each other, their teams, and the CyberForce community as a whole.

CyberForce encourages content users to communicate with content producers by providing feedback to promote quality and effective resources.

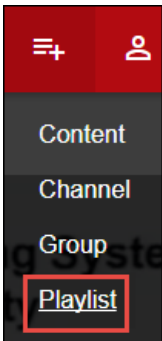
CyberForce integrates extensions from third-party sources to offer you a wide variety of systems that enhance the learning experience.

This **Quick Start Guide** introduces you to some of the basic capabilities, features, and the general interface of CyberForce.

For additional help, see the *CyberForce User Guide*, [Introducing CyberForce](#).

## Creating a Playlist

Creating a playlist allows you to consolidate and organize related CyberForce content in a single location for you and your team. To create a playlist, select **Playlist**.



Provide a descriptive **Name**, upload a poster image, and check the option to make your playlist public.

For additional help, see the *CyberForce User Guide*, [Creating a new playlist](#).

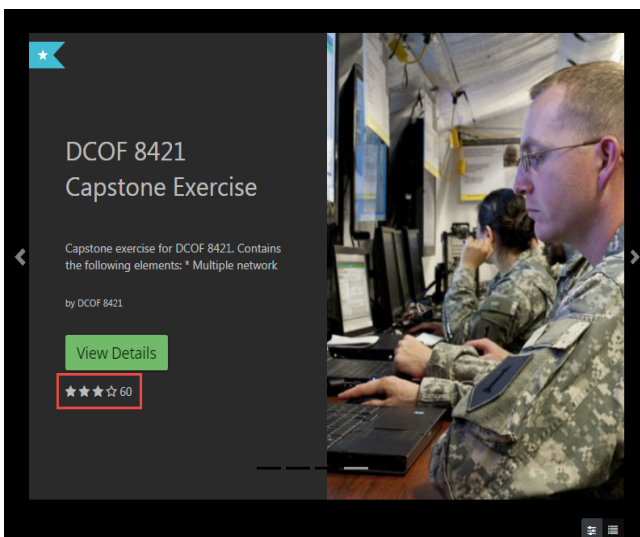
## Adding training content to a Playlist

One of the first things you will do in CyberForce is to search for useful training materials for you or your team and combine them into a playlist. User playlists may include courses, labs, and exercises that different organizations publish and host on their own platforms. Users can provide feedback on published content by rating the quality and difficulty levels and commenting on their experience.

On the CyberForce landing page, browse through the categories such as Recommended, Top Rated, New, etc., until you see a piece of content that is relevant to you. In the example below, we selected a Capstone Exercise from the **Featured** category. Featured content is denoted by the blue flag and the white star icon.



Notice that the Capstone Exercise content item has been rated by multiple people and holds a 3-star rating.

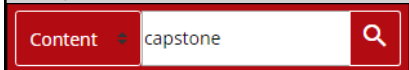


Click **View Details** to see what it's about. You read the description and decide that this content holds training value for your team. You decide to create a new playlist to hold this exercise.

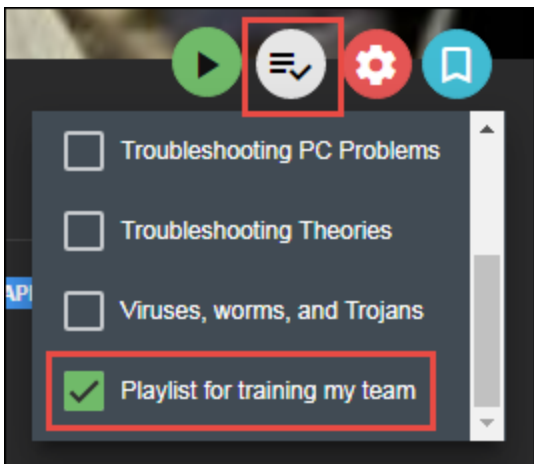
1. In the top navigation bar, click **Add** then **Playlist**.
2. Provide a descriptive **Name**.
3. Upload a poster image or select an image from the catalog.
4. Check the **Make Public** option to make your playlist public.
5. Click **Submit**.

Navigate back to the content that you previously reviewed (our example was the Capstone Exercise content).

**Tip!** If you aren't sure how to navigate back to the previously viewed content, go to the top navigation bar, select **Content**. Enter part of the name into the **Search** field and press **Enter**.



Click the **Add to Playlist** dropdown and select the one you just created.



Next, you might want to browse available channels to locate some more useful content for your team.

## Browsing Channels

In CyberForce, channels contain content, which can be rated and reviewed to ensure that all users have a high-quality experience.

Browsing channels can help you find useful content. There are a couple of ways to browse channels.

In the top navigation bar, select **Browse**, then **Channels**.

Specific channels can also be found by using the **Search** field.

1. In the top navigation bar, select **Channels**.
2. Enter your search terms into the **Search** field, and click the magnifying glass icon.

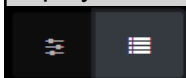


In the **BROWSE CHANNELS** results screen, you can see channel ratings and the number of subscribers to the channel. You have the option to subscribe to the channel by clicking the green subscribe icon.





**Tip!** Toggle between **Grid view** and **List view** to change the way your channel search results are displayed.



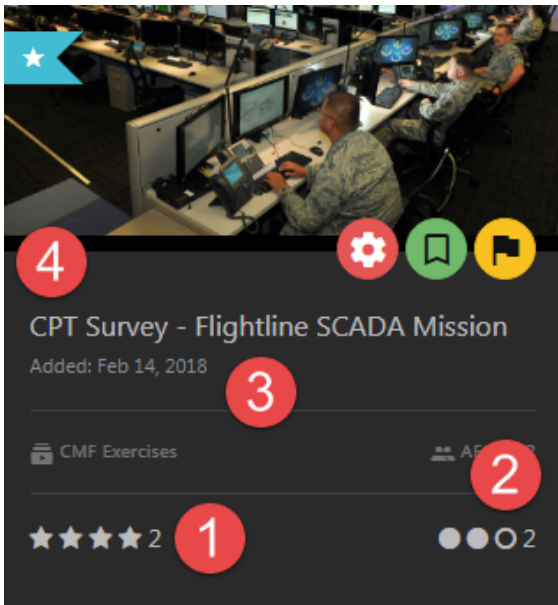
For additional help, see the *CyberForce User Guide*, [Managing channels](#).

## Browsing, Adding, and Launching Exercises

To further enhance your playlist, you may want to add hands-on training in the form of exercise content.

1. To retrieve exercise content, use the **Browse** dropdown menu again.
2. Select **Exercise** in the second column.

From the **BROWSE CONTENT** screen, you can see various exercises and their **1)** ratings, **2)** level of difficulty, **3)** date added, and **4)** name. To select an exercise, click the name. Notice the black and yellow flag icon. This exercise has been flagged as inappropriate!



To begin an exercise, click the green launch icon.

You will notice that users can also rate content for both quality and difficulty level, to ensure the best experience.

To add an exercise to your playlist, select the **Add to Playlist** icon, and choose which playlist to add the exercise to. Remember that this exercise can now be accessed by selecting **Profile** under the username in the top-right corner of the screen.

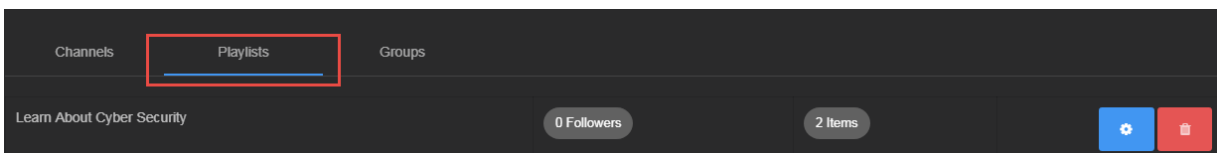
## Reviewing your Channels, Playlists, Group, or Activity

To view your new playlists, channels, team, or recent activity, select **Profile** from under the dropdown menu with your username in the top-right corner. From the Profile page, you can navigate between tabs to view your personal content.

For example, if you'd like to review the playlist you've been creating for your team:

1. Select the **Playlist** tab.
2. The list of all of your playlists will be displayed.
3. Select an individual playlist to see and curate the content.

The **Profile Playlists** tab also shows the number of followers each playlist has, as well as the options to **Manage Playlist** or **Delete Playlist**.



## CyberForce Extensions

The CyberForce platform includes a variety of extensions for the user. Popular learning management systems such as **Moodle** (moodle.org) and **Canvas** (www.canvaslms.com) demonstrate CyberForce's ability to integrate with externally hosted content. The platform also supports enabling applications such as **Rocket Chat**, **Discourse** forum software, and the SEI-produced **TopoMojo** and **Cartographer** exercise creation tools.

New extensions can be easily added through open web standards like **OpenID Connect**, **OAuth2**, and a restful API. The CyberForce API is comprehensive and provides developers with numerous endpoints for platform integration and extensibility. CyberForce web interaction functions entirely through this API, ensuring that the API can be fully leveraged through third-party applications.

Extensions are found by clicking Extensions in the top navigation menu on the home screen. On the **BROWSE EXTENSIONS** page, you may choose an extension to use. Clicking an extension takes you to another website in a new tab.

For additional help, see the *CyberForce User Guide*, [Accessing Extensions](#).

## Communication Between Users

CyberForce facilitates peer-learning and encourages users to share their knowledge and experiences as a community. Real-time chat and discussion boards connect groups, teams, and operators. Forums and extensions like Rocket Chat allow constant collaboration and communication among users. Additionally, other extensions can be added to enrich the collaborative group experience.

For additional help, see the *CyberForce User Guide*, Collaborating within CyberForce.

To search for and find a user, go to the **Search** field and select **People**. In the **Search** field, enter the name of the person you want to search for and click the magnifying glass.



## Messaging over CyberForce

You can message other individual users over CyberForce.


1. Search for and find a user.
2. From your search results, select the user you would like to message.
3. Select the **Open Chat** icon.

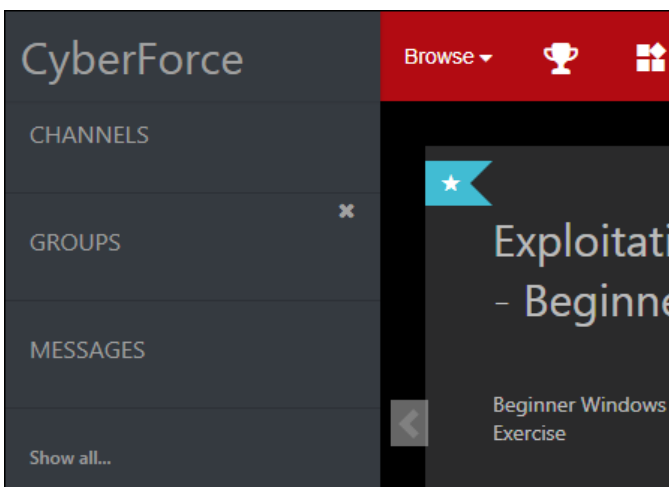


4. CyberForce will open a message field, where you can type your direct message to the other user.

You can message an entire group at once too.

1. To locate your group, select **Groups** from the **Browse** dropdown menu.
2. This will take you to the **BROWSE GROUPS** screen.
3. Select the **Open Chat** icon.

You can open messaging from the home screen by clicking the **Chat** icon  in the top navigation bar. Clicking the **Chat** icon opens the Channels panel on the left where you can select a chat to open. The panel contains chats for **Groups**, **Messages**, and **Channels**.



## Using Forums and Groups over CyberForce

You can create forums to collaborate with other users and share content, ideas, and talk about your ongoing search for material.

1. To locate your group's forum, select **Groups** from the **Browse** dropdown menu.
2. On the BROWSE GROUPS screen, select a group where you are a member.
3. To access the group's forum, click the **Open Forum** icon.



Opening the forum for the group will take you to an external page, **Discourse**, where your group can collaborate.

## Creating a new Forum

To create a new forum, find your group's Discourse page as explained above.

1. In the Welcome to Discourse screen, log in with CyberForce.
2. On the Discourse page, click **New Topic**.



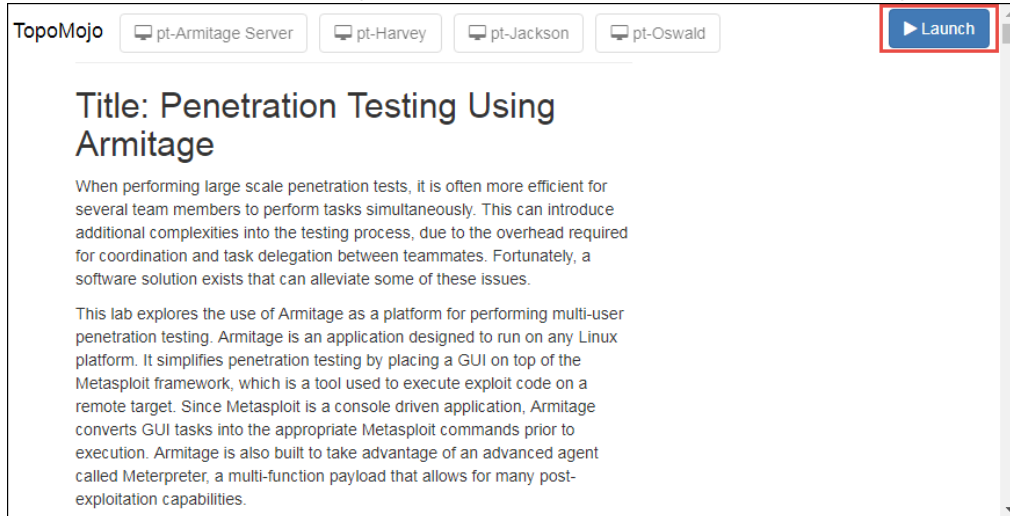
3. Enter a **Title**, **Description**, and select a **Category**.
4. Click **Create Topic**.

## Launching Labs via TopoMojo

From the BROWSE EXERCISES screen, you can see various exercises and their ratings, level of difficulty, date added, and name. To select an exercise, click the title. Specific exercises can be found by using the **Search** box in the top-right of the navigation bar. In this section of the *Quick Start Guide* we will describe launching a lab via the TopoMojo extension.

1. After selecting an exercise, click the green **Play** icon in the exercise screen. In our example, the exercise is called "**Penetration Testing using Armitage Lab**". The lab link redirects you to TopoMojo, a CyberForce extension used for building, publishing, and accessing training labs.
2. Read through the lab manual. The lab manual provides an overview of the lab, learning objectives, network diagram, followed by step-by-step instructions for completing the lab.

3. To launch the lab in TopoMojo, click the blue Launch icon in the upper-right corner.



4. To gain console access to a virtual machine (VM), click the respective VM, which opens in a separate tab.
5. To exit a lab, select **End Game**.

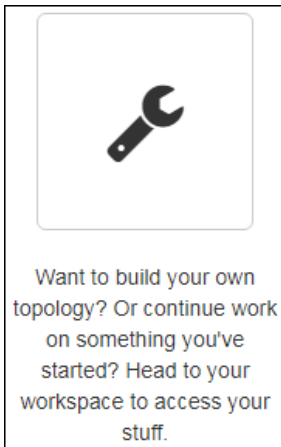
## Taking Assessments

Some labs may have assessment pieces that go along with them. Labs with assessments will give instructions on how to find and complete their assessments. Specific assessments can be found by using the **Search** box in the navigation bar.

1. After selecting an assessment, click the green **Launch** icon. This launches XAssessor, an extension used to assess an individual's performance.
2. Log into XAssessor using your CyberForce credentials.
3. When you have completed the quiz, click **Submit and Mark Quiz as Complete**.

## Creating Labs with TopoMojo

Using TopoMojo, you can create your own labs to assess the progress of a team or to add to the community content. To build your own virtual topology, open up the TopoMojo extension and select the Workspace icon. For a refresher on browsing for extensions, refer to the [Quick Start](#) section above.



1. Login with your CyberForce credentials, then click **New**.
2. Enter a **Title** and a **Description** for your lab and click **Create**.
3. Using the **Machines** tab, add any virtual machines from the list.
4. Configure the VM details by clicking the dropdown icon next to each VM. This displays the settings that can be configured for this VM.
5. Click on the gear icon initialize the VM.



6. To add instructions using markdown language, select the **Document** tab.


## Using the Document Editor while Creating a Lab

You can use TopoMojo's document editor to add instructions for your lab. TopoMojo's document editor uses the Markdown format (<https://guides.github.com/features/mastering-markdown>).

1. To add instructions using markdown language, select the **Document** tab. Type your instructions on the left and TopoMojo previews what you have written on the right.
2. You may choose to link to a Markdown document by entering the URL in the **External Url** field.
3. Click **Save** when finished.

## Virtual Machine Settings

On the Machines tab, click the dropdown arrow next a virtual machine. The virtual machine settings are displayed.

win10  initializing


Type **linked** ?


Name win10


Description creds: student, tartans


Networks lan ?

Hidden ☐ ?

Iso  **none**

 Browse for file

 Refresh list

 Delete Template

- **Type:** Determines if the VM is local to a lab or shared across different labs. A **linked** VM is shared across different labs. If there aren't any changes to be made to the VM as part of building the lab, the type is left as linked. If changes are to be made to the VM, the VM needs to be cloned. To do so, click the question mark icon next to it and then click the **copy** icon. This creates a clone of the VM and the type changes to local.
- **Name:** The name of the VM.
- **Description:** The description the VM.
- **Network Information:** If a VM needs to be on multiple subnets, enter a space-delimited list of network names.
- **Hidden:** When checked, **Hidden** means that the VM will not be accessible to the end user, but will be deployed as part of the lab.
- **Iso:** The Iso field is used to attach an Iso to the VM.

## Publishing Labs

To publish your lab (note that you're still in TopoMojo, not in CyberForce!) navigate back to your lab's home page and select the Topo tab. Next to **Publish**, toggle **Enable**.



Topo

Machines

Document

Name

Win Pen Test

Description

Windows penetration testing

Publish

☒

Share

☐

By

REEDER.ROBERT.G

Delete Topology

Once the lab is published, it is visible in the TopoMojo browser section.

TopoMojo

English

Search

ForensicPrinterNetwork

By fwu1

Description Simulate the enterprise network and perform the printer attack


Host Exploitation with Metasploit

To launch the lab, click the **Lightning** (launch) icon next to the lab name.



Copy the URL link of the lab in TopoMojo. You'll need this for publishing the lab in CyberForce.

Now, go back to CyberForce.

1. Click the  icon in the menu bar and select **Content**.
2. Enter a **Name** and a **Description** for your piece of content.
3. Select a **Channel**.
4. Select **Lab** as **Type**.
5. Upload a poster image URL either by providing a URL or browsing for a file to upload.
6. Enter the content URL. **This is the URL link of the lab you copied in the step above.**
7. Add any relevant **Tags** to the lab.
8. Click **Submit**.
9. You may verify that your lab works by launching it from CyberForce.

# Creating a new playlist

A CyberForce playlist is just a group of CyberForce content in order, created by any CyberForce user. Playlists are usually organized by subject or theme. Maybe your new playlist contains content that is only related to troubleshooting PC security issues. However, you can create a playlist of any content that you like (related or not) to keep private or to make public. Maybe you just want a private playlist to keep track of content that you find interesting.

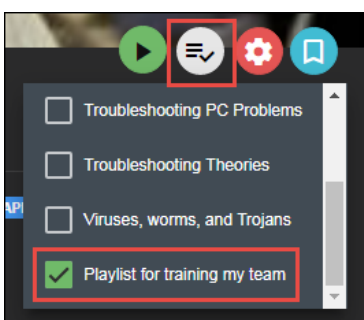
## Creating a playlist

1. In the top navigation bar select **Add**, then **Playlist**.
2. In the ADD PLAYLIST screen, enter a **Name** for your new playlist.
3. In the Poster Image field, select an image from the gallery or upload an image of your own. The image you upload here becomes the background image for your playlist.
4. Click **Upload**.
5. By default, a new playlist is private. Check the option **Make Public** if you want others to be able to view it.
6. Click **Submit**.
7. You are presented with the option to **Add Another Playlist** or **View** the playlist you just created. Select one or the other. Choosing to view the playlist takes you to the playlist's home page. From here, you can edit the playlist by clicking the **Gear** icon.

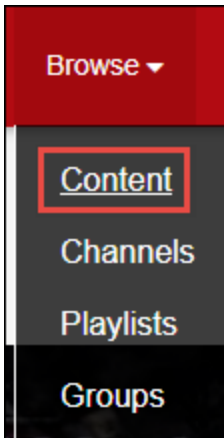
## Adding content to your playlist

After you have created your playlist you can start adding content. To add a content item to your playlist, browse to the content's detail page.

1. From the CyberForce dashboard, scroll through the **Featured** content, **Recommended Content**, **New Content**, **Top Content**, etc. and click the content tile for the item you want to add to your playlist.
2. Click the tile.
3. On the content detail page click the **Add to playlist** icon, then check the box next to the playlist you want to add the content to.



Another way to add content to your playlist is to **Browse** for content via the dropdown in the top navigation bar. Select **Browse**, then **Content**. In the Browse Content screen, locate the content tile and select it.



Finally, you can add content to your playlist via the **Search** field in the top navigation bar. Select **Content**, then enter your search terms.



Click the magnifying glass icon. In the search results, locate the content tile and select it.

## Sharing a playlist

As noted above, by default a new playlist is private. You can check the option **Make Public** when you create the new playlist if you want others to be able to view it. Or, you can go back later and edit the playlist and check the option to make it public.

## Editing your playlist

You edit your playlist from the right navigation pane on the CyberForce dashboard. On the right, under MY PLAYLISTS, click the link to the playlist you want to edit.

On the playlist's home page edit the playlist by clicking the **Gear** icon. On the EDIT PLAYLIST screen, the Details tab contains all of the information you entered when you first created your playlist. If you decide you want to delete your playlist, click the red **Delete Playlist** icon. Then click **Delete** again to confirm.

You can change the order of the content in your list by clicking the Content tab then dragging to reorder content items. When you have the content in the positions you want, click **Save**. When you are completely finished editing your playlist click **Submit** on the Details tab.

# Managing channels

## Channel basics

A channel is a feed or a means to house CyberForce content for other users to view and subscribe to. Anyone can create a channel, add content to it, and manage subscriptions. Anyone can search and launch content from unrestricted channels. To subscribe to a channel:

1. Locate the channel in CyberForce
2. Click **Subscribe**.

**Subscribe:**



If you are a channel owner, you will have to approve the requests on the Subscribers tab in the EDIT CHANNEL screen. To approve a subscription request:

1. Login to CyberForce.
2. Locate your channel in CyberForce.
3. In the CHANNEL DETAILS screen, click the **Edit Channel** (gear) icon.
4. Click the **Subscribers** tab.
5. Click the green check to approve or click the yellow **x** to deny the subscription request.




After approving, you can give the new member roles where they are limited to just browsing content or managing members or a combination of roles. Roles include the ability to **Browse Content**, **Launch Content**, **Edit Content**, **Edit Channel**, and **Manage Members**.

## Creating a new channel

### Creating a new channel from the Profile page

Follow these instructions to create a channel that you can manage using your CyberForce account and others can subscribe to.

1. In the top navigation bar click **Add** , then **Channel**.
2. Enter a **Name** and a **Description** for your new channel.
3. In the Poster Image field, select an image from the gallery or upload an image of your own. The image you upload here becomes the background image for your channel.
4. Click **Submit**.
5. You are presented with the option to **Add Another Channel** or **View** the channel you just created. Select one or the other. Choosing to view the channel takes you to the channel's

home page. From here, you can:

- add content to your new channel
- open a chat for channel subscribers, and
- edit the channel by clicking the red and white **Gear** icon.

## Adding content to the new channel



After creating the new channel, you can add content to it by clicking the **Add Content** icon on the channel home page. In the Add Content screen:

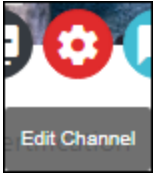
1. Enter a **Name** for your content item.
2. Enter a **Description**. Both **Name** and **Description** are required fields denoted by an asterisk. For the Description, you have the option to use plain text or markdown. Markdown is just a way to style the text in the description. For more information on markdown, see [Mastering Markdown](#) in the **GitHub Guides**.
3. Select a **Channel**.
4. Optionally, select a **Sponsor**.
5. Optionally, select the **Type** of content.
6. Turn on **Recommended**, **Disabled**, or **Featured**.
  - Recommended content has priority on the dashboard.
  - Disabled content is only shown to Power Users.
  - Featured content is displayed in the dashboard carousel.
7. In the **Poster Image** field, select an image from the gallery or upload an image of your own.
8. In the **Hover Image** field, select an image from the gallery or upload an image of your own.
9. In the **Thumbnail Image** field, select an image from the gallery or upload an image of your own.
10. Enter a content URL.
11. Apply a content type tag by clicking one of the **Suggested Tags**. Content types are: **Text**, **Video**, **Lab**, **Curriculum**, **Module**, and **Quiz**.
12. Apply any additional tags to your content by typing in the **Tags** field and pressing the **Tab** key. Think of tags as keywords and terms that help other CyberForce users find your content. To remove a tag, click the "x" next to the tag.
13. Click **Submit**. You should see a confirmation message telling you that your new content has been added. You can add more content or view the content you just added.

## Editing a channel

After creating a channel, you can edit or update it at any time.

1. Locate your channel in the CyberForce dashboard. (Having trouble locating something in CyberForce? See [Browsing and searching](#) for additional help.)

2. Click the **Edit Channel** (red and white gear) icon.



3. On the Details tab, update **Name**, **Description**, and the **Poster Image URL**.
4. On the Content tab, add additional content or drag existing content to reorder it.
5. Click **Submit**.

## Deleting a channel

After creating a channel, you can permanently delete it at any time. Deleting a channel deletes your content, comments, and subscriptions.

1. Locate your channel in the CyberForce dashboard.
2. Click the **Edit Channel** (red and white gear) icon.
3. Click **Delete Channel**.
4. Click **Delete** again.

# Accessing Extensions

An extension in CyberForce is a program that extends the capability of the CyberForce core. To access CyberForce extensions, click the **Extensions** in the top navigation bar.



Examples of extensions to the core include:

- **Canvas:** An open-source learning management system.
- **Cartographer:** Used to build exercise topologies.
- **Moodle:** A free open-source learning management system.
- **PCTC:** CERT's Private Cyber Training Cloud, a a rich library of cyber security and information assurance training.
- **Rocket Chat:** An instant messenger that allows CyberForce users to communicate in real time.
- **CyberForce API:** CyberForce core's application programming interface. The CyberForce core API has its own documentation included with it.
- **TAO:** A free open-source assessment platform for education, career, and industry advancement.
- **TopoMojo:** Used to build a virtual lab and publish to CyberForce.
- **Discourse:** A free open-source discussion platform.




# Adding content

## Adding new content

You can add content to CyberForce in a few quick steps. Follow the procedures below to upload content. Required fields like **Name**, **Description**, and **Channel** are denoted by an asterisk.

### Note

Add a channel before you add new content. Content needs to be added to a channel.

1. Login to CyberForce.
2. At the top of the page, click , then **Content**.
3. Enter a **Name** for your piece of content.
4. Enter a **Description** for your piece of content. Both Name and Description are required fields denoted by an asterisk. For the Description, you have the option to use plain text or markdown. Markdown is just a way to style the text in the description. For more information on markdown, see "[Mastering Markdown](#)" in the **GitHub Guides**.
5. Select a **Channel**. If you need to create a new channel to hold your new content, see [Managing channels](#).
6. Optionally, select a **Sponsor**.
7. Optionally, select what **Type** of content it is.
8. Turn on **Recommended**, **Disabled**, or **Featured**.
  - Recommended content has priority on the dashboard.
  - Disabled content is only shown to Power Users.
  - Featured content is displayed in the dashboard carousel.
9. In the **Poster Image** field, select an image from the gallery or upload an image of your own.
10. In the **Hover Image** field, select an image from the gallery or upload an image of your own.
11. In the **Thumbnail Image** field, select an image from the gallery or upload an image of your own.
12. Enter a content URL.
13. Apply a content type tag by clicking one of the **Suggested Tags**. Content types are: **Text**, **Video**, **Lab**, **Curriculum**, **Module**, and **Quiz**.
14. Apply any additional tags to your content by typing in the **Tags** field and pressing the **Tab** key. Think of tags as keywords and terms that help other CyberForce users find your content. To remove a tag, click the "x" next to the tag.
15. Click **Submit**. You should see a confirmation message telling you that your new content has been added. You can add more content or view the content you just added.

## Editing existing content

1. Login to CyberForce.
2. Locate the content item you want to edit. You can use the **Search** feature or locate it from the **Dashboard**.
3. In Content Details, click the gear icon. In Edit Content, make any changes you want to the existing fields.
4. Click **Submit**.

# Working with content

## Searching for content

The **Search field** is found on the top navigation bar on every screen in CyberForce.

1. From the dropdown, select **Content**.
2. Enter your terms in the **Search** field and press **Enter**.
3. Select the content item from the search results.

For additional help on locating content in CyberForce, see [Browsing and searching in CyberForce](#).

## Bookmarking content

Bookmarking content is a way for you to store or save links to items in CyberForce that you want to access at a later time.

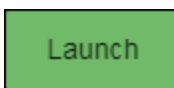
1. Locate the content in CyberForce.
2. Click **Add Bookmark**. When content has been bookmarked, the bookmark icon turns solid.



To find your bookmarked content click the **CyberForce** icon in the top left corner to return to the dashboard. Bookmarked content is listed under **MY BOOKMARKS** down the right side of the page.

## Launching content

1. Locate the content in CyberForce.
2. Click the green **Launch** icon.



## Rating content

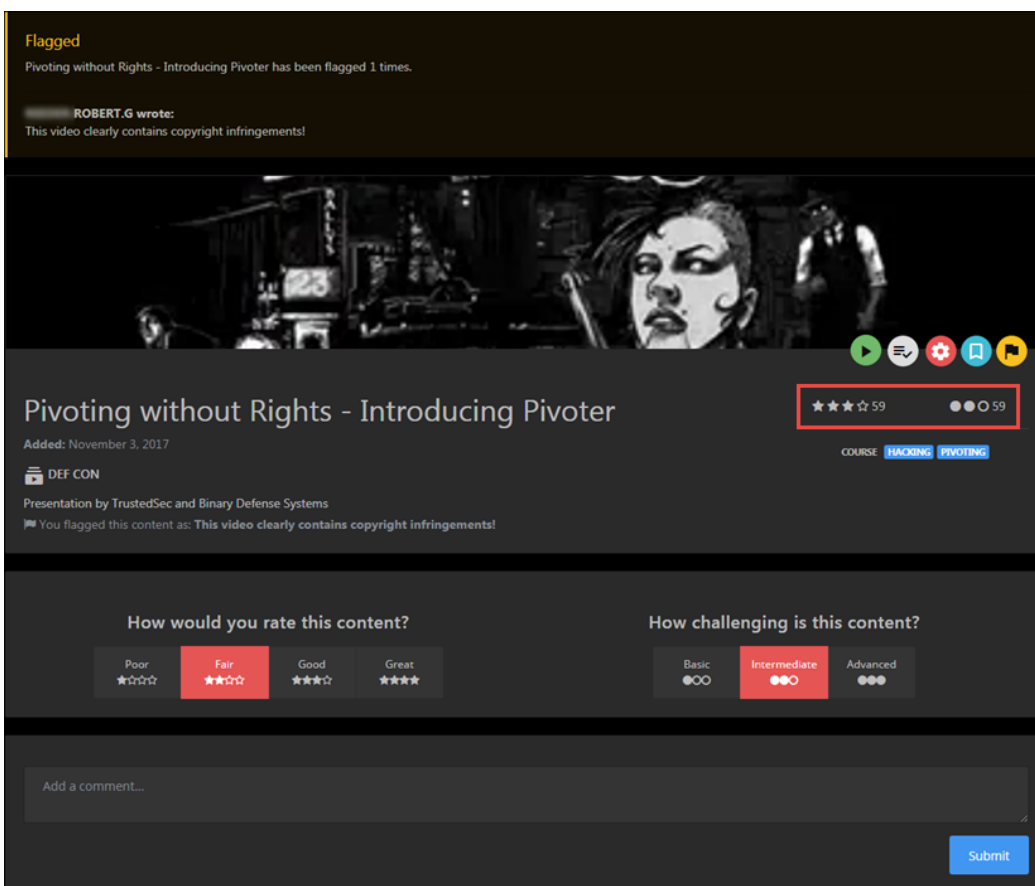
Any user can rate content that they launch. There are two content rating labels:

- **How would you rate this content?** allows the user to rate the content as Poor, Fair, Good, or Great. Selecting a rating translates to the four stars you see under the content item. The star (and half-star) rating is an average of the ratings users have given the content.
- **How challenging is this content?** allows the user to give their opinion on how difficult it is to understand the content. The user can rate the content as Basic, Intermediate, or Advanced. The average rating of that piece of content is displayed below the content item.

The number of users who have rated the content item appears beside the stars.

To change your choice, simply select a different rating.

For example, the video "Pivoting without Rights" has an overall rating of three stars and a difficulty level of Intermediate. 59 users have rated this video. The current user has rated it Intermediate.



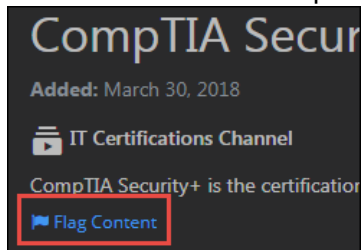
## Flagging content

Rating something is different than if you want to report inappropriate content. You should flag the piece of content as inappropriate instead of giving it a rating. When something is flagged, it's not automatically taken down. Flagged content is reviewed by our team first. Content considered inappropriate may include sexual content, hateful content, dangerous content, and violent content. Content that is deliberately misleading, harassing, or threatening is inappropriate.

In our "Pivoting without Rights" example above, someone has flagged that content as inappropriate and entered the explanation that the video contains copyright violations.

To report a content item as inappropriate:

1. Locate the content in CyberForce.
2. Under the content description, click **Flag Content**.



3. Select the reason that you think makes the content inappropriate: Spam, Inappropriate, Not Accurate, Low Quality, or Other. If you select Other, then you have the opportunity to enter an explanation why.
4. Click **OK**.

## Tagging content

When a user adds content to CyberForce, they are required to add tags; that is, words or short phrases that categorize their content. Tags are displayed in the content details. Using our "Pivoting without Rights" example from above you can see that the content producer added two tags: **hacking**, and **pivoting**. Clicking a tag makes CyberForce search for all content that is tagged with that word or phrase. So, if you were looking at "Pivoting without Rights" and you wanted to see what other "hacking" content was in CyberForce you could just click the hacking tag. For additional help on tagging when adding content, see: [Adding content](#).

# Requesting new training content

## Introduction

If you are new to CyberForce and to the order portal component of CyberForce , this *Quick Start Guide* offers some useful guidance on finding training scenarios in CyberForce and requesting new training scenarios if you can't find something that applies to your team.

For additional Help on any of the topics in this *Quick Start Guide*, refer to the *CyberForce User Guide*.

## Premise

We will use this premise throughout the *Quick Start Guide* to help illustrate order portal functionality:

Lieutenant Commander Cindy Martinez leads the Cyber Protection Team, **123 CPT**, and would like to schedule a training event for her team. Her team has been working to improve their malware hunting skills in recent weeks and she would like them to exercise these skills in a more comprehensive training event.

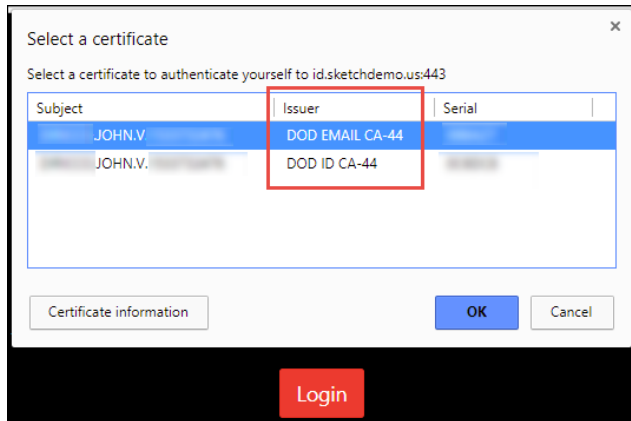
## Key Concepts

- **CyberForce:** A marketplace for cyber operations training. Here, users are matched to mission-focused and community-curated training content.
- **Order Portal:** A core component of the CyberForce platform which enables users to request new training scenario development and schedule events.

## Logging in with a CAC

1. Insert your CAC into the reader. Make sure you insert the card before clicking the link to access CyberForce.
2. Go to: **<https://browser.cyberforce.site>** or **<https://browser.cyberforce.site/home>**. Note that your instructor or presenter will indicate which site to use.
3. At the **Welcome to CyberForce** page, click **Login**.
4. At the **Select a certificate** screen, select a certificate to authenticate yourself to CyberForce. You can select either Issuer, but you must select the same one the next time you log

in.



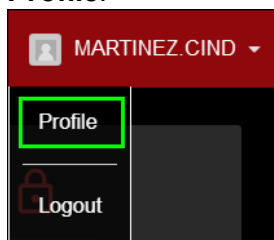
5. Enter your **Smart Card PIN** and click **OK**.
6. Click **Login**.
7. If prompted by the CyberForce Browser for granting permissions, leave the default permissions checked - including **Remember My Decision** - and click **Yes, Allow**.

You are now logged into CyberForce and are viewing the **CyberForce dashboard**. For additional **Help** with the CyberForce dashboard, see [Reviewing the user interface](#) in the *CyberForce User Guide*.

## Updating your Profile

Since this is LCDR Martinez's first time using CyberForce, she may want to take a moment to update her profile. To update a profile in CyberForce:

1. After logging in, from the top right corner of the navigation bar click your username, then **Profile**.



2. Click **Edit**. In the Edit Profile screen, LCDR Martinez wants to update her **Name**, **Organization**, and **Avatar**.
3. In the **Name** field, enter a new profile name.
4. In the **Organization Name** field, select **Navy**.
5. Under Avatar, click **Choose File**.
6. Browse to an image file you have saved locally. Your image is saved by CyberForce at 200x200 pixels.
7. Click **Upload**.
8. Click **Save**.

LCDR Martinez's changes are saved in the Edit Profile page and visible in CyberForce. Her new avatar, the 1971 Pittsburgh Pirates logo, is displayed in place of the default gray and white figure seen above under Step 1.

#### Note

Updating a profile may require you to logout of CyberForce and then login again to see your change.



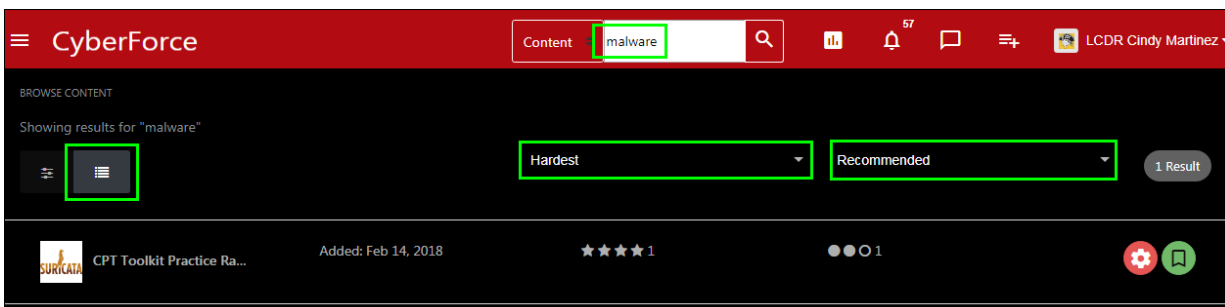
Now that she is logged into CyberForce and has an updated profile and avatar, LCDR Martinez wants to find a training scenario for her 123 CPT.

## Finding a training scenario

From the CyberForce dashboard, LCDR Martinez views all training scenarios that are currently available. Training scenarios can be searched.

1. Next to the **Search** field, select **Content**.
2. In the **Search** field, type "**malware**" and click the magnifying glass icon.

Results for "malware" can be displayed in list view, sorted by name, date created, degree of difficulty, and by how high or low the piece of content is rated. Results can be further sorted by whether the results are flagged, recommended, bookmarked, and more. In the screenshot below, LCDR Martinez has displayed the most difficult, recommended, piece of training content in the List View.



For additional **Help** on searching for training scenarios in CyberForce, see [Browsing and searching in CyberForce](#) in the *CyberForce User Guide*.

## Finding a training scenario using tags

LCDR Martinez could have chosen to search for "malware" using tags. Tags are words or short phrases that categorize their training content.

Tags are also displayed at the very, very bottom of the CyberForce dashboard page.



When LCDR Martinez clicks on the malware tag she is taken to the content search results where all the content items with that tag are listed.

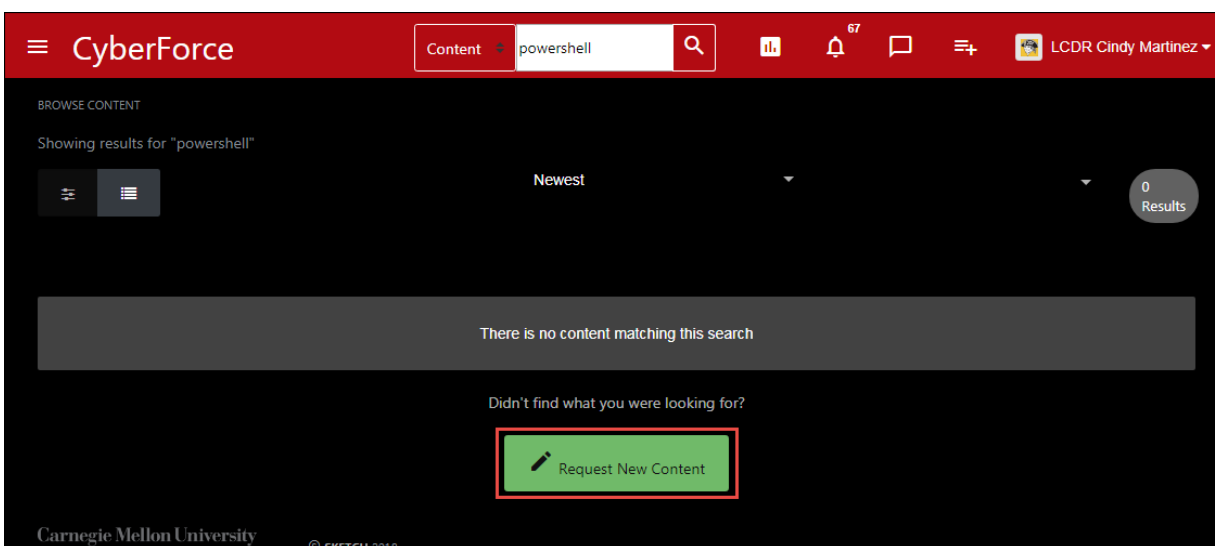


What happens when you can't find a scenario that fits your training needs?

In the event that LCDR Martinez was unable to find a training scenario that met her team's needs she has the option to request training be developed via the order portal. Here's how.

## Requesting a new training scenario

1. Next to the **Search** field, select **Content**.
2. In the **Search** field, type "**powershell**" and click the magnifying glass icon. There is no content matching that search.
3. Click **Request New Content**.



4. The **Order Portal** launches in a separate tab.
5. Click **Login with CyberForce Identity**. You are presented with the **Create a New Order** screen.

The order portal Wizard is made up of four steps where LCDR Martinez is "interviewed" by the system. The five steps in the Wizard are:

1. Define Request
2. Define Content
3. Define Terrain

4. Define Scenario
5. Review and Submit Order

## Step 1: Define Request

Complete the following fields. Fields marked with an asterisk ( \* ) are required and must be completed before proceeding.

- **Requestor's name:** Who is requesting the new training? For the purposes of this *Quick Start Guide*, the requestor is LCDR Martinez.
- **Service Branch:** Which of the five armed service branches the requestor belongs to.
- **Unit/Team:** The unit or team of the requestor.
- **Email:** The email address of the requestor.
- **Phone:** The phone number of the requestor.
- **Training audience:** Indicate whether the audience is for individuals or for teams. If **Individuals** is selected for the training audience, then:
  - **Role / Crew Position:** Enter the expected roles of those who will take the training.

If **Collective teams** is selected for the training audience, then enter the **Team Type**.

If you know the date when you need the training ready by, enter the **Date Required**.

Then click **Continue**.

## Step 2: Define Content

In the Define Content screen, LCDR Martinez would describe - in as much detail as possible - what she wants the training content to be. She includes details such as:

- **Training Description**
- **Learning Objectives**
- **Content type:** if a Scheduled Event is selected, then the Event Date fields are required; if an On-Demand type is selected, then the training duration field is required. Here are several examples of valid content types.
  - Scheduled Event - Team Training Exercise
  - Scheduled Event - Team Validation Event
  - On-Demand - Guided Practice Lab
  - On-Demand - Skills Assessment Lab
  - On-Demand – Automated Pre-scripted Scenario
  - On-Demand -Tactical Sandbox (no scenario)
- **Training Duration:** The number and increment of time. For example, "8 Hours".

Then click **Continue**.

### Step 3: Define Terrain

In the Define Terrain screen, LCDR Martinez would identify the **systems and tools** which are required to facilitate the training. She has the option to **upload a network diagram** or **create a network diagram**. She has the option to **upload any ancillary supporting files** here too.

For all of options below, multiple selections can be made (that is, Linux and Windows 2008) when defining the terrain.

- **Desired Operating Systems:** Red Hat Linux, Windows 2008, Windows 2012, Windows 2016, Windows 7.
- **Desired Services:** Exchange, Active directory, SharePoint, HTTP, SMB, Chat.
- **Desired Tools:** Security Onion, Rock NSM, CAPESTACK, SIEM-ArcSight, SIEM-Splunk, CVA-Hunt.
- **Desired Simulators:** JWICS, Weapon Systems, User simulation, Traffic generation, SCADA/ICS, Internet (Core routing), TOR, Bitcoin.
- **Malicious Terrain:** Specific Malware, Custom Malware, C2 Infrastructure in Greyspace, Legacy Systems.
- **Other Requirements:** Specify any other specific requirements.

Then click **Continue**.

### Step 4: Define Scenario

In the Define Scenario screen, LCDR Martinez would provide a possible setting, sequence of events, background, and context using the options below. For some of options below, multiple selections can be made (for example, Live OPFOR and white cell) when describing the scenario.

- **Classification Level:** UNCLASS, CONFIDENTIAL, SECRET, TOP SECRET, TS/SCI, or specify an Other.
- **Theater/Command/Area of Responsibility:** Enter text here.
- **Geopolitical Situation / Storyline:** Enter text here.
- **Mission CONOPS (for example, Commander's intent, Reporting procedures, etc.):** Enter text here.
- **Threat Actors / Adversary:** Nation-State, Hacktivist, Organized Crime, Insider(s).
- **Exercise Support:** Live OPFOR, Automated Injects, White Cell, Role Players (Mission Partners, Intel, HHQ, CNDSP, etc.).
- **Other Support:** Specify other support that is needed.
- **MSEL Input/Cyber Threats (APT, Exfiltration, DOS, etc.):** Enter text here.
- **Intel:** Embedded with Team? (**Yes** or **No**); **Intel Types:** Intel Community Provided Artifacts, Open Source Artifacts, Tippers, or specify **Other Intel Requirements**.
- **Assessment Types:** Knowledge tests/quizzes, Embedded Observer, Automated Terrain Sensing, Specific MOPS/METS, After Action Review / Debriefing, or specify **Other Assessment Requirements**.

Click **Continue**.

### Step 5: Review and Submit Order

LCDR Martinez has the opportunity to review her order and submit it.

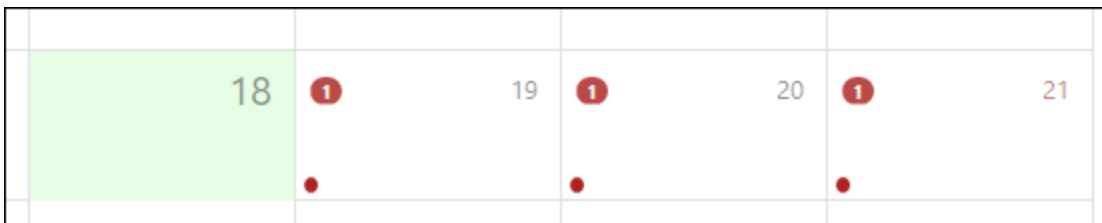
Click **Submit**.

Upon submitting, LCDR Martinez's training request is posted so content producers can take action to fulfill her request. LCDR Martinez can track the status of her request and provide clarifying details if necessary. Events that are scheduled are visible in, and can be launched from, each team participant's calendar in CyberForce.

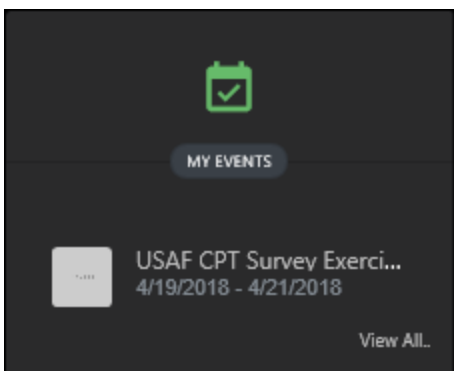
For example, in the top navigation bar, select the **Calendar** icon.



If an event were scheduled it would appear in the calendar:




Events can also be viewed in the right-navigation pane that appears at the right side of the CyberForce dashboard under **My Events**.



# Working with groups


Groups in CyberForce make it easy for you to organize people into teams, departments, or classes, and communicate within the group over chat and curate training for the members of your team. For example, if you are team lead you can: create a CyberForce group for your team; then, attach a playlist - made up of content previously selected by you - to your group. Members of your team join the group in CyberForce and get access to the group playlist which contains content you want them to have.

## Creating a new group

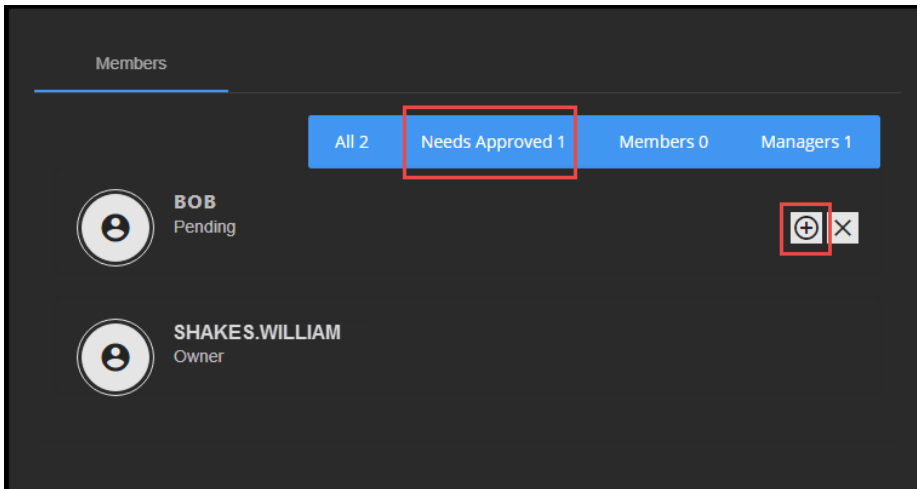
1. In the top navigation bar select **Add** , then **Group**.
2. Enter a **Name** for the new group.
3. Enter a **Description** for the new group. Both Name and Description are required fields denoted by an asterisk.
4. Select a poster image either by selecting an image that is provided or by browsing for a file to upload.
5. Select a thumbnail image either by selecting an image that is provided or by browsing for a file to upload.
6. Click **Submit**. You should see a confirmation message telling you that your new group has been added. You can add another group or view the group you just added.

## Adding members

After adding a new group potential members can browse to your group and request permission to be come a member. Group leaders or managers don't add members to the group; users who want to join must ask for permission. When a potential group member wants to join a group they:

1. Locate the group they want to join.
2. Click the **Request Membership** icon .
3. On the **Members** tab on the group home page, the group owner sees the notification that a membership needs to be approved.
4. The group owner clicks the **Admit** icon.

In the screen capture below, BOB wants to join the group called **CompTIA 901 and 902 Students**. The group owner, William Shakes, will have to click **Admit** to allow BOB to join.



## Editing an existing group

1. Locate the group you want to edit.
2. Click the **Manage** icon.
3. In the Edit Group screen, make any changes that you want to the existing fields.
4. Click **Submit**.

## Deleting an existing group

1. Locate the group you want to delete.
2. Click the **Manage** icon.
3. In the Edit Group screen, click **Delete group**.
4. Click **Delete** again.

## Adding a playlist to a group

Assume that you have already created a playlist in CyberForce and have added content to it. You have just created a new group, and some users are now members of the group. You want those members to use your playlist so you attach it to your group.

1. Locate the playlist you want to attach to your group.
2. On the playlist home page, from the **Add Playlist To Group** dropdown, select your newly created group.
3. Click **Add**.

## Leaving a group

To leave a group:

1. In the top navigation bar, select **Browse**, then **Groups**.
2. In the search results, locate the group you want to leave and click the **Leave** icon.



## Viewing a group member's profile

1. In the top navigation bar, select **Browse**, then **Groups**.
2. In the search results, click the group.
3. Click the **Manage** icon.
4. Select the **Members** tab.
5. Click the name of the group member in the grid. You are taken to that user's profile page.

# Notification Types

## Who Receives Notification

	Power Users	Channel Subscribers	Channel Owners	Playlist Followers	Group Owners	Playlist Owner	Target Profile
Channel Add	X	-	-	-	-	-	-
Channel Delete	X	-	-	-	-	-	-
Channel Update	-	X	-	-	-	-	-
Content Add	-	X	-	-	-	-	-
Content Update	-	X	-	-	-	-	-
Content Delete	-	X	-	-	-	-	-
Content Flagged	X	-	X	-	-	-	-
Content Difficulty Set	-	X	-	-	-	-	-
Content Rating Set	-	X	-	-	-	-	-
Group Add	X	-	-	-	-	-	-
Group Update	-	-	-	-	X	-	-
Group Delete	X	-	-	-	-	-	-
Member Add	-	-	-	-	X	-	-
Member Admit	-	-	-	-	X	-	-
Member Delete	-	-	-	-	X	-	-
Member Join	-	-	-	-	X	-	-
Member Leave	-	-	-	-	X	-	-
Playlist Add	X	-	-	-	-	-	-
Playlist Update	-	-	-	X	-	-	-
Playlist Delete	X	-	-	-	-	-	-
Content Added To Playlist	-	-	-	X	-	-	-
Content Deleted From Playlist	-	-	-	X	-	-	-
Playlist Followed User	-	-	-	-	-	X	-
Playlist Unfollowed By User	-	-	-	-	-	X	-
Playlist Followed By Group	-	-	-	-	-	X	-
Playlist Unfollowed By Group	-	-	-	-	-	X	-
Playlist Rated	-	-	-	-	-	X	-
Profile Permission Granted	-	-	-	-	-	-	X
Subscriber Add	-	-	X	-	-	-	-
Subscriber Delete	-	-	X	-	-	-	-



# Glossary

## A

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### **Administrator Role**

Can create system notifications, manage settings, content, channels, and groups; take away and designate Power User and Administrator roles; view disabled content.

## B

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### **Bookmarking**

Bookmarking content is a way for you to store or save links to items in CyberForce that you want to access at a later time.

## C

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### **Cartographer**

Used to build exercise topologies.

### **Channel**

A channel is a feed or a means to house CyberForce content for other users to view and subscribe to. Anyone can create a channel, add content to it, and manage subscriptions. Anyone can search and launch content from unrestricted channels.

### **Chat or Rocket Chat**

An instant messenger that allows CyberForce users to communicate in real time.

### **Content**

Includes instructional videos and documents, hands-on labs, tactical sandboxes, quizzes, and PBAs.

### **CyberForce Core**

A marketplace for cyber operations training. Here, users are matched to mission-focused and community-curated training content.

## D

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### **Discourse**

An open source discussion platform.

## **E**

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### **Extension**

An extension is a program that extends the capability of the CyberForce core. Examples of extensions to the core include: Cartographer, the STEP Exercise Player, Moodle, Chat, TopoMojo, Discussion forums, YouTube, and others.

## **G**

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### **Group**

A number of people who have something in common who are organized into a group of users.

## **I**

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### **Initializing**

In TopoMojo, the process of adding a new VM to your topo.

## **L**

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### **Learning Record Store**

Stores learning and performance data recorded in CyberForce.

## **M**

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### **Markdown**

Markdown is a lightweight and easy-to-use syntax for styling all forms of writing on the GitHub platform. <https://guides.github.com/features/mastering-markdown/>

### **Moodle**

A free open-source learning management system (moodle.org).

## **O**

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### **Order Portal**

A core component of the platform which enables users to request training scenario development and schedule events.

## **P**

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### **Power User Role**

Can view disabled content; manage content, channels, and groups.

## **S**

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### **STEP Exercise Player**

STEP "classic" lab and exercise player.

## **T**

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### **Topo**

Short for "topologies". Exercises found in TopoMojo.

### **TopoMojo**

Used to build a virtual lab and publish to CyberForce.

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