I-CTF

(Islander Capture the Flag)

Policy Version: 1.0

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Current Sections

- **Creation**
- **Officer Review**
- **Advisor Approval**

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Title: Project Creators

This Policy Manual Includes:

Question Creation Process

Officer Review Process

Advisor Approval Process

Question Creation Process

0.0 Purpose

The purpose of the Creation Submission process is to inform potential creators, the proper way to create a question. This informs them according to the style and demand of certain subjects and how the approval and review process work.

1.0 Who May Create?

- Any member is able to create whether it be a current member or Alumni. Position in the club does not dictate any creation exclusion, all members can create.
- All creators must follow the same submission process.

1.1 Challenge creation recommendations

- When first creating a challenge begin with the beginner difficulty in mind. This is because the goal of the product is to increase understanding of challenge solving. As well as help the thought process of the creator. By creating a challenge with a guide to help the learner, the creator can also assist in real time.
- If one area of the challenge practices is abundant with challenges, consider creating a challenge in an empty module.

1.2 Rules for the Creator

- The creator must never import or implement malicious elements within a challenge.
- The creator must always stay within legal limitations when gathering challenge information or data collection.
- Challenges must never endanger or expose the user of the application

1.3 Challenge Quality Standards

Every challenge submitted should reflect a clear, logical, and meaningful structure. The following quality expectations must be met:

- **Originality**: Challenges must be created from scratch. Reusing challenges from online repositories or previous competitions is not allowed unless significantly modified and approved.
- **Solvability**: Each challenge must be solvable using the information provided. A walkthrough or solution document must accompany the submission to prove validity.

- **Clarity**: The challenge prompt should be easy to understand without grammatical or spelling errors. Vague or confusing wording can result in rejection during the review process.
- **Flag Format**: All flags must follow the standard format: ICS-####-ABCD unless the challenge type explicitly requires a different format. This consistency ensures proper scoring and verification.
- **No External Dependencies**: Challenges must run in isolation or within the provided environment. Avoid requiring additional downloads, accounts, or external tools not already part of the I-CTF platform.

Officer Review

0.0 Purpose:

The purpose of this section is to define the officer role in the submission process. After a new challenge is submitted, the officer then takes that challenge and tests it on their machines.

1.0 Testing:

- Each available officer will implement the challenge in their own environment.
- Attempts at the challenge will dictate some key aspects:
    - If challenge difficulty matches the speculated difficulty
    - If it functionally works in the current product version
    - If it follows legal limitations.
- The testing phase should not take more than a week.

Advisor Approval

0.0 Purpose:

The purpose of the advisors is to review the feedback and comments on the challenge and confirm that it is a safe implementation.

1.0 Advisor Duties:

- Advisors will receive officer-reviewed challenges.
- They will assess the challenge from an oversight perspective:
    - Does the challenge reflect the learning values of the club?
    - Are there any institutional concerns related to legality, privacy, or ethics?

2.0 Final Approval or Rejection:

- Advisors may either approve the challenge, request minor edits, or reject the challenge entirely.
- If rejected, justification must be documented and provided to both the officers and the original creator.
- If approved, the challenge is good for implementation into the application.
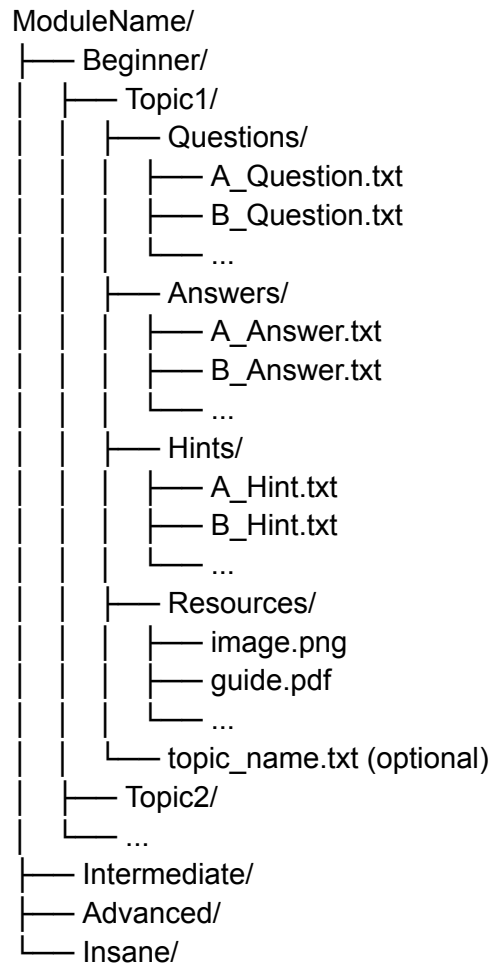
Question Creation Guide for I-CTF

This guide will walk you through the process of creating questions, answers, hints, and associated media for the Islander Cyber Society CTF application. Following these guidelines will ensure your content works correctly with the application.
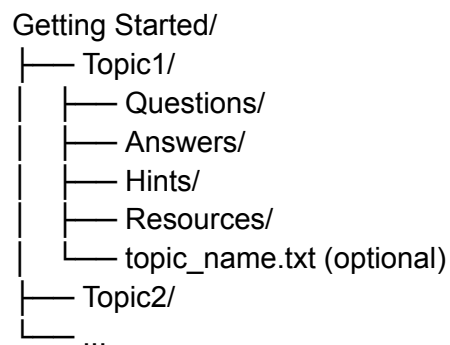
Table of Contents

Directory Structure

Each module follows this directory structure:

```
ModuleName/
├── Beginner/
│   ├── Topic1/
│   │   ├── Questions/
│   │   │   ├── A_Question.txt
│   │   │   ├── B_Question.txt
│   │   │   └── ...
│   │   ├── Answers/
│   │   │   ├── A_Answer.txt
│   │   │   ├── B_Answer.txt
│   │   │   └── ...
│   │   ├── Hints/
│   │   │   ├── A_Hint.txt
│   │   │   ├── B_Hint.txt
│   │   │   └── ...
│   │   ├── Resources/
│   │   │   ├── image.png
│   │   │   ├── guide.pdf
│   │   │   └── ...
│   │   └── topic_name.txt (optional)
│   ├── Topic2/
│   └── ...
├── Intermediate/
├── Advanced/
└── Insane/
```

For the "Getting Started" module, which has no difficulty levels, use:

```
Getting Started/
├── Topic1/
│   ├── Questions/
│   ├── Answers/
│   ├── Hints/
│   ├── Resources/
│   └── topic_name.txt (optional)
├── Topic2/
└── ...
```

Creating Questions

Questions are stored as text files in the `Questions` directory of each topic. The application supports two formats:

Regular Questions

1. Create a text file in the `Questions` directory with a meaningful name, starting with an identifier letter:

   - Example: `A_Find_MAC_Address.txt`

Format the question content as follows:

 [This is the description or context for the question]

{This is the actual question to be answered?}

2. The text within `[ ]` is the description or context, and the text within `{ }` is the actual question.

3. If you don't use the `[ ]{ }` format, the entire content will be displayed as the question.

Creating Answers

Answer files correspond to question files and must use consistent identifiers:

1. Create a text file in the `Answers` directory with a name that matches its question:

   - For question `A_Find_MAC_Address.txt`, create answer `A_Answer.txt`
2. The content of the answer file should be the correct answer text, with no special formatting.

If there are multiple acceptable answers, separate them with the pipe character `|`:

 00:1A:2B:3C:4D:5E|00-1A-2B-3C-4D-5E

3. This allows the application to accept either format as correct.

Creating Hints

Hints help users who are stuck on questions:

1. Create a text file in the `Hints` directory with a name that matches its question's identifier:

   - For question `A_Find_MAC_Address.txt`, create hint `A_Hint.txt`

2. Write the hint text in plain format with no special formatting required.

3. Remember that hints have different effects based on difficulty:

   - **Beginner**: No penalty for using hints
   - **Intermediate**: One incorrect attempt penalty
   - **Advanced**: Three incorrect attempts penalty
   - **Insane**: No hints provided

Adding Media and Resources

Resources provide additional information and media for topics:

1. Create a `Resources` directory (or alternatively `Files` or `Media`) within the topic directory.

2. Add resource files with appropriate names:

   - For question-specific resources, use the same identifier:
     - `A_network_diagram.png` for question `A_Find_MAC_Address.txt`
   - For general topic resources, use descriptive names:
     - `wireshark_tutorial.pdf`

3. Supported resource types:

   - Images (.jpg, .jpeg, .png, .gif, .bmp, .svg)
   - Documents (.pdf, .txt, .md, .rtf)
   - Videos (.mp4, .avi, .mov, .wmv)
   - Other file types will be treated as generic files

Naming Conventions

Consistent naming helps the application correctly associate files:

Questions

- Start with an identifier letter followed by underscore: `A_`, `B_`, `C_`, etc.
- Use descriptive names: `A_Find_MAC_Address.txt`

Answers

- Use the same identifier as the question: `A_Answer.txt`
- Alternative formats:
    - `A_Find_MAC_Address_Answer.txt`
    - `A_MAC_Answer.txt`

Hints

- Use the same identifier as the question: `A_Hint.txt`
- Alternative formats:
    - `A_Find_MAC_Address_Hint.txt`
    - `A_MAC_Hint.txt`

Resources

- For question-specific resources, use the question identifier:
    - `A_network_diagram.png`
- For general resources, use descriptive names:
    - `wireshark_tutorial.pdf`

Topics

- Directory names should start with "Topic" followed by a number:
    - `Topic 1 - Network Discovery`
    - `Topic2-Packet Analysis`

Best Practices

Writing Effective Questions

- Be clear and concise
- Provide enough context for the question to be understood
- For beginners, include specific directions about tools or methods to use
- For advanced levels, keep instructions more open-ended

Writing Good Answers

- Accept multiple formats when applicable (using the | separator)
- Be specific about the expected format (case-sensitive, with/without spaces, etc.)
- For complex answers, provide examples of acceptable formats in the question

Creating Helpful Hints

- Beginner hints should only exist if it is something that is not explained in the guide
- Intermediate hints should point users in the right direction without giving away the answer
- Advanced hints should be more subtle, just providing a small push toward the solution

Question Progression

- Start with easier questions that introduce a topic
- Build complexity gradually
- End topics with challenge questions that combine multiple concepts

Resource Management

- Keep resource files below 10MB when possible
- Use common file formats for better compatibility
- Organize resources by question or in logical groups

Testing

- Test all questions, answers, and hints before deploying
- Ensure hints actually help solve the questions
- Verify that all expected answer formats are accepted

By following these guidelines, you'll create CTF content that works seamlessly with the application and provides an excellent learning experience for users.