

Attack plan

The idea is exploit the overflow in `gets()` to write a `G` character in the `permtd` array. This will allow the attacker to pass an arbitrary pattern to `grep` and thus read the flag, e.g., by passing the `.` wildcard, or some string known to be contained in the flag (e.g., `SNH`).

For example, we can overflow `buffer` with the following:

```
+---+---+---+---+---+---+---+---+---+
| G | S | N | H | \0| x | x | x |   buffer
+---+---+---+---+---+---+---+---+---+
|           the canary           |   canary
+---+---+---+---+---+---+---+---+---+
| G |                               |   permtd
+---+---+---+---+---+---+---+---+---+
```