**Dumb Dumber Dumbest**



# Web Application Penetration Test

Product Name: Runtime\_Terror Web Application

Product Version: 1.0

Test Completion:

Penetration Testers:

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## Project Information

Application Name: Runtime\_Terror Web Application

Application Version: 1.0

## Overview

## Total Vulnerabilities

## Tools Used

OWASP ZAP Version 2.11.1

Burp Suite Community Edition v2022.1.1

## Source Code Alterations

Text

Description automatically generated

Changed the datasource URL to point to a docker container on port 4000

Changed the password to match with the mysql db running in the container

Changed server port to 8070 to allow burp suite to function

# **Findings**

## Vulnerabilities Due to Application Components

Outdated Libraries – CWE 829 - Medium

Bootstrap v3.3.7 - <https://snyk.io/test/npm/bootstrap/3.3.7>

Possibly don’t use any of these

JQuery v3.2.1 - <https://snyk.io/test/npm/jquery/3.2.1>

Possibly don’t use any of these

## App-Specific Exploits and Vulnerabilities

**Gain Admin Access with no checks - Critical**

During the Account Creation stage, the user is asked if they wish to register as an Admin or Standard User via a check box. If the Admin check box is pressed, the account is promoted to have admin privileges. This is a critical security and design issue as any user can create an account with Admin level access and thus access all Admin functionality. This vulnerability makes most of the below exploits redundant.

**Location in Code**

**Solution**

**No Strong Password Enforcement - High**

When creating an account, the password field only enforces a password with 6 characters. These characters can be any characters meaning that the password doesn’t have to be complex or contain strong password characteristics like symbols, capital letters or numbers.

**Location in Code**

**Solution**

**No Limit on Requests - Medium**

The application doesn’t limit the number of requests that can be sent to the server. This means that the web application is susceptible to Brute Forcing Password or Denial of Service (DoS) attacks.

**Location in Code**

**Solution**

**Brute Force Passwords - High**

The Web Application is susceptible to Brute Forcing the password during the user login stage. This is possible as there is no limitation on the number of Requests that can be sent when attempting to Login. This can be done using a Cluster Bomb Attack for example. This process can take a long time, although when it is completed, it can be detrimental to the security of the web application as access to an admin or user account can be gained.

**Location in Code**

**Solution**

**Forum Slowdown Due to Excess of Posts – Low**

**No Anti CSRF tokens – Medium**

The requests being sent in the application do not have a token requiring traffic to only come from within the applications domain. This leaves the application open to cross site request forgery attacks. These attacks leverage the victim’s browser to send requests from a compromised site to this site, which will then have the users cookies. If the user is logged in to the site, these malicious requests can use the victim’s identity to make requests to the application.

Solution :

Spring security has a built in protection against CSRF attacks. This uses a CSRF cookie.