

| Risk ID | Technical Risk | Technical Risk Indicators | Related CWE ID | Impact Rating | Impact |
|---------|---|--|-------------------------|---------------|--|
| 1 | Obvious administrative username: root | Root is the username set for the username of the wordpressblog | CWE-341, | Medium | Attackers can bruteforce the password for root and gain admin access |
| 2 | Response Discrepancy Information Exposure: webapp will say if user is valid | Admin log-in tells whether failed log-in attempts are due to invalid username or bad password | CWE 204 | Medium | Attackers can bruteforce for valid usernames then crack passwords conventionally |
| 3 | Informtion Exposure through Discrepancy, attempt to connect to FTP results in key | FTP port is open and can be scanned by Nmap | CWE-203 | Medium | Loss of key |
| 4 | Sql Injection allows unauthorized access to database | Sql code embedded in normal queries; unauthorized changes to database | CWE 89 CVE-2008-5817 | high | loss of sensitive information such as passwords/keys |
| 5 | Keys/passwords are hard-coded into certain paths of the webapp | fuzzing or attempting to access the wp-uploads directory of the webapp reveals sensitive information | CWE 259 | High | Easy access to sensitive information |
| 6 | Cross-site scripting through user-input of HTML script tags | Users are able to manipulate the content of the webapp | CWE 80 | High | Redirection to malicious pages or vandalism of web-page |
| 7 | Plaintext storage of password in memory | Anyone with access to the system can easily find the unencrypted passwords | CWE 316 | Medium | loss of sensitive information such as passwords/keys |
| 8 | Lack of encryption for Sensitive data | Certain functions may be passed unencrypted data | CWE 311 | Medium | Unintended sharing of sensitive data |

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|--|---|---------|--------|--|
| Use of Broken Cryptographic 9 Algorithm | Sensitive data is easily cracked using conventional mehtods | CWE 327 | Medium | Passwords/keys are easily obtainable |
| User has access to directory 10 containing contnents of app | user of app can traverse to directories unintended by the creator and access data | CWE 73 | Medium | Easy unauthorized access to other directories by users |
| Exposure of Information thorough 11 Error message | error message provides more information than intended | CWE 209 | Low | Sensitive information can be leaked |
| External Initialization of 12 variables/Data | Optarg is unbounded and attackers can overflow the destination buffer | CWE 454 | Low | Can result in execution of unwanted code |

| Mitigation | Validation Steps | Sources |
|---|--|---------------|
| Set the wordpress admin username to anything other than root | User name is not as easily guessed by crackers. | CWE |
| Only specify if log-in attempt failed or not without providing additional information | accounts are secure and usernames are not being easily guessed | CWE |
| Close FTP port and don't respond to it being connected to | FTP port remains closed | CWE |
| Sanitize all input in query fields, filtering out special characters | No changes in database and only authorized queries occur | Veracode, CWE |
| Store passwords in non-public locations; never store as plain text | No passwords can be accessed simply by navigating the website | Veracode, CWE |
| Sanitize user-input, filter out all HTML tags from user input. | Only intended changes to the webapp can be seen; Users can only post text. | Veracode, CWE |
| Don't store plaintext passwords. Always hash/encrypt it | Can't find plaintext sensitive information in memory | Veracode, CWE |
| Make sure all functions receive sensitive data encrypted | Web app is not passing sensitive data around unencrypted | Veracode, CWE |

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|--|--|---------------|
| Use legitimate/trusted cryptographic algorithms | Passwords and Keys cannot be easily cracked normally | Veracode, CWE |
| Ensure user cannot get to directory listing thorough URL | Only intended public webpages are accessible by Users | Veracode, CWE |
| Ensure error message only describes the error itself | Error messages only give information on current issue | Veracode, CWE |
| Limit size of data copied form optarg variable | Command line applications are only run when intended by the programmer | Veracode, CWE |