

Jan 22, 2020 pgupta25



Executive Summary

Issues Overview

On Jan 22, 2020, a source code review was performed over the calculation code base. 119 files, 6,179 LOC (Executable) were scanned and reviewed for defects that could lead to potential security vulnerabilities. A total of 78 reviewed findings were uncovered during the analysis.

Issues by Fortify Priority Order	
Critical	72
High	6

Recommendations and Conclusions

The Issues Category section provides Fortify recommendations for addressing issues at a generic level. The recommendations for specific fixes can be extrapolated from those generic recommendations by the development group.



Project Summary

Code Base Summary

Code location: /srv/openmrs_code/org/openmrs/module/calculation

Number of Files: 119 Lines of Code: 6179

Build Label: <No Build Label>

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Scan time: 12:27

SCA Engine version: 19.1.0.2241 Machine Name: vclv99-89.hpc.ncsu.edu Username running scan: pgupta25

Results Certification

Results Certification Valid

Details:

Results Signature:

SCA Analysis Results has Valid signature

Rules Signature:

There were no custom rules used in this scan

Attack Surface

Attack Surface:

Private Information:

null.null.null

System Information:

null.null.null

java.io.File.listFiles

java. lang. Class Loader. get Resource

java.lang.Throwable.getMessage

Filter Set Summary

Current Enabled Filter Set:

Quick View

Filter Set Details:

Folder Filters:

If [fortify priority order] contains critical Then set folder to Critical

If [fortify priority order] contains high Then set folder to High

If [fortify priority order] contains medium Then set folder to Medium

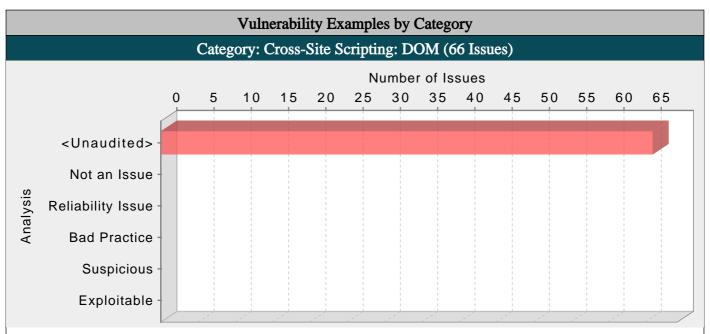


Audit Guide Summary				
Audit guide not enabled		·		

Results Outline

Overall number of results

The scan found 78 issues.



Abstract:

</div>

The method _fnAddData() in jquery.dataTables.js sends unvalidated data to a web browser on line 1704, which can result in the browser executing malicious code.

Explanation:

Cross-site scripting (XSS) vulnerabilities occur when:

- 1. Data enters a web application through an untrusted source. In the case of DOM-based XSS, data is read from a URL parameter or other value within the browser and written back into the page with client-side code. In the case of reflected XSS, the untrusted source is typically a web request, while in the case of persisted (also known as stored) XSS it is typically a database or other back -end data store.
- 2. The data is included in dynamic content that is sent to a web user without being validated. In the case of DOM Based XSS, malicious content gets executed as part of DOM (Document Object Model) creation, whenever the victim's browser parses the HTML page.

The malicious content sent to the web browser often takes the form of a segment of JavaScript, but may also include HTML, Flash or any other type of code that the browser executes. The variety of attacks based on XSS is almost limitless, but they commonly include transmitting private data like cookies or other session information to the attacker, redirecting the victim to web content controlled by the attacker, or performing other malicious operations on the user's machine under the guise of the vulnerable site.

Example 1: The following JavaScript code segment reads an employee ID, eid, from a URL and displays it to the user.



The following jQuery code segment reads an employee ID from the form, and displays it to the user.

```
$(document).ready(function(){
$("#myDiv").on("click", "button", function(){
var eid = $("#eid").val();
$("resultsDiv").append(eid);
...
});
});
```

These code examples operate correctly if the employee ID, from the text input with ID eid contains only standard alphanumeric text. If eid has a value that includes meta-characters or source code, then the code will be executed by the web browser as it displays the HTTP response.

Example 3: The following code shows an example of a DOM-based XSS within a React application:

```
let element = JSON.parse(getUntrustedInput());
ReactDOM.render(<App>
{element}
</App>);
```

In Example 3, if an attacker can control the entire JSON object retrieved from getUntrustedInput(), they may be able to make React render element as a component, and therefore can pass an object with dangerouslySetInnerHTML with their own controlled value, a typical cross-site scripting attack.

Initially these might not appear to be much of a vulnerability. After all, why would someone provide input containing malicious code to run on their own computer? The real danger is that an attacker will create the malicious URL, then use email or social engineering tricks to lure victims into visiting a link to the URL. When victims click the link, they unwittingly reflect the malicious content through the vulnerable web application back to their own computers. This mechanism of exploiting vulnerable web applications is known as Reflected XSS.

As the example demonstrates, XSS vulnerabilities are caused by code that includes unvalidated data in an HTTP response. There are three vectors by which an XSS attack can reach a victim:

- Data is read directly from the HTTP request and reflected back in the HTTP response. Reflected XSS exploits occur when an attacker causes a user to supply dangerous content to a vulnerable web application, which is then reflected back to the user and executed by the web browser. The most common mechanism for delivering malicious content is to include it as a parameter in a URL that is posted publicly or emailed directly to victims. URLs constructed in this manner constitute the core of many phishing schemes, whereby an attacker convinces victims to visit a URL that refers to a vulnerable site. After the site reflects the attacker's content back to the user, the content is executed and proceeds to transfer private information, such as cookies that may include session information, from the user's machine to the attacker or perform other nefarious activities.
- The application stores dangerous data in a database or other trusted data store. The dangerous data is subsequently read back into the application and included in dynamic content. Persistent XSS exploits occur when an attacker injects dangerous content into a data store that is later read and included in dynamic content. From an attacker's perspective, the optimal place to inject malicious content is in an area that is displayed to either many users or particularly interesting users. Interesting users typically have elevated privileges in the application or interact with sensitive data that is valuable to the attacker. If one of these users executes malicious content, the attacker may be able to perform privileged operations on behalf of the user or gain access to sensitive data belonging to the user.
- A source outside the application stores dangerous data in a database or other data store, and the dangerous data is subsequently read back into the application as trusted data and included in dynamic content.

Recommendations:

The solution to XSS is to ensure that validation occurs in the correct places and checks are made for the correct properties.

Since XSS vulnerabilities occur when an application includes malicious data in its output, one logical approach is to validate data immediately before it leaves the application. However, because web applications often have complex and intricate code for generating dynamic content, this method is prone to errors of omission (missing validation). An effective way to mitigate this risk is to also perform input validation for XSS.

Web applications must validate their input to prevent other vulnerabilities, such as SQL injection, so augmenting an application's existing input validation mechanism to include checks for XSS is generally relatively easy. Despite its value, input validation for XSS does not take the place of rigorous output validation. An application may accept input through a shared data store or other trusted source, and that data store may accept input from a source that does not perform adequate input validation. Therefore, the application cannot implicitly rely on the safety of this or any other data. This means the best way to prevent XSS vulnerabilities is to validate everything that enters the application and leaves the application destined for the user.

The most secure approach to validation for XSS is to create a whitelist of safe characters that are allowed to appear in HTTP content and accept input composed exclusively of characters in the approved set. For example, a valid username might only include alpha-numeric characters or a phone number might only include digits 0-9. However, this solution is often infeasible in web applications because many characters that have special meaning to the browser should still be considered valid input once they are encoded, such as a web design bulletin board that must accept HTML fragments from its users.



A more flexible, but less secure approach is known as blacklisting, which selectively rejects or escapes potentially dangerous characters before using the input. In order to form such a list, you first need to understand the set of characters that hold special meaning for web browsers. Although the HTML standard defines what characters have special meaning, many web browsers try to correct common mistakes in HTML and may treat other characters as special in certain contexts, which is why we do not encourage the use of blacklists as a means to prevent XSS. The CERT(R) Coordination Center at the Software Engineering Institute at Carnegie Mellon University provides the following details about special characters in various contexts [1]:

In the content of a block-level element (in the middle of a paragraph of text):

- "<" is special because it introduces a tag.
- "&" is special because it introduces a character entity.
- ">" is special because some browsers treat it as special, on the assumption that the author of the page intended to include an opening "<", but omitted it in error.

The following principles apply to attribute values:

- In attribute values enclosed with double quotes, the double quotes are special because they mark the end of the attribute value.
- In attribute values enclosed with single quote, the single quotes are special because they mark the end of the attribute value.
- In attribute values without any quotes, white-space characters, such as space and tab, are special.
- "&" is special when used with certain attributes, because it introduces a character entity.

In URLs, for example, a search engine might provide a link within the results page that the user can click to re-run the search. This can be implemented by encoding the search query inside the URL, which introduces additional special characters:

- Space, tab, and new line are special because they mark the end of the URL.
- "&" is special because it either introduces a character entity or separates CGI parameters.
- Non-ASCII characters (that is, everything greater than 127 in the ISO-8859-1 encoding) are not allowed in URLs, so they are considered to be special in this context.
- The "%" symbol must be filtered from input anywhere parameters encoded with HTTP escape sequences are decoded by server -side code. For example, "%" must be filtered if input such as "%68%65%6C%6C%6F" becomes "hello" when it appears on the web page in question.

Within the body of a <SCRIPT> </SCRIPT>:

- Semicolons, parentheses, curly braces, and new line characters should be filtered out in situations where text could be inserted directly into a pre-existing script tag.

Server-side scripts:

- Server-side scripts that convert any exclamation characters (!) in input to double-quote characters (") on output might require additional filtering.

Other possibilities:

- If an attacker submits a request in UTF-7, the special character '<' appears as '+ADw-' and may bypass filtering. If the output is included in a page that does not explicitly specify an encoding format, then some browsers try to intelligently identify the encoding based on the content (in this case, UTF-7).

After you identify the correct points in an application to perform validation for XSS attacks and what special characters the validation should consider, the next challenge is to identify how your validation handles special characters. If special characters are not considered valid input to the application, then you can reject any input that contains special characters as invalid. A second option in this situation is to remove special characters with filtering. However, filtering has the side effect of changing any visual representation of the filtered content and may be unacceptable in circumstances where the integrity of the input must be preserved for display.

If input containing special characters must be accepted and displayed accurately, validation must encode any special characters to remove their significance. A complete list of ISO 8859-1 encoded values for special characters is provided as part of the official HTML specification [2].

Many application servers attempt to limit an application's exposure to cross-site scripting vulnerabilities by providing implementations for the functions responsible for setting certain specific HTTP response content that perform validation for the characters essential to a cross-site scripting attack. Do not rely on the server running your application to make it secure. When an application is developed there are no guarantees about what application servers it will run on during its lifetime. As standards and known exploits evolve, there are no guarantees that application servers will also stay in sync.

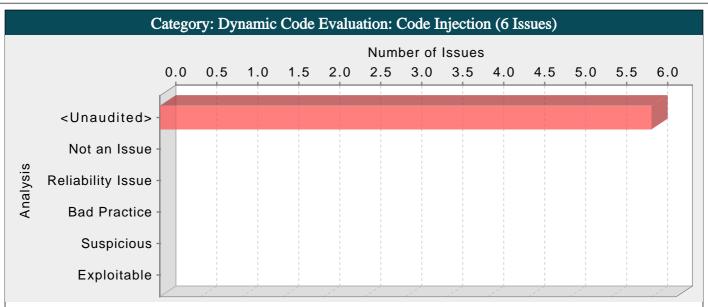
Tips:

1. The Fortify Secure Coding Rulepacks warn about SQL Injection and Access Control: Database issues when untrusted data is written to a database and also treat the database as a source of untrusted data, which can lead to XSS vulnerabilities. If the database is a trusted resource in your environment, use custom filters to filter out dataflow issues that include the DATABASE taint flag or originate from database sources. Nonetheless, it is often still a good idea to validate everything read from the database.



- 2. Even though URL encoding untrusted data protects against many XSS attacks, some browsers (specifically, Internet Explorer 6 and 7 and possibly others) automatically decode content at certain locations within the Document Object Model (DOM) prior to passing it to the JavaScript interpreter. To reflect this danger, the rulepacks no longer treat URL encoding routines as sufficient to protect against cross-site scripting. Data values that are URL encoded and subsequently output will cause Fortify to report Cross-Site Scripting: Poor Validation vulnerabilities.
- 3. Older versions of React are more susceptible to cross-site scripting attacks by controlling an entire component. Newer versions use Symbols to identify a React component, which prevents the exploit, however older browsers that do not have Symbol support (natively, or through polyfills), such as all versions of Internet Explorer, are still vulnerable. Other types of cross-site scripting attacks are valid for all browsers and versions of React.

jquery.dataTables.js, line 1704 (Cross-Site Scripting: DOM)			
Fortify Priority:	Critical	Folder	Critical
Kingdom:	Input Validation and Repre	sentation	
Abstract:			bles.js sends unvalidated data to a web e browser executing malicious code.
Source:	jquery.dataTables.js:1527	ambda(0)	
1525 1526	_fnProcessingDisplay(oSet	tings, true);	
1527	\$.getJSON(oSettings.sAjax	Source, null,	function(json) {
1528	/* Got the data - add it	to the table *	/
1529	for (var i=0 ; i <json.aa< td=""><th>Data.length ;</th><td>i++)</td></json.aa<>	Data.length ;	i++)
Sink:	jquery.dataTables.js:1704	Assignment to	o nTd.innerHTML()
1702	else		
1703	{		
1704	nTd.innerHTML = aData[i];		
1705	}		
1706			



Abstract:

The file jquery.dataTables.js interprets unvalidated user input as source code on line 3643. Interpreting user-controlled instructions at run-time can allow attackers to execute malicious code.

Explanation:

Many modern programming languages allow dynamic interpretation of source instructions. This capability allows programmers to perform dynamic instructions based on input received from the user. Code injection vulnerabilities occur when the programmer incorrectly assumes that instructions supplied directly from the user will perform only innocent operations, such as performing simple calculations on active user objects or otherwise modifying the user's state. However, without proper validation, a user might specify operations the programmer does not intend.

Example: In this classic code injection example, the application implements a basic calculator that allows the user to specify commands for execution.

```
...
userOp = form.operation.value;
calcResult = eval(userOp);
...
```

The program behaves correctly when the operation parameter is a benign value, such as "8 + 7 * 2", in which case the calcResult variable is assigned a value of 22. However, if an attacker specifies languages operations that are both valid and malicious, those operations would be executed with the full privilege of the parent process. Such attacks are even more dangerous when the underlying language provides access to system resources or allows execution of system commands. In the case of JavaScript, the attacker may utilize this vulnerability to perform a cross-site scripting attack.

Recommendations:

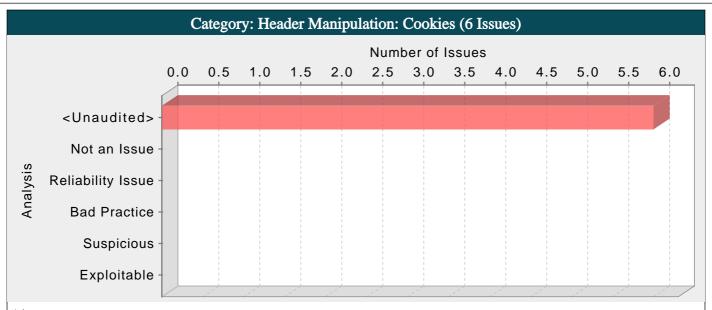
Avoid dynamic code interpretation whenever possible. If your program's functionality requires code to be interpreted dynamically, the likelihood of attack can be minimized by constraining the code your program will execute dynamically as much as possible, limiting it to an application- and context-specific subset of the base programming language.

If dynamic code execution is required, unvalidated user input should never be directly executed and interpreted by the application. Instead, use a level of indirection: create a list of legitimate operations and data objects that users are allowed to specify, and only allow users to select from the list. With this approach, input provided by users is never executed directly.

jquery.dataTables.js, line 3643 (Dynamic Code Evaluation: Code Injection)			
Fortify Priority:	Critical	Folder	Critical
Kingdom:	Input Validation	and Representation	
Abstract:		user-controlled instruction	lidated user input as source code on line as at run-time can allow attackers to
Source:	jquery.dataTable	es.js:3711 Read docume	ent.cookie()
3709	{		
3710	<pre>var sNameEQ = s + "=";</pre>	Name +'_'+ window.location.	<pre>pathname.replace(/[\/:]/g,"").toLowerCase</pre>
3711	var sCookieCont	ents = document.cookie.spli	Lt(';');
3712			
3713	for(var i=0 ;	i <scookiecontents.length;< td=""><td>i++)</td></scookiecontents.length;<>	i++)
Sink:	jquery.dataTable	es.js:3643 eval()	



```
3641
                           else
3642
3643
                            oData = eval( '('+sData+')' );
3644
                           }
3645
                          }
```



Abstract:

The method _fnCreateCookie() in jquery.dataTables.js includes unvalidated data in an HTTP cookie on line 3699. This enables Cookie manipulation attacks and can lead to other HTTP Response header manipulation attacks like: cache-poisoning, cross-site scripting, cross-user defacement, page hijacking or open redirect.

Explanation:

Cookie Manipulation vulnerabilities occur when:

- 1. Data enters a web application through an untrusted source, most frequently an HTTP request.
- 2. The data is included in an HTTP cookie sent to a web user without being validated.

As with many software security vulnerabilities, cookie manipulation is a means to an end, not an end in itself. At its root, the vulnerability is straightforward: an attacker passes malicious data to a vulnerable application, and the application includes the data in an HTTP cookie.

Cookie Manipulation: When combined with attacks like cross-site request forgery, attackers may change, add to, or even overwrite a legitimate user's cookies.

Being an HTTP Response header, Cookie manipulation attacks can also lead to other types of attacks like:

HTTP Response Splitting:

One of the most common Header Manipulation attacks is HTTP Response Splitting. To mount a successful HTTP Response Splitting exploit, the application must allow input that contains CR (carriage return, also given by %0d or \r) and LF (line feed, also given by %0a or \n) characters into the header. These characters not only give attackers control of the remaining headers and body of the response the application intends to send, but also allows them to create additional responses entirely under their control.

Many of today's modern application servers will prevent the injection of malicious characters into HTTP headers. For example, recent versions of Apache Tomcat will throw an IllegalArgumentException if you attempt to set a header with prohibited characters. If your application server prevents setting headers with new line characters, then your application is not vulnerable to HTTP Response Splitting. However, solely filtering for new line characters can leave an application vulnerable to Cookie Manipulation or Open Redirects, so care must still be taken when setting HTTP headers with user input.

Example: The following code segment reads the name of the author of a weblog entry, author, from an HTTP request and sets it in a cookie header of an HTTP response.

```
author = form.author.value;
...
document.cookie = "author=" + author + ";expires="+cookieExpiration;
...
```

Assuming a string consisting of standard alpha-numeric characters, such as "Jane Smith", is submitted in the request the HTTP response including this cookie might take the following form:

```
HTTP/1.1 200 OK ... Set-Cookie: author=Jane Smith
```



However, because the value of the cookie is formed of unvalidated user input the response will only maintain this form if the value submitted for AUTHOR_PARAM does not contain any CR and LF characters. If an attacker submits a malicious string, such as "Wiley Hacker\r\nHTTP/1.1 200 OK\r\n...", then the HTTP response would be split into two responses of the following form:

HTTP/1.1 200 OK

•••

Set-Cookie: author=Wiley Hacker

HTTP/1.1 200 OK

...

Clearly, the second response is completely controlled by the attacker and can be constructed with any header and body content desired. The ability of attacker to construct arbitrary HTTP responses permits a variety of resulting attacks, including: cross-user defacement, web and browser cache poisoning, cross-site scripting, and page hijacking.

Cross-User Defacement: An attacker will be able to make a single request to a vulnerable server that will cause the server to create two responses, the second of which may be misinterpreted as a response to a different request, possibly one made by another user sharing the same TCP connection with the server. This can be accomplished by convincing the user to submit the malicious request themselves, or remotely in situations where the attacker and the user share a common TCP connection to the server, such as a shared proxy server. In the best case, an attacker may leverage this ability to convince users that the application has been hacked, causing users to lose confidence in the security of the application. In the worst case, an attacker may provide specially crafted content designed to mimic the behavior of the application but redirect private information, such as account numbers and passwords, back to the attacker.

Cache Poisoning: The impact of a maliciously constructed response can be magnified if it is cached either by a web cache used by multiple users or even the browser cache of a single user. If a response is cached in a shared web cache, such as those commonly found in proxy servers, then all users of that cache will continue receive the malicious content until the cache entry is purged. Similarly, if the response is cached in the browser of an individual user, then that user will continue to receive the malicious content until the cache entry is purged, although only the user of the local browser instance will be affected.

Cross-Site Scripting: Once attackers have control of the responses sent by an application, they have a choice of a variety of malicious content to provide users. Cross-site scripting is common form of attack where malicious JavaScript or other code included in a response is executed in the user's browser. The variety of attacks based on XSS is almost limitless, but they commonly include transmitting private data like cookies or other session information to the attacker, redirecting the victim to web content controlled by the attacker, or performing other malicious operations on the user's machine under the guise of the vulnerable site. The most common and dangerous attack vector against users of a vulnerable application uses JavaScript to transmit session and authentication information back to the attacker who can then take complete control of the victim's account.

Page Hijacking: In addition to using a vulnerable application to send malicious content to a user, the same root vulnerability can also be leveraged to redirect sensitive content generated by the server and intended for the user to the attacker instead. By submitting a request that results in two responses, the intended response from the server and the response generated by the attacker, an attacker may cause an intermediate node, such as a shared proxy server, to misdirect a response generated by the server for the user to the attacker. Because the request made by the attacker generates two responses, the first is interpreted as a response to the attacker's request, while the second remains in limbo. When the user makes a legitimate request through the same TCP connection, the attacker's request is already waiting and is interpreted as a response to the victim's request. The attacker then sends a second request to the server, to which the proxy server responds with the server generated request intended for the victim, thereby compromising any sensitive information in the headers or body of the response intended for the victim.

Open Redirect: Allowing unvalidated input to control the URL used in a redirect can aid phishing attacks.

Recommendations:

The solution to cookie manipulation is to ensure that input validation occurs in the correct places and checks for the correct properties.

Since Header Manipulation vulnerabilities like cookie manipulation occur when an application includes malicious data in its output, one logical approach is to validate data immediately before it leaves the application. However, because web applications often have complex and intricate code for generating responses dynamically, this method is prone to errors of omission (missing validation). An effective way to mitigate this risk is to also perform input validation for Header Manipulation.

Web applications must validate their input to prevent other vulnerabilities, such as SQL injection, so augmenting an application's existing input validation mechanism to include checks for Header Manipulation is generally relatively easy. Despite its value, input validation for Header Manipulation does not take the place of rigorous output validation. An application may accept input through a shared data store or other trusted source, and that data store may accept input from a source that does not perform adequate input validation. Therefore, the application cannot implicitly rely on the safety of this or any other data. This means the best way to prevent Header Manipulation vulnerabilities is to validate everything that enters the application or leaves the application destined for the user.

The most secure approach to validation for Header Manipulation is to create a whitelist of safe characters that are allowed to appear in HTTP response headers and accept input composed exclusively of characters in the approved set. For example, a valid name might only include alpha-numeric characters or an account number might only include digits 0-9.

A more flexible, but less secure approach is known as blacklisting, which selectively rejects or escapes potentially dangerous characters before using the input. In order to form such a list, you first need to understand the set of characters that hold special meaning in HTTP response headers. Although the CR and LF characters are at the heart of an HTTP response splitting attack, other characters, such as ':' (colon) and '=' (equal), have special meaning in response headers as well.



After you identify the correct points in an application to perform validation for Header Manipulation attacks and what special characters the validation should consider, the next challenge is to identify how your validation handles special characters. The application should reject any input destined to be included in HTTP response headers that contains special characters, particularly CR and LF, as invalid.

Many application servers attempt to limit an application's exposure to HTTP response splitting vulnerabilities by providing implementations for the functions responsible for setting HTTP headers and cookies that perform validation for the characters essential to an HTTP response splitting attack. Do not rely on the server running your application to make it secure. When an application is developed there are no guarantees about what application servers it will run on during its lifetime. As standards and known exploits evolve, there are no guarantees that application servers will also stay in sync.

jquery.dataTables.js,	line 3699 (Header Manipulation:	Cookies)	
Fortify Priority: Kingdom:	High Input Validation and Represe	Folder	High
Abstract:	The method _fnCreateCookie() i HTTP cookie on line 3699. This	in jquery.dataTa enables Cookie anipulation attac	bles.js includes unvalidated data in an manipulation attacks and can lead to eks like: cache-poisoning, cross-site or open redirect.
Source: 3695 3696	jquery.dataTables.js:3697 Re * have to append the pathname */		V
3697 3698	sName += '_'+window.location.p	pathname.replace	(/[\/:]/g,"").toLowerCase();
3699 Sink: 3697 3698	<pre>document.cookie = sName+"="+sV jquery.dataTables.js:3699 As sName += '_'+window.location.p</pre>	signment to do	V
3699 3700 3701	document.cookie = sName+"="+s\}	<mark>/alue+"; expires</mark> :	="+date.toGMTString()+"; path=/";



Detailed Project Summary

Files Scanned

Code base location: /srv/openmrs_code/org/openmrs/module/calculation

Files Scanned:

api/pom.xml xml 2 KB Dec 13, 2019 12:56:31 PM

api/src/main/java/org/openmrs/calculation/BaseCalculation.java java 5 Lines 1.6 KB Dec 13, 2019 12:56:31 PM api/src/main/java/org/openmrs/calculation/Calculation.java java 1.1 KB Dec 13, 2019 12:56:31 PM api/src/main/java/org/openmrs/calculation/CalculationActivator.java java 21 Lines 2.8 KB Dec 13, 2019 12:56:31 PM api/src/main/java/org/openmrs/calculation/CalculationConstants.java java 6 Lines 1.1 KB Dec 13, 2019 12:56:31 PM api/src/main/java/org/openmrs/calculation/CalculationContext.java java 1.7 KB Dec 13, 2019 12:56:31 PM api/src/main/java/org/openmrs/calculation/CalculationProvider.java java 1.7 KB Dec 13, 2019 12:56:31 PM api/src/main/java/org/openmrs/calculation/CalculationRegistration.java java 25 Lines 3.6 KB Dec 13, 2019 12:56:31 PM api/src/main/java/org/openmrs/calculation/CalculationRegistrationSuggestion.java java 1.3 KB Dec 13, 2019 12:56:31 PM api/src/main/java/org/openmrs/calculation/CalculationRegistrationValidator.java java 10 Lines 3 KB Dec 13, 2019 12:56:31 PM api/src/main/java/org/openmrs/calculation/CalculationUtil.java java 36 Lines 6.5 KB Dec 13, 2019 12:56:31 PM api/src/main/java/org/openmrs/calculation/ClasspathCalculationProvider.java java 9 Lines 2.3 KB Dec 13, 2019 12:56:31 PM api/src/main/java/org/openmrs/calculation/ConfigurableCalculation.java java Dec 13, 2019 12:56:31 PM api/src/main/java/org/openmrs/calculation/ConversionException.java java 5 Lines 1.3 KB Dec 13, 2019 12:56:31 PM api/src/main/java/org/openmrs/calculation/EvaluationInstanceData.java java Dec 13, 2019 12:56:31 PM api/src/main/java/org/openmrs/calculation/ImplementationConfiguredCalculationProvider.java java 26 Lines 3.1 KB Dec 13, 2019 12:56:31 PM

api/src/main/java/org/openmrs/calculation/InvalidCalculationException.java java 8 Lines 2 KB Dec 13, 2019 12:56:31 PM api/src/main/java/org/openmrs/calculation/InvalidParameterValueException.java java 4 Lines 1.5 KB Dec 13, 2019 12:56:31 PM api/src/main/java/org/openmrs/calculation/MissingParameterException.java java 5 Lines 1.4 KB Dec 13, 2019 12:56:31 PM api/src/main/java/org/openmrs/calculation/api/CalculationRegistrationService.java java 4.3 KB Dec 13, 2019 12:56:31 PM api/src/main/java/org/openmrs/calculation/api/CalculationRegistrationServiceImpl.java java 21 Lines 5 KB Dec 13, 2019 12:56:31 PM

api/src/main/java/org/openmrs/calculation/db/CalculationRegistrationDAO.java java 2.3 KB Dec 13, 2019 12:56:31 PM api/src/main/java/org/openmrs/calculation/db/HibernateCalculationRegistrationDAO.java java 19 Lines 4.8 KB Dec 13, 2019 12:56:31 PM

api/src/main/java/org/openmrs/calculation/parameter/ParameterDefinition.java java 1.9 KB Dec 13, 2019 12:56:31 PM api/src/main/java/org/openmrs/calculation/parameter/ParameterDefinitionSet.java java 6 Lines 1.3 KB Dec 13, 2019 12:56:31 PM api/src/main/java/org/openmrs/calculation/parameter/SimpleParameterDefinition.java java 29 Lines 4.8 KB Dec 13, 2019 12:56:31 PM

api/src/main/java/org/openmrs/calculation/patient/PatientAtATimeCalculation.java java 9 Lines 3.5 KB Dec 13, 2019 12:56:31 PM api/src/main/java/org/openmrs/calculation/patient/PatientCalculation.java java 1.9 KB Dec 13, 2019 12:56:31 PM api/src/main/java/org/openmrs/calculation/patient/PatientCalculationContext.java java Dec 13, 2019 12:56:31 PM api/src/main/java/org/openmrs/calculation/patient/PatientCalculationService.java java 4.7 KB Dec 13, 2019 12:56:31 PM api/src/main/java/org/openmrs/calculation/patient/PatientCalculationServiceImpl.java java 50 Lines 8.4 KB Dec 13, 2019 12:56:31 PM

api/src/main/java/org/openmrs/calculation/patient/PatientIdCalculation.java java 5 Lines 1.6 KB Dec 13, 2019 12:56:31 PM api/src/main/java/org/openmrs/calculation/result/CalculationResult.java java 1.5 KB Dec 13, 2019 12:56:31 PM api/src/main/java/org/openmrs/calculation/result/CalculationResultMap.java java 6 Lines 1.9 KB Dec 13, 2019 12:56:31 PM api/src/main/java/org/openmrs/calculation/result/DateBasedResult.java java 1 KB Dec 13, 2019 12:56:31 PM api/src/main/java/org/openmrs/calculation/result/EncounterResult.java java 5 Lines 2 KB Dec 13, 2019 12:56:31 PM api/src/main/java/org/openmrs/calculation/result/ListResult.java java 5 Lines 1.9 KB Dec 13, 2019 12:56:31 PM api/src/main/java/org/openmrs/calculation/result/ObsResult.java java 5 Lines 1.9 KB Dec 13, 2019 12:56:31 PM api/src/main/java/org/openmrs/calculation/result/ResultUtil.java java 43 Lines 8.9 KB Dec 13, 2019 12:56:31 PM api/src/main/java/org/openmrs/calculation/result/SimpleResult.java java 15 Lines 3.1 KB Dec 13, 2019 12:56:31 PM api/src/main/java/org/openmrs/calculation/result/SimpleResult.java java 15 Lines 3.1 KB Dec 13, 2019 12:56:31 PM api/src/main/resources/CalculationRegistration.hbm.xml xml 1.2 KB Dec 13, 2019 12:56:31 PM



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api/src/test/java/org/openmrs/calculation/CalculationUtilTest.java java 32 Lines 8.7 KB Dec 13, 2019 12:56:31 PM api/src/test/java/org/openmrs/calculation/ClasspathCalculationProviderTest.java java 12 Lines 3.4 KB Dec 13, 2019 12:56:31 PM api/src/test/java/org/openmrs/calculation/CountingCalculation.java java 5 Lines 1.8 KB Dec 13, 2019 12:56:31 PM api/src/test/java/org/openmrs/calculation/ImplementationConfiguredCalculationProviderTest.java java 11 Lines 1.7 KB Dec 13, 2019 12:56:31 PM

api/src/test/java/org/openmrs/calculation/InnerCalculation.java java 4 Lines 1.7 KB Dec 13, 2019 12:56:31 PM api/src/test/java/org/openmrs/calculation/MostRecentEncounterCalculation.java java 17 Lines 2.9 KB Dec 13, 2019 12:56:31 PM api/src/test/java/org/openmrs/calculation/MostRecentObsCalculation.java java 14 Lines 2.6 KB Dec 13, 2019 12:56:31 PM api/src/test/java/org/openmrs/calculation/OuterCalculation.java java 9 Lines 1.9 KB Dec 13, 2019 12:56:31 PM api/src/test/java/org/openmrs/calculation/RecentEncounterCalculation.java java 20 Lines 3.5 KB Dec 13, 2019 12:56:31 PM api/src/test/java/org/openmrs/calculation/api/CalculationRegistrationServiceTest.java java 39 Lines 8 KB Dec 13, 2019 12:56:31 PM

api/src/test/java/org/openmrs/calculation/patient/PatientBehaviorTest.java java 107 Lines 10.8 KB Dec 13, 2019 12:56:31 PM api/src/test/java/org/openmrs/calculation/patient/PatientCalculationServiceTest.java java 41 Lines 7.5 KB Dec 13, 2019 12:56:31 PM

api/src/test/java/org/openmrs/calculation/result/CalculationResultMapTest.java java 27 Lines 2.7 KB Dec 13, 2019 12:56:31 PM api/src/test/java/org/openmrs/calculation/result/ListResultTest.java java 11 Lines Dec 13, 2019 12:56:31 PM api/src/test/java/org/openmrs/calculation/result/ResultUtilTest.java java 84 Lines 15.7 KB Dec 13, 2019 12:56:31 PM api/src/test/resources/TestingApplicationContext.xml xml 1.1 KB Dec 13, 2019 12:56:31 PM api/src/test/resources/org/openmrs/calculation/include/moduleTestData.xml xml 1.9 KB Dec 13, 2019 12:56:31 PM api/src/test/resources/test-hibernate.cfg.xml xml Dec 13, 2019 12:56:31 PM api/target/classes/CalculationRegistration.hbm.xml xml 1.2 KB Dec 18, 2019 3:32:50 PM api/target/classes/liquibase.xml xml 1.5 KB Dec 18, 2019 3:32:50 PM api/target/classes/moduleApplicationContext.xml xml 2.3 KB Dec 18, 2019 3:32:50 PM api/target/classes/moduleApplicationContext.xml xml 2.3 KB Dec 18, 2019 3:32:50 PM api/target/maven-archiver/pom.properties java_properties Dec 18, 2019 3:32:53 PM omod/pom.xml xml 6.1 KB Dec 13, 2019 12:56:31 PM

omod/src/main/java/org/openmrs/calculation/web/controller/CalculationAutoRegistrationFormController.java java 47 Lines 5.3 KB Dec 13, 2019 12:56:31 PM

omod/src/main/java/org/openmrs/calculation/web/controller/CalculationRegistrationController.java java 19 Lines 3.8 KB Dec 13, 2019 12:56:31 PM

omod/src/main/java/org/openmrs/calculation/web/controller/CalculationRegistrationFormController.java java 25 Lines 5.7 KB Dec 13, 2019 12:56:31 PM

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omod/src/main/webapp/localHeader.jsp jsp 2 Lines Dec 13, 2019 12:56:31 PM

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Reference Elements

Classpath:

No classpath specified during translation

Libdirs:



No libdirs specified during translation

Rulepacks

Valid Rulepacks:

Name: Fortify Secure Coding Rules, Core, Java

Version: 2019.4.0.0009

ID: 06A6CC97-8C3F-4E73-9093-3E74C64A2AAF

SKU: RUL13003

Name: Fortify Secure Coding Rules, Core, Annotations

Version: 2019.4.0.0009

ID: 14EE50EB-FA1C-4AE8-8B59-39F952E21E3B

SKU: RUL13078

Name: Fortify Secure Coding Rules, Core, JavaScript

Version: 2019.4.0.0009

ID: BD292C4E-4216-4DB8-96C7-9B607BFD9584

SKU: RUL13059

Name: Fortify Secure Coding Rules, Core, Android

Version: 2019.4.0.0009

ID: FF9890E6-D119-4EE8-A591-83DCF4CA6952

SKU: RUL13093

Name: Fortify Secure Coding Rules, Extended, JavaScript

Version: 2019.4.0.0009

ID: C4D1969E-B734-47D3-87D4-73962C1D32E2

SKU: RUL13141

Name: Fortify Secure Coding Rules, Extended, Configuration

Version: 2019.4.0.0009

ID: CD6959FC-0C37-45BE-9637-BAA43C3A4D56

SKU: RUL13005

Name: Fortify Secure Coding Rules, Extended, Java

Version: 2019.4.0.0009

ID: AAAC0B10-79E7-4FE5-9921-F4903A79D317

SKU: RUL13007

Name: Fortify Secure Coding Rules, Extended, Content

Version: 2019.4.0.0009

ID: 9C48678C-09B6-474D-B86D-97EE94D38F17

SKU: RUL13067

Name: Fortify Secure Coding Rules, Core, Golang

Version: 2019.4.0.0009

ID: 1DCE79F8-AF6B-474D-A05A-5BFFC8B13DCD

SKU: RUL13218



Name: Fortify Secure Coding Rules, Extended, JSP

Version: 2019.4.0.0009

ID: 00403342-15D0-48C9-8E67-4B1CFBDEFCD2

SKU: RUL13026

External Metadata: Version: 2019.4.0.0009

Name: CWE

ID: 3ADB9EE4-5761-4289-8BD3-CBFCC593EBBC

The Common Weakness Enumeration (CWE), co-sponsored and maintained by MITRE, is international in scope and free for public use. CWE provides a unified, measurable set of software weaknesses that is enabling more effective discussion, description, selection, and use of software security tools and services that can find these weaknesses in source code and operational systems as well as better understanding and management of software weaknesses related to architecture and design.

Name: CWE Top 25 2019

ID: 7AF935C9-15AA-45B2-8EEC-0EAE4194ACDE

The 2019 CWE Top 25 Most Dangerous Software Errors lists the most widespread and critical weaknesses that can lead to serious vulnerabilities in software (as demonstrated by the National Vulnerability Database). These weaknesses occur frequently, are often easy to find, and easy to exploit. They are dangerous because they will frequently enable attackers to completely take over the software, steal data, or prevent the software from working at all. The list is the result of heuristic formula that the CWE Team used with a data-driven approach that leveraged the Common Vulnerabilities and Exposure (CVE), National Vulnerability Database (NVD), and Common Vulnerability Scoring System (CVSS). Due to the hiearchical nature of the CWE taxonomy, Fortify considers all CWE IDs which are children of a Top 25 entry, as included within the context of the entry due to the "CHILD-OF" relationship within the hierarchy. Exercise caution if using only this Top 25 list to prioritize auditing efforts because the software under analysis might not align with the assumptions of the heuristic used to define the Top 25. For example, many of these weaknesses are related to C-like languages and the software under analysis might not be within the C-family of languages - thus, many CWEs would not be in scope.

Name: DISA CCI 2

ID: 7F037130-41E5-40F0-B653-7819A4B3E241

The purpose of a Defense Information Systems Agency (DISA) Control Correlation Identifier (CCI) is to provide a standard identifier for policy based requirements which connect high-level policy expressions and low-level technical implementations. Associated with each CCI is a description for each of the singular, actionable, statements compromising an information assurance (IA) control or IA best practice. Using CCI allows high-level policy framework security requirements to be decomposed and explicitly associated with low-level implementations, thus enabling the assessment of related compliance assessment results spanning heterogeneous technologies. The current IA controls and best practices associated with each CCI, that are specified in NIST SP 800-53 Revision 4, can be viewed using the DISA STIG Viewer.

The following table summarizes the number of issues identified across the different CCIs broken down by Fortify Priority Order. The status of a CCI is considered "In Place" when there are no issues reported for a given CCI.

If the project is missing a Fortify Static Code Analyzer (SCA) scan, or the scan contains findings that have not been fixed, hidden or suppressed, CCI-003187 is not considered "In Place". Similarly, if the project is missing a Micro Focus Fortify WebInspect scan, or the scan contains any critical findings, CCI-000366 and CCI-000256 are not considered "In Place".

Name: FISMA

ID: B40F9EE0-3824-4879-B9FE-7A789C89307C

The Federal Information Processing Standard (FIPS) 200 document is part of the official series of publications, issued by the National Institute of Standards and Technology (NIST), relating to standards and guidelines adopted and promulgated under the provisions of the Federal Information Security Management Act (FISMA). Specifically, FIPS Publication 200 specifies the



"Minimum Security Requirements for Federal Information and Information Systems."

Name: GDPR

ID: 771C470C-9274-4580-8556-C12F5E4BEC51

The EU General Data Protection Regulation (GDPR) replaces the Data Protection Directive 95/46/EC and was designed to harmonize data privacy laws across Europe, to protect and empower all EU citizens data privacy and to reshape the way organizations across the region approach data privacy. Going into effect on May 25, 2018, GDPR provides a framework for organizations on how to handle personal data. According to GDPR regulation personal data "means any information relating to an identified or identifiable natural person ('data subject'); an identifiable natural person is one who can be identified, directly or indirectly, in particular by reference to an identifier such as a name, an identification number, location data, an online identifier or to one or more factors specific to the physical, physiological, genetic, mental, economic, cultural or social identity of that natural person." GDPR articles that pertain to application security and require businesses to protect personal data during design and development of its product and services are:

- Article 25, Data protection by design and by default which requires "The controller shall implement appropriate technical and organisational measures for ensuring that, by default, only personal data which are necessary for each specific purpose of the processing are processed."
- Article 32, Security of processing which requires businesses to protect its systems and applications "from accidental or unlawful destruction, loss, alteration, unauthorized disclosure of, or access to personal data". This report may be used by organizations as a framework to help identify and protect personal data as it relates to application security.

Name: MISRA C 2012

ID: 555A3A66-A0E1-47AF-910C-3F19A6FB2506

Now in its third edition, the Motor Industry Software Reliability Association (MISRA) C Guidelines describe a subset of the C programming language in which there is reduced risk of introducing mistakes in critical systems. While the MISRA C Guidelines focus upon safety-related software development, a subset of the rules also reflect security properties. Fortify interprets the MISRA C Guidelines under the context of security and provides correlation of security vulnerability categories to the rules defined by MISRA. Fortify provides these security focused detection mechanism with the standard rulepacks, however, further support of the MISRA C Guidelines related to safety can be added through the use of custom rules. The results in this report can assist in the creation of a compliance matrix for MISRA.

Name: MISRA C++ 2008

ID: 5D4B75A1-FC91-4B4B-BD4D-C81BBE9604FA

The Motor Industry Software Reliability Association (MISRA) C++ Guidelines describe a subset of the C++ programming language in which there is reduced risk of introducing mistakes in critical systems. While the MISRA C++ Guidelines focus upon safety-related software development, a subset of the rules also reflect security properties. Fortify interprets the MISRA C++ Guidelines under the context of security and provides correlation of security vulnerability categories to the rules defined by MISRA. Fortify provides these security focused detection mechanism with the standard rulepacks, however, further support of the MISRA C++ Guidelines related to safety can be added through the use of custom rules. The results in this report can assist in the creation of a compliance matrix for MISRA.

Name: NIST SP 800-53 Rev.4

ID: 1114583B-EA24-45BE-B7F8-B61201BACDD0

NIST Special Publication 800-53 Revision 4 provides a list of security and privacy controls designed to protect federal organizations and information systems from security threats. The following table summarizes the number of issues identified across the different controls and broken down by Fortify Priority Order.

Name: OWASP Mobile 2014

ID: EEE3F9E7-28D6-4456-8761-3DA56C36F4EE

The OWASP Mobile Top 10 Risks 2014 provides a powerful awareness document for mobile application security. The OWASP Mobile Top 10 represents a broad consensus about what the most critical mobile application security flaws are. Project members



include a variety of security experts from around the world who have shared their expertise to produce this list.

Name: OWASP Top 10 2004

ID: 771C470C-9274-4580-8556-C023E4D3ADB4

The OWASP Top Ten 2004 provides a powerful awareness document for web application security. The OWASP Top Ten represents a broad consensus about what the most critical web application security flaws are. Project members include a variety of security experts from around the world who have shared their expertise to produce this list.

Name: OWASP Top 10 2007

ID: 1EB1EC0E-74E6-49A0-BCE5-E6603802987A

The OWASP Top Ten 2007 provides a powerful awareness document for web application security. The OWASP Top Ten represents a broad consensus about what the most critical web application security flaws are. Project members include a variety of security experts from around the world who have shared their expertise to produce this list.

Name: OWASP Top 10 2010

ID: FDCECA5E-C2A8-4BE8-BB26-76A8ECD0ED59

The OWASP Top Ten 2010 provides a powerful awareness document for web application security. The OWASP Top Ten represents a broad consensus about what the most critical web application security flaws are. Project members include a variety of security experts from around the world who have shared their expertise to produce this list.

Name: OWASP Top 10 2013

ID: 1A2B4C7E-93B0-4502-878A-9BE40D2A25C4

The OWASP Top Ten 2013 provides a powerful awareness document for web application security. The OWASP Top Ten represents a broad consensus about what the most critical web application security flaws are. Project members include a variety of security experts from around the world who have shared their expertise to produce this list.

Name: OWASP Top 10 2017

ID: 3C6ECB67-BBD9-4259-A8DB-B49328927248

The OWASP Top Ten 2017 provides a powerful awareness document for web application security focused on informing the community about the consequences of the most common and most important web application security weaknesses. The OWASP Top Ten represents a broad agreement about what the most critical web application security flaws are with consensus being drawn from data collection and survey results. Project members include a variety of security experts from around the world who have shared their expertise to produce this list.

Name: PCI 1.1

ID: CBDB9D4D-FC20-4C04-AD58-575901CAB531

The Payment Card Industry (PCI) Data Security Standard (DSS) 1.1 compliance standard describes 12 requirements which are organized into 6 logically related groups, which are "control objectives". PCI DSS requirements are applicable if Primary Account Number (PAN) is stored, processed, or transmitted by the system.

Name: PCI 1.2

ID: 57940BDB-99F0-48BF-BF2E-CFC42BA035E5

Payment Card Industry Data Security Standard Version 1.2 description

Name: PCI 2.0

ID: 8970556D-7F9F-4EA7-8033-9DF39D68FF3E

The PCI DSS 2.0 compliance standard, particularly sections 6.3, 6.5, and 6.6, references the OWASP Top 10 vulnerability categories as the core categories that must be tested for and remediated. The following table summarizes the number of issues identified across the different PCI DSS requirements and broken down by Fortify Priority Order.

Name: PCI 3.0



ID: E2FB0D38-0192-4F03-8E01-FE2A12680CA3

The following is a summary of the application security portions of Payment Card Industry (PCI) Data Security Standard (DSS) v3.0. Fortify tests for 32 application security related requirements across sections 1, 2, 3, 4, 6, 7, 8, and 10 of PCI DSS and reports whether each requirement is In Place or Not In Place to indicate whether requirements are satisfied or not. This report is intended to measure the level of adherence the specific application(s) possess when compared to PCI DSS 3.0 compliance and is not intended to serve as a comprehensive Report on Compliance (ROC). The information contained in this report is targeted at project managers, security auditors, and compliance auditors.

Name: PCI 3.1

ID: AC0D18CF-C1DA-47CF-9F1A-E8EC0A4A717E

The following is a summary of the application security portions of Payment Card Industry (PCI) Data Security Standard (DSS) v3.1. Fortify tests for 31 application security related requirements across sections 1, 2, 3, 4, 6, 7, 8, and 10 of PCI DSS and reports whether each requirement is In Place or Not In Place to indicate whether requirements are satisfied or not. This report is intended to measure the level of adherence the specific application(s) possess when compared to PCI DSS 3.1 compliance and is not intended to serve as a comprehensive Report on Compliance (ROC). The information contained in this report is targeted at project managers, security auditors, and compliance auditors.

Name: PCI 3.2

ID: 4E8431F9-1BA1-41A8-BDBD-087D5826751A

The following is a summary of the application security portions of Payment Card Industry (PCI) Data Security Standard (DSS) v3.2. Fortify tests for 31 application security related requirements across sections 1, 2, 3, 4, 6, 7, 8, and 10 of PCI DSS and reports whether each requirement is In Place or Not In Place to indicate whether requirements are satisfied or not. This report is intended to measure the level of adherence the specific application(s) possess when compared to PCI DSS 3.2 compliance and is not intended to serve as a comprehensive Report on Compliance (ROC). The information contained in this report is targeted at project managers, security auditors, and compliance auditors.

Name: PCI 3.2.1

ID: EADE255F-6561-4EFE-AD31-2914F6BFA329

The following is a summary of the application security portions of Payment Card Industry (PCI) Data Security Standard (DSS) v3.2.1. Fortify tests for 31 application security related requirements across sections 1, 2, 3, 4, 6, 7, 8, and 10 of PCI DSS and reports whether each requirement is In Place or Not In Place to indicate whether requirements are satisfied or not. This report is intended to measure the level of adherence the specific application(s) possess when compared to PCI DSS 3.2.1 compliance and is not intended to serve as a comprehensive Report on Compliance (ROC). The information contained in this report is targeted at project managers, security auditors, and compliance auditors.

Name: PCI SSF 1.0

ID: 0F551543-AF0E-4334-BEDF-1DDCD5F4BF74

The following is a summary of the application security portions of the Secure Software Requirements and Assessment Procedures defined in the Payment Card Industry (PCI) Software Security Framework (SSF) v1.0. Fortify tests for 23 application security related control objectives across Control Objective sections 2, 3, 4, 5, 6, 7, 8, and A.2 of PCI SSF and reports whether each control objective is In Place or Not In Place to indicate whether requirements are satisfied or not. This report is intended to measure the level of adherence the specific application(s) possess when compared to PCI SSF 1.0 compliance and is not intended to serve as a comprehensive Report on Compliance (ROC). The information contained in this report is targeted at project managers, security auditors, and compliance auditors.

Name: SANS Top 25 2009

ID: 939EF193-507A-44E2-ABB7-C00B2168B6D8

The 2009 CWE/SANS Top 25 Programming Errors lists the most significant programming errors that can lead to serious software vulnerabilities. They occur frequently, are often easy to find, and easy to exploit. They are dangerous because they will frequently allow attackers to completely take over the software, steal data, or prevent the software from working at all. The list is the result of collaboration between the SANS Institute, MITRE, and many top software security experts.



Name: SANS Top 25 2010

ID: 72688795-4F7B-484C-88A6-D4757A6121CA

SANS Top 25 2010 Most Dangerous Software Errors provides an enumeration of the most widespread and critical errors, categorized by Common Weakness Enumeration (CWE) identifiers, that lead to serious vulnerabilities in software (http://cwe.mitre.org/). These software errors are often easy to find and exploit. The inherent danger in these errors is that they can allow an attacker to completely take over the software, steal data, or prevent the software from working at all.

Name: SANS Top 25 2011

ID: 92EB4481-1FD9-4165-8E16-F2DE6CB0BD63

SANS Top 25 2011 Most Dangerous Software Errors provides an enumeration of the most widespread and critical errors, categorized by Common Weakness Enumeration (CWE) identifiers, that lead to serious vulnerabilities in software (http://cwe.mitre.org/). These software errors are often easy to find and exploit. The inherent danger in these errors is that they can allow an attacker to completely take over the software, steal data, or prevent the software from working at all.

Name: STIG 3.1

ID: F2FA57EA-5AAA-4DDE-90A5-480BE65CE7E7

Security Technical Implementation Guide Version 3.1 description

Name: STIG 3.10

ID: 788A87FE-C9F9-4533-9095-0379A9B35B12

Each requirement or recommendation identified by the Defense Information Systems Agency (DISA) STIG is represented by a STIG identifier (STIGID), which corresponds to a checklist item and a severity code [APP<I>ID</I>: CAT <I>SEV</I>]. DISA STIG defines three severities with respect to vulnerabilities where their:

- exploitation leads to direct and immediate loss of Confidentiality, Availability, or Integrity (CAT I).
- exploitation potentially results in loss of Confidentiality, Availability, or Integrity (CAT II).
- existence degrades protections against loss of Confidentiality, Availability, or Integrity (CAT III).

The following table summarizes the number of issues identified across the different STIGIDs broken down by Fortify Priority Order. The status of a STIGID is considered "In Place" when there are no issues reported for a given STIGID.

If the project is missing a Fortify Static Code Analyzer (SCA) scan, or the scan contains findings that have not been fixed, hidden or suppressed, STIGID APP5080: CAT II is not considered "In Place". Similarly, if the project is missing a Fortify WebInspect scan, or the scan contains any critical findings, STIGID APP5100: CAT II is not considered "In Place".

Name: STIG 3.4

ID: 58E2C21D-C70F-4314-8994-B859E24CF855

Each requirement or recommendation identified by the Defense Information Systems Agency (DISA) STIG is represented by a STIG identifier (STIGID), which corresponds to a checklist item and a severity code [APP<I>ID</I>: CAT <I>SEV</I>]. DISA STIG identifies several severities with respect to vulnerabilities:

CAT I: allow an attacker immediate access into a machine, allow super user access, or bypass a firewall.

CAT II: provide information that have a high potential of giving access to an intruder.

CAT III: provide information that potentially could lead to compromise.

The following table summarizes the number of issues identified across the different STIGIDs broken down by Fortify Priority Order. The status of a STIGID is considered "In Place" when there are no issues reported for a given STIGID.

Name: STIG 3.5

ID: DD18E81F-3507-41FA-9DFA-2A9A15B5479F



Each requirement or recommendation identified by the Defense Information Systems Agency (DISA) STIG is represented by a STIG identifier (STIGID), which corresponds to a checklist item and a severity code [APP<I>ID</I>: CAT <I>SEV</I>]. DISA STIG identifies several severities with respect to vulnerabilities:

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The following table summarizes the number of issues identified across the different STIGIDs broken down by Fortify Priority Order. The status of a STIGID is considered "In Place" when there are no issues reported for a given STIGID.

Name: STIG 3.6

ID: 000CA760-0FED-4374-8AA2-6FA3968A07B1

Each requirement or recommendation identified by the Defense Information Systems Agency (DISA) STIG is represented by a STIG identifier (STIGID), which corresponds to a checklist item and a severity code [APP<I>ID</I>: CAT <I>SEV</I>]. DISA STIG identifies several severities with respect to vulnerabilities:

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Name: STIG 3.7

ID: E69C07C0-81D8-4B04-9233-F3E74167C3D2

Each requirement or recommendation identified by the Defense Information Systems Agency (DISA) STIG is represented by a STIG identifier (STIGID), which corresponds to a checklist item and a severity code [APP<I>ID</I>: CAT <I>SEV</I>]. DISA STIG identifies several severities with respect to vulnerabilities:

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Name: STIG 3.9

ID: 1A9D736B-2D4A-49D1-88CA-DF464B40D732

Each requirement or recommendation identified by the Defense Information Systems Agency (DISA) STIG is represented by a STIG identifier (STIGID), which corresponds to a checklist item and a severity code [APP<I>ID</I>: CAT <I>SEV</I>]. DISA STIG defines three severities with respect to vulnerabilities where their:



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Name: STIG 4.1

ID: 95227C50-A9E4-4C9D-A8AF-FD98ABAE1F3C

Each requirement or recommendation identified by the Defense Information Systems Agency (DISA) STIG is represented by a STIG identifier (STIGID), which corresponds to a checklist item and a severity code [APSC-DV-<I>ID</I>: CAT <I>SEV</I>]. DISA STIG defines three severities with respect to vulnerabilities where their:

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Name: STIG 4.10

ID: EF1FF442-1673-4CF1-B7C4-920F1A96A8150

Each requirement or recommendation identified by the Defense Information Systems Agency (DISA) STIG is represented by a STIG identifier (STIGID), which corresponds to a checklist item and a severity code [APSC-DV-<I>ID</I>: CAT <I>SEV</I>]. DISA STIG defines three severities with respect to vulnerabilities where their:

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Name: STIG 4.2

ID: 672C15F8-8822-4E05-8C9E-1A4BAAA7A373

Each requirement or recommendation identified by the Defense Information Systems Agency (DISA) STIG is represented by a STIG identifier (STIGID), which corresponds to a checklist item and a severity code [APSC-DV-<I>ID</I>: CAT <I>SEV</I>].



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Name: STIG 4.3

ID: A0B313F0-29BD-430B-9E34-6D10F1178506

Each requirement or recommendation identified by the Defense Information Systems Agency (DISA) STIG is represented by a STIG identifier (STIGID), which corresponds to a checklist item and a severity code [APSC-DV-<I>ID</I>: CAT <I>SEV</I>]. DISA STIG defines three severities with respect to vulnerabilities where their:

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Name: STIG 4.4

ID: ECEC5CA2-7ACA-4B70-BF44-3248B9C6F4F8

Each requirement or recommendation identified by the Defense Information Systems Agency (DISA) STIG is represented by a STIG identifier (STIGID), which corresponds to a checklist item and a severity code [APSC-DV-<I>ID</I>: CAT <I>SEV</I>]. DISA STIG defines three severities with respect to vulnerabilities where their:

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Name: STIG 4.5



ID: E6010E0A-7F71-4388-B8B7-EE9A02143474

Each requirement or recommendation identified by the Defense Information Systems Agency (DISA) STIG is represented by a STIG identifier (STIGID), which corresponds to a checklist item and a severity code [APSC-DV-<I>ID</I>: CAT <I>SEV</I>]. DISA STIG defines three severities with respect to vulnerabilities where their:

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Name: STIG 4.6

ID: EFB9B012-44D6-456D-B197-03D2FD7C7AD6

Each requirement or recommendation identified by the Defense Information Systems Agency (DISA) STIG is represented by a STIG identifier (STIGID), which corresponds to a checklist item and a severity code [APSC-DV-<I>ID</I>: CAT <I>SEV</I>]. DISA STIG defines three severities with respect to vulnerabilities where their:

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Name: STIG 4.7

ID: B04A1E01-F1C1-48D3-A827-0F70872182D7

Each requirement or recommendation identified by the Defense Information Systems Agency (DISA) STIG is represented by a STIG identifier (STIGID), which corresponds to a checklist item and a severity code [APSC-DV-<I>ID</I>: CAT <I>SEV</I>]. DISA STIG defines three severities with respect to vulnerabilities where their:

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CAT II are not considered "In Place".

Name: STIG 4.8

ID: E6805D9F-D5B5-4192-962C-46828FF68507

Each requirement or recommendation identified by the Defense Information Systems Agency (DISA) STIG is represented by a STIG identifier (STIGID), which corresponds to a checklist item and a severity code [APSC-DV-<I>ID</I>: CAT <I>SEV</I>]. DISA STIG defines three severities with respect to vulnerabilities where their:

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Name: STIG 4.9

ID: 7B9F7B3B-07FC-4B61-99A1-70E3BB23A6A0

Each requirement or recommendation identified by the Defense Information Systems Agency (DISA) STIG is represented by a STIG identifier (STIGID), which corresponds to a checklist item and a severity code [APSC-DV-<I>ID</I>: CAT <I>SEV</I>]. DISA STIG defines three severities with respect to vulnerabilities where their:

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Name: WASC 2.00

ID: 74f8081d-dd49-49da-880f-6830cebe9777

The Web Application Security Consortium (WASC) was created as a cooperative effort to standardize, clarify, and organize the threats to the security of a web site. Version 2.00 of their Threat Classification outlines the attacks and weaknesses that can commonly lead to a website being compromised.

Name: WASC 24 + 2

ID: 9DC61E7F-1A48-4711-BBFD-E9DFF537871F

The Web Application Security Consortium (WASC) was created as a cooperative effort to standardize, clarify, and organize the threats to the security of a web site.



Properties

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com.fortify.sca.DeadCodeIgnoreTrivialPredicates=true

com. for tify. sca. Default Analyzers = semantic: data flow: control flow: null ptr: configuration: content: structural: buffer the configuration of the c

com. for tify. sca. Default File Types=java, rb, erb, jsp, jspx, jspf, tag, tagx, tld, sql, cfm, php, phtml, ctp, pks, pkh, pkb, xml, config, Config, settings, properties, dll, exe, winmd, cs, vb, asax, ascx, ashx, asmx, aspx, master, Master, xaml, baml, cshtml, vbhtml, inc, asp, vbscript, js, ini, bas, cls, vbs, frm, ctl, html, htm, xsd, wsdd, xmi, py, cfml, cfc, abap, xhtml, cpx, xcfg, jsff, as, mxml, cbl, cscfg, csdef, wadcfg, wadcfgx, appxmanifest, aspx, asp

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com.fortify.sca.LogFileName=sca.log
com.fortify.sca.LogFileNameNoExt=sca
com.fortify.sca.LogFilePath=/home/pgupta25/.fortify/sca19.1/log/sca.log
com.fortify.sca.LogLevel=INFO
com.fortify.sca.LowSeverityCutoff=1.0
com.fortify.sca.MachineOutputMode=
com.fortify.sca.MultithreadedAnalysis=true
com.fortify.sca.NoNestedOutTagOutput=org.apache.taglibs.standard.tag.rt.core.RemoveTag,org.apache.taglibs.standard.tag.rt.cor
e.SetTag
com.fortify.sca.OldVbNetExcludeFileTypes=vb,asax,ascx,ashx,asmx,aspx,xaml,cshtml,vbhtml
com.fortify.sca.PID=22443
com.fortify.sca.PhaseOHigherOrder.Languages=python,ruby,swift,javascript,typescript
com.fortify.sca.Phase0HigherOrder.Level=1
com. for tify. sca. PrintPerformance Data After Scan=false\\
com.fortify.sca.ProjectRoot=/home/pgupta25/.fortify
com.fortify.sca.ProjectRoot=/home/pgupta25/.fortify
com.fortify.sca.Renderer=fpr
com.fortify.sca.RequireMapKeys=classrule
com.fortify.sca.ResultsFile=/srv/openmrs_code/org/openmrs/module/calculation/calculation_scan.fpr
com.fortify.sca.SolverTimeout=15
com.fortify.sca.SqlLanguage=PLSQL
com.fortify.sca.SuppressLowSeverity=true
com.fortify.sca.ThreadCount.NameTableLoading=1
com.fortify.sca.TypeInferenceFunctionTimeout=60
com.fortify.sca.TypeInferenceLanguages=javascript,typescript,python,ruby
com.fortify.sca.TypeInferencePhase0Timeout=300
com.fortify.sca.UnicodeInputFile=true
com.fortify.sca.UniversalBlacklist=.*yyparse.*
com.fortify.sca.alias.mode.csharp=fs
com.fortify.sca.alias.mode.javascript=fi
com.fortify.sca.alias.mode.scala=fi
com.fortify.sca.alias.mode.swift=fi
com.fortify.sca.alias.mode.typescript=fi
com.fortify.sca.alias.mode.vb=fs
com.fortify.sca.analyzer.controlflow.EnableLivenessOptimization=false
com.fortify.sca.analyzer.controlflow.EnableMachineFiltering=false
com.fortify.sca.analyzer.controlflow.EnableRefRuleOptimization=false
com.fortify.sca.analyzer.controlflow.EnableTimeOut=true
com.fortify.sca.compilers.ant=com.fortify.sca.util.compilers.AntAdapter
com.fortify.sca.compilers.ar=com.fortify.sca.util.compilers.ArUtil
com.fortify.sca.compilers.armcc=com.fortify.sca.util.compilers.ArmCcCompiler
com.fortify.sca.compilers.armcpp=com.fortify.sca.util.compilers.ArmCppCompiler
com. for tify. sca. compilers. c++=com. for tify. sca. util. compilers. Gpp Compilers. c-+=com. for tify. sca. util. c--=com. for tify. c--=com. fo
com.fortify.sca.compilers.cc=com.fortify.sca.util.compilers.GccCompiler
com.fortify.sca.compilers.clearmake=com.fortify.sca.util.compilers.TouchlessCompiler
```



com.fortify.sca.compilers.fortify=com.fortify.sca.util.compilers.FortifyCompiler com.fortify.sca.compilers.g++=com.fortify.sca.util.compilers.GppCompiler com.fortify.sca.compilers.g++-*=com.fortify.sca.util.compilers.GppCompiler com.fortify.sca.compilers.g++2*=com.fortify.sca.util.compilers.GppCompiler com.fortify.sca.compilers.g++3*=com.fortify.sca.util.compilers.GppCompiler com.fortify.sca.compilers.g++4*=com.fortify.sca.util.compilers.GppCompiler com.fortify.sca.compilers.gcc=com.fortify.sca.util.compilers.GccCompiler com.fortify.sca.compilers.gcc-*=com.fortify.sca.util.compilers.GccCompiler com.fortify.sca.compilers.gcc2*=com.fortify.sca.util.compilers.GccCompiler com.fortify.sca.compilers.gcc3*=com.fortify.sca.util.compilers.GccCompiler com.fortify.sca.compilers.gcc4*=com.fortify.sca.util.compilers.GccCompiler com.fortify.sca.compilers.gmake=com.fortify.sca.util.compilers.TouchlessCompiler com.fortify.sca.compilers.gradle=com.fortify.sca.util.compilers.GradleAdapter com.fortify.sca.compilers.gradlew=com.fortify.sca.util.compilers.GradleAdapter com.fortify.sca.compilers.icc=com.fortify.sca.util.compilers.IntelCompiler com.fortify.sca.compilers.icpc=com.fortify.sca.util.compilers.IntelCompiler com.fortify.sca.compilers.jam=com.fortify.sca.util.compilers.TouchlessCompiler com.fortify.sca.compilers.javac=com.fortify.sca.util.compilers.JavacCompiler com.fortify.sca.compilers.ld=com.fortify.sca.util.compilers.LdCompiler com.fortify.sca.compilers.make=com.fortify.sca.util.compilers.TouchlessCompiler com.fortify.sca.compilers.mvn=com.fortify.sca.util.compilers.MavenAdapter com.fortify.sca.compilers.scalac=com.fortify.sca.util.compilers.ScalacCompiler com.fortify.sca.compilers.tcc=com.fortify.sca.util.compilers.ArmCcCompiler com.fortify.sca.compilers.tcpp=com.fortify.sca.util.compilers.ArmCppCompiler com.fortify.sca.compilers.touchless=com.fortify.sca.util.compilers.FortifyCompiler com.fortify.sca.cpfe.441.command=/opt/Fortify/Fortify SCA and Apps 19.1.0/Core/private-bin/sca/cpfe441.rfct com.fortify.sca.cpfe.command=/opt/Fortify/Fortify SCA and Apps 19.1.0/Core/private-bin/sca/cpfe48 com.fortify.sca.cpfe.file.option=--gen_c_file_name com.fortify.sca.cpfe.options=--remove unneeded entities --suppress vtbl -tused com.fortify.sca.cpfe.options=--remove unneeded entities --suppress vtbl -tused com.fortify.sca.env.exesearchpath=/sbin:/bin:/usr/bin:/usr/local/bin com.fortify.sca.fileextensions.ABAP=ABAP com.fortify.sca.fileextensions.BSP=ABAP com.fortify.sca.fileextensions.Config=XML com.fortify.sca.fileextensions.abap=ABAP com.fortify.sca.fileextensions.appxmanifest=XML com.fortify.sca.fileextensions.as=ACTIONSCRIPT com.fortify.sca.fileextensions.asp=ASP com.fortify.sca.fileextensions.bas=VB6 com.fortify.sca.fileextensions.bsp=ABAP com.fortify.sca.fileextensions.cfc=CFML com.fortify.sca.fileextensions.cfm=CFML com.fortify.sca.fileextensions.cfml=CFML com.fortify.sca.fileextensions.cls=VB6 com.fortify.sca.fileextensions.conf=HOCON com.fortify.sca.fileextensions.config=XML com.fortify.sca.fileextensions.cpx=XML com.fortify.sca.fileextensions.cscfg=XML com.fortify.sca.fileextensions.csdef=XML com.fortify.sca.fileextensions.ctl=VB6 com.fortify.sca.fileextensions.ctp=PHP

com.fortify.sca.fileextensions.erb=RUBY ERB com.fortify.sca.fileextensions.faces=JSPX com.fortify.sca.fileextensions.frm=VB6 com.fortify.sca.fileextensions.htm=HTML com.fortify.sca.fileextensions.html=HTML com.fortify.sca.fileextensions.ini=JAVA_PROPERTIES com.fortify.sca.fileextensions.java=JAVA com.fortify.sca.fileextensions.js=TYPESCRIPT com.fortify.sca.fileextensions.jsff=JSPX com.fortify.sca.fileextensions.json=JSON com.fortify.sca.fileextensions.jsp=JSP com.fortify.sca.fileextensions.jspf=JSP com.fortify.sca.fileextensions.jspx=JSPX com.fortify.sca.fileextensions.jsx=TYPESCRIPT com.fortify.sca.fileextensions.mxml=MXML com.fortify.sca.fileextensions.page=VISUAL FORCE com.fortify.sca.fileextensions.php=PHP com.fortify.sca.fileextensions.phtml=PHP com.fortify.sca.fileextensions.pkb=PLSQL com.fortify.sca.fileextensions.pkh=PLSQL com.fortify.sca.fileextensions.pks=PLSQL com.fortify.sca.fileextensions.plist=XML com.fortify.sca.fileextensions.properties=JAVA_PROPERTIES com.fortify.sca.fileextensions.py=PYTHON com.fortify.sca.fileextensions.rb=RUBY com.fortify.sca.fileextensions.scala=SCALA com.fortify.sca.fileextensions.settings=XML com.fortify.sca.fileextensions.sql=SQL com.fortify.sca.fileextensions.swift=SWIFT com.fortify.sca.fileextensions.tag=JSP com.fortify.sca.fileextensions.tagx=JSP com.fortify.sca.fileextensions.tld=TLD com.fortify.sca.fileextensions.trigger=APEX TRIGGER com.fortify.sca.fileextensions.ts=TYPESCRIPT com.fortify.sca.fileextensions.tsx=TYPESCRIPT com.fortify.sca.fileextensions.vbs=VBSCRIPT com.fortify.sca.fileextensions.vbscript=VBSCRIPT com.fortify.sca.fileextensions.wadcfg=XML com.fortify.sca.fileextensions.wadcfgx=XML com.fortify.sca.fileextensions.wsdd=XML com.fortify.sca.fileextensions.wsdl=XML com.fortify.sca.fileextensions.xcfg=XML com.fortify.sca.fileextensions.xhtml=JSPX com.fortify.sca.fileextensions.xmi=XML com.fortify.sca.fileextensions.xml=XML com.fortify.sca.fileextensions.xsd=XML com.fortify.sca.fileextensions.yaml=YAML com.fortify.sca.fileextensions.yml=YAML com.fortify.sca.jsp.UseNativeParser=true com.fortify.sca.parser.python.ignore.module.1=test.badsyntax_future3

com.fortify.sca.parser.python.ignore.module.2=test.badsyntax_future4

```
com.fortify.sca.parser.python.ignore.module.3=test.badsyntax_future5
com. for tify. sca. parser. python. ignore. module. 4 = test. badsyntax\_future 6
com.fortify.sca.parser.python.ignore.module.5=test.badsyntax_future7
com.fortify.sca.parser.python.ignore.module.6=test.badsyntax_future8
com. for tify. sca. parser. python. ignore. module. 7 = test. badsyntax\_future 9
com.fortify.sca.parser.python.ignore.module.8=test.badsyntax_nocaret
com.fortify.sca.skip.libraries.AngularJS=angular.js,angular.min.js,angular-animate.js,angular-aria.js,angular 1 router.js,angular-
cookies.js,angular-message-format.js,angular-messages.js,angular-mocks.js,angular-parse-ext.js,angular-resource.js,angular-mocks.js,angular-parse-ext.js,angular-resource.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,angular-mocks.js,ang
route.js,angular-sanitize.js,angular-touch.js
com.fortify.sca.skip.libraries.ES6=es6-shim.min.js,system-polyfills.js,shims for IE.js
com.fortify.sca.skip.libraries.jQuery=jquery.js,jquery.min.js,jquery-migrate.js,jquery-migrate.min.js,jquery-ui.js,jquery-
ui.min.js,jquery.mobile.js,jquery.mobile.min.js,jquery.color.js,jquery.color.min.js,jquery.color.svg-names.js,jquery.color.svg-
names.min.js,jquery.color.plus-names.js,jquery.color.plus-names.min.js,jquery.tools.min.js
com.fortify.sca.skip.libraries.javascript=bootstrap.js,bootstrap.min.js,typescript.js,typescriptServices.js
com.fortify.sca.skip.libraries.typescript=typescript.d.ts,typescriptServices.d.ts
com.fortify.search.defaultSyntaxVer=2
com.sun.management.jmxremote=true
file.encoding=UTF-8
file.encoding.pkg=sun.io
file.separator=/
java.awt.graphicsenv=sun.awt.X11GraphicsEnvironment
java.awt.headless=true
java.awt.printerjob=sun.print.PSPrinterJob
java.class.path=/opt/Fortify/Fortify SCA and Apps 19.1.0/Core/lib/exe/sca-exe.jar
java.class.version=52.0
java.endorsed.dirs=/opt/Fortify/Fortify SCA and Apps 19.1.0/jre/lib/endorsed
java.ext.dirs=/opt/Fortify/Fortify_SCA_and_Apps_19.1.0/jre/lib/ext:/usr/java/packages/lib/ext
java.home=/opt/Fortify/Fortify_SCA_and_Apps_19.1.0/jre
java.io.tmpdir=/tmp
java.library.path=/usr/java/packages/lib/amd64:/usr/lib64:/lib64:/lib:/usr/lib
java.rmi.server.randomIDs=true
java.runtime.name=OpenJDK Runtime Environment
java.runtime.version=1.8.0 181-b02
java.specification.name=Java Platform API Specification
java.specification.vendor=Oracle Corporation
java.specification.version=1.8
java.vendor=Azul Systems, Inc.
java.vendor.url=http://www.azulsystems.com/
java.vendor.url.bug=http://www.azulsystems.com/support/
java.version=1.8.0_181
java.vm.info=mixed mode
java.vm.name=OpenJDK 64-Bit Server VM
java.vm.specification.name=Java Virtual Machine Specification
java.vm.specification.vendor=Oracle Corporation
java.vm.specification.version=1.8
java.vm.vendor=Azul Systems, Inc.
java.vm.version=25.181-b02
line.separator=
```

log4j.isThreadContextMapInheritable=true

log4j.configurationFile=/opt/Fortify/Fortify_SCA_and_Apps_19.1.0/Core/config/log4j2.xml



max.file.path.length=255
os.arch=amd64
os.name=Linux
os.version=4.15.0-58-generic
path.separator=:
stderr.isatty=false
stdout.isatty=false
sun.arch.data.model=64
sun.boot.class.path=/opt/Forti

 $sun.boot.class.path = /opt/Fortify/Fortify_SCA_and_Apps_19.1.0/jre/lib/resources.jar:/opt/Fortify/Fortify_SCA_and_Apps_19.1.0/jre/lib/resources.jar:/opt/Fortify/Fortify_SCA_and_Apps_19.1.0/jre/lib/sunrsasign.jar:/opt/Fortify/Fortify_SCA_and_Apps_19.1.0/jre/lib/jce.jar:/opt/Fortify/Fortify_SCA_and_Apps_19.1.0/jre/lib/jce.jar:/opt/Fortify/Fortify_SCA_and_Apps_19.1.0/jre/lib/jfr.jar:/opt/Fortify/Fortify_SCA_and_Apps_19.1.0/jre/lib/jfr.jar:/opt/Fortify/Fortify_SCA_and_Apps_19.1.0/jre/classes$

 $sun.boot.library.path = /opt/Fortify/Fortify_SCA_and_Apps_19.1.0/jre/lib/amd64$

sun.cpu.endian = little

sun.cpu.isalist=

sun.io.unicode.encoding=UnicodeLittle

sun.java.command=sourceanalyzer -Djava.awt.headless=true -Dcom.sun.management.jmxremote=true -

XX:SoftRefLRUPolicyMSPerMB=3000 -Dcom.fortify.sca.env.exesearchpath=/sbin:/bin:/usr/bin:/usr/local/bin -

Dcom.fortify.sca.ProjectRoot=/home/pgupta25/.fortify -Dstdout.isatty=false -Dstderr.isatty=false -Dcom.fortify.sca.PID=22443 -

Xmx4096M -Dcom.fortify.TotalPhysicalMemory=8363917312 -Xss16M -Dcom.fortify.sca.JVMArgs=

XX:SoftRefLRUPolicyMSPerMB=3000 -Xmx4096M -Xss16M -

Djava.class.path=/opt/Fortify/Fortify_SCA_and_Apps_19.1.0/Core/lib/exe/sca-exe.jar -scan

@/home/pgupta25/.fortify/Eclipse.Plugin-19.1.0/calculation/calculationScan.txt

sun.jnu.encoding=UTF-8

sun.management.compiler=HotSpot 64-Bit Tiered Compilers

sun.os.patch.level=unknown

user.country=US

user.dir=/home/pgupta25

user.home=/home/pgupta25

user.language=en

user.name=pgupta25

user.timezone=America/New_York

Commandline Arguments

-scan

-b

calculation

-format

fpr

-machine-output

-f

/srv/openmrs_code/org/openmrs/module/calculation/calculation_scan.fpr

Warnings

[12002] Could not locate the deployment descriptor (web.xml) for your web application. Please build your web application and try again. File:

 $/srv/openmrs_code/org/openmrs/module/calculation/omod/src/main/webapp/calculationRegistrations.jsp$

[12003] Assuming Java source level to be 1.8 as it was not specified. Note that the default value may change in future versions.

[12004] The Java frontend was unable to resolve the following include:

/WEB-INF/template/include.jsp at



/srv/openmrs_code/org/openmrs/module/calculation/omod/target/classes/web/module/patientCalculationTest.jsp:1. /WEB-INF/template/footer.jsp at /srv/openmrs_code/org/openmrs/module/calculation/omod/target/classes/web/module/patientCalculationTest.jsp:86. /WEB-INF/template/header.jsp at /srv/openmrs_code/org/openmrs/module/calculation/omod/target/classes/web/module/patientCalculationTest.jsp:2. [12022] The class "javax.servlet.http.HttpServlet" could not be found on the classpath, but it was found in the JAR file provided by Fortify in "/opt/Fortify/Fortify SCA and Apps 19.1.0/Core/default jars/javax.servlet-api-3.0.1.jar" as a convenience. To ensure consistent translation behavior add the JAR file that contains "javax.servlet.http.HttpServlet" to the classpath given to the translation step. Refer to the documentation about "default JARs" in the SCA User Guide for more information. [12022] The class "javax.servlet.jsp.PageContext" could not be found on the classpath, but it was found in the JAR file provided by Fortify in "/opt/Fortify_SCA_and_Apps_19.1.0/Core/default_jars/javax.servlet.jsp-api.jar" as a convenience. To ensure consistent translation behavior add the JAR file that contains "javax.servlet.jsp.PageContext" to the classpath given to the translation step. Refer to the documentation about "default JARs" in the SCA User Guide for more information. [1214] Multiple definitions found for class /calculationAutoRegistration.jsp (/srv/openmrs_code/org/openmrs/module/calculation/omod/src/main/webapp/calculationAutoRegistration.jsp and /srv/openmrs_code/org/openmrs/module/calculation/omod/target/calculation-1.2/web/module/calculationAutoRegistration.jsp). [1214] Multiple definitions found for class JSPPAGE._/_jspcalculationAutoRegistration_jsp\$ftfy_frameworkVisibleObjects (/srv/openmrs code/org/openmrs/module/calculation/omod/src/main/webapp/calculationAutoRegistration.jsp and /srv/openmrs_code/org/openmrs/module/calculation/omod/target/calculation-1.2/web/module/calculationAutoRegistration.jsp). [1214] Multiple definitions found for class /calculationRegistration.jsp (/srv/openmrs code/org/openmrs/module/calculation/omod/src/main/webapp/calculationRegistration.jsp and /srv/openmrs_code/org/openmrs/module/calculation/omod/target/calculation-1.2/web/module/calculationRegistration.jsp). [1214] Multiple definitions found for class JSPPAGE._/_jspcalculationRegistration_jsp\$ftfy_frameworkVisibleObjects (/srv/openmrs code/org/openmrs/module/calculation/omod/src/main/webapp/calculationRegistration.jsp and /srv/openmrs_code/org/openmrs/module/calculation/omod/target/calculation-1.2/web/module/calculationRegistration.jsp). [1214] Multiple definitions found for class /calculationRegistrations.jsp (/srv/openmrs code/org/openmrs/module/calculation/omod/src/main/webapp/calculationRegistrations.jsp and /srv/openmrs_code/org/openmrs/module/calculation/omod/target/calculation-1.2/web/module/calculationRegistrations.jsp). [1214] Multiple definitions found for class JSPPAGE.__ispcalculationRegistrations_isp\$ftfy_frameworkVisibleObjects (/srv/openmrs code/org/openmrs/module/calculation/omod/src/main/webapp/calculationRegistrations.jsp and /srv/openmrs_code/org/openmrs/module/calculation/omod/target/calculation-1.2/web/module/calculationRegistrations.jsp). [1214] Multiple definitions found for class /patientCalculationTest.jsp (/srv/openmrs_code/org/openmrs/module/calculation/omod/src/main/webapp/patientCalculationTest.jsp and /srv/openmrs code/org/openmrs/module/calculation/omod/target/calculation-1.2/web/module/patientCalculationTest.jsp). [1214] Multiple definitions found for class JSPPAGE._/_isppatientCalculationTest_jsp\$ftfy_frameworkVisibleObjects (/srv/openmrs_code/org/openmrs/module/calculation/omod/src/main/webapp/patientCalculationTest.jsp and /srv/openmrs_code/org/openmrs/module/calculation/omod/target/calculation-1.2/web/module/patientCalculationTest.jsp). [1214] Multiple definitions found for class /calculationAutoRegistration.jsp (/srv/openmrs_code/org/openmrs/module/calculation/omod/src/main/webapp/calculationAutoRegistration.jsp and /srv/openmrs_code/org/openmrs/module/calculation/omod/target/classes/web/module/calculationAutoRegistration.jsp). [1214] Multiple definitions found for class JSPPAGE._/_ispcalculationAutoRegistration_jsp\$ftfy_frameworkVisibleObjects (/srv/openmrs_code/org/openmrs/module/calculation/omod/src/main/webapp/calculationAutoRegistration.jsp and /srv/openmrs_code/org/openmrs/module/calculation/omod/target/classes/web/module/calculationAutoRegistration.jsp). [1214] Multiple definitions found for class /calculationRegistration.jsp (/srv/openmrs_code/org/openmrs/module/calculation/omod/src/main/webapp/calculationRegistration.jsp and /srv/openmrs_code/org/openmrs/module/calculation/omod/target/classes/web/module/calculationRegistration.jsp). [1214] Multiple definitions found for class JSPPAGE._/_jspcalculationRegistration_jsp\$ftfy_frameworkVisibleObjects (/srv/openmrs_code/org/openmrs/module/calculation/omod/src/main/webapp/calculationRegistration.jsp and

/srv/openmrs_code/org/openmrs/module/calculation/omod/target/classes/web/module/calculationRegistration.jsp).

(/srv/openmrs_code/org/openmrs/module/calculation/omod/src/main/webapp/calculationRegistrations.jsp and

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[1214] Multiple definitions found for class /calculationRegistrations.jsp



/srv/openmrs_code/org/openmrs/module/calculation/omod/target/classes/web/module/calculationRegistrations.jsp). [1214] Multiple definitions found for class JSPPAGE/_jspcalculationRegistrations_jsp\$ftfy_frameworkVisibleObjects (/srv/openmrs_code/org/openmrs/module/calculation/omod/src/main/webapp/calculationRegistrations.jsp and /srv/openmrs_code/org/openmrs/module/calculation/omod/target/classes/web/module/calculationRegistrations.jsp). [1214] Multiple definitions found for class /patientCalculationTest.jsp (/srv/openmrs_code/org/openmrs/module/calculation/omod/src/main/webapp/patientCalculationTest.jsp and /srv/openmrs_code/org/openmrs/module/calculation/omod/target/classes/web/module/patientCalculationTest.jsp). [1214] Multiple definitions found for class JSPPAGE/_jsppatientCalculationTest_jsp\$ftfy_frameworkVisibleObjects (/srv/openmrs_code/org/openmrs/module/calculation/omod/src/main/webapp/patientCalculationTest.jsp and /srv/openmrs_code/org/openmrs/module/calculation/omod/target/classes/web/module/patientCalculationTest.jsp). [1215] Could not locate the root (WEB-INF) of the web application. Please build your web application and try again.	



Issue Count by Category		
Issues by Category		
Cross-Site Scripting: DOM	66	
Dynamic Code Evaluation: Code Injection	6	
Header Manipulation: Cookies	6	

