



Hewlett Packard
Enterprise

HPE Security Fortify Audit Workbench

Developer Workbook

PS_INB_ERX_Fortify-2.0.4.059

Table of Contents

[Executive Summary](#)

[Project Description](#)

[Issue Breakdown by Fortify Categories](#)

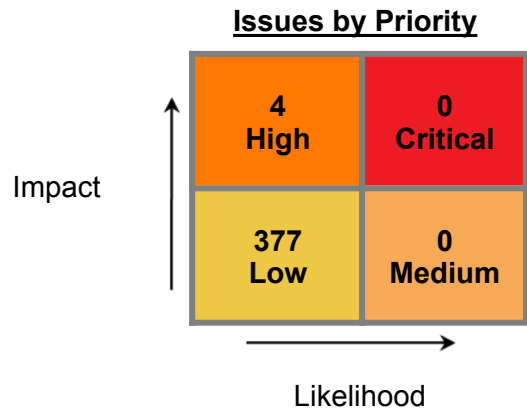
[Results Outline](#)

Executive Summary

This workbook is intended to provide all necessary details and information for a developer to understand and remediate the different issues discovered during the PS_INB_ERX_Fortify-2.0.4.059 project audit. The information contained in this workbook is targeted at project managers and developers.

This section provides an overview of the issues uncovered during analysis.

Project Name:	PS_INB_ERX_Fortify-2.0
Project Version:	
SCA:	Results Present
WebInspect:	Results Not Present
SecurityScope:	Results Not Present
Other:	Results Not Present



Top Ten Critical Categories

This project does not contain any critical issues

Project Description

This section provides an overview of the HPE Security Fortify scan engines used for this project, as well as the project meta-information.

SCA

Date of Last Analysis:	Sep 14, 2017, 4:50 PM	Engine Version:	17.10.0156
Host Name:	HAM-LT51592	Certification:	VALID
Number of Files:	2,150	Lines of Code:	108,967

Issue Breakdown by Fortify Categories

The following table depicts a summary of all issues grouped vertically by Fortify Category. For each category, the total number of issues is shown by Fortify Priority Order, including information about the number of audited issues.

Category	Fortify Priority (audited/total)				Total Issues
	Critical	High	Medium	Low	
Build Misconfiguration: External Maven Dependency Repository	0	0	0	0 / 7	0 / 7
Code Correctness: Byte Array to String Conversion	0	0	0	0 / 2	0 / 2
Code Correctness: Misleading Method Signature	0	0	0	0 / 4	0 / 4
Cross-Site Request Forgery	0	0	0	0 / 6	0 / 6
Dead Code: Expression is Always false	0	0	0	0 / 14	0 / 14
Dead Code: Expression is Always true	0	0	0	0 / 1	0 / 1
Denial of Service	0	0	0	0 / 1	0 / 1
Denial of Service: StringBuilder	0	0	0	0 / 2	0 / 2
Hidden Field	0	0	0	0 / 4	0 / 4
J2EE Misconfiguration: Excessive Session Timeout	0	0	0	0 / 3	0 / 3
J2EE Misconfiguration: Incomplete Error Handling	0	0	0	0 / 1	0 / 1
J2EE Misconfiguration: Missing Error Handling	0	0	0	0 / 2	0 / 2
Missing Check against Null	0	0	0	0 / 11	0 / 11
Obsolete: Deprecated by ESAPI	0	0	0	0 / 59	0 / 59
Password Management	0	0	0	0 / 5	0 / 5
Password Management: Hardcoded Password	0	4 / 4	0	0	4 / 4
Password Management: Password in Comment	0	0	0	0 / 18	0 / 18
Poor Error Handling: Overly Broad Catch	0	0	0	0 / 25	0 / 25
Poor Error Handling: Overly Broad Throws	0	0	0	0 / 14	0 / 14
Poor Error Handling: Throw Inside Finally	0	0	0	0 / 1	0 / 1
Poor Style: Confusing Naming	0	0	0	0 / 167	0 / 167
Poor Style: Value Never Read	0	0	0	0 / 1	0 / 1
Redundant Null Check	0	0	0	0 / 1	0 / 1
SQL Injection	0	0	0	0 / 1	0 / 1
System Information Leak: External	0	0	0	0 / 7	0 / 7
System Information Leak: HTML Comment in JSP	0	0	0	0 / 5	0 / 5
System Information Leak: Internal	0	0	0	0 / 3	0 / 3
Trust Boundary Violation	0	0	0	0 / 11	0 / 11
XML Entity Expansion Injection	0	0	0	0 / 1	0 / 1

Results Outline

Build Misconfiguration: External Maven Dependency Repository (7 issues)

Abstract

This maven build script relies on external sources, which could allow an attacker to insert malicious code into the final product or to take control of the build machine.

Explanation

Several tools exist within the Java development world to aid in dependency management: both Apache Ant and Apache Maven build systems include functionality specifically designed to help manage dependencies and Apache Ivy is developed explicitly as a dependency manager. Although there are differences in their behavior, these tools share the common functionality that they automatically download external dependencies specified in the build process at build time. This makes it much easier for developer B to build software in the same manner as developer A. Developers just store dependency information in the build file, which means that each developer and build engineer has a consistent way to obtain dependencies, compile the code, and deploy without the dependency management hassles involved in manual dependency management. The following examples illustrate how Ivy, Ant and Maven can be used to manage external dependencies as part of a build process.

Under Maven, instead of listing explicit URLs from which to retrieve the dependencies, developers specify the dependency names and versions and Maven relies on its underlying configuration to identify the server(s) from which to retrieve the dependencies. For commonly used components this saves the developer from having to researching dependency locations.

Example 1: The following excerpt from a Maven pom.xml file shows how a developer can specify multiple external dependencies using their name and version:

```
<dependencies>
  <dependency>
    <groupId>commons-logging</groupId>
    <artifactId>commons-logging</artifactId>
    <version>1.1</version>
  </dependency>
  <dependency>
    <groupId>javax.jms</groupId>
    <artifactId>jms</artifactId>
    <version>1.1</version>
  </dependency>
  ...
</dependencies>
```

Two distinct types of attack scenarios affect these systems: An attacker could either compromise the server hosting the dependency or compromise the DNS server the build machine uses to redirect requests for hostname of the server hosting the dependency to a machine controlled by the attacker. Both scenarios result in the attacker gaining the ability to inject a malicious version of a dependency into a build running on an otherwise uncompromised machine.

Regardless of the attack vector used to deliver the Trojan dependency, these scenarios share the common element that the build system blindly accepts the malicious binary and includes it in the build. Because the

build system has no recourse for rejecting the malicious binary and existing security mechanisms, such as code review, typically focus on internally-developed code rather than external dependencies, this type of attack has a strong potential to go unnoticed as it spreads through the development environment and potentially into production.

Although there is some risk of a compromised dependency being introduced into a manual build process, by the tendency of automated build systems to retrieve the dependency from an external source each time the build system is run in a new environment greatly increases the window of opportunity for an attacker. An attacker need only compromise the dependency server or the DNS server during one of the many times the dependency is retrieved in order to compromise the machine on which the build is occurring.

Recommendation

The simplest solution is to refrain from adopting automated dependency management systems altogether. Managing dependencies manually eliminates the potential for unexpected behavior caused by the build system. Obviously, the an attacker could still mount one of the attacks described above to coincide with the manual retrieval of a dependency, but limiting the frequency with which the dependency must be retrieved significantly reduces the window of opportunity for an attacker. Finally, this solution forces the development organization to rely on what is ostensibly an antiquated build system. A system based on manual dependency management is often more difficult to use and maintain, and may be unacceptable in some software development environments.

The second solution is a hybrid of the traditional manual dependency management approach and the fully automated solution that is popular today. The biggest advantage of the manual build process is the decreased window of attack, which can be achieved in a semi-automated system by replicating external dependency servers internally. Any build system that requires an external dependency can then point to the internal server using a hard-coded internal IP address to bypass the risk of DNS-based attacks. As new dependencies are added and new versions released, they can be downloaded once and included on the internal repository. This solution reduces the attack opportunities and allows the organization leverage existing internal network security infrastructure.

To implement this solution using Maven, a project should have the IP address for an internal repository hard coded the pom.xml. Specifying the IP address in the pom.xml ensures the internal repository will be used by the corresponding build, but is tied to a specific project. Alternatively, the IP address can be specified in settings.xml, which makes the configuration easier to share across multiple projects.

Example 2: The following Maven pom.xml demonstrates the use of an explicit internal IP address (the entries can also be used in settings.xml):

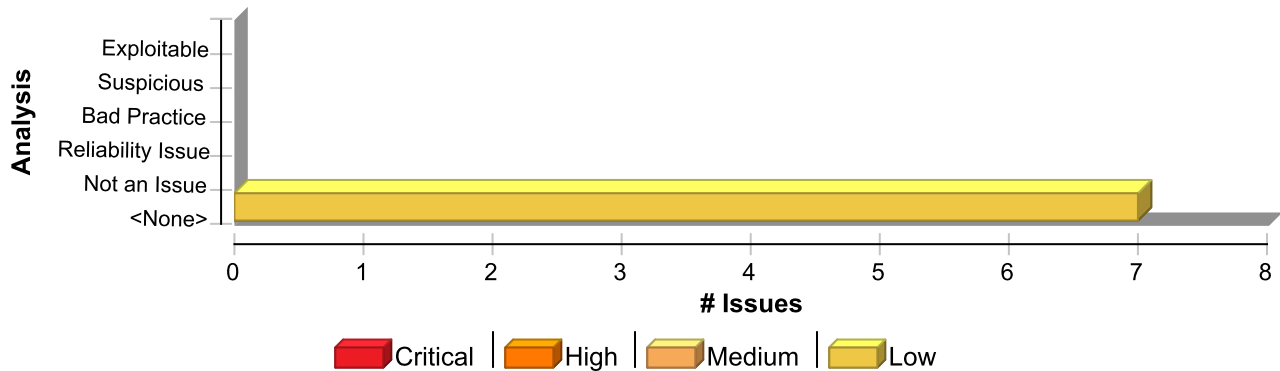
```
<project>
...
<repositories>
  <repository>
    <releases>
      <enabled>true</enabled>
      <updatePolicy>always</updatePolicy>
      <checksumPolicy>warn</checksumPolicy>
    </releases>
    <snapshots>
      <enabled>true</enabled>
      <updatePolicy>never</updatePolicy>
      <checksumPolicy>fail</checksumPolicy>
    </snapshots>
    <id>central</id>
    <name>Internal Repository</name>
    <url>http://172.16.1.13/maven2</url>
```

```

    <layout>default</layout>
  </repository>
</repositories>
<pluginRepositories>
  ...
</pluginRepositories>
  ...
</project>

```

Issue Summary



Engine Breakdown

	SCA	WebInspect	SecurityScope	Total
Build Misconfiguration: External Maven Dependency Repository	7	0	0	7
Total	7	0	0	7

Build Misconfiguration: External Maven Dependency Repository	Low
---------------------------------------------------------------------	------------

Package: PS_INB_ERX_Common

PS_INB_ERX_Common/pom.xml, line 2 (Build Misconfiguration: External Maven Dependency Repository)	Low
---------------------------------------------------------------------------------------------------------	------------

Issue Details

Kingdom: Environment
Scan Engine: SCA (Configuration)

Sink Details

Sink: //project/repositories
File: PS_INB_ERX_Common/pom.xml:2
Taint Flags:

```

1 <project xmlns="http://maven.apache.org/POM/4.0.0" xmlns:xsi="http://www.w3.org/2001/
XMLSchema-instance"
2   xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 http://maven.apache.org/maven-
v4_0_0.xsd">
3
4 <modelVersion>4.0.0</modelVersion>
5 <artifactId>PS_INB_ERX_Common</artifactId>
6

```


Build Misconfiguration: External Maven Dependency Repository	Low
Package: PS_INB_ERX_Common	
PS_INB_ERX_Common/pom.xml, line 2 (Build Misconfiguration: External Maven Dependency Repository)	Low
7 undefined	

Package: PS_INB_ERX_Fortify	
PS_INB_ERX_Fortify/pom.xml, line 22 (Build Misconfiguration: External Maven Dependency Repository)	Low
Issue Details	

Kingdom: Environment
Scan Engine: SCA (Configuration)

Sink Details

Sink: //project/repositories
File: PS_INB_ERX_Fortify/pom.xml:22
Taint Flags:

```

19
20 </modules>
21
22 <repositories>
23 <repository>
24 <id>project.local</id>
25 <name>project</name>
```

Package: PS_INB_ERX_JMS	
PS_INB_ERX_JMS/pom.xml, line 15 (Build Misconfiguration: External Maven Dependency Repository)	Low
Issue Details	

Kingdom: Environment
Scan Engine: SCA (Configuration)

Sink Details

Sink: //project/repositories
File: PS_INB_ERX_JMS/pom.xml:15
Taint Flags:

```

12 <version>${version.number}</version>
13 <relativePath>../PS_INB_ERX/pom.xml</relativePath>
14 </parent>
15 <repositories>
16 <repository>
17 <id>project.local</id>
18 <name>project</name>
```

Build Misconfiguration: External Maven Dependency Repository	Low
Package: PS_INB_ERX_Model	
PS_INB_ERX_Model/pom.xml, line 2 (Build Misconfiguration: External Maven Dependency Repository)	Low

Issue Details

Kingdom: Environment
Scan Engine: SCA (Configuration)

Sink Details

Sink: //project/repositories
File: PS_INB_ERX_Model/pom.xml:2
Taint Flags:

```

1 <project xmlns="http://maven.apache.org/POM/4.0.0" xmlns:xsi="http://www.w3.org/2001/
XMLSchema-instance"
2   xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 http://maven.apache.org/maven-
v4_0_0.xsd">
3
4 <modelVersion>4.0.0</modelVersion>
5 <name>PS_INB_ERX_Model</name>
6
7 undefined

```

Package: PS_INB_ERX_Service	
PS_INB_ERX_Service/pom.xml, line 16 (Build Misconfiguration: External Maven Dependency Repository)	Low

Issue Details

Kingdom: Environment
Scan Engine: SCA (Configuration)

Sink Details

Sink: //project/repositories
File: PS_INB_ERX_Service/pom.xml:16
Taint Flags:

```

13 <relativePath>../PS_INB_ERX/pom.xml</relativePath>
14 </parent>
15
16 <repositories>
17 <repository>
18 <id>project.local</id>
19 <name>project</name>

```

Package: PS_INB_ERX_UI	
PS_INB_ERX_UI/pom.xml, line 17 (Build Misconfiguration: External Maven Dependency Repository)	Low

Issue Details

Build Misconfiguration: External Maven Dependency Repository**Low****Package: PS_INB_ERX_UI****PS_INB_ERX_UI/pom.xml, line 17 (Build Misconfiguration: External Maven Dependency Repository)****Low****Kingdom:** Environment**Scan Engine:** SCA (Configuration)**Sink Details****Sink:** //project/repositories**File:** PS_INB_ERX_UI/pom.xml:17**Taint Flags:**

```
14 </parent>
15
16
17 <repositories>
18 <repository>
19 <id>project.local</id>
20 <name>project</name>
```

Package: PS_INB_ERX_WS**PS_INB_ERX_WS/pom.xml, line 16 (Build Misconfiguration: External Maven Dependency Repository)****Low****Issue Details****Kingdom:** Environment**Scan Engine:** SCA (Configuration)**Sink Details****Sink:** //project/repositories**File:** PS_INB_ERX_WS/pom.xml:16**Taint Flags:**

```
13 <relativePath>../PS_INB_ERX/pom.xml</relativePath>
14 </parent>
15
16 <repositories>
17 <repository>
18 <id>project.local</id>
19 <name>project</name>
```

Code Correctness: Byte Array to String Conversion (2 issues)

Abstract

Converting a byte array into a `String` may lead to data loss.

Explanation

When data from a byte array is converted into a `String`, it is unspecified what will happen to any data that is outside of the applicable character set. This can lead to data being lost, or a decrease in the level of security when binary data is needed to ensure proper security measures are followed.

Example 1: The following code converts data into a `String` in order to create a hash.

```
...
FileInputStream fis = new FileInputStream(myFile);
byte[] byteArr = new byte[BUFSIZE];
...
int count = fis.read(byteArr);
...
String fileString = new String(byteArr);
String fileSHA256Hex = DigestUtils.sha256Hex(fileString);
// use fileSHA256Hex to validate file
...
```

Assuming the size of the file is less than `BUFSIZE`, this works fine as long as the information in `myFile` is encoded the same as the default character set, however if it's using a different encoding, or is a binary file, it will lose information. This in turn will cause the resulting SHA hash to be less reliable, and could mean it's far easier to cause collisions, especially if any data outside of the default character set is represented by the same value, such as a question mark.

Recommendation

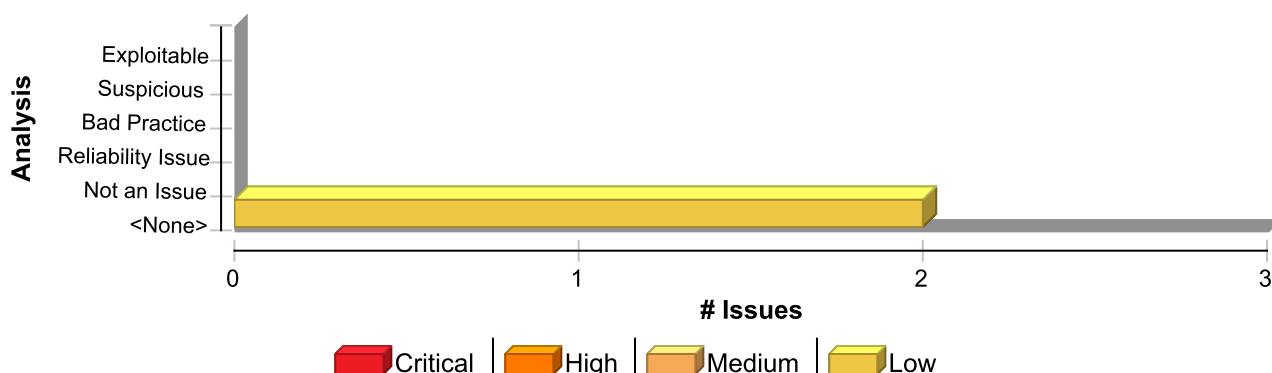
Generally speaking, a byte array potentially containing noncharacter data should never be converted into a `String` object as it may break functionality, but in some cases this can cause much larger security concerns. In a lot of cases there is no need to actually convert a byte array into a `String`, but if there is a specific reason to be able to create a `String` object from binary data, it must first be encoded in a way such that it will fit into the default character set.

Example 2: The following uses a different variant of the API in Example 1 to prevent any validation problems.

```
...
FileInputStream fis = new FileInputStream(myFile);
byte[] byteArr = new byte[BUFSIZE];
...
int count = fis.read(byteArr);
...
byte[] fileSHA256 = DigestUtils.sha256(byteArr);
// use fileSHA256 to validate file, comparing hash byte-by-byte.
...
```

In this case it is straightforward to rectify, since this API has overloaded variants including one that accepts a byte array, and this could be simplified even further by using another overloaded variant of `DigestUtils.sha256()` that accepts a `FileInputStream` object as its argument. Other scenarios may need careful consideration as to whether it's possible that the byte array could contain data outside of the character set, and further refactoring may be required.

Issue Summary



Engine Breakdown

	SCA	WebInspect	SecurityScope	Total
Code Correctness: Byte Array to String Conversion	2	0	0	2
Total	2	0	0	2

Code Correctness: Byte Array to String Conversion

Low

Package: gov.va.med.pharmacy.jms.messaging

PS_INB_ERX_JMS/src/main/java/gov/va/med/pharmacy/jms/messaging/InboundMsgProcessor.java, line 43 (Code Correctness: Byte Array to String Conversion)

Low

Issue Details

Kingdom: Code Quality

Scan Engine: SCA (Semantic)

Sink Details

Sink: String()

Enclosing Method: getERxMessage()

File: PS_INB_ERX_JMS/src/main/java/gov/va/med/pharmacy/jms/messaging/InboundMsgProcessor.java:43

Taint Flags:

```

40
41 eRxMessage.readBytes(messageByteArray, messageLength);
42
43 String message = new String(messageByteArray);
44
45 inbounderx.setMessage(message);
46

```

Code Correctness: Byte Array to String Conversion**Low****Package:** gov.va.med.pharmacy.jms.messaging**PS_INB_ERX_JMS/src/main/java/gov/va/med/pharmacy/jms/messaging/
InboundMsgProducer.java, line 39 (Code Correctness: Byte Array to String
Conversion)****Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Semantic)**Sink Details****Sink:** String()**Enclosing Method:** postProcessMessage()**File:** PS_INB_ERX_JMS/src/main/java/gov/va/med/pharmacy/jms/messaging/InboundMsgProducer.java:39**Taint Flags:**

```
36 byte[] newMessage = new byte[length.intValue()];
37 int messageRead = byteMessage.readBytes(newMessage);
38
39 LOG.debug("--- sending message", new String(newMessage));
40
41 return msg;
42 }
```

Code Correctness: Misleading Method Signature (4 issues)

Abstract

This looks like an effort to override a common Java method, but it probably does not have the intended effect.

Explanation

This method's name is similar to a common Java method name, but it is either spelled incorrectly or the argument list causes it to not override the intended method.

Example 1: The following method is meant to override `Object.equals()`:

```
public boolean equals(Object obj1, Object obj2) {  
    ...  
}
```

But since `Object.equals()` only takes a single argument, the method above is never called.

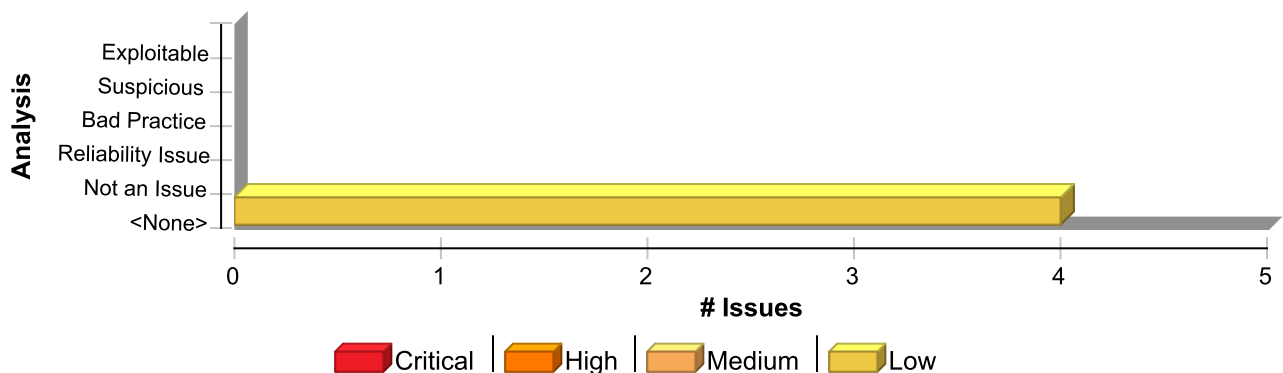
Recommendation

Carefully check to make sure the method does what was intended.

Example 2: The code in Example 1 could be rewritten in the following way:

```
public boolean equals(Object obj) {  
    ...  
}
```

Issue Summary



Engine Breakdown

	SCA	WebInspect	SecurityScope	Total
Code Correctness: Misleading Method Signature	4	0	0	4
Total	4	0	0	4

Code Correctness: Misleading Method Signature**Low****Package:** gov.va.med.pharmacy.persistence.model.usertypes**PS_INB_ERX_Model/src/main/java/gov/va/med/pharmacy/persistence/model/usertypes/OutboundNcpdpMsgUserType.java, line 57 (Code Correctness: Misleading Method Signature)****Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Function: hashCode**Enclosing Method:** hashCode()**File:** PS_INB_ERX_Model/src/main/java/gov/va/med/pharmacy/persistence/model/usertypes/OutboundNcpdpMsgUserType.java:57**Taint Flags:**

```
54  }  
55  
56  @Override  
57  public int hashCode(final Object x) {  
58  return (x != null) ? x.hashCode() : 0;  
59  }  
60
```

PS_INB_ERX_Model/src/main/java/gov/va/med/pharmacy/persistence/model/usertypes/InboundNcpdpMsgUserType.java, line 50 (Code Correctness: Misleading Method Signature)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Function: hashCode**Enclosing Method:** hashCode()**File:** PS_INB_ERX_Model/src/main/java/gov/va/med/pharmacy/persistence/model/usertypes/InboundNcpdpMsgUserType.java:50**Taint Flags:**

```
47  }  
48  
49  @Override  
50  public int hashCode(final Object x) {  
51  return (x != null) ? x.hashCode() : 0;  
52  }  
53
```


Code Correctness: Misleading Method Signature	Low
Package: gov.va.med.pharmacy.persistence.model.usertypes	
PS_INB_ERX_Model/src/main/java/gov/va/med/pharmacy/persistence/model/usertypes/InboundNcpdpMsgUserType.java, line 45 (Code Correctness: Misleading Method Signature)	Low

Issue Details

Kingdom: Code Quality

Scan Engine: SCA (Structural)

Sink Details

Sink: Function: equals

Enclosing Method: equals()

File: PS_INB_ERX_Model/src/main/java/gov/va/med/pharmacy/persistence/model/usertypes/InboundNcpdpMsgUserType.java:45

Taint Flags:

```

42  }
43
44  @Override
45  public boolean equals(final Object x, final Object y) {
46  return (x != null) && x.equals(y);
47  }
48

```

PS_INB_ERX_Model/src/main/java/gov/va/med/pharmacy/persistence/model/usertypes/OutboundNcpdpMsgUserType.java, line 52 (Code Correctness: Misleading Method Signature)	Low
------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------

Issue Details

Kingdom: Code Quality

Scan Engine: SCA (Structural)

Sink Details

Sink: Function: equals

Enclosing Method: equals()

File: PS_INB_ERX_Model/src/main/java/gov/va/med/pharmacy/persistence/model/usertypes/OutboundNcpdpMsgUserType.java:52

Taint Flags:

```

49  }
50
51  @Override
52  public boolean equals(final Object x, final Object y) {
53  return (x != null) && x.equals(y);
54  }
55

```

Cross-Site Request Forgery (6 issues)

Abstract

Form posts must contain a user-specific secret in order to prevent an attacker from making unauthorized requests.

Explanation

A cross-site request forgery (CSRF) vulnerability occurs when:

1. A Web application uses session cookies.
2. The application acts on an HTTP request without verifying that the request was made with the user's consent.

A nonce is a cryptographic random value that is sent with a message to prevent replay attacks. If the request does not contain a nonce that proves its provenance, the code that handles the request is vulnerable to a CSRF attack (unless it does not change the state of the application). This means a Web application that uses session cookies has to take special precautions in order to ensure that an attacker can't trick users into submitting bogus requests. Imagine a Web application that allows administrators to create new accounts by submitting this form:

```
<form method="POST" action="/new_user" >
  Name of new user: <input type="text" name="username">
  Password for new user: <input type="password" name="user_passwd">
    <input type="submit" name="action" value="Create User">
</form>
```

An attacker might set up a Web site with the following:

```
<form method="POST" action="http://www.example.com/new_user">
  <input type="hidden" name="username" value="hacker">
  <input type="hidden" name="user_passwd" value="hacked">
</form>
<script>
  document.usr_form.submit();
</script>
```

If an administrator for `example.com` visits the malicious page while she has an active session on the site, she will unwittingly create an account for the attacker. This is a CSRF attack. It is possible because the application does not have a way to determine the provenance of the request. Any request could be a legitimate action chosen by the user or a faked action set up by an attacker. The attacker does not get to see the Web page that the bogus request generates, so the attack technique is only useful for requests that alter the state of the application.

Applications that pass the session identifier in the URL rather than as a cookie do not have CSRF problems because there is no way for the attacker to access the session identifier and include it as part of the bogus request.

CSRF is entry number five on the 2007 OWASP Top 10 list.

Recommendation

Applications that use session cookies must include some piece of information in every form post that the back-end code can use to validate the provenance of the request. One way to do that is to include a random request identifier or nonce, like this:

```
RequestBuilder rb = new RequestBuilder(RequestBuilder.POST, "/new_user");
body = addToPost(body, new_username);
body = addToPost(body, new_passwd);
body = addToPost(body, request_id);
rb.sendRequest(body, new NewAccountCallback(callback));
```

Then the back-end logic can validate the request identifier before processing the rest of the form data. When possible, the request identifier should be unique to each server request rather than shared across every request for a particular session. As with session identifiers, the harder it is for an attacker to guess the request identifier, the harder it is to conduct a successful CSRF attack. The token should not be easily guessed and it should be protected in the same way that session tokens are protected, such as using SSLv3.

Additional mitigation techniques include:

Framework protection: Most modern web application frameworks embed CSRF protection and they will automatically include and verify CSRF tokens.

Use a Challenge-Response control: Forcing the customer to respond to a challenge sent by the server is a strong defense against CSRF. Some of the challenges that can be used for this purpose are: CAPTCHAs, password re-authentication and one-time tokens.

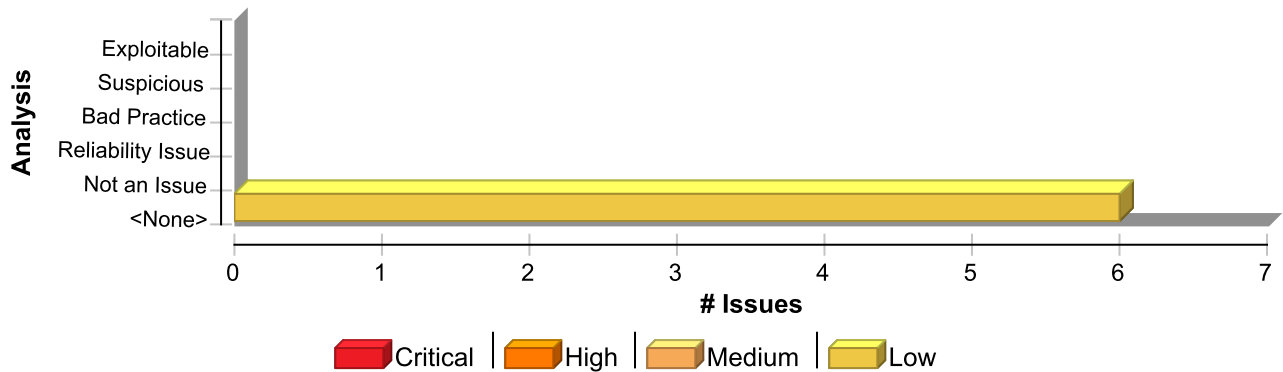
Check HTTP Referer/Origin headers: An attacker won't be able to spoof these headers while performing a CSRF attack. This makes these headers a useful method to prevent CSRF attacks.

Double-submit Session Cookie: Sending the session ID Cookie as a hidden form value in addition to the actual session ID Cookie is a good protection against CSRF attacks. The server will check both values and make sure they are identical before processing the rest of the form data. If an attacker submits a form in behalf of a user, he won't be able to modify the session ID cookie value as per the same-origin-policy.

Limit Session Lifetime: When accessing protected resources using a CSRF attack, the attack will only be valid as long as the session ID sent as part of the attack is still valid on the server. Limiting the Session lifetime will reduce the probability of a successful attack.

The techniques described here can be defeated with XSS attacks. Effective CSRF mitigation includes XSS mitigation techniques.

Issue Summary



Engine Breakdown

	SCA	WebInspect	SecurityScope	Total
Cross-Site Request Forgery	6	0	0	6
Total	6	0	0	6

Cross-Site Request Forgery

Low

Package: .src.main.webapp.WEB-INF

PS_INB_ERX_UI/src/main/webapp/WEB-INF/reports.jsp, line 19 (Cross-Site Request Forgery)

Low

Issue Details

Kingdom: Encapsulation

Scan Engine: SCA (Content)

Sink Details

File: PS_INB_ERX_UI/src/main/webapp/WEB-INF/reports.jsp:19

Taint Flags:

```

16 </div>
17
18 <div id="summaryReportFilter">
19 <form id="summaryReportForm" >
20 <h2 class="h2title"><span class="reportTitle"></span></h2>
21 <label for="visnSelection">VISN:&nbsp;&nbsp;&nbsp;</label>
22 <div id="summaryReportFormVisnSelect" tabindex="0" style="width: 40px; ">

```

PS_INB_ERX_UI/src/main/webapp/WEB-INF/managepharmacy.jsp, line 35 (Cross-Site Request Forgery)

Low

Issue Details

Kingdom: Encapsulation

Scan Engine: SCA (Content)

Sink Details

File: PS_INB_ERX_UI/src/main/webapp/WEB-INF/managepharmacy.jsp:35

Taint Flags:

```

32 </c:if>

```

Cross-Site Request Forgery

Low

Package: .src.main.webapp.WEB-INF

PS_INB_ERX_UI/src/main/webapp/WEB-INF/managepharmacy.jsp, line 35 (Cross-Site Request Forgery)

Low

```
33
34 <div id="pharmacyManagement">
35 <form:form id="pharmacyFilterForm" name="pharmacyFilterForm" method="POST" action="${
36   {pageContext.request.contextPath}/inb-erx/managePharm/addPharmacy">
37 <label for="visnSelection" style="width: 40px; padding-top: 6px; padding-left: 5px;">VISN:
38 </label>
39 <div id="visnSelect" tabindex="3" style="width: 40px; ">
```

PS_INB_ERX_UI/src/main/webapp/WEB-INF/loginErrorLayout.jsp, line 23 (Cross-Site Request Forgery)

Low

Issue Details

Kingdom: Encapsulation

Scan Engine: SCA (Content)

Sink Details

File: PS_INB_ERX_UI/src/main/webapp/WEB-INF/loginErrorLayout.jsp:23

Taint Flags:

```
20 <hr />
21 <div id="content">
22 <br/>
23 <form action="${index}" method="post" >
24
25 <div align="center">
26 <br/>
```

PS_INB_ERX_UI/src/main/webapp/WEB-INF/manageusers.jsp, line 10 (Cross-Site Request Forgery)

Low

Issue Details

Kingdom: Encapsulation

Scan Engine: SCA (Content)

Sink Details

File: PS_INB_ERX_UI/src/main/webapp/WEB-INF/manageusers.jsp:10

Taint Flags:

```
7 <div id="userRoles">
8 <h2 class="titleBar"><span>&nbsp;Users</span>
9 </h2>
10 <form:form name="manageUsersForm" id="manageUsersForm"
11   modelAttribute="userManagementModel" method="POST" action="${pageContext.request.contextPath}/
12   inb-erx/manageUsers/saveUserData">
13
14 <c:if test="${not empty data.errorMessage}">
```

Cross-Site Request Forgery

Low

Package: .src.main.webapp.WEB-INF

PS_INB_ERX_UI/src/main/webapp/WEB-INF/manageusers.jsp, line 10 (Cross-Site Request Forgery)

Low

```
12 <div id="errorMessages" class="error" aria-describedby="" tabindex="0">
13 <p id="errorTitle">
```

PS_INB_ERX_UI/src/main/webapp/WEB-INF/addpharmacy.jsp, line 11 (Cross-Site Request Forgery)

Low

Issue Details

Kingdom: Encapsulation

Scan Engine: SCA (Content)

Sink Details

File: PS_INB_ERX_UI/src/main/webapp/WEB-INF/addpharmacy.jsp:11

Taint Flags:

```
8
9 <div id="AddPharm">
10 <h1 class="titleBar"><span class="headerText">Add Pharmacy</span></h1>
11 <form:form id="pharmacyAddForm" name="pharmacyAddForm" commandName="pharmacyAddForm"
method="POST" action="{pageContext.request.contextPath}/inb-erx/managePharm/addNewPharmacy">
12 <c:if test="{not empty data.errorMessage }">
13 <div id="errorMessages" class="error" aria-describedby="" tabindex="0">
14 <p id="errorTitle">
```

PS_INB_ERX_UI/src/main/webapp/WEB-INF/editpharmacy.jsp, line 12 (Cross-Site Request Forgery)

Low

Issue Details

Kingdom: Encapsulation

Scan Engine: SCA (Content)

Sink Details

File: PS_INB_ERX_UI/src/main/webapp/WEB-INF/editpharmacy.jsp:12

Taint Flags:

```
9 <div id="EditPharm">
10
11 <h1 class="titleBar"><span class="headerText">Edit Pharmacy</span></h1>
12 <form:form id="pharmacyEditForm" name="pharmacyEditForm" commandName="pharmacyEditForm"
method="POST" action="{pageContext.request.contextPath}/inb-erx/managePharm/updatePharmacy">
13 <c:if test="{not empty data.errorMessage }">
14 <div id="errorMessages" class="error" aria-describedby="" tabindex="0">
15 <p id="errorTitle">
```

Dead Code: Expression is Always false (14 issues)

Abstract

This expression (or part of it) will always evaluate to `false`.

Explanation

This expression (or part of it) will always evaluate to `false`; the program could be rewritten in a simpler form. The nearby code may be present for debugging purposes, or it may not have been maintained along with the rest of the program. The expression may also be indicative of a bug earlier in the method.

Example 1: The following method never sets the variable `secondCall` after initializing it to `false`. (The variable `firstCall` is mistakenly used twice.) The result is that the expression `firstCall && secondCall` will always evaluate to `false`, so `setUpDualCall()` will never be invoked.

```
public void setUpCalls() {
    boolean firstCall = false;
    boolean secondCall = false;

    if (fCall > 0) {
        setUpFCall();
        firstCall = true;
    }
    if (sCall > 0) {
        setUpSCall();
        firstCall = true;
    }

    if (firstCall && secondCall) {
        setUpDualCall();
    }
}
```

Example 2: The following method never sets the variable `firstCall` to `true`. (The variable `firstCall` is mistakenly set to `false` after the first conditional statement.) The result is that the first part of the expression `firstCall && secondCall` will always evaluate to `false`.

```
public void setUpCalls() {
    boolean firstCall = false;
    boolean secondCall = false;

    if (fCall > 0) {
        setUpFCall();
        firstCall = false;
    }
    if (sCall > 0) {
        setUpSCall();
        secondCall = true;
    }

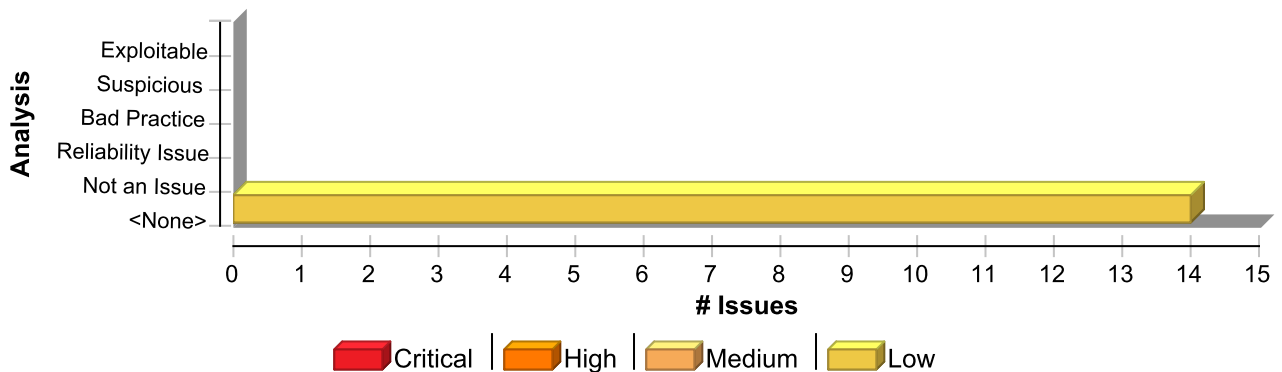
    if (firstCall || secondCall) {
        setUpForCall();
    }
}
```

```
}
}
```

Recommendation

In general, you should repair or remove unused code. It causes additional complexity and maintenance burden without contributing to the functionality of the program.

Issue Summary



Engine Breakdown

	SCA	WebInspect	SecurityScope	Total
Dead Code: Expression is Always false	14	0	0	14
Total	14	0	0	14

Dead Code: Expression is Always false

Low

Package: gov.va.med.pharmacy.jaxrs.eAnde.dao.impl

PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/eAnde/dao/impl/PatientInfoWSDao.java, line 19 (Dead Code: Expression is Always false)

Low

Issue Details

Kingdom: Code Quality

Scan Engine: SCA (Structural)

Sink Details

Sink: IfStatement

Enclosing Method: lookupPatientByKey()

File: PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/eAnde/dao/impl/PatientInfoWSDao.java:19

Taint Flags:

```
16
17 try {
18     getEESummaryResponse eeSummaryResponse = eeClient.returnResponse(key);
19     if (eeSummaryResponse != null){
20         patientInfo.setEligibilityStatus(eeSummaryResponse.getSummary().getEligibilityVerificationInfo())
21         patientInfo.setEnrollmentStatus(eeSummaryResponse.getSummary().getEnrollmentDeterminationInfo())
22     };
```


Dead Code: Expression is Always false	Low
Package: gov.va.med.pharmacy.jaxrs.eAnde.dao.impl	
PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/eAnde/dao/impl/PatientInfoWSDao.java, line 19 (Dead Code: Expression is Always false)	Low

Package: gov.va.med.pharmacy.utility	
PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/ESAPIValidator.java, line 77 (Dead Code: Expression is Always false)	Low

Issue Details

Kingdom: Code Quality

Scan Engine: SCA (Structural)

Sink Details

Sink: IfStatement

Enclosing Method: validateStringInput()

File: PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/ESAPIValidator.java:77

Taint Flags:

```

74  throw new RuntimeException("Invalid characters found in input. Cross Site Scripting:
Reflected violation.");
75  }
76
77  case DENIAL_OF_SERVICE_REG_EXP:
78  try {
79  return validator().getValidInput("denialOfServiceRegExp", input, "denialOfServiceRegExp",
Integer.MAX_VALUE, false, false);
80  } catch (Exception e) {

```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/ESAPIValidator.java, line 101 (Dead Code: Expression is Always false)	Low
------------------------------------------------------------------------------------------------------------------------------------------	------------

Issue Details

Kingdom: Code Quality

Scan Engine: SCA (Structural)

Sink Details

Sink: IfStatement

Enclosing Method: validateStringInput()

File: PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/ESAPIValidator.java:101

Taint Flags:

```

98  return null;
99  }
100
101  case OPEN_REDIRECT:
102  try {
103  return validator().getValidInput("openRedirect", input, "openRedirect",
Integer.MAX_VALUE, false, false);
104  } catch (Exception e) {

```

Dead Code: Expression is Always false

Low

Package: gov.va.med.pharmacy.utility

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/ESAPIValidator.java, line 130 (Dead Code: Expression is Always false)

Low

Issue Details

Kingdom: Code Quality

Scan Engine: SCA (Structural)

Sink Details

Sink: IfStatement

Enclosing Method: validateStringInput()

File: PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/ESAPIValidator.java:130

Taint Flags:

```
127 throw new RuntimeException("Invalid characters found in input. Portability Flaw Locale violation.");
128 }
129
130 case PRIVACY_VIOLATION:
131 // remove cr/lf
132 input = input.replace('\n', ' ').replace('\r', ' ');
133 try {
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/ESAPIValidator.java, line 108 (Dead Code: Expression is Always false)

Low

Issue Details

Kingdom: Code Quality

Scan Engine: SCA (Structural)

Sink Details

Sink: IfStatement

Enclosing Method: validateStringInput()

File: PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/ESAPIValidator.java:108

Taint Flags:

```
105 throw new RuntimeException("Invalid characters found in input. Open Redirect violation.");
106 }
107
108 case PATH_MANIPULATION:
109 try {
110 return validator().getValidInput("pathManipulation", input, "pathManipulation",
Integer.MAX_VALUE, false, false);
111 } catch (Exception e) {
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/ESAPIValidator.java, line 148 (Dead Code: Expression is Always false)

Low

Issue Details

Kingdom: Code Quality

Dead Code: Expression is Always false**Low****Package:** gov.va.med.pharmacy.utility**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/ESAPIValidator.java, line 148 (Dead Code: Expression is Always false)****Low****Scan Engine:** SCA (Structural)**Sink Details****Sink:** IfStatement**Enclosing Method:** validateStringInput()**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/ESAPIValidator.java:148**Taint Flags:**

```
145 return null;
146 }
147
148 case SYSTEM_INFORMATION_LEAK_EXTERNAL:
149 try {
150 return validator().getValidInput("systemInformationLeakExternal", input,
"systemInformationLeakExternal", Integer.MAX_VALUE, false, false);
151 } catch (Exception e) {
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/ESAPIValidator.java, line 155 (Dead Code: Expression is Always false)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** IfStatement**Enclosing Method:** validateStringInput()**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/ESAPIValidator.java:155**Taint Flags:**

```
152 return null;
153 }
154
155 case XML_EXT_ENTITY_INJ:
156 try {
157 return validator().getValidInput("xmlExtEntityInj", input, "xmlExtEntityInj",
Integer.MAX_VALUE, false, false);
158 } catch (Exception e) {
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/ESAPIValidator.java, line 139 (Dead Code: Expression is Always false)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)

Dead Code: Expression is Always false**Low****Package:** gov.va.med.pharmacy.utility**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/ESAPIValidator.java, line 139 (Dead Code: Expression is Always false)****Low****Sink Details****Sink:** IfStatement**Enclosing Method:** validateStringInput()**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/ESAPIValidator.java:139**Taint Flags:**

```
136 return null;
137 }
138
139 case SQL_INJECTION:
140 // remove cr/lf
141 input = input.replace('\n', ' ').replace('\r', ' ');
142 try {
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/ESAPIValidator.java, line 54 (Dead Code: Expression is Always false)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** IfStatement**Enclosing Method:** validateStringInput()**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/ESAPIValidator.java:54**Taint Flags:**

```
51 throw new RuntimeException("Invalid characters found in input. Access Control: DB
violation.");
52 }
53
54 case COMMAND_INJECTION:
55 try {
56
57 return validator().getValidInput("commandInjection", input, "commandInjection",
Integer.MAX_VALUE, false, false);
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/ESAPIValidator.java, line 70 (Dead Code: Expression is Always false)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** IfStatement

Dead Code: Expression is Always false**Low****Package:** gov.va.med.pharmacy.utility**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/ESAPIValidator.java, line 70 (Dead Code: Expression is Always false)****Low****Enclosing Method:** validateStringInput()**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/ESAPIValidator.java:70**Taint Flags:**

```
67  throw new RuntimeException("Invalid characters found in input. Cross Site Scripting: Persistent violation.");
68  }
69
70  case CROSS_SITE_SCRIPTING_REFLECTED:
71  try {
72  return validator().getValidInput("crossSiteScriptingReflected", input, "crossSiteScriptingReflected", Integer.MAX_VALUE, false, false);
73  } catch (Exception e) {
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/ESAPIValidator.java, line 115 (Dead Code: Expression is Always false)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** IfStatement**Enclosing Method:** validateStringInput()**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/ESAPIValidator.java:115**Taint Flags:**

```
112  throw new RuntimeException("Invalid characters found in input. Path Manipulation violation.");
113  }
114
115  case PORTABILITY_FLAW_FILE_SEPARATOR:
116  try {
117  input = input.replace('\\', File.separator.toCharArray()[0]).replace('/', File.separator.toCharArray()[0]);
118  return validator().getValidInput("portabilityFlawFileSeparator", input, "portabilityFlawFileSeparator", Integer.MAX_VALUE, false, false);
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/ESAPIValidator.java, line 85 (Dead Code: Expression is Always false)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** IfStatement

Dead Code: Expression is Always false**Low****Package:** gov.va.med.pharmacy.utility**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/ESAPIValidator.java, line 85 (Dead Code: Expression is Always false)****Low****Enclosing Method:** validateStringInput()**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/ESAPIValidator.java:85**Taint Flags:**

```
82 + "Denial Of Service: Regular Expression violation.");
83 }
84
85 case JSON_INJECTION:
86 try {
87 return validator().getValidInput("jsonInjection", input, "jsonInjection",
Integer.MAX_VALUE, false, false);
88 } catch (Exception e) {
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/ESAPIValidator.java, line 63 (Dead Code: Expression is Always false)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** IfStatement**Enclosing Method:** validateStringInput()**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/ESAPIValidator.java:63**Taint Flags:**

```
60 throw new RuntimeException("Invalid characters found in input. Command Injection
violation.");
61 }
62
63 case CROSS_SITE_SCRIPTING_PERSISTENT:
64 try {
65 return validator().getValidInput("crossSiteScriptingPersistent", input,
"crossSiteScriptingPersistent", Integer.MAX_VALUE, false, false);
66 } catch (Exception e) {
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/ESAPIValidator.java, line 123 (Dead Code: Expression is Always false)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** IfStatement**Enclosing Method:** validateStringInput()**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/ESAPIValidator.java:123

Dead Code: Expression is Always false	Low
Package: gov.va.med.pharmacy.utility	
PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/ESAPIValidator.java, line 123 (Dead Code: Expression is Always false)	Low

Taint Flags:

```
120 throw new RuntimeException("Invalid characters found in input. Portability Flaw File
Separator violation.");
121 }
122
123 case PORTABILITY_FLAW_LOCALE:
124 try {
125 return validator().getValidInput("portabilityFlawLocale", input, "portabilityFlawLocale",
Integer.MAX_VALUE, false, false);
126 } catch (Exception e) {
```

Dead Code: Expression is Always true (1 issue)

Abstract

This expression (or part of it) will always evaluate to `true`.

Explanation

This expression (or part of it) will always evaluate to `true`; the program could be rewritten in a simpler form. The nearby code may be present for debugging purposes, or it may not have been maintained along with the rest of the program. The expression may also be indicative of a bug earlier in the method.

Example 1: The following method never sets the variable `secondCall` after initializing it to `true`. (The variable `firstCall` is mistakenly used twice.) The result is that the expression `firstCall || secondCall` will always evaluate to `true`, so `setUpForCall()` will always be invoked.

```
public void setUpCalls() {
    boolean firstCall = true;
    boolean secondCall = true;

    if (fCall < 0) {
        cancelFCall();
        firstCall = false;
    }
    if (sCall < 0) {
        cancelSCall();
        firstCall = false;
    }

    if (firstCall || secondCall) {
        setUpForCall();
    }
}
```

Example 2: The following method tries to check the variables `firstCall` and `secondCall`. (The variable `firstCall` is mistakenly set to `true` instead of being checked.) The result is that the first part of the expression `firstCall = true && secondCall == true` will always evaluate to `true`.

```
public void setUpCalls() {
    boolean firstCall = false;
    boolean secondCall = false;

    if (fCall > 0) {
        setUpFCall();
        firstCall = true;
    }
    if (sCall > 0) {
        setUpSCall();
        secondCall = true;
    }

    if (firstCall = true && secondCall == true) {
        setUpDualCall();
    }
}
```

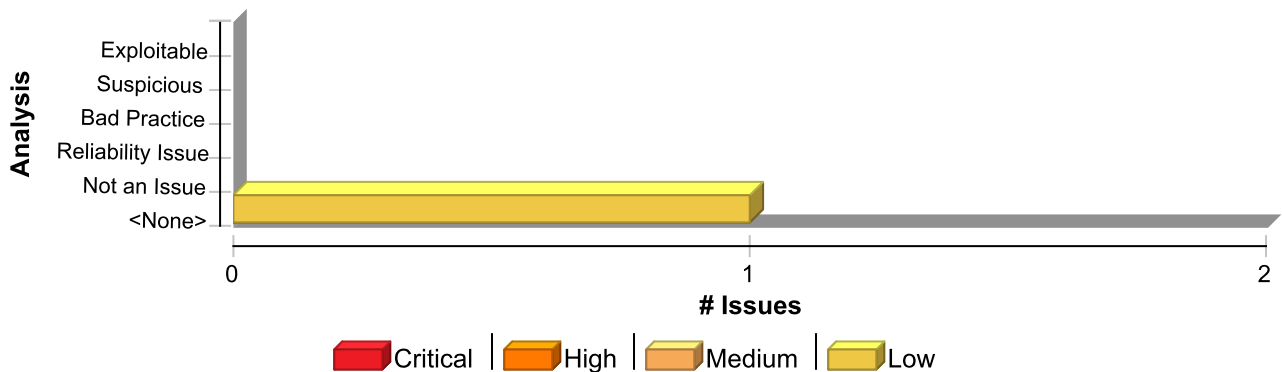


```
}
}
```

Recommendation

In general, you should repair or remove unused code. It causes additional complexity and maintenance burden without contributing to the functionality of the program.

Issue Summary



Engine Breakdown

	SCA	WebInspect	SecurityScope	Total
Dead Code: Expression is Always true	1	0	0	1
Total	1	0	0	1

Dead Code: Expression is Always true	Low
Package: gov.va.med.pharmacy.web.administration	
PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/administration/UserManagementController.java, line 532 (Dead Code: Expression is Always true)	Low
Issue Details	

Kingdom: Code Quality
Scan Engine: SCA (Structural)

Sink Details

Sink: IfStatement
Enclosing Method: processForm()
File: PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/administration/UserManagementController.java:532
Taint Flags:

```
529
530 // add success message.
531
532 if(addOP == true && deleteOP == false && updateOP == false){
533
534   responseMessage.setSuccessMessage("User information added successfully.");
535 }
```

Denial of Service (1 issue)

Abstract

An attacker could cause the program to crash or otherwise become unavailable to legitimate users.

Explanation

Attackers may be able to deny service to legitimate users by flooding the application with requests, but flooding attacks can often be defused at the network layer. More problematic are bugs that allow an attacker to overload the application using a small number of requests. Such bugs allow the attacker to specify the quantity of system resources their requests will consume or the duration for which they will use them.

Example 1: The following code allows a user to specify the amount of time for which a thread will sleep. By specifying a large number, an attacker may tie up the thread indefinitely. With a small number of requests, the attacker may deplete the application's thread pool.

```
int usrSleepTime = Integer.parseInt(usrInput);
Thread.sleep(usrSleepTime);
```

Example 2: The following code reads a String from a zip file. Because it uses the `readLine()` method, it will read an unbounded amount of input. An attacker may take advantage of this code to cause an `OutOfMemoryException` or to consume a large amount of memory so that the program spends more time performing garbage collection or runs out of memory during some subsequent operation.

```
InputStream zipInput = zipFile.getInputStream(zipEntry);
Reader zipReader = new InputStreamReader(zipInput);
BufferedReader br = new BufferedReader(zipReader);
String line = br.readLine();
```

Recommendation

Validate user input to ensure that it will not cause inappropriate resource utilization.

Example 3: The following code allows a user to specify the amount of time for which a thread will sleep just as in Example 1, but only if the value is within reasonable bounds.

```
int usrSleepTime = Integer.parseInt(usrInput);
if (usrSleepTime >= SLEEP_MIN &&
    usrSleepTime <= SLEEP_MAX) {
    Thread.sleep(usrSleepTime);
} else {
    throw new Exception("Invalid sleep duration");
}
```

Example 4: The following code reads a String from a zip file just as in Example 2, but the maximum string length it will read is `MAX_STR_LEN` characters.

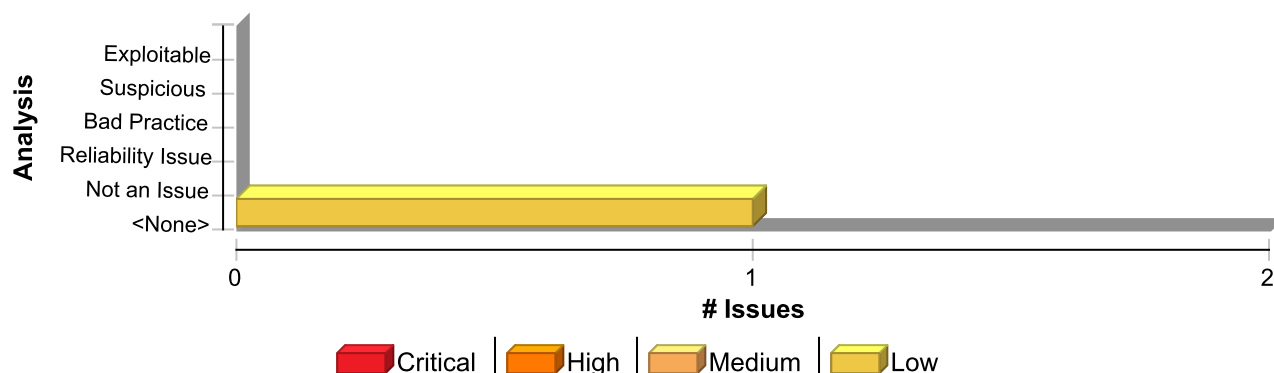
```
InputStream zipInput = zipFile.getInputStream(zipEntry);
```

```

Reader zipReader = new InputStreamReader(zipInput);
BufferedReader br = new BufferedReader(zipReader);
StringBuffer sb = new StringBuffer();
int intC;
while ((intC = br.read()) != -1) {
    char c = (char) intC;
    if (c == '\n') {
        break;
    }
    if (sb.length() >= MAX_STR_LEN) {
        throw new Exception("input too long");
    }
    sb.append(c);
}
String line = sb.toString();

```

Issue Summary



Engine Breakdown

	SCA	WebInspect	SecurityScope	Total
Denial of Service	1	0	0	1
Total	1	0	0	1

Denial of Service

Low

Package: gov.va.med.pharmacy.jaxrs.tovista.dao.impl

PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/tovista/dao/impl/VistaInboundRpc.java, line 78 (Denial of Service)

Low

Issue Details

Kingdom: Input Validation and Representation
Scan Engine: SCA (Semantic)

Sink Details

Sink: readLine()
Enclosing Method: sendMessage()
File: PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/tovista/dao/impl/VistaInboundRpc.java:78
Taint Flags:

75 sb.setLength(0);

Denial of Service	Low
Package: gov.va.med.pharmacy.jaxrs.tovista.dao.impl	
PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/tovista/dao/impl/VistaInboundRpc.java, line 78 (Denial of Service)	Low

```

76  i = 0;
77  sb2.append("<SIG>");
78  while(null != (line = br.readLine())) {
79
80  if (line.trim().equalsIgnoreCase("<StructuredSIG>")){
81  addLine = false;

```

Denial of Service: StringBuilder (2 issues)

Abstract

Appending untrusted data to `StringBuilder` instance initialized with the default backing-array size can cause the JVM to over-consume heap memory space.

Explanation

Appending user-controlled data to a `StringBuilder` instance initialized with the default backing character array size (16) can cause the application to consume large amounts of heap memory while resizing the underlying array to fit user's data. Everytime new data is appended to a `StringBuilder` instance, it will try to fit it on its backing character array. If data does not fit, a new array will be created doubling the previous size while the old array will remain in the heap until it is garbage collected. This defect can be used to execute a Denial of Service (DoS) attack.

Example 1: User-controlled data is appended to a `StringBuilder` instance initialized with the default constructor.

```
...
StringBuilder sb = new StringBuilder();
sb.append(request.getParameter("foo"));
...
```

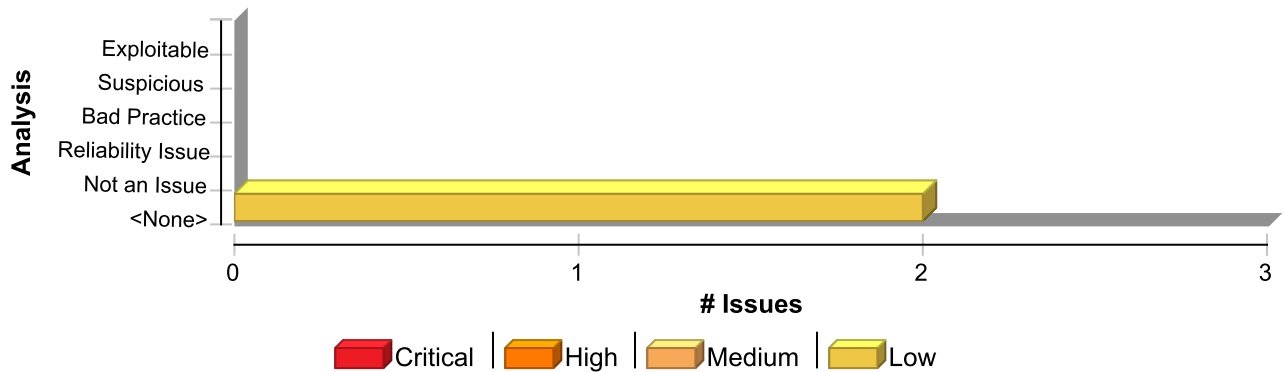
Recommendation

Initialize the `StringBuilder` with a size similar to the length of the expected data in order to reduce the number of times the backing array needs to be resized. Check the size of the data before appending it to a `StringBuilder` instance.

Example 2: User-controlled data is appended to a `StringBuilder` instance initialized with the default constructor.

```
...
private final int MAX_DATA = 128;
private final int EXPECTED_BUFFER_DATA = 1024;
StringBuilder sb = new StringBuilder(EXPECTED_BUFFER_DATA);
...
String data = request.getParameter("foo");
if (data.length() < MAX_DATA) sb.append(data);
...
```

Issue Summary



Engine Breakdown

	SCA	WebInspect	SecurityScope	Total
Denial of Service: StringBuilder	2	0	0	2
Total	2	0	0	2

Denial of Service: StringBuilder

Low

Package: gov.va.med.pharmacy.jaxrs.tovista.dao.impl

PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/tovista/dao/impl/VistaInboundRpc.java, line 85 (Denial of Service: StringBuilder)

Low

Issue Details

Kingdom: Input Validation and Representation

Scan Engine: SCA (Data Flow)

Source Details

Source: java.io.BufferedReader.readLine()

From: gov.va.med.pharmacy.jaxrs.tovista.dao.impl.VistaInboundRpc.sendMessage

File: PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/tovista/dao/impl/VistaInboundRpc.java:78

```

75  sb.setLength(0);
76  i = 0;
77  sb2.append("<SIG>");
78  while(null != (line = br.readLine())) {
79
80  if (line.trim().equalsIgnoreCase("<StructuredSIG>")) {
81  addLine = false;

```

Sink Details

Sink: java.lang.StringBuilder.append()

Enclosing Method: sendMessage()

File: PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/tovista/dao/impl/VistaInboundRpc.java:85

Taint Flags: NO_NEW_LINE, STREAM, VALIDATED_PORTABILITY_FLAW_FILE_SEPARATOR

```

82  }
83
84  if (addLine == true){

```

Denial of Service: StringBuilder**Low****Package:** gov.va.med.pharmacy.jaxrs.tovista.dao.impl**PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/tovista/dao/impl/VistaInboundRpc.java, line 85 (Denial of Service: StringBuilder)****Low**

```
85 sb.append(line.trim().replaceAll("[\\000]*", ""));
86 LOG.debug("sb1("+ i +")=" +line.trim());
87 }else{
88 sb2.append(line.trim().replaceAll("[\\000]*", ""));
```

PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/tovista/dao/impl/VistaInboundRpc.java, line 88 (Denial of Service: StringBuilder)**Low****Issue Details****Kingdom:** Input Validation and Representation**Scan Engine:** SCA (Data Flow)**Source Details****Source:** java.io.BufferedReader.readLine()**From:** gov.va.med.pharmacy.jaxrs.tovista.dao.impl.VistaInboundRpc.sendMessage**File:** PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/tovista/dao/impl/VistaInboundRpc.java:78

```
75 sb.setLength(0);
76 i = 0;
77 sb2.append("<SIG>");
78 while(null != (line = br.readLine())) {
79
80 if (line.trim().equalsIgnoreCase("<StructuredSIG>")) {
81 addLine = false;
```

Sink Details**Sink:** java.lang.StringBuilder.append()**Enclosing Method:** sendMessage()**File:** PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/tovista/dao/impl/VistaInboundRpc.java:88**Taint Flags:** NO_NEW_LINE, STREAM, VALIDATED_PORTABILITY_FLAW_FILE_SEPARATOR

```
85 sb.append(line.trim().replaceAll("[\\000]*", ""));
86 LOG.debug("sb1("+ i +")=" +line.trim());
87 }else{
88 sb2.append(line.trim().replaceAll("[\\000]*", ""));
89 LOG.debug("sb2("+ i +")=" +line.trim());
90 }
91
```

Hidden Field (4 issues)

Abstract

A hidden form field is used.

Explanation

Programmers often trust the contents of hidden fields, expecting that users will not be able to view them or manipulate their contents. Attackers will violate these assumptions. They will examine the values written to hidden fields and alter them or replace the contents with attack data.

Example: An `tag` of type `hidden` indicates the use of a hidden field.

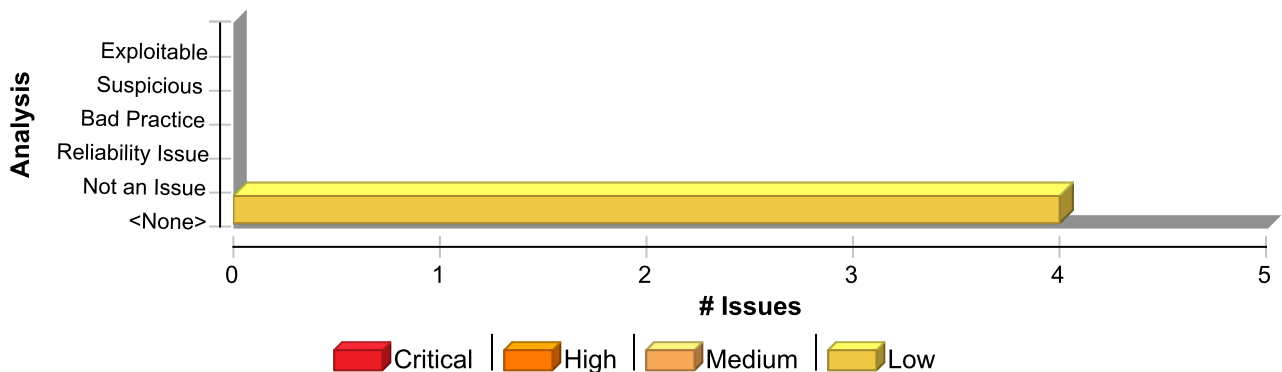
```
<input type="hidden">
```

If hidden fields carry sensitive information, this information will be cached the same way the rest of the page is cached. This can lead to sensitive information being tucked away in the browser cache without the user's knowledge.

Recommendation

Expect that attackers will study and decode all uses of hidden fields in the application. Treat hidden fields as untrusted input. Don't store information in hidden fields if the information should not be cached along with the rest of the page.

Issue Summary



Engine Breakdown

	SCA	WebInspect	SecurityScope	Total
Hidden Field	4	0	0	4
Total	4	0	0	4

Hidden Field	Low
Package: .src.main.webapp.WEB-INF	
PS_INB_ERX_UI/src/main/webapp/WEB-INF/manageusers.jsp, line 32 (Hidden Field)	Low
Issue Details	

Hidden Field	Low
Package: .src.main.webapp.WEB-INF	
PS_INB_ERX_UI/src/main/webapp/WEB-INF/manageusers.jsp, line 32 (Hidden Field)	Low

Kingdom: Encapsulation
Scan Engine: SCA (Content)

Sink Details

File: PS_INB_ERX_UI/src/main/webapp/WEB-INF/manageusers.jsp:32
Taint Flags:

```

29 </c:if>
30 <!-- CSRF Spring Security protection
31 <form:hidden path="${_csrf.parameterName}" value="${_csrf.token}"/> -->
32 <form:hidden path="modifiedIds" value="" />
33 <form:hidden path="modifiedFields" value="" />
34 <form:hidden path="deleteRecords" value="" />
35

```

PS_INB_ERX_UI/src/main/webapp/WEB-INF/manageusers.jsp, line 33 (Hidden Field)	Low
--------------------------------------------------------------------------------------	------------

Issue Details

Kingdom: Encapsulation
Scan Engine: SCA (Content)

Sink Details

File: PS_INB_ERX_UI/src/main/webapp/WEB-INF/manageusers.jsp:33
Taint Flags:

```

30 <!-- CSRF Spring Security protection
31 <form:hidden path="${_csrf.parameterName}" value="${_csrf.token}"/> -->
32 <form:hidden path="modifiedIds" value="" />
33 <form:hidden path="modifiedFields" value="" />
34 <form:hidden path="deleteRecords" value="" />
35
36 <div class="divUserMgmtTable" tabindex="1">

```

PS_INB_ERX_UI/src/main/webapp/WEB-INF/manageusers.jsp, line 34 (Hidden Field)	Low
--------------------------------------------------------------------------------------	------------

Issue Details

Kingdom: Encapsulation
Scan Engine: SCA (Content)

Sink Details

File: PS_INB_ERX_UI/src/main/webapp/WEB-INF/manageusers.jsp:34
Taint Flags:

Hidden Field	Low
Package: .src.main.webapp.WEB-INF	
PS_INB_ERX_UI/src/main/webapp/WEB-INF/manageusers.jsp, line 34 (Hidden Field)	Low

```

31 <form:hidden path="${_csrf.parameterName}" value="${_csrf.token}"/> -->
32 <form:hidden path="modifiedIds" value="" />
33 <form:hidden path="modifiedFields" value="" />
34 <form:hidden path="deleteRecords" value="" />
35
36 <div class="divUserMgmtTable" tabindex="1">
37 <div class="divUserMgmtTableBody">

```

PS_INB_ERX_UI/src/main/webapp/WEB-INF/landing.jsp, line 50 (Hidden Field)	Low
Issue Details	

Kingdom: Encapsulation
Scan Engine: SCA (Content)

Sink Details

File: PS_INB_ERX_UI/src/main/webapp/WEB-INF/landing.jsp:50
Taint Flags:

```

47 <p>${ sessionScope.loginErrorMessage}</p>
48 </div>
49 <!-- CSRF Spring Security protection -->
50 <input type="hidden" name="${_csrf.parameterName}" value="${_csrf.token}"/>
51 </form>
52 </div>
53 <br/>

```

J2EE Misconfiguration: Excessive Session Timeout (3 issues)

Abstract

An overly long session timeout gives attackers more time to potentially compromise user accounts.

Explanation

The longer a session stays open, the larger the window of opportunity an attacker has to compromise user accounts. While a session remains active, an attacker may be able to brute-force a user's password, crack a user's wireless encryption key, or commandeer a session from an open browser. Longer session timeouts can also prevent memory from being released and eventually result in a denial of service if a sufficiently large number of sessions are created.

Example 1: If the session timeout is zero or less than zero, the session never expires. The following example shows a session timeout set to -1, which will cause the session to remain active indefinitely.

```
<session-config>
  <session-timeout>-1</session-timeout>
</session-config>
```

The `<session-timeout>` tag defines the default session timeout interval for all sessions in the web application. If the tag is missing, it is left to the container to set the default timeout.

This category was derived from the Cigital Java Rulepack. <http://www.cigital.com/>

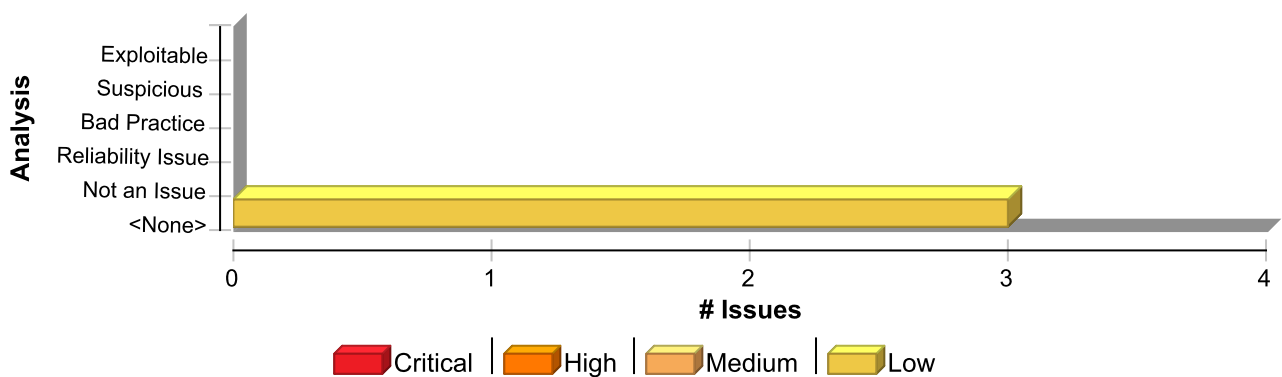
Recommendation

Set a session timeout that is 30 minutes or less, which both allows users to interact with the application over a period of time and provides a reasonable bound for the window of attack.

Example 2: The following example sets the session timeout to 20 minutes.

```
<session-config>
  <session-timeout>20</session-timeout>
</session-config>
```

Issue Summary



Engine Breakdown

	SCA	WebInspect	SecurityScope	Total
J2EE Misconfiguration: Excessive Session Timeout	3	0	0	3
Total	3	0	0	3

J2EE Misconfiguration: Excessive Session Timeout

Low

Package: .src.main.webapp.WEB-INF

PS_INB_ERX_JMS/src/main/webapp/WEB-INF/web.xml, line 5 (J2EE Misconfiguration: Excessive Session Timeout)

Low

Issue Details

Kingdom: Environment

Scan Engine: SCA (Configuration)

Sink Details

File: PS_INB_ERX_JMS/src/main/webapp/WEB-INF/web.xml:5

Taint Flags:

```
2 xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
3 xsi:schemaLocation="http://java.sun.com/xml/ns/javaee
4 http://java.sun.com/xml/ns/javaee/web-app_3_0.xsd"
5 version="3.0">
6 <display-name>Inbound eRx JMS Receiver</display-name>
7
8 <listener>
```

PS_INB_ERX_UI/src/main/webapp/WEB-INF/web.xml, line 103 (J2EE Misconfiguration: Excessive Session Timeout)

Low

Issue Details

Kingdom: Environment

Scan Engine: SCA (Configuration)

Sink Details

File: PS_INB_ERX_UI/src/main/webapp/WEB-INF/web.xml:103

Taint Flags:

```
100 </servlet-mapping>
101
102 <!-- Let javascript timeout on the UI first which is 30 minutes. -->
103 <session-config>
104 <session-timeout>32</session-timeout>
105 <cookie-config>
106 <http-only>true</http-only>
```

PS_INB_ERX_WS/src/main/webapp/WEB-INF/web.xml, line 6 (J2EE Misconfiguration: Excessive Session Timeout)

Low

Issue Details

J2EE Misconfiguration: Excessive Session Timeout	Low
Package: .src.main.webapp.WEB-INF	
PS_INB_ERX_WS/src/main/webapp/WEB-INF/web.xml, line 6 (J2EE Misconfiguration: Excessive Session Timeout)	Low

Kingdom: Environment

Scan Engine: SCA (Configuration)

Sink Details

File: PS_INB_ERX_WS/src/main/webapp/WEB-INF/web.xml:6

Taint Flags:

```

3  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
4  xsi:schemaLocation="http://java.sun.com/xml/ns/javaee
5  http://java.sun.com/xml/ns/javaee/web-app_3_0.xsd"
6  metadata-complete="true">
7
8  <display-name>Inbound eRx WS Application</display-name>
9  <description></description>

```

J2EE Misconfiguration: Incomplete Error Handling (1 issue)

Abstract

A web application must define a default error page for 500 errors to prevent attackers from mining information from the application container's built-in error response.

Explanation

When an attacker explores a web site looking for vulnerabilities, the amount of information that the site provides is crucial to the eventual success or failure of any attempted attacks. If the application shows the attacker a stack trace, it relinquishes information that makes the attacker's job significantly easier. For example, a stack trace might show the attacker a malformed SQL query string, the type of database being used, and the version of the application container. This information enables the attacker to target known vulnerabilities in these components.

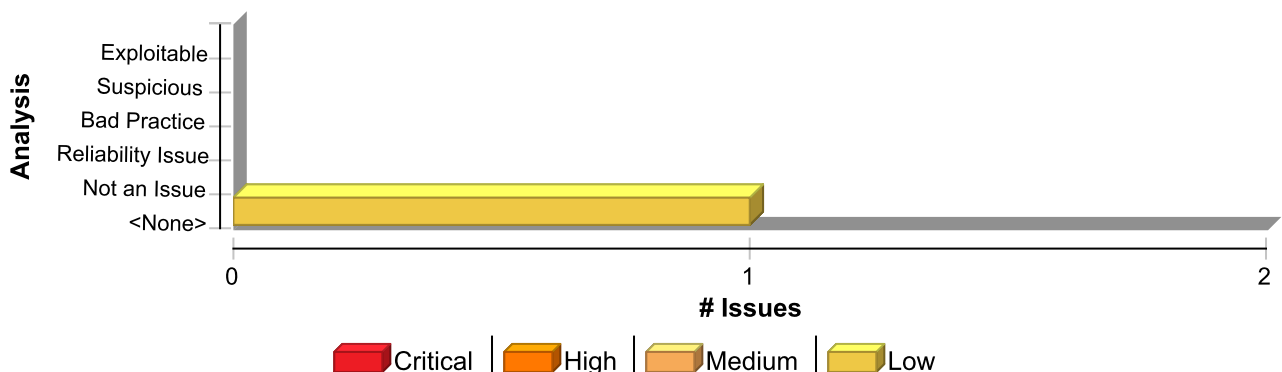
The application configuration should specify a default error page in order to guarantee that the application will never leak error messages to an attacker. Handling standard HTTP error codes is useful and user-friendly in addition to being a good security practice, and a good configuration will also define a last-chance error handler that catches any exception that could possibly be thrown by the application.

Recommendation

A web application must be configured with a default error page. Your `web.xml` should include at least the following entries:

```
<error-page>
  <exception-type>java.lang.Throwable</exception-type>
<location>/error.jsp</location>
</error-page>
<error-page>
  <error-code>404</error-code>
<location>/error.jsp</location>
</error-page>
<error-page>
  <error-code>500</error-code>
<location>/error.jsp</location>
</error-page>
```

Issue Summary



Engine Breakdown

	SCA	WebInspect	SecurityScope	Total
J2EE Misconfiguration: Incomplete Error Handling	1	0	0	1
Total	1	0	0	1

J2EE Misconfiguration: Incomplete Error Handling

Low

Package: .src.main.webapp.WEB-INF

PS_INB_ERX_UI/src/main/webapp/WEB-INF/web.xml, line 125 (J2EE Misconfiguration: Incomplete Error Handling)

Low

Issue Details

Kingdom: Environment

Scan Engine: SCA (Configuration)

Sink Details

Sink: /web-app/error-page/error-code

File: PS_INB_ERX_UI/src/main/webapp/WEB-INF/web.xml:125

Taint Flags:

```
122 </error-page>
123
124 <error-page>
125 <error-code>403</error-code>
126 <location>/WEB-INF/accessDenied.jsp</location>
127 </error-page>
128
```

J2EE Misconfiguration: Missing Error Handling (2 issues)

Abstract

A web application must define default error pages in order to prevent attackers from mining information from the application container's built-in error response.

Explanation

When an attacker explores a web site looking for vulnerabilities, the amount of information that the site provides is crucial to the eventual success or failure of any attempted attacks. If the application shows the attacker a stack trace, it relinquishes information that makes the attacker's job significantly easier. For example, a stack trace might show the attacker a malformed SQL query string, the type of database being used, and the version of the application container. This information enables the attacker to target known vulnerabilities in these components.

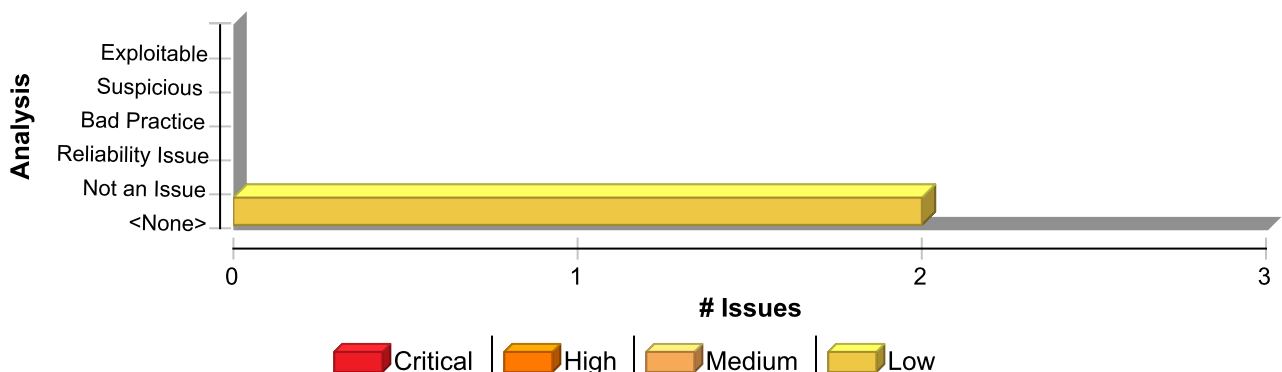
The application configuration should specify a default error page in order to guarantee that the application will never leak error messages to an attacker. Handling standard HTTP error codes is useful and user-friendly in addition to being a good security practice, and a good configuration will also define a last-chance error handler that catches any exception that could possibly be thrown by the application.

Recommendation

A web application must be configured with a default error page. Your `web.xml` should include at least the following entries:

```
<error-page>
  <exception-type>java.lang.Throwable</exception-type>
<location>/error.jsp</location>
</error-page>
<error-page>
  <error-code>404</error-code>
<location>/error.jsp</location>
</error-page>
<error-page>
  <error-code>500</error-code>
<location>/error.jsp</location>
</error-page>
```

Issue Summary



Engine Breakdown

	SCA	WebInspect	SecurityScope	Total
J2EE Misconfiguration: Missing Error Handling	2	0	0	2
Total	2	0	0	2

J2EE Misconfiguration: Missing Error Handling

Low

Package: .src.main.webapp.WEB-INF

PS_INB_ERX_JMS/src/main/webapp/WEB-INF/web.xml, line 5 (J2EE Misconfiguration: Missing Error Handling)

Low

Issue Details

Kingdom: Environment

Scan Engine: SCA (Configuration)

Sink Details

Sink: /web-app

File: PS_INB_ERX_JMS/src/main/webapp/WEB-INF/web.xml:5

Taint Flags:

```
2 xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
3 xsi:schemaLocation="http://java.sun.com/xml/ns/javaee
4 http://java.sun.com/xml/ns/javaee/web-app_3_0.xsd"
5 version="3.0">
6 <display-name>Inbound eRx JMS Receiver</display-name>
7
8 <listener>
```

PS_INB_ERX_WS/src/main/webapp/WEB-INF/web.xml, line 6 (J2EE Misconfiguration: Missing Error Handling)

Low

Issue Details

Kingdom: Environment

Scan Engine: SCA (Configuration)

Sink Details

Sink: /web-app

File: PS_INB_ERX_WS/src/main/webapp/WEB-INF/web.xml:6

Taint Flags:

```
3 xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
4 xsi:schemaLocation="http://java.sun.com/xml/ns/javaee
5 http://java.sun.com/xml/ns/javaee/web-app_3_0.xsd"
6 metadata-complete="true">
7
8 <display-name>Inbound eRx WS Application</display-name>
9 <description></description>
```

Missing Check against Null (11 issues)

Abstract

The program can dereference a null pointer because it does not check the return value of a function that might return null.

Explanation

Just about every serious attack on a software system begins with the violation of a programmer's assumptions. After the attack, the programmer's assumptions seem flimsy and poorly founded, but before an attack many programmers would defend their assumptions well past the end of their lunch break.

Two dubious assumptions that are easy to spot in code are "this function call can never fail" and "it doesn't matter if this function call fails". When a programmer ignores the return value from a function, they implicitly state that they are operating under one of these assumptions.

Example 1: The following code does not check to see if the string returned by `getParameter()` is null before calling the member function `compareTo()`, potentially causing a null dereference.

```
String itemName = request.getParameter(ITEM_NAME);
    if (itemName.compareTo(IMPORTANT_ITEM)) {
        ...
    }
    ...
```

Example 2: The following code shows a system property that is set to null and later dereferenced by a programmer who mistakenly assumes it will always be defined.

```
System.clearProperty("os.name");
...
String os = System.getProperty("os.name");
if (os.equalsIgnoreCase("Windows 95") )
    System.out.println("Not supported");
```

The traditional defense of this coding error is:

"I know the requested value will always exist because.... If it does not exist, the program cannot perform the desired behavior so it doesn't matter whether I handle the error or simply allow the program to die dereferencing a null value."

But attackers are skilled at finding unexpected paths through programs, particularly when exceptions are involved.

Recommendation

If a function can return an error code or any other evidence of its success or failure, always check for the error condition, even if there is no obvious way for it to occur. In addition to preventing security errors, many initially mysterious bugs have eventually led back to a failed method call with an unchecked return

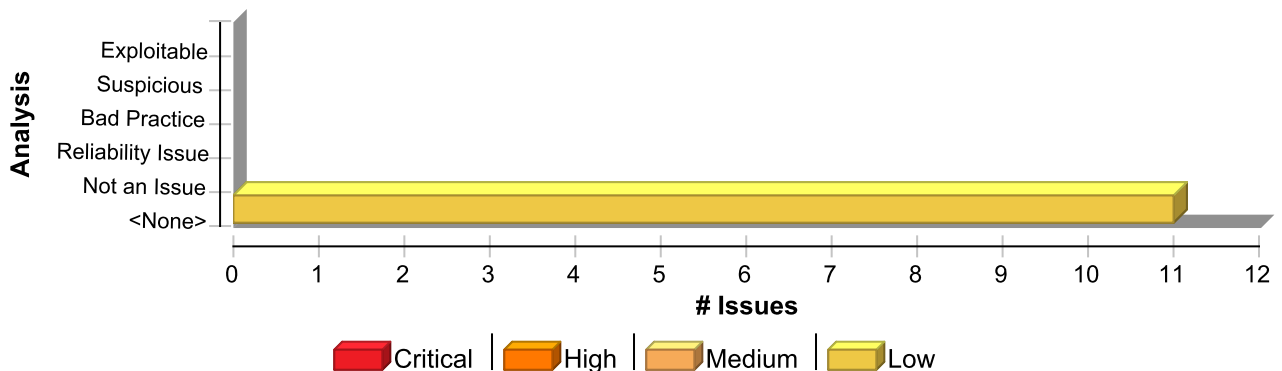
value.

Create an easy to use and standard way for dealing with failure in your application. If error handling is straightforward, programmers will be less inclined to omit it. One approach to standardized error handling is to write wrappers around commonly-used functions that check and handle error conditions without additional programmer intervention. When wrappers are implemented and adopted, the use of non-wrapped equivalents can be prohibited and enforced by using custom rules.

Example 3: The following code implements a wrapper around `getParameter()` that checks the return value of `getParameter()` against `null` and uses a default value if the requested parameter is not defined.

```
String safeGetParameter (HttpRequest request, String name)
{
    String value = request.getParameter(name);
    if (value == null) {
        return getDefaultValue(name)
    }
    return value;
}
```

Issue Summary



Engine Breakdown

	SCA	WebInspect	SecurityScope	Total
Missing Check against Null	11	0	0	11
Total	11	0	0	11

Missing Check against Null	Low
Package: gov.va.med.pharmacy.jaxrs.eAnde.services.impl	
PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/eAnde/services/impl/EESummary_Client.java, line 151 (Missing Check against Null)	Low

Issue Details

Kingdom: API Abuse
Scan Engine: SCA (Control Flow)

Sink Details

Missing Check against Null

Low

Package: gov.va.med.pharmacy.jaxrs.eAnde.services.impl

PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/eAnde/services/impl/EESummary_Client.java, line 151 (Missing Check against Null)

Low

Sink: classloader = getClassLoader() : Class.getClassLoader may return NULL

Enclosing Method: setupTLS()

File: PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/eAnde/services/impl/EESummary_Client.java:151

Taint Flags:

```
148 private void setupTLS(EeSummaryPort port, Properties properties) throws
FileNotFoundException, IOException, GeneralSecurityException {
149
150 if (this.getClass().getClassLoader() != null){
151 ClassLoader classloader = this.getClass().getClassLoader();
152 File file = new
File(classloader.getResource(properties.getProperty(KEYSTORE_FILE_NAME_PROPERTY).trim()).getFile
153
154 HTTPConduit httpConduit = (HTTPConduit) ClientProxy.getClient(port).getConduit();
```

PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/eAnde/services/impl/EESummary_Client.java, line 66 (Missing Check against Null)

Low

Issue Details

Kingdom: API Abuse

Scan Engine: SCA (Control Flow)

Sink Details

Sink: getClassLoader() : Class.getClassLoader may return NULL

Enclosing Method: returnResponse()

File: PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/eAnde/services/impl/EESummary_Client.java:66

Taint Flags:

```
63
64 InputStream inputStream = null;
65 try{
66 inputStream =
this.getClass().getClassLoader().getResourceAsStream("gov.va.med.pharmacy.wsclients.properties")
67 if(null != inputStream){
68 properties.load(inputStream);
69 } else
```

Package: gov.va.med.pharmacy.jaxrs.inboundncdpdpmessage.service.impl

PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/inboundncdpdpmessage/service/impl/InboundNCPDPMMessageServiceImpl.java, line 219 (Missing Check against Null)

Low

Issue Details

Kingdom: API Abuse

Scan Engine: SCA (Control Flow)

Sink Details

Missing Check against Null**Low****Package:** gov.va.med.pharmacy.jaxrs.inboundncdpdpmessage.service.impl**PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/inboundncdpdpmessage/service/impl/InboundNCPDPMessageServiceImpl.java, line 219 (Missing Check against Null)****Low****Sink:** getClassLoader() : Class.getClassLoader may return NULL**Enclosing Method:** getInboundMessage()**File:** PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/inboundncdpdpmessage/service/impl/InboundNCPDPMessageServiceImpl.java:219**Taint Flags:**

```
216 SchemaFactory schemaFactory =
SchemaFactory.newInstance(XMLConstants.W3C_XML_SCHEMA_NS_URI);
217
218 // fortify get inputStream and then close it
219 inputStream =
this.getClass().getClassLoader().getResourceAsStream(EMD_NCPDP_SCRIPT_10_6_XSD);
220
221 xsdStreamSource = new StreamSource(inputStream);
222
```

Package: gov.va.med.pharmacy.jaxrs.mvi.dao.impl**PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/mvi/dao/impl/MVIClient.java, line 733 (Missing Check against Null)****Low****Issue Details****Kingdom:** API Abuse**Scan Engine:** SCA (Control Flow)**Sink Details****Sink:** classloader = getClassLoader() : Class.getClassLoader may return NULL**Enclosing Method:** setupTLS()**File:** PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/mvi/dao/impl/MVIClient.java:733**Taint Flags:**

```
730 */
731 private void setupTLS(VAIdMPort port, Properties properties) throws
FileNotFoundException, IOException, GeneralSecurityException {
732
733 ClassLoader classloader = this.getClass().getClassLoader();
734
735 File file = new
File(classloader.getResource(properties.getProperty(KEYSTORE_FILE_NAME_PROPERTY).trim()).getFile
736 HTTPConduit httpConduit = (HTTPConduit) ClientProxy.getClient(port).getConduit();
```

PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/mvi/dao/impl/MVIClient.java, line 162 (Missing Check against Null)**Low****Issue Details****Kingdom:** API Abuse**Scan Engine:** SCA (Control Flow)

Missing Check against Null**Low****Package:** gov.va.med.pharmacy.jaxrs.mvi.dao.impl**PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/mvi/dao/impl/MVIClient.java, line 162 (Missing Check against Null)****Low****Sink Details****Sink:** getClassLoader() : Class.getClassLoader may return NULL**Enclosing Method:** getMVIData()**File:** PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/mvi/dao/impl/MVIClient.java:162**Taint Flags:**

```
159
160 InputStream inputStream = null;
161 try {
162     inputStream = this.getClass().getClassLoader()
163         .getResourceAsStream("gov.va.med.pharmacy.wsclients.properties");
164     if (null != inputStream) {
165         properties.load(inputStream);
```

Package: gov.va.med.pharmacy.jaxrs.outboundncpdpmmessage.service.impl**PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/outboundncpdpmmessage/service/impl/****OutboundNCPDPMMessageServiceImpl.java, line 122 (Missing Check against Null)****Low****Issue Details****Kingdom:** API Abuse**Scan Engine:** SCA (Control Flow)**Sink Details****Sink:** getClassLoader() : Class.getClassLoader may return NULL**Enclosing Method:** sendOutboundMessage()**File:** PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/outboundncpdpmmessage/service/impl/OutboundNCPDPMMessageServiceImpl.java:122**Taint Flags:**

```
119 InputStream inputStream = null;
120 try
121 {
122     inputStream =
123     this.getClass().getClassLoader().getResourceAsStream(WSClients_PROPERTIES_FILE_NAME);
124
125     if (null != inputStream) {
126         properties.load(inputStream);
```

PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/outboundncpdpmmessage/service/impl/**OutboundNCPDPMMessageServiceImpl.java, line 225 (Missing Check against Null)****Low****Issue Details****Kingdom:** API Abuse**Scan Engine:** SCA (Control Flow)

Missing Check against Null	Low
Package: gov.va.med.pharmacy.jaxrs.outboundncpdpmmessage.service.impl	
PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/outboundncpdpmmessage/service/impl/OutboundNCPDPMMessageServiceImpl.java, line 225 (Missing Check against Null)	Low

Sink Details

Sink: classloader = getClassLoader() : Class.getClassLoader may return NULL

Enclosing Method: setupTLS()

File: PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/outboundncpdpmmessage/service/impl/OutboundNCPDPMMessageServiceImpl.java:225

Taint Flags:

```

222  */
223  private void setupTLS(WebClient client, Properties properties) throws
FileNotFoundException, IOException, GeneralSecurityException {
224
225  ClassLoader classloader = this.getClass().getClassLoader();
226
227  File file = new
File(classloader.getResource(properties.getProperty(KEYSTORE_FILE_NAME_PROPERTY).trim()).getFile
228

```

Package: gov.va.med.pharmacy.utility	
PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/VistaLinkConnectionUtility.java, line 72 (Missing Check against Null)	Low

Issue Details

Kingdom: API Abuse

Scan Engine: SCA (Control Flow)

Sink Details

Sink: getClassLoader() : Class.getClassLoader may return NULL

Enclosing Method: sendRequest()

File: PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/VistaLinkConnectionUtility.java:72

Taint Flags:

```

69  InputStream inputStream = null;
70  try{
71
72  inputStream =
this.getClass().getClassLoader().getResourceAsStream("gov.va.med.pharmacy.vistalink.properties")
73
74  if(null!=inputStream) {
75  properties.load(inputStream);

```

Package: gov.va.med.pharmacy.web.filter	
PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/filter/XSSRequestWrapper.java, line 104 (Missing Check against Null)	Low

Issue Details

Missing Check against Null**Low****Package:** gov.va.med.pharmacy.web.filter**PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/filter/XSSRequestWrapper.java, line 104 (Missing Check against Null)****Low****Kingdom:** API Abuse**Scan Engine:** SCA (Control Flow)**Sink Details****Sink:** getParameterMap() : XSSRequestWrapper.getParameterMap may return NULL**Enclosing Method:** getParameter()**File:** PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/filter/XSSRequestWrapper.java:104**Taint Flags:**

```
101 public String getParameter(String name) {  
102     String parameter = null;  
103  
104     String[] vals = getParameterMap().get(name);  
105  
106     if (vals != null && vals.length > 0) {  
107         parameter = vals[0];
```

PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/filter/XSSRequestWrapper.java, line 82 (Missing Check against Null)**Low****Issue Details****Kingdom:** API Abuse**Scan Engine:** SCA (Control Flow)**Sink Details****Sink:** getParameterMap() : XSSRequestWrapper.getParameterMap may return NULL**Enclosing Method:** getParameterValues()**File:** PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/filter/XSSRequestWrapper.java:82**Taint Flags:**

```
79  
80 @Override  
81 public String[] getParameterValues(String name) {  
82     return getParameterMap().get(name);  
83 }  
84  
85 @Override
```

Package: gov.va.med.pharmacy.wsclients.eAnde**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/eAnde/ClientPasswordCallback.java, line 30 (Missing Check against Null)****Low****Issue Details****Kingdom:** API Abuse**Scan Engine:** SCA (Control Flow)

Missing Check against Null	Low
Package: gov.va.med.pharmacy.wsclients.eAnde	
PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/eAnde/ClientPasswordCallback.java, line 30 (Missing Check against Null)	Low
Sink Details	

Sink: getClassLoader() : Class.getClassLoader may return NULL

Enclosing Method: handle()

File: PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/eAnde/ClientPasswordCallback.java:30

Taint Flags:

```

27
28 String password = null;
29
30 inputStream =
this.getClass().getClassLoader().getResourceAsStream("gov.va.med.pharmacy.wsclients.properties")
31
32 try{
33 if (null != inputStream) {

```

Obsolete: Deprecated by ESAPI (59 issues)

Abstract

ESAPI offers a safer version of this method.

Explanation

The ESAPI secure coding guidelines contain a list of banned APIs for which a safer alternative is available in ESAPI.

The list of banned and substitute API's:

Banned 001 System.out.println()
Banned 002 Throwable.printStackTrace()
Banned 003 Runtime.exec()
Banned 004 Session.getId()
Banned 005 ServletRequest.getUserPrincipal()
Banned 006 ServletRequest.isUserInRole()
Banned 007 Session.invalidate()
Banned 008 Math.Random.*
Banned 009 File.createTempFile()
Banned 010 ServletResponse.setContentType()
Banned 011 ServletResponse.sendRedirect()
Banned 012 RequestDispatcher.forward()
Banned 013 ServletResponse.addHeader()
Banned 014 ServletResponse.addCookie()
Banned 015 ServletRequest.isSecure()
Banned 016 Properties.*
Banned 017 ServletContext.log()
Banned 018 java.security and javax.crypto
Banned 019 java.net.URLEncoder/Decoder
Banned 021 ServletResponse.encodeURL
Banned 022 ServletResponse.encodeRedirectURL
Banned 023 javax.servlet.ServletInputStream.readLine

Recommendation

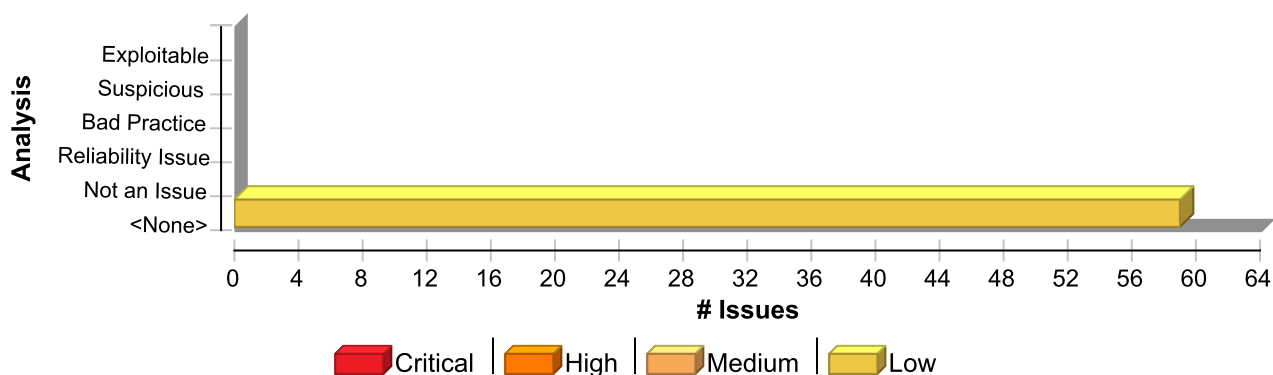
Replace banned API calls with the recommended safer version provided by ESAPI.

The list of banned and replacement API's:

Banned 001 System.out.println()
ESAPI Replacement: Logger.*
Banned 002 Throwable.printStackTrace()
ESAPI Replacement: Logger.*
Banned 003 Runtime.exec()
ESAPI Replacement: Executor.safeExec()
Banned 004 Session.getId()
ESAPI Replacement: Randomizer.getRandomString (better not to use at all)
Banned 005 ServletRequest.getUserPrincipal()
ESAPI Replacement: Authenticator.getCurrentUser()
Banned 006 ServletRequest.isUserInRole()
ESAPI Replacement: AccessController.isAuthorized*()
Banned 007 Session.invalidate()

ESAPI Replacement: Authenticator.logout()
Banned 008 Math.Random.*
 ESAPI Replacement: Randomizer.*
Banned 009 File.createTempFile()
 ESAPI Replacement: Randomizer.getRandomFilename()
Banned 010 ServletResponse.setContentType()
 ESAPI Replacement: HTTPUtilities.setContentType()
Banned 011 ServletResponse.sendRedirect()
 ESAPI Replacement: HTTPUtilities.safeSendRedirect()
Banned 012 RequestDispatcher.forward()
 ESAPI Replacement: HTTPUtilities.safeSendForward()
Banned 013 ServletResponse.addHeader()
 ESAPI Replacement: HTTPUtilities.safeSetHeader()/safeSetHeader()
Banned 014 ServletResponse.addCookie()
 ESAPI Replacement: HTTPUtilities.safeAddCookie()
Banned 015 ServletRequest.isSecure()
 ESAPI Replacement: HTTPUtilities.isSecureChannel()
Banned 016 Properties.*
 ESAPI Replacement: EncryptedProperties.*
Banned 017 ServletContext.log()
 ESAPI Replacement: Logger.*
Banned 018 java.security and javax.crypto
 ESAPI Replacement: Encryptor.*
Banned 019 java.net.URLEncoder/Decoder
 ESAPI Replacement: Encoder.encodeForURL()/decodeForURL()
Banned 021 ServletResponse.encodeURL
 ESAPI Replacement: HTTPUtilities.safeEncodeURL() (better not to use at all)
Banned 022 ServletResponse.encodeRedirectURL
 ESAPI Replacement: HTTPUtilities.safeEncodeRedirectURL() (better not to use at all)
Banned 023 javax.servlet.ServletInputStream.readLine
 ESAPI Replacement: Validator.safeReadLine()

Issue Summary



Engine Breakdown

	SCA	WebInspect	SecurityScope	Total
Obsolete: Deprecated by ESAPI	59	0	0	59
Total	59	0	0	59

Obsolete: Deprecated by ESAPI

Low

Package: gov.va.med.pharmacy.jaxrs.eAnde.services.impl

PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/eAnde/services/impl/EESummary_Client.java, line 152 (Obsolete: Deprecated by ESAPI)

Low

Issue Details

Kingdom: API Abuse

Scan Engine: SCA (Semantic)

Sink Details

Sink: getProperty()

Enclosing Method: setupTLS()

File: PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/eAnde/services/impl/EESummary_Client.java:152

Taint Flags:

```
149
150 if (this.getClass().getClassLoader() != null){
151     ClassLoader classloader = this.getClass().getClassLoader();
152     File file = new
File(classloader.getResource(properties.getProperty(KEYSTORE_FILE_NAME_PROPERTY).trim()).getFile
153
154     HTTPConduit httpConduit = (HTTPConduit) ClientProxy.getClient(port).getConduit();
155
```

PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/eAnde/services/impl/EESummary_Client.java, line 79 (Obsolete: Deprecated by ESAPI)

Low

Issue Details

Kingdom: API Abuse

Scan Engine: SCA (Semantic)

Sink Details

Sink: getProperty()

Enclosing Method: returnResponse()

File: PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/eAnde/services/impl/EESummary_Client.java:79

Taint Flags:

```
76 }
77
78
79 eAndeEndpoint = properties.getProperty(E_AND_E_CLIENT_ENDPOINT).trim();
80
81 username = properties.getProperty(E_AND_E_USERNAME).trim();
82
```

PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/eAnde/services/impl/EESummary_Client.java, line 58 (Obsolete: Deprecated by ESAPI)

Low

Issue Details

Kingdom: API Abuse

Scan Engine: SCA (Semantic)

Obsolete: Deprecated by ESAPI

Low

Package: gov.va.med.pharmacy.jaxrs.eAnde.services.impl

PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/eAnde/services/impl/EESummary_Client.java, line 58 (Obsolete: Deprecated by ESAPI)

Low

Sink Details

Sink: Properties()

Enclosing Method: returnResponse()

File: PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/eAnde/services/impl/EESummary_Client.java:58

Taint Flags:

```
55
56 public getEESummaryResponse returnResponse(String key) throws java.lang.Exception {
57
58 Properties properties = new Properties();
59
60 String username = null;
61 String eAndeEndpoint = null;
```

PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/eAnde/services/impl/EESummary_Client.java, line 81 (Obsolete: Deprecated by ESAPI)

Low

Issue Details

Kingdom: API Abuse

Scan Engine: SCA (Semantic)

Sink Details

Sink: getProperty()

Enclosing Method: returnResponse()

File: PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/eAnde/services/impl/EESummary_Client.java:81

Taint Flags:

```
78
79 eAndeEndpoint = properties.getProperty(E_AND_E_CLIENT_ENDPOINT).trim();
80
81 username = properties.getProperty(E_AND_E_USERNAME).trim();
82
83 eAndeRequestName = properties.getProperty(E_AND_E_REQUEST_NAME).trim();
84
```

PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/eAnde/services/impl/EESummary_Client.java, line 158 (Obsolete: Deprecated by ESAPI)

Low

Issue Details

Kingdom: API Abuse

Scan Engine: SCA (Semantic)

Sink Details

Sink: getProperty()

Enclosing Method: setupTLS()

File: PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/eAnde/services/impl/EESummary_Client.java:158

Obsolete: Deprecated by ESAPI

Low

Package: gov.va.med.pharmacy.jaxrs.eAnde.services.impl

PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/eAnde/services/impl/EESummary_Client.java, line 158 (Obsolete: Deprecated by ESAPI)

Low

Taint Flags:

```
155
156 FileInputStream fileIn2 = null;
157 TLSClientParameters tlsCP = new TLSClientParameters();
158 String keyPasswd = properties.getProperty(KEYSTORE_PASSWD_PROPERTY).trim();
159
160 try {
161 fileIn2 = new FileInputStream(file);
```

PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/eAnde/services/impl/EESummary_Client.java, line 68 (Obsolete: Deprecated by ESAPI)

Low

Issue Details

Kingdom: API Abuse

Scan Engine: SCA (Semantic)

Sink Details

Sink: load()

Enclosing Method: returnResponse()

File: PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/eAnde/services/impl/EESummary_Client.java:68

Taint Flags:

```
65 try{
66 inputStream =
this.getClass().getClassLoader().getResourceAsStream("gov.va.med.pharmacy.wsclients.properties")
67 if(null != inputStream){
68 properties.load(inputStream);
69 } else
70 {
71 LOG.error("Property file not loaded/found.");
```

PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/eAnde/services/impl/EESummary_Client.java, line 83 (Obsolete: Deprecated by ESAPI)

Low

Issue Details

Kingdom: API Abuse

Scan Engine: SCA (Semantic)

Sink Details

Sink: getProperty()

Enclosing Method: returnResponse()

File: PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/eAnde/services/impl/EESummary_Client.java:83

Taint Flags:

```
80
81 username = properties.getProperty(E_AND_E_USERNAME).trim();
```

Obsolete: Deprecated by ESAPI

Low

Package: gov.va.med.pharmacy.jaxrs.eAnde.services.impl

PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/eAnde/services/impl/EESummary_Client.java, line 83 (Obsolete: Deprecated by ESAPI)

Low

```
82
83 eAndeRequestName = properties.getProperty(E_AND_E_REQUEST_NAME).trim();
84
85 String url = "";
86
```

Package: gov.va.med.pharmacy.jaxrs.inboundncdpdpmessage.service.impl

PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/inboundncdpdpmessage/service/impl/InboundNCPDPMMessageServiceImpl.java, line 176 (Obsolete: Deprecated by ESAPI)

Low

Issue Details

Kingdom: API Abuse

Scan Engine: SCA (Semantic)

Sink Details

Sink: current()

Enclosing Method: getInboundMessage()

File: PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/inboundncdpdpmessage/service/impl/InboundNCPDPMMessageServiceImpl.java:176

Taint Flags:

```
173
174
175 // 9 digit random number.
176 int randomNumber = ThreadLocalRandom.current().nextInt(1, 100000000 + 1);
177
178 newMessageID = new StringBuffer(dateString).append(randomNumber).toString();
179
```

PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/inboundncdpdpmessage/service/impl/InboundNCPDPMMessageServiceImpl.java, line 176 (Obsolete: Deprecated by ESAPI)

Low

Issue Details

Kingdom: API Abuse

Scan Engine: SCA (Semantic)

Sink Details

Sink: nextInt()

Enclosing Method: getInboundMessage()

File: PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/inboundncdpdpmessage/service/impl/InboundNCPDPMMessageServiceImpl.java:176

Taint Flags:

```
173
```

Obsolete: Deprecated by ESAPI

Low

Package: gov.va.med.pharmacy.jaxrs.inboundncdpdmessage.service.impl

PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/inboundncdpdmessage/service/impl/InboundNCPDMessageServiceImpl.java, line 176 (Obsolete: Deprecated by ESAPI)

Low

```
174
175 // 9 digit random number.
176 int randomNumber = ThreadLocalRandom.current().nextInt(1, 100000000 + 1);
177
178 newMessageID = new StringBuffer(dateString).append(randomNumber).toString();
179
```

Package: gov.va.med.pharmacy.jaxrs.mvi.dao.impl

PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/mvi/dao/impl/MVIClient.java, line 165 (Obsolete: Deprecated by ESAPI)

Low

Issue Details

Kingdom: API Abuse

Scan Engine: SCA (Semantic)

Sink Details

Sink: load()

Enclosing Method: getMVIData()

File: PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/mvi/dao/impl/MVIClient.java:165

Taint Flags:

```
162 inputStream = this.getClass().getClassLoader()
163 .getResourceAsStream("gov.va.med.pharmacy.wsclients.properties");
164 if (null != inputStream) {
165     properties.load(inputStream);
166 }
167 } finally {
168     if (null != inputStream) {
```

PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/mvi/dao/impl/MVIClient.java, line 158 (Obsolete: Deprecated by ESAPI)

Low

Issue Details

Kingdom: API Abuse

Scan Engine: SCA (Semantic)

Sink Details

Sink: Properties()

Enclosing Method: getMVIData()

File: PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/mvi/dao/impl/MVIClient.java:158

Taint Flags:

```
155
156 // System.setProperty("javax.net.debug", "ssl, handshake");
157
```


Obsolete: Deprecated by ESAPI

Low

Package: gov.va.med.pharmacy.jaxrs.mvi.dao.impl

PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/mvi/dao/impl/MVIClient.java, line 158 (Obsolete: Deprecated by ESAPI)

Low

```
158 Properties properties = new Properties();
159
160 InputStream inputStream = null;
161 try {
```

PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/mvi/dao/impl/MVIClient.java, line 745 (Obsolete: Deprecated by ESAPI)

Low

Issue Details

Kingdom: API Abuse

Scan Engine: SCA (Semantic)

Sink Details

Sink: getProperty()

Enclosing Method: setupTLS()

File: PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/mvi/dao/impl/MVIClient.java:745

Taint Flags:

```
742 FileInputStream fileIn1 = null;
743 FileInputStream fileIn2 = null;
744 TLSClientParameters tlsCP = new TLSClientParameters();
745 String keyPasswd = properties.getProperty(KEYSTORE_PASSWD_PROPERTY).trim();
746 KeyStore keyStore = KeyStore.getInstance(KEYSTORE_FILE_TYPE);
747
748 try {
```

PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/mvi/dao/impl/MVIClient.java, line 735 (Obsolete: Deprecated by ESAPI)

Low

Issue Details

Kingdom: API Abuse

Scan Engine: SCA (Semantic)

Sink Details

Sink: getProperty()

Enclosing Method: setupTLS()

File: PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/mvi/dao/impl/MVIClient.java:735

Taint Flags:

```
732
733 ClassLoader classloader = this.getClass().getClassLoader();
734
735 File file = new
File(classloader.getResource(properties.getProperty(KEYSTORE_FILE_NAME_PROPERTY).trim()).getFile
736 HTTPConduit httpConduit = (HTTPConduit) ClientProxy.getClient(port).getConduit();
737
```

Obsolete: Deprecated by ESAPI

Low

Package: gov.va.med.pharmacy.jaxrs.mvi.dao.impl

**PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/mvi/dao/impl/
MVIClient.java, line 735 (Obsolete: Deprecated by ESAPI)**

Low

```
738 // We do two FileInpustreams otherwise it gives EOFException as the file
```

**PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/mvi/dao/impl/
MVIClient.java, line 192 (Obsolete: Deprecated by ESAPI)**

Low

Issue Details

Kingdom: API Abuse

Scan Engine: SCA (Semantic)

Sink Details

Sink: getProperty()

Enclosing Method: getMVIData()

File: PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/mvi/dao/impl/MVIClient.java:192

Taint Flags:

```
189 VAIdMPort port = ss.getVAIdMPort();
190
191
192 mviClientEndpoint = properties.getProperty(MVI_CLIENT_ENDPOINT_PROPERTY).trim(); // trim
the value for any potential whitespace.
193 // Secure Dev
194 ((BindingProvider)
port).getRequestContext().put(BindingProvider.ENDPOINT_ADDRESS_PROPERTY, mviClientEndpoint);
195
```

Package: gov.va.med.pharmacy.jaxrs.outboundncpdpmmessage.service.impl

**PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/
outboundncpdpmmessage/service/impl/
OutboundNCPDPMMessageServiceImpl.java, line 117 (Obsolete: Deprecated by
ESAPI)**

Low

Issue Details

Kingdom: API Abuse

Scan Engine: SCA (Semantic)

Sink Details

Sink: Properties()

Enclosing Method: sendOutboundMessage()

File: PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/outboundncpdpmmessage/service/impl/
OutboundNCPDPMMessageServiceImpl.java:117

Taint Flags:

```
114
115 // TODO - Asynchronous invocation with future.....
116
117 Properties properties = new Properties();
```

Obsolete: Deprecated by ESAPI

Low

Package: gov.va.med.pharmacy.jaxrs.outboundncpdpmmessage.service.impl

PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/outboundncpdpmmessage/service/impl/OutboundNCPDPMMessageServiceImpl.java, line 117 (Obsolete: Deprecated by ESAPI)

Low

```
118
119 InputStream inputStream = null;
120 try
```

PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/outboundncpdpmmessage/service/impl/OutboundNCPDPMMessageServiceImpl.java, line 248 (Obsolete: Deprecated by ESAPI)

Low

Issue Details

Kingdom: API Abuse
Scan Engine: SCA (Semantic)

Sink Details

Sink: getProperty()
Enclosing Method: setupTLS()
File: PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/outboundncpdpmmessage/service/impl/OutboundNCPDPMMessageServiceImpl.java:248
Taint Flags:

```
245 FileInputStream fileIn1 = null;
246 FileInputStream fileIn2 = null;
247 TLSClientParameters tlsCP = new TLSClientParameters();
248 String keyPasswd = properties.getProperty(KEYSTORE_PASSWD_PROPERTY).trim();
249 KeyStore keyStore = KeyStore.getInstance(KEYSTORE_FILE_TYPE);
250
251 try {
```

PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/outboundncpdpmmessage/service/impl/OutboundNCPDPMMessageServiceImpl.java, line 227 (Obsolete: Deprecated by ESAPI)

Low

Issue Details

Kingdom: API Abuse
Scan Engine: SCA (Semantic)

Sink Details

Sink: getProperty()
Enclosing Method: setupTLS()
File: PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/outboundncpdpmmessage/service/impl/OutboundNCPDPMMessageServiceImpl.java:227
Taint Flags:

```
224
```

Obsolete: Deprecated by ESAPI

Low

Package: gov.va.med.pharmacy.jaxrs.outboundncpdpmmessage.service.impl

PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/outboundncpdpmmessage/service/impl/OutboundNCPDPMMessageServiceImpl.java, line 227 (Obsolete: Deprecated by ESAPI)

Low

```
225 ClassLoader classloader = this.getClass().getClassLoader();
226
227 File file = new
File(classloader.getResource(properties.getProperty(KEYSTORE_FILE_NAME_PROPERTY).trim()).getFile
228
229 HTTPConduit httpConduit = WebClient.getConfig(client).getHttpConduit();
230
```

PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/outboundncpdpmmessage/service/impl/OutboundNCPDPMMessageServiceImpl.java, line 135 (Obsolete: Deprecated by ESAPI)

Low

Issue Details

Kingdom: API Abuse

Scan Engine: SCA (Semantic)

Sink Details

Sink: getProperty()

Enclosing Method: sendOutboundMessage()

File: PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/outboundncpdpmmessage/service/impl/OutboundNCPDPMMessageServiceImpl.java:135

Taint Flags:

```
132 }
133 }
134
135 String dasOutboundEndpoint = properties.getProperty(DAS_OUTBOUND_ENDPOINT).trim();
136
137 WebClient webclient = WebClient.create(dasOutboundEndpoint);
138
```

PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/outboundncpdpmmessage/service/impl/OutboundNCPDPMMessageServiceImpl.java, line 125 (Obsolete: Deprecated by ESAPI)

Low

Issue Details

Kingdom: API Abuse

Scan Engine: SCA (Semantic)

Sink Details

Sink: load()

Enclosing Method: sendOutboundMessage()

Obsolete: Deprecated by ESAPI**Low****Package: gov.va.med.pharmacy.jaxrs.outboundncpdpmmessage.service.impl****PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/outboundncpdpmmessage/service/impl/OutboundNCPDPMMessageServiceImpl.java, line 125 (Obsolete: Deprecated by ESAPI)****Low**

File: PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/outboundncpdpmmessage/service/impl/OutboundNCPDPMMessageServiceImpl.java:125

Taint Flags:

```
122 inputStream =
this.getClass().getClassLoader().getResourceAsStream(WSClients_PROPERTIES_FILE_NAME);
123
124 if (null != inputStream) {
125     properties.load(inputStream);
126 }
127 }
128 finally
```

Package: gov.va.med.pharmacy.jaxrs.provider.dao.impl**PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/provider/dao/impl/ProviderSearchDaoImpl.java, line 29 (Obsolete: Deprecated by ESAPI)****Low****Issue Details****Kingdom:** API Abuse**Scan Engine:** SCA (Semantic)**Sink Details****Sink:** printStackTrace()**Enclosing Method:** lookupProvider()**File:** PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/provider/dao/impl/ProviderSearchDaoImpl.java:29**Taint Flags:**

```
26
27 } catch (Exception e) {
28     LOG.error("Error in ProviderSearchDaoImpl:" + e.getMessage());
29     e.printStackTrace();
30     throw new Exception(e); // let the exception go all the way up.
31 }
32
```

Package: gov.va.med.pharmacy.jaxrs.tovista.dao.impl**PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/tovista/dao/impl/VistaInboundDaoImpl.java, line 35 (Obsolete: Deprecated by ESAPI)****Low****Issue Details****Kingdom:** API Abuse**Scan Engine:** SCA (Semantic)**Sink Details**

Obsolete: Deprecated by ESAPI

Low

Package: gov.va.med.pharmacy.jaxrs.tovista.dao.impl

PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/tovista/dao/impl/VistaInboundDaoImpl.java, line 35 (Obsolete: Deprecated by ESAPI)

Low

Sink: printStackTrace()

Enclosing Method: sendMessage()

File: PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/tovista/dao/impl/VistaInboundDaoImpl.java:35

Taint Flags:

```
32  sendResults = vistaInboundRpc.sendMessage(vistaInboundObj);
33
34  } catch (Exception e) {
35  e.printStackTrace();
36  throw new IOException(e); // let the exception go all the way up.
37  }
38
```

Package: gov.va.med.pharmacy.persistence.service.impl

PS_INB_ERX_Model/src/main/java/gov/va/med/pharmacy/persistence/service/impl/UserServiceImpl.java, line 141 (Obsolete: Deprecated by ESAPI)

Low

Issue Details

Kingdom: API Abuse

Scan Engine: SCA (Semantic)

Sink Details

Sink: printStackTrace()

Enclosing Method: updateUser()

File: PS_INB_ERX_Model/src/main/java/gov/va/med/pharmacy/persistence/service/impl/UserServiceImpl.java:141

Taint Flags:

```
138
139  } catch (Exception e) {
140  // TODO Auto-generated catch block
141  e.printStackTrace();
142
143  throw new Exception(e);
144  }
```

PS_INB_ERX_Model/src/main/java/gov/va/med/pharmacy/persistence/service/impl/UserServiceImpl.java, line 42 (Obsolete: Deprecated by ESAPI)

Low

Issue Details

Kingdom: API Abuse

Scan Engine: SCA (Semantic)

Sink Details

Sink: printStackTrace()

Enclosing Method: addNewVAUser()

File: PS_INB_ERX_Model/src/main/java/gov/va/med/pharmacy/persistence/service/impl/UserServiceImpl.java:42

Obsolete: Deprecated by ESAPI

Low

Package: gov.va.med.pharmacy.persistence.service.impl

PS_INB_ERX_Model/src/main/java/gov/va/med/pharmacy/persistence/service/impl/UserServiceImpl.java, line 42 (Obsolete: Deprecated by ESAPI)

Low

Taint Flags:

```
39
40 } catch (Exception e) {
41 // TODO Auto-generated catch block
42 e.printStackTrace();
43 }
44 }
45
```

PS_INB_ERX_Model/src/main/java/gov/va/med/pharmacy/persistence/service/impl/UserServiceImpl.java, line 172 (Obsolete: Deprecated by ESAPI)

Low

Issue Details

Kingdom: API Abuse

Scan Engine: SCA (Semantic)

Sink Details

Sink: printStackTrace()

Enclosing Method: deleteUsers()

File: PS_INB_ERX_Model/src/main/java/gov/va/med/pharmacy/persistence/service/impl/UserServiceImpl.java:172

Taint Flags:

```
169
170 } catch (Exception e) {
171 // TODO Auto-generated catch block
172 e.printStackTrace();
173
174 throw new Exception(e);
175 }
```

PS_INB_ERX_Model/src/main/java/gov/va/med/pharmacy/persistence/service/impl/UserServiceImpl.java, line 54 (Obsolete: Deprecated by ESAPI)

Low

Issue Details

Kingdom: API Abuse

Scan Engine: SCA (Semantic)

Sink Details

Sink: printStackTrace()

Enclosing Method: updateVAUser()

File: PS_INB_ERX_Model/src/main/java/gov/va/med/pharmacy/persistence/service/impl/UserServiceImpl.java:54

Taint Flags:

```
51 userDao.save(user);
52
```

Obsolete: Deprecated by ESAPI

Low

Package: gov.va.med.pharmacy.persistence.service.impl

PS_INB_ERX_Model/src/main/java/gov/va/med/pharmacy/persistence/service/impl/UserServiceImpl.java, line 54 (Obsolete: Deprecated by ESAPI)

Low

```
53 } catch (Exception e) {  
54     e.printStackTrace();  
55 }  
56 }  
57
```

Package: gov.va.med.pharmacy.utility

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/VistaLinkConnectionUtility.java, line 67 (Obsolete: Deprecated by ESAPI)

Low

Issue Details

Kingdom: API Abuse

Scan Engine: SCA (Semantic)

Sink Details

Sink: Properties()

Enclosing Method: sendRequest()

File: PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/VistaLinkConnectionUtility.java:67

Taint Flags:

```
64 try {  
65  
66  
67     Properties properties = new Properties();  
68  
69     InputStream inputStream = null;  
70     try{
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/VistaLinkConnectionUtility.java, line 75 (Obsolete: Deprecated by ESAPI)

Low

Issue Details

Kingdom: API Abuse

Scan Engine: SCA (Semantic)

Sink Details

Sink: load()

Enclosing Method: sendRequest()

File: PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/VistaLinkConnectionUtility.java:75

Taint Flags:

```
72     inputStream =  
this.getClass().getClassLoader().getResourceAsStream("gov.va.med.pharmacy.vistalink.properties")  
73  
74     if (null != inputStream) {  
75         properties.load(inputStream);
```


Obsolete: Deprecated by ESAPI

Low

Package: gov.va.med.pharmacy.utility

**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/
VistaLinkConnectionUtility.java, line 75 (Obsolete: Deprecated by ESAPI)**

Low

```
76 proxyUser = properties.getProperty("vistalink.proxyuser").trim();  
77 }  
78
```

**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/
StreamUtilities.java, line 25 (Obsolete: Deprecated by ESAPI)**

Low

Issue Details

Kingdom: API Abuse

Scan Engine: SCA (Structural)

Sink Details

Sink: FunctionCall: print

Enclosing Method: safeClose()

File: PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/StreamUtilities.java:25

Taint Flags:

```
22 try {  
23   inputStream.close();  
24 } catch (IOException e) {  
25   System.out.print(e);  
26 }  
27 }  
28 }
```

**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/
StreamUtilities.java, line 15 (Obsolete: Deprecated by ESAPI)**

Low

Issue Details

Kingdom: API Abuse

Scan Engine: SCA (Structural)

Sink Details

Sink: FunctionCall: print

Enclosing Method: safeClose()

File: PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/StreamUtilities.java:15

Taint Flags:

```
12 try {  
13   fileInputStream.close();  
14 } catch (IOException e) {  
15   System.out.print(e);  
16 }  
17 }  
18 }
```

Obsolete: Deprecated by ESAPI

Low

Package: gov.va.med.pharmacy.utility

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/VistaLinkConnectionUtility.java, line 114 (Obsolete: Deprecated by ESAPI)

Low

Issue Details

Kingdom: API Abuse

Scan Engine: SCA (Semantic)

Sink Details

Sink: printStackTrace()

Enclosing Method: sendRequest()

File: PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/VistaLinkConnectionUtility.java:114

Taint Flags:

```
111 connection.close();
112 } catch (ResourceException e) {
113 //LOG.error("Error closing VistaLink connection.", e);
114 e.printStackTrace();
115 }
116 }
117 }
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/StreamUtilities.java, line 35 (Obsolete: Deprecated by ESAPI)

Low

Issue Details

Kingdom: API Abuse

Scan Engine: SCA (Structural)

Sink Details

Sink: FunctionCall: print

Enclosing Method: safeClose()

File: PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/StreamUtilities.java:35

Taint Flags:

```
32 try {
33 bufferedReader.close();
34 } catch (IOException e) {
35 System.out.print(e);
36 }
37 }
38 }
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/VistaLinkConnectionUtility.java, line 76 (Obsolete: Deprecated by ESAPI)

Low

Issue Details

Kingdom: API Abuse

Scan Engine: SCA (Semantic)

Obsolete: Deprecated by ESAPI

Low

Package: gov.va.med.pharmacy.utility

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/VistaLinkConnectionUtility.java, line 76 (Obsolete: Deprecated by ESAPI)

Low

Sink Details

Sink: getProperty()

Enclosing Method: sendRequest()

File: PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/VistaLinkConnectionUtility.java:76

Taint Flags:

```
73
74  if(null!=inputStream) {
75    properties.load(inputStream);
76    proxyUser = properties.getProperty("vistalink.proxyuser").trim();
77  }
78
79  } finally {
```

Package: gov.va.med.pharmacy.web.administration

PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/administration/PharmacyManagementController.java, line 601 (Obsolete: Deprecated by ESAPI)

Low

Issue Details

Kingdom: API Abuse

Scan Engine: SCA (Semantic)

Sink Details

Sink: printStackTrace()

Enclosing Method: addNewPharmacy()

File: PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/administration/PharmacyManagementController.java:601

Taint Flags:

```
598  }
599  catch (Exception e) {
600
601    e.printStackTrace();
602
603    errorsList.add("Add Failed. Unable to save record. Please contact production support.");
604
```

PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/administration/PharmacyManagementController.java, line 566 (Obsolete: Deprecated by ESAPI)

Low

Issue Details

Kingdom: API Abuse

Scan Engine: SCA (Semantic)

Sink Details

Sink: printStackTrace()

Obsolete: Deprecated by ESAPI

Low

Package: gov.va.med.pharmacy.web.administration

PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/administration/PharmacyManagementController.java, line 566 (Obsolete: Deprecated by ESAPI)

Low

Enclosing Method: addNewPharmacy()

File: PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/administration/PharmacyManagementController.java:566

Taint Flags:

```
563
564 } catch (HibernateException e) {
565
566 e.printStackTrace();
567
568 Throwable cause = e.getCause();
569
```

PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/administration/PharmacyManagementController.java, line 272 (Obsolete: Deprecated by ESAPI)

Low

Issue Details

Kingdom: API Abuse

Scan Engine: SCA (Semantic)

Sink Details

Sink: printStackTrace()

Enclosing Method: updatePharmacy()

File: PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/administration/PharmacyManagementController.java:272

Taint Flags:

```
269 }
270 catch (Exception e) {
271
272 e.printStackTrace();
273
274 errorsList.add("Update Failed. Unable to save record. Please contact production
support.");
275
```

PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/administration/PharmacyManagementController.java, line 239 (Obsolete: Deprecated by ESAPI)

Low

Issue Details

Kingdom: API Abuse

Scan Engine: SCA (Semantic)

Sink Details

Sink: printStackTrace()

Enclosing Method: updatePharmacy()

File: PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/administration/PharmacyManagementController.java:239

Taint Flags:

Obsolete: Deprecated by ESAPI

Low

Package: gov.va.med.pharmacy.web.administration

PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/administration/PharmacyManagementController.java, line 239 (Obsolete: Deprecated by ESAPI)

Low

```
236
237 } catch (HibernateException e) {
238
239 e.printStackTrace();
240
241 Throwable cause = e.getCause();
242
```

Package: gov.va.med.pharmacy.web.auth

PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/auth/LogoutController.java, line 25 (Obsolete: Deprecated by ESAPI)

Low

Issue Details

Kingdom: API Abuse

Scan Engine: SCA (Semantic)

Sink Details

Sink: invalidate()

Enclosing Method: logout()

File: PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/auth/LogoutController.java:25

Taint Flags:

```
22
23 session.removeAttribute(Constants.SESSION_USER);
24
25 session.invalidate();
26
27 String logoutMessage;
28
```

PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/auth/LoginController.java, line 138 (Obsolete: Deprecated by ESAPI)

Low

Issue Details

Kingdom: API Abuse

Scan Engine: SCA (Semantic)

Sink Details

Sink: printStackTrace()

Enclosing Method: authenticateUser()

File: PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/auth/LoginController.java:138

Taint Flags:

```
135 e.printStackTrace();
136 } catch (Exception e) {
137 // TODO Auto-generated catch block
```

Obsolete: Deprecated by ESAPI

Low

Package: gov.va.med.pharmacy.web.auth

PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/auth/LoginController.java, line 138 (Obsolete: Deprecated by ESAPI)

Low

```
138 e.printStackTrace();
139 }
140 session.removeAttribute("loginErrorMessage");
141
```

PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/auth/LoginController.java, line 135 (Obsolete: Deprecated by ESAPI)

Low

Issue Details

Kingdom: API Abuse

Scan Engine: SCA (Semantic)

Sink Details

Sink: printStackTrace()

Enclosing Method: authenticateUser()

File: PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/auth/LoginController.java:135

Taint Flags:

```
132 session.setAttribute(Constants.SESSION_USER, user);
133 } catch (IntrusionException e) {
134 // TODO Auto-generated catch block
135 e.printStackTrace();
136 } catch (Exception e) {
137 // TODO Auto-generated catch block
138 e.printStackTrace();
```

Package: gov.va.med.pharmacy.web.filter

PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/filter/XSSRequestWrapper.java, line 248 (Obsolete: Deprecated by ESAPI)

Low

Issue Details

Kingdom: API Abuse

Scan Engine: SCA (Semantic)

Sink Details

Sink: invalidate()

Enclosing Method: stripXSS()

File: PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/filter/XSSRequestWrapper.java:248

Taint Flags:

```
245
246 LOG.error("XSS ATTACK is repetative, dumping user session as a precaution.");
247
248 session.invalidate();
249
250 cleanValue = null;
```

Obsolete: Deprecated by ESAPI

Low

Package: gov.va.med.pharmacy.web.filter

PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/filter/XSSRequestWrapper.java, line 248 (Obsolete: Deprecated by ESAPI)

Low

251

Package: gov.va.med.pharmacy.web.interceptor

PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/interceptor/LoginInterceptor.java, line 44 (Obsolete: Deprecated by ESAPI)

Low

Issue Details

Kingdom: API Abuse

Scan Engine: SCA (Semantic)

Sink Details

Sink: sendRedirect()

Enclosing Method: preHandle()

File: PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/interceptor/LoginInterceptor.java:44

Taint Flags:

```
41 if (session.getAttribute(Constants.SESSION_USER) == null) {  
42  
43  
44 response.sendRedirect("/inbound/public/landing");  
45 return false;  
46 }  
47
```

Package: gov.va.med.pharmacy.web.reports

PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/reports/SummaryReportController.java, line 172 (Obsolete: Deprecated by ESAPI)

Low

Issue Details

Kingdom: API Abuse

Scan Engine: SCA (Semantic)

Sink Details

Sink: printStackTrace()

Enclosing Method: csvExport()

File: PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/reports/SummaryReportController.java:172

Taint Flags:

```
169  
170 } catch (Exception e) {  
171 // TODO Auto-generated catch block  
172 e.printStackTrace();  
173 }  
174  
175 }
```

Obsolete: Deprecated by ESAPI

Low

Package: gov.va.med.pharmacy.web.reports

PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/reports/SummaryReportController.java, line 172 (Obsolete: Deprecated by ESAPI)

Low

PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/reports/SummaryReportController.java, line 149 (Obsolete: Deprecated by ESAPI)

Low

Issue Details

Kingdom: API Abuse

Scan Engine: SCA (Structural)

Sink Details

Sink: FunctionCall: setContentType

Enclosing Method: csvExport()

File: PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/reports/SummaryReportController.java:149

Taint Flags:

```
146
147 }
148
149 response.setContentType("text/csv");
150
151 response.setHeader(responseHeaderKey, responseHeaderValue);
152
```

Package: gov.va.med.pharmacy.web.track

PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/track/TrackRxController.java, line 222 (Obsolete: Deprecated by ESAPI)

Low

Issue Details

Kingdom: API Abuse

Scan Engine: SCA (Semantic)

Sink Details

Sink: printStackTrace()

Enclosing Method: csvExport()

File: PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/track/TrackRxController.java:222

Taint Flags:

```
219
220 } catch (Exception e) {
221 // TODO Auto-generated catch block
222 e.printStackTrace();
223 }
224
225 }
```


Obsolete: Deprecated by ESAPI	Low
Package: gov.va.med.pharmacy.web.track	
PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/track/TrackRxController.java, line 192 (Obsolete: Deprecated by ESAPI)	Low

Issue Details

Kingdom: API Abuse
Scan Engine: SCA (Structural)

Sink Details

Sink: FunctionCall: setContentType
Enclosing Method: csvExport()
File: PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/track/TrackRxController.java:192
Taint Flags:

```

189
190 String responseHeaderValue = String.format("attachment; filename=\"%s\"", csvFileName);
191
192 response.setContentType("text/csv");
193
194 response.setHeader(responseHeaderKey, responseHeaderValue);
195

```

Package: gov.va.med.pharmacy.wsclients.eAnde	
PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/eAnde/EeSummaryPortSoap11Impl.java, line 135 (Obsolete: Deprecated by ESAPI)	Low

Issue Details

Kingdom: API Abuse
Scan Engine: SCA (Semantic)

Sink Details

Sink: printStackTrace()
Enclosing Method: getEESummaryHistory()
File: PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/eAnde/EeSummaryPortSoap11Impl.java:135
Taint Flags:

```

132 gov.va.med.pharmacy.wsclients.eAnde.GetEESummaryHistoryResponse _return = null;
133 return _return;
134 } catch (java.lang.Exception ex) {
135 ex.printStackTrace();
136 throw new RuntimeException(ex);
137 }
138 }

```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/eAnde/EeSummaryPortSoap11Impl.java, line 60 (Obsolete: Deprecated by ESAPI)	Low
--------------------------------------------------------------------------------------------------------------------------------------------------	------------

Issue Details

Kingdom: API Abuse

Obsolete: Deprecated by ESAPI

Low

Package: gov.va.med.pharmacy.wsclients.eAnde

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/eAnde/EeSummaryPortSoap11Impl.java, line 60 (Obsolete: Deprecated by ESAPI)

Low

Scan Engine: SCA (Semantic)

Sink Details

Sink: printStackTrace()

Enclosing Method: getDeliveryPreference()

File: PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/eAnde/EeSummaryPortSoap11Impl.java:60

Taint Flags:

```
57 gov.va.med.pharmacy.wsclients.eAnde.GetDeliveryPreferenceResponse _return = null;
58 return _return;
59 } catch (java.lang.Exception ex) {
60 ex.printStackTrace();
61 throw new RuntimeException(ex);
62 }
63 }
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/eAnde/EeSummaryPortSoap11Impl.java, line 180 (Obsolete: Deprecated by ESAPI)

Low

Issue Details

Kingdom: API Abuse

Scan Engine: SCA (Semantic)

Sink Details

Sink: printStackTrace()

Enclosing Method: getEESummary()

File: PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/eAnde/EeSummaryPortSoap11Impl.java:180

Taint Flags:

```
177 gov.va.med.pharmacy.wsclients.eAnde.getEESummaryResponse _return = null;
178 return _return;
179 } catch (java.lang.Exception ex) {
180 ex.printStackTrace();
181 throw new RuntimeException(ex);
182 }
183 }
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/eAnde/EeSummaryPortSoap11Impl.java, line 75 (Obsolete: Deprecated by ESAPI)

Low

Issue Details

Kingdom: API Abuse

Scan Engine: SCA (Semantic)

Sink Details

Obsolete: Deprecated by ESAPI

Low

Package: gov.va.med.pharmacy.wsclients.eAnde

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/eAnde/EeSummaryPortSoap11Impl.java, line 75 (Obsolete: Deprecated by ESAPI)

Low

Sink: printStackTrace()

Enclosing Method: retrieveIVMCandidates()

File: PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/eAnde/EeSummaryPortSoap11Impl.java:75

Taint Flags:

```
72 gov.va.med.pharmacy.wsclients.eAnde.RetrieveIVMCandidatesResponse _return = null;
73 return _return;
74 } catch (java.lang.Exception ex) {
75     ex.printStackTrace();
76     throw new RuntimeException(ex);
77 }
78 }
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/eAnde/ClientPasswordCallback.java, line 22 (Obsolete: Deprecated by ESAPI)

Low

Issue Details

Kingdom: API Abuse

Scan Engine: SCA (Semantic)

Sink Details

Sink: Properties()

Enclosing Method: handle()

File: PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/eAnde/ClientPasswordCallback.java:22

Taint Flags:

```
19
20 public void handle(Callback[] callbacks) throws IOException, UnsupportedCallbackException {
21
22     Properties properties = new Properties();
23
24     InputStream inputStream = null;
25 }
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/eAnde/EeSummaryPortSoap11Impl.java, line 165 (Obsolete: Deprecated by ESAPI)

Low

Issue Details

Kingdom: API Abuse

Scan Engine: SCA (Semantic)

Sink Details

Sink: printStackTrace()

Enclosing Method: getEligibilityDetermination()

File: PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/eAnde/EeSummaryPortSoap11Impl.java:165

Taint Flags:

Obsolete: Deprecated by ESAPI

Low

Package: gov.va.med.pharmacy.wsclients.eAnde

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/eAnde/EeSummaryPortSoap11Impl.java, line 165 (Obsolete: Deprecated by ESAPI)

Low

```
162 gov.va.med.pharmacy.wsclients.eAnde.GetEligibilityDeterminationResponse _return = null;
163 return _return;
164 } catch (java.lang.Exception ex) {
165 ex.printStackTrace();
166 throw new RuntimeException(ex);
167 }
168 }
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/eAnde/EeSummaryPortSoap11Impl.java, line 150 (Obsolete: Deprecated by ESAPI)

Low

Issue Details

Kingdom: API Abuse

Scan Engine: SCA (Semantic)

Sink Details

Sink: printStackTrace()

Enclosing Method: updateDeliveryPreference()

File: PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/eAnde/EeSummaryPortSoap11Impl.java:150

Taint Flags:

```
147 gov.va.med.pharmacy.wsclients.eAnde.UpdateDeliveryPreferenceResponse _return = null;
148 return _return;
149 } catch (java.lang.Exception ex) {
150 ex.printStackTrace();
151 throw new RuntimeException(ex);
152 }
153 }
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/eAnde/EeSummaryPortSoap11Impl.java, line 90 (Obsolete: Deprecated by ESAPI)

Low

Issue Details

Kingdom: API Abuse

Scan Engine: SCA (Semantic)

Sink Details

Sink: printStackTrace()

Enclosing Method: getPersonNotification()

File: PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/eAnde/EeSummaryPortSoap11Impl.java:90

Taint Flags:

```
87 gov.va.med.pharmacy.wsclients.eAnde.GetPersonNotificationResponse _return = null;
88 return _return;
89 } catch (java.lang.Exception ex) {
90 ex.printStackTrace();
91 }
```

Obsolete: Deprecated by ESAPI

Low

Package: gov.va.med.pharmacy.wsclients.eAnde

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/eAnde/EeSummaryPortSoap11Impl.java, line 90 (Obsolete: Deprecated by ESAPI)

Low

```
91  throw new RuntimeException(ex);
92  }
93  }
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/eAnde/EeSummaryPortSoap11Impl.java, line 105 (Obsolete: Deprecated by ESAPI)

Low

Issue Details

Kingdom: API Abuse

Scan Engine: SCA (Semantic)

Sink Details

Sink: printStackTrace()

Enclosing Method: getIVMLetterStatuses()

File: PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/eAnde/EeSummaryPortSoap11Impl.java:105

Taint Flags:

```
102  gov.va.med.pharmacy.wsclients.eAnde.GetIVMLetterStatusesResponse _return = null;
103  return _return;
104  } catch (java.lang.Exception ex) {
105  ex.printStackTrace();
106  throw new RuntimeException(ex);
107  }
108  }
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/eAnde/ClientPasswordCallback.java, line 34 (Obsolete: Deprecated by ESAPI)

Low

Issue Details

Kingdom: API Abuse

Scan Engine: SCA (Semantic)

Sink Details

Sink: load()

Enclosing Method: handle()

File: PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/eAnde/ClientPasswordCallback.java:34

Taint Flags:

```
31
32  try{
33  if (null != inputStream) {
34  properties.load(inputStream);
35  }
36  }
37  finally{
```

Obsolete: Deprecated by ESAPI	Low
Package: gov.va.med.pharmacy.wsclients.eAnde	
PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/eAnde/ClientPasswordCallback.java, line 41 (Obsolete: Deprecated by ESAPI)	Low

Issue Details

Kingdom: API Abuse
Scan Engine: SCA (Semantic)

Sink Details

Sink: getProperty()
Enclosing Method: handle()
File: PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/eAnde/ClientPasswordCallback.java:41
Taint Flags:

```

38 StreamUtilities.safeClose(inputStream);
39 }
40 username = properties.getProperty(E_AND_E_USERNAME).trim();
41 password = properties.getProperty(E_AND_E_PASSWD).trim();
42
43 for (int i = 0; i < callbacks.length; i++) {
44 WSPasswordCallback pc = (WSPasswordCallback) callbacks[i];

```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/eAnde/EeSummaryPortSoap11Impl.java, line 120 (Obsolete: Deprecated by ESAPI)	Low
---------------------------------------------------------------------------------------------------------------------------------------------------	------------

Issue Details

Kingdom: API Abuse
Scan Engine: SCA (Semantic)

Sink Details

Sink: printStackTrace()
Enclosing Method: sendIVMUpdates()
File: PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/eAnde/EeSummaryPortSoap11Impl.java:120
Taint Flags:

```

117 gov.va.med.pharmacy.wsclients.eAnde.SendIVMUpdatesResponse _return = null;
118 return _return;
119 } catch (java.lang.Exception ex) {
120 ex.printStackTrace();
121 throw new RuntimeException(ex);
122 }
123 }

```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/eAnde/EeSummaryPortSoap11Impl.java, line 45 (Obsolete: Deprecated by ESAPI)	Low
--------------------------------------------------------------------------------------------------------------------------------------------------	------------

Issue Details

Kingdom: API Abuse
Scan Engine: SCA (Semantic)

Obsolete: Deprecated by ESAPI

Low

Package: gov.va.med.pharmacy.wsclients.eAnde

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/eAnde/EeSummaryPortSoap11Impl.java, line 45 (Obsolete: Deprecated by ESAPI)

Low

Sink Details

Sink: printStackTrace()

Enclosing Method: updateIVMRecordStatus()

File: PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/eAnde/EeSummaryPortSoap11Impl.java:45

Taint Flags:

```
42 gov.va.med.pharmacy.wsclients.eAnde.UpdateIVMRecordStatusResponse _return = null;
43 return _return;
44 } catch (java.lang.Exception ex) {
45 ex.printStackTrace();
46 throw new RuntimeException(ex);
47 }
48 }
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/eAnde/ClientPasswordCallback.java, line 40 (Obsolete: Deprecated by ESAPI)

Low

Issue Details

Kingdom: API Abuse

Scan Engine: SCA (Semantic)

Sink Details

Sink: getProperty()

Enclosing Method: handle()

File: PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/eAnde/ClientPasswordCallback.java:40

Taint Flags:

```
37 finally{
38 StreamUtilities.safeClose(inputStream);
39 }
40 username = properties.getProperty(E_AND_E_USERNAME).trim();
41 password = properties.getProperty(E_AND_E_PASSWD).trim();
42
43 for (int i = 0; i < callbacks.length; i++) {
```

Password Management (5 issues)

Abstract

Storing a password in plaintext can result in a system compromise.

Explanation

Password management issues occur when a password is stored in plaintext in an application's properties or configuration file.

Example 1: The following code reads a password from a properties file and uses the password to connect to a database.

```
...
Properties prop = new Properties();
prop.load(new FileInputStream("config.properties"));
String password = prop.getProperty("password");

DriverManager.getConnection(url, usr, password);
...
```

This code will run successfully, but anyone who has access to config.properties can read the value of password. If a devious employee has access to this information, they can use it to break into the system.

In the mobile world, password management is even trickier, considering a much higher chance of device loss.

Example 2: The code below reads username and password from an Android WebView store and uses them to setup authentication for viewing protected pages.

```
...
webview.setWebViewClient(new WebViewClient() {
    public void onReceivedHttpAuthRequest(WebView view,
        HttpAuthHandler handler, String host, String realm) {
        String[] credentials = view.getHttpAuthUsernamePassword(host, realm);
        String username = credentials[0];
        String password = credentials[1];
        handler.proceed(username, password);
    }
});
...
```

By default, WebView credentials are stored in plaintext and are not hashed. So if a user has a rooted device (or uses an emulator), she is able to read stored passwords for given sites.

Recommendation

A password should never be stored in plaintext. Instead, the password should be entered by an administrator when the system starts. If that approach is impractical, a less secure but often adequate solution is to obfuscate the password and scatter the de-obfuscation material around the system so that an attacker has to obtain and correctly combine multiple system resources to decipher the password. At the very least, passwords should be hashed before being stored.

Some third-party products claim the ability to manage passwords in a more secure way. For example, WebSphere Application Server 4.x uses a simple XOR encryption algorithm for obfuscating values, but be skeptical about such facilities. WebSphere and other application servers offer outdated and relatively weak encryption mechanisms that are insufficient for security-sensitive environments. For a secure generic solution, the best option today appears to be a proprietary mechanism that you create.

For Android, as well as any other platform that uses SQLite database, a good option is SQLCipher -- an extension to SQLite database that provides transparent 256-bit AES encryption of database files. Thus, credentials can be stored in an encrypted database.

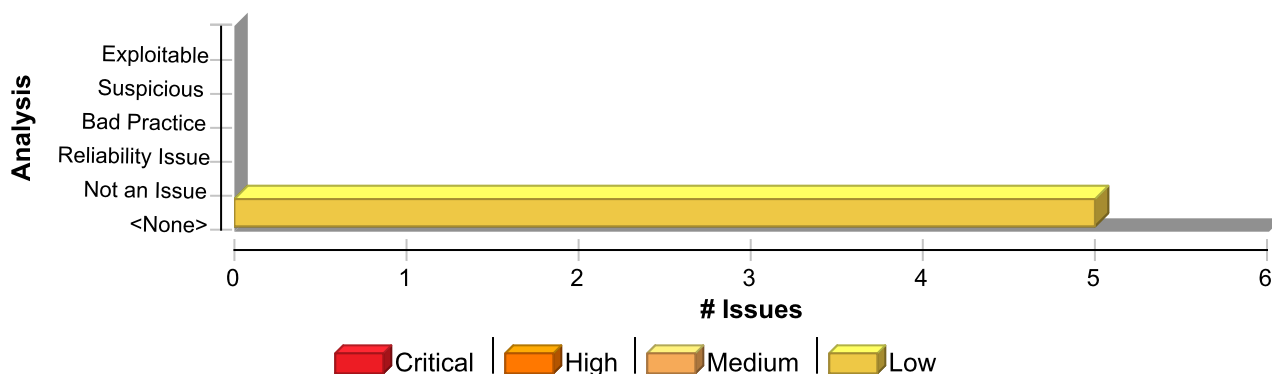
Example 3: The code below demonstrates how to integrate SQLCipher into an Android application after downloading the necessary binaries, and store credentials into the database file.

```
import net.sqlcipher.database.SQLiteDatabase;
...
    SQLiteDatabase.loadLibs(this);
    File dbFile = getDatabasePath("credentials.db");
    dbFile.mkdirs();
    dbFile.delete();
    SQLiteDatabase db = SQLiteDatabase.openOrCreateDatabase(dbFile,
"credentials", null);
    db.execSQL("create table credentials(u, p)");
    db.execSQL("insert into credentials(u, p) values(?, ?)", new Object[]
{username, password});
    ...
```

Note that references to `android.database.sqlite.SQLiteDatabase` are substituted with those of `net.sqlcipher.database.SQLiteDatabase`.

To enable encryption on the WebView store, WebKit has to be re-compiled with the `sqlcipher.so` library.

Issue Summary



Engine Breakdown

	SCA	WebInspect	SecurityScope	Total
Password Management	5	0	0	5
Total	5	0	0	5

Password Management	Low
Package: gov.va.med.pharmacy.jaxrs.eAnde.services.impl	
PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/eAnde/services/impl/EESummary_Client.java, line 163 (Password Management)	Low

Issue Details

Kingdom: Security Features
Scan Engine: SCA (Data Flow)

Source Details

Source: java.util.Properties.load()
From: gov.va.med.pharmacy.jaxrs.eAnde.services.impl.EESummary_Client.returnResponse
File: PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/eAnde/services/impl/EESummary_Client.java:68

```

65  try{
66  inputStream =
this.getClass().getClassLoader().getResourceAsStream("gov.va.med.pharmacy.wscli
67  if(null != inputStream){
68  properties.load(inputStream);
69  } else
70  {
71  LOG.error("Property file not loaded/found.");

```

Sink Details

Sink: java.security.KeyStore.load()
Enclosing Method: setupTLS()
File: PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/eAnde/services/impl/EESummary_Client.java:163
Taint Flags: PROPERTY

```

160  try {
161  fileIn2 = new FileInputStream(file);
162  KeyStore trustStore = KeyStore.getInstance(KEYSTORE_FILE_TYPE);
163  trustStore.load(fileIn2, keyPasswd.toCharArray());
164  TrustManager[] myTrustStoreKeyManagers = getTrustManagers(trustStore);
165  tlsCP.setTrustManagers(myTrustStoreKeyManagers);
166  httpConduit.setTlsClientParameters(tlsCP);

```

Package: gov.va.med.pharmacy.jaxrs.mvi.dao.impl	
PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/mvi/dao/impl/MVIClient.java, line 762 (Password Management)	Low

Issue Details

Kingdom: Security Features
Scan Engine: SCA (Data Flow)

Source Details

Source: java.util.Properties.load()

Password Management

Low

Package: gov.va.med.pharmacy.jaxrs.mvi.dao.impl

PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/mvi/dao/impl/MVIClient.java, line 762 (Password Management)

Low

From: gov.va.med.pharmacy.jaxrs.mvi.dao.impl.MVIClient.getMVIData
File: PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/mvi/dao/impl/MVIClient.java:165

```
162 inputStream = this.getClass().getClassLoader()  
163 .getResourceAsStream("gov.va.med.pharmacy.wsclients.properties");  
164 if (null != inputStream) {  
165     properties.load(inputStream);  
166 }  
167 } finally {  
168     if (null != inputStream) {
```

Sink Details

Sink: java.security.KeyStore.load()
Enclosing Method: setupTLS()
File: PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/mvi/dao/impl/MVIClient.java:762
Taint Flags: PROPERTY

```
759 try {  
760     fileIn2 = new FileInputStream(file);  
761     KeyStore trustStore = KeyStore.getInstance(KEYSTORE_FILE_TYPE);  
762     trustStore.load(fileIn2, keyPasswd.toCharArray());  
763     TrustManager[] myTrustStoreKeyManagers = getTrustManagers(trustStore);  
764     tlsCP.setTrustManagers(myTrustStoreKeyManagers);  
765     httpConduit.setTlsClientParameters(tlsCP);
```

PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/mvi/dao/impl/MVIClient.java, line 750 (Password Management)

Low

Issue Details

Kingdom: Security Features
Scan Engine: SCA (Data Flow)

Source Details

Source: java.util.Properties.load()
From: gov.va.med.pharmacy.jaxrs.mvi.dao.impl.MVIClient.getMVIData
File: PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/mvi/dao/impl/MVIClient.java:165

```
162 inputStream = this.getClass().getClassLoader()  
163 .getResourceAsStream("gov.va.med.pharmacy.wsclients.properties");  
164 if (null != inputStream) {  
165     properties.load(inputStream);  
166 }  
167 } finally {
```

Password Management

Low

Package: gov.va.med.pharmacy.jaxrs.mvi.dao.impl

PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/mvi/dao/impl/
MVIClient.java, line 750 (Password Management)

Low

```
168 if (null != inputStream) {
```

Sink Details

Sink: java.security.KeyStore.load()

Enclosing Method: setupTLS()

File: PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/mvi/dao/impl/MVIClient.java:750

Taint Flags: PROPERTY

```
747  
748 try {  
749     fileIn1 = new FileInputStream(file);  
750     keyStore.load(fileIn1, keyPasswd.toCharArray());  
751     KeyManager[] myKeyManagers = getKeyManagers(keyStore, keyPasswd);  
752     tlsCP.setKeyManagers(myKeyManagers);  
753 } finally {
```

Package: gov.va.med.pharmacy.jaxrs.outboundncpdpmessagetransaction.service.impl

PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/
outboundncpdpmessagetransaction/service/impl/
OutboundNCPDPMMessageServiceImpl.java, line 253 (Password Management)

Low

Issue Details

Kingdom: Security Features

Scan Engine: SCA (Data Flow)

Source Details

Source: java.util.Properties.load()

From: gov.va.med.pharmacy.jaxrs.outboundncpdpmessagetransaction.service.impl.OutboundNCPDPMMessageServiceImpl.sendOutboundMessage

File: PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/outboundncpdpmessagetransaction/service/impl/OutboundNCPDPMMessageServiceImpl.java:125

```
122 inputStream =  
this.getClass().getClassLoader().getResourceAsStream(WSClients.PROPERTIES_FILE_  
123  
124 if (null != inputStream) {  
125     properties.load(inputStream);  
126 }  
127 }  
128 finally
```

Sink Details

Sink: java.security.KeyStore.load()

Enclosing Method: setupTLS()

Password Management

Low

Package: gov.va.med.pharmacy.jaxrs.outboundncpdpmmessage.service.impl

PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/
outboundncpdpmmessage/service/impl/
OutboundNCPDPMMessageServiceImpl.java, line 253 (Password Management)

Low

File: PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/outboundncpdpmmessage/service/impl/
OutboundNCPDPMMessageServiceImpl.java:253

Taint Flags: PROPERTY

```
250
251 try {
252     fileIn1 = new FileInputStream(file);
253     keyStore.load(fileIn1, keyPasswd.toCharArray());
254     KeyManager[] myKeyManagers = getKeyManagers(keyStore, keyPasswd);
255     tlsCP.setKeyManagers(myKeyManagers);
256 } finally {
```

PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/
outboundncpdpmmessage/service/impl/
OutboundNCPDPMMessageServiceImpl.java, line 265 (Password Management)

Low

Issue Details

Kingdom: Security Features

Scan Engine: SCA (Data Flow)

Source Details

Source: java.util.Properties.load()

From: gov.va.med.pharmacy.jaxrs.outboundncpdpmmessage.service.impl.OutboundNCPDPMMessageServiceImpl.sendOutboundMessage

File: PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/outboundncpdpmmessage/service/impl/OutboundNCPDPMMessageServiceImpl.java:125

```
122 inputStream =
this.getClass().getClassLoader().getResourceAsStream(WSClients_PROPERTIES_FILE_
123
124 if (null != inputStream) {
125     properties.load(inputStream);
126 }
127 }
128 finally
```

Sink Details

Sink: java.security.KeyStore.load()

Enclosing Method: setupTLS()

File: PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/outboundncpdpmmessage/service/impl/
OutboundNCPDPMMessageServiceImpl.java:265

Taint Flags: PROPERTY

```
262 try {
263     fileIn2 = new FileInputStream(file);
```

Password Management	Low
Package: gov.va.med.pharmacy.jaxrs.outboundncpdpmmessage.service.impl	
PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/outboundncpdpmmessage/service/impl/OutboundNCPDPMessageServiceImpl.java, line 265 (Password Management)	Low

```

264 KeyStore trustStore = KeyStore.getInstance(KEYSTORE_FILE_TYPE);
265 trustStore.load(fileIn2, keyPasswd.toCharArray());
266 TrustManager[] myTrustStoreKeyManagers = getTrustManagers(trustStore);
267 tlsCP.setTrustManagers(myTrustStoreKeyManagers);
268 httpConduit.setTlsClientParameters(tlsCP);

```

Password Management: Hardcoded Password (4 issues)

Abstract

Hardcoded passwords may compromise system security in a way that cannot be easily remedied.

Explanation

It is never a good idea to hardcode a password. Not only does hardcoding a password allow all of the project's developers to view the password, it also makes fixing the problem extremely difficult. Once the code is in production, the password cannot be changed without patching the software. If the account protected by the password is compromised, the owners of the system will be forced to choose between security and availability.

Example 1: The following code uses a hardcoded password to connect to a database:

```
...
DriverManager.getConnection(url, "scott", "tiger");
...
```

This code will run successfully, but anyone who has access to it will have access to the password. Once the program has shipped, there is likely no way to change the database user "scott" with a password of "tiger" unless the program is patched. An employee with access to this information could use it to break into the system. Even worse, if attackers have access to the bytecode for the application they can use the `javap -c` command to access the disassembled code, which will contain the values of the passwords used. The result of this operation might look something like the following for the example above:

```
javap -c ConnMngr.class

22: ldc    #36; //String jdbc:mysql://ixne.com/rxsql
24: ldc    #38; //String scott
26: ldc    #17; //String tiger
```

In the mobile world, password management is even trickier, considering a much higher chance of device loss.

Example 2: The code below uses hardcoded username and password to setup authentication for viewing protected pages with Android's WebView.

```
...
webview.setWebViewClient(new WebViewClient() {
    public void onReceivedHttpAuthRequest(WebView view,
        HttpAuthHandler handler, String host, String realm) {
        handler.proceed("guest", "allow");
    }
});
...
```

Similar to Example 1, this code will run successfully, but anyone who has access to it will have access to the password.

Recommendation

Passwords should never be hardcoded and should generally be obfuscated and managed in an external source. Storing passwords in plaintext anywhere on the system allows anyone with sufficient permissions to read and potentially misuse the password. At the very least, passwords should be hashed before being stored.

Some third-party products claim the ability to manage passwords in a more secure way. For example, WebSphere Application Server 4.x uses a simple XOR encryption algorithm for obfuscating values, but be skeptical about such facilities. WebSphere and other application servers offer outdated and relatively weak encryption mechanisms that are insufficient for security-sensitive environments. For a secure generic solution, the best option today appears to be a proprietary mechanism that you create.

For Android, as well as any other platform that uses SQLite database, a good option is SQLCipher -- an extension to SQLite database that provides transparent 256-bit AES encryption of database files. Thus, credentials can be stored in an encrypted database.

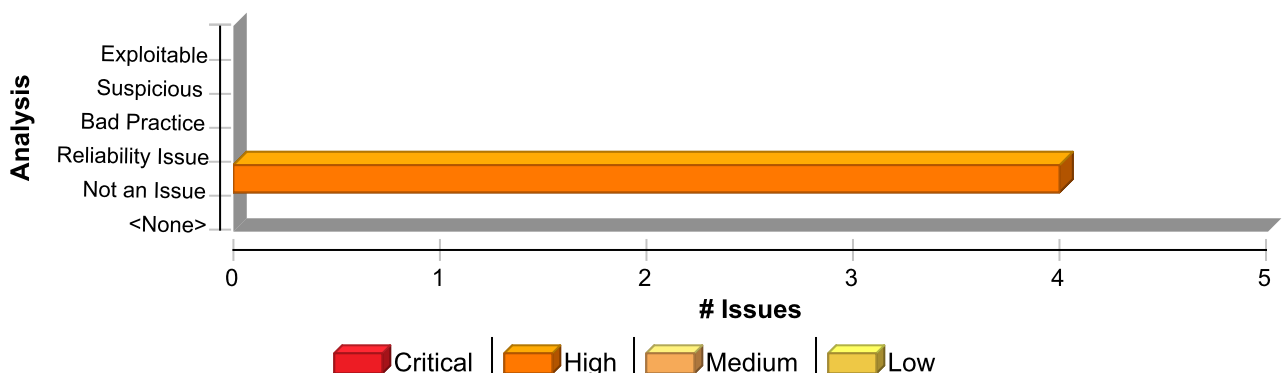
Example 3: The code below demonstrates how to integrate SQLCipher into an Android application after downloading the necessary binaries, and store credentials into the database file.

```
import net.sqlcipher.database.SQLiteDatabase;
...
    SQLiteDatabase.loadLibs(this);
    File dbFile = getDatabasePath("credentials.db");
    dbFile.mkdirs();
    dbFile.delete();
    SQLiteDatabase db = SQLiteDatabase.openOrCreateDatabase(dbFile,
"credentials", null);
    db.execSQL("create table credentials(u, p)");
    db.execSQL("insert into credentials(u, p) values(?, ?)", new Object[]
{username, password});
    ...
```

Note that references to `android.database.sqlite.SQLiteDatabase` are substituted with those of `net.sqlcipher.database.SQLiteDatabase`.

To enable encryption on the WebView store, WebKit has to be re-compiled with the `sqlcipher.so` library.

Issue Summary



Engine Breakdown

	SCA	WebInspect	SecurityScope	Total
Password Management: Hardcoded Password	4	0	0	4
Total	4	0	0	4

Password Management: Hardcoded Password

High

Package: gov.va.med.pharmacy.jaxrs.eAnde.services.impl

PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/eAnde/services/impl/EESummary_Client.java, line 54 (Password Management: Hardcoded Password)

High

Issue Details

Kingdom: Security Features
Scan Engine: SCA (Structural)

Audit Details

Analysis Not an Issue

Audit Comments

VHAHAMWandIJ: Thu Sep 14 2017 16:55:47 GMT-0400 (EDT)
The references are not hardcoded passwords, but System Property names that refer to passwords

Sink Details

Sink: FieldAccess: KEYSTORE_PASSWD_PROPERTY
Enclosing Method: ()
File: PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/eAnde/services/impl/EESummary_Client.java:54
Taint Flags:

```
51 private static final QName SERVICE_NAME = new QName("http://
jaxws.webservices.esr.med.va.gov/schemas", "eeSummaryPortService");
52 private static final String KEYSTORE_FILE_TYPE = "JKS";
53 private static final String KEYSTORE_FILE_NAME_PROPERTY = "keystore.filename";
54 private static final String KEYSTORE_PASSWD_PROPERTY = "keystore.password";
55
56 public getEESummaryResponse returnResponse(String key) throws java.lang.Exception {
57
```

Package: gov.va.med.pharmacy.jaxrs.mvi.dao.impl

PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/mvi/dao/impl/MVIClient.java, line 98 (Password Management: Hardcoded Password)

High

Issue Details

Kingdom: Security Features
Scan Engine: SCA (Structural)

Audit Details

Analysis Not an Issue

Audit Comments

VHAHAMWandIJ: Wed May 10 2017 11:28:37 GMT-0400 (EDT)
The references are not hardcoded passwords, but System Property names that refer to passwords

Sink Details

Password Management: Hardcoded Password**High****Package:** gov.va.med.pharmacy.jaxrs.mvi.dao.impl**PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/mvi/dao/impl/MVIClient.java, line 98 (Password Management: Hardcoded Password)****High****Sink:** FieldAccess: KEYSTORE_PASSWD_PROPERTY**Enclosing Method:** ()**File:** PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/mvi/dao/impl/MVIClient.java:98**Taint Flags:**

```
95 private static final String MVI_CLIENT_ENDPOINT_PROPERTY = "mvi.client.endpoint";
96 private static final String KEYSTORE_FILE_TYPE = "JKS";
97 private static final String KEYSTORE_FILE_NAME_PROPERTY = "keystore.filename";
98 private static final String KEYSTORE_PASSWD_PROPERTY = "keystore.password";
99 private static final String LEGAL_NAME = "Legal Name";
100 private static final String L_CHARACTER = "L";
101 private static final String EMPTY_STRING = "";
```

Package: gov.va.med.pharmacy.jaxrs.outboundncpdpmmessage.service.impl**PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/outboundncpdpmmessage/service/impl/OutboundNCPDPMMessageServiceImpl.java, line 77 (Password Management: Hardcoded Password)****High****Issue Details****Kingdom:** Security Features**Scan Engine:** SCA (Structural)**Audit Details**

Analysis Not an Issue

Audit Comments**VHAHAMWandIJ:** Wed May 10 2017 11:28:46 GMT-0400 (EDT)

The references are not hardcoded passwords, but System Property names that refer to passwords

Sink Details**Sink:** FieldAccess: KEYSTORE_PASSWD_PROPERTY**Enclosing Method:** ()**File:** PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/outboundncpdpmmessage/service/impl/OutboundNCPDPMMessageServiceImpl.java:77**Taint Flags:**

```
74
75 private static final String KEYSTORE_FILE_TYPE = "JKS";
76 private static final String KEYSTORE_FILE_NAME_PROPERTY = "keystore.filename";
77 private static final String KEYSTORE_PASSWD_PROPERTY = "keystore.password";
78
79 @Autowired
80 private OutboundNcpdpMsgService outboundNcpdpMsgService;
```

Password Management: Hardcoded Password	High
Package: gov.va.med.pharmacy.wsclients.eAnde	
PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/eAnde/ClientPasswordCallback.java, line 17 (Password Management: Hardcoded Password)	High

Issue Details

Kingdom: Security Features
Scan Engine: SCA (Structural)

Audit Details

Analysis Not an Issue

Audit Comments

VHAHAMWandIJ: Wed May 10 2017 11:28:30 GMT-0400 (EDT)
The references are not hardcoded passwords, but System Property names that refer to passwords

Sink Details

Sink: FieldAccess: E_AND_E_PASSWD
Enclosing Method: ()
File: PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/eAnde/ClientPasswordCallback.java:17
Taint Flags:

```

14
15 public class ClientPasswordCallback implements CallbackHandler {
16
17     private static final String E_AND_E_PASSWD = "eAnde.password";
18     private static final String E_AND_E_USERNAME = "eAnde.username";
19
20     public void handle(Callback[] callbacks) throws IOException, UnsupportedCallbackException {

```

Password Management: Password in Comment (18 issues)

Abstract

Storing passwords or password details in plaintext anywhere in the system or system code may compromise system security in a way that cannot be easily remedied.

Explanation

It is never a good idea to hardcode a password. Storing password details within comments is equivalent to hardcoding passwords. Not only does it allow all of the project's developers to view the password, it also makes fixing the problem extremely difficult. Once the code is in production, the password is now leaked to the outside world and cannot be protected or changed without patching the software. If the account protected by the password is compromised, the owners of the system will be forced to choose between security and availability.

Example: The following comment specifies the default password to connect to a database:

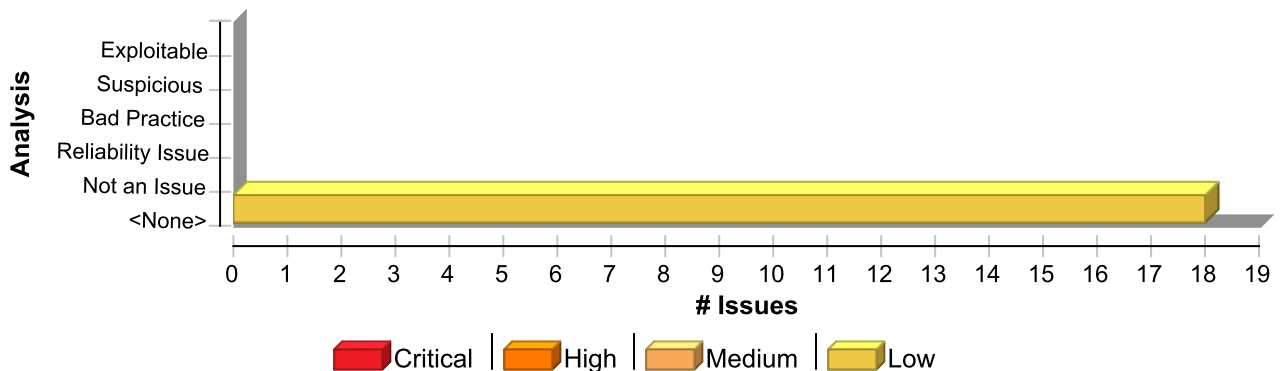
```
...  
// Default username for database connection is "scott"  
// Default password for database connection is "tiger"  
...
```

This code will run successfully, but anyone who has access to it will have access to the password. Once the program has shipped, there is likely no way to change the database user "scott" with a password of "tiger" unless the program is patched. An employee with access to this information could use it to break into the system.

Recommendation

Passwords should never be hardcoded and should generally be obfuscated and managed in an external source. Storing passwords in plaintext anywhere on the system allows anyone with sufficient permissions to read and potentially misuse the password.

Issue Summary



Engine Breakdown

	SCA	WebInspect	SecurityScope	Total
Password Management: Password in Comment	18	0	0	18
Total	18	0	0	18

Password Management: Password in Comment

Low

Package: .src.main.java.gov.va.med.pharmacy.ncdpmsgs

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/ncdpmsgs/
PasswordType.java, line 19 (Password Management: Password in Comment)

Low

Issue Details

Kingdom: Security Features
Scan Engine: SCA (Structural)

Sink Details

Sink: Comment
File: PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/ncdpmsgs/PasswordType.java:19
Taint Flags:

```
16 import javax.xml.bind.annotation.XmlValue;
17
18
19 /**
20  * <p>Java class for PasswordType complex type.
21  *
22  * <p>The following schema fragment specifies the expected content contained within this
   class.
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/ncdpmsgs/
PasswordRequestType.java, line 61 (Password Management: Password in
Comment)

Low

Issue Details

Kingdom: Security Features
Scan Engine: SCA (Structural)

Sink Details

Sink: Comment
File: PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/ncdpmsgs/PasswordRequestType.java:61
Taint Flags:

```
58 return oldPassword;
59 }
60
61 /**
62  * Sets the value of the oldPassword property.
63  *
64  * @param value
```

Password Management: Password in Comment**Low****Package:** .src.main.java.gov.va.med.pharmacy.ncdpmsgs**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/ncdpmsgs/UsernameTokenType.java, line 96 (Password Management: Password in Comment)****Low****Issue Details**

Kingdom: Security Features
Scan Engine: SCA (Structural)

Sink Details

Sink: Comment
File: PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/ncdpmsgs/UsernameTokenType.java:96
Taint Flags:

```
93 return password;  
94 }  
95  
96 /**  
97  * Sets the value of the password property.  
98  *  
99  * @param value
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/ncdpmsgs/PasswordChange.java, line 59 (Password Management: Password in Comment)**Low****Issue Details**

Kingdom: Security Features
Scan Engine: SCA (Structural)

Sink Details

Sink: Comment
File: PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/ncdpmsgs/PasswordChange.java:59
Taint Flags:

```
56 return request;  
57 }  
58  
59 /**  
60  * Sets the value of the request property.  
61  *  
62  * @param value
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/ncdpmsgs/PasswordRequestType.java, line 49 (Password Management: Password in Comment)**Low****Issue Details**

Kingdom: Security Features
Scan Engine: SCA (Structural)

Password Management: Password in Comment**Low****Package:** .src.main.java.gov.va.med.pharmacy.ncdpmsgs**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/ncdpmsgs/PasswordRequestType.java, line 49 (Password Management: Password in Comment)****Low****Sink Details****Sink:** Comment**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/ncdpmsgs/PasswordRequestType.java:49**Taint Flags:**

```
46 @XmlElement(name = "NewPassword", required = true)
47 protected Object newPassword;
48
49 /**
50  * Gets the value of the oldPassword property.
51  *
52  * @return
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/ncdpmsgs/ObjectFactory.java, line 828 (Password Management: Password in Comment)**Low****Issue Details****Kingdom:** Security Features**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Comment**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/ncdpmsgs/ObjectFactory.java:828**Taint Flags:**

```
825 return new SecurityIdentificationType();
826 }
827
828 /**
829  * Create an instance of {@link PasswordType }
830  *
831  */
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/ncdpmsgs/BodyType.java, line 17 (Password Management: Password in Comment)**Low****Issue Details****Kingdom:** Security Features**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Comment**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/ncdpmsgs/BodyType.java:17**Taint Flags:**

Password Management: Password in Comment**Low****Package: .src.main.java.gov.va.med.pharmacy.ncdpmsgs****PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/ncdpmsgs/
BodyType.java, line 17 (Password Management: Password in Comment)****Low**

```
14 import javax.xml.bind.annotation.XmlType;
15
16
17 /**
18  * <p>Java class for BodyType complex type.
19  *
20  * <p>The following schema fragment specifies the expected content contained within this
   class.
```

**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/ncdpmsgs/
ObjectFactory.java, line 524 (Password Management: Password in Comment)****Low****Issue Details**

Kingdom: Security Features
Scan Engine: SCA (Structural)

Sink Details

Sink: Comment
File: PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/ncdpmsgs/ObjectFactory.java:524
Taint Flags:

```
521 return new PasswordChange();
522 }
523
524 /**
525  * Create an instance of {@link PasswordRequestType }
526  *
527  */
```

**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/ncdpmsgs/
UsernameTokenType.java, line 84 (Password Management: Password in
Comment)****Low****Issue Details**

Kingdom: Security Features
Scan Engine: SCA (Structural)

Sink Details

Sink: Comment
File: PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/ncdpmsgs/UsernameTokenType.java:84
Taint Flags:

```
81 this.username = value;
82 }
83
84 /**
```


Password Management: Password in Comment**Low****Package: .src.main.java.gov.va.med.pharmacy.ncdpmsgs****PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/ncdpmsgs/UsernameTokenType.java, line 84 (Password Management: Password in Comment)****Low**

```
85 * Gets the value of the password property.  
86 *  
87 * @return
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/ncdpmsgs/BodyType.java, line 349 (Password Management: Password in Comment)**Low****Issue Details**

Kingdom: Security Features
Scan Engine: SCA (Structural)

Sink Details

Sink: Comment
File: PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/ncdpmsgs/BodyType.java:349
Taint Flags:

```
346 this.getMessage = value;  
347 }  
348  
349 /**  
350 * Gets the value of the passwordChange property.  
351 *  
352 * @return
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/ncdpmsgs/ObjectFactory.java, line 516 (Password Management: Password in Comment)**Low****Issue Details**

Kingdom: Security Features
Scan Engine: SCA (Structural)

Sink Details

Sink: Comment
File: PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/ncdpmsgs/ObjectFactory.java:516
Taint Flags:

```
513 return new GetMessage();  
514 }  
515  
516 /**  
517 * Create an instance of {@link PasswordChange }  
518 *  
519 */
```

Password Management: Password in Comment	Low
Package: .src.main.java.gov.va.med.pharmacy.ncdpmsgs	
PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/ncdpmsgs/PasswordRequestType.java, line 17 (Password Management: Password in Comment)	Low

Issue Details

Kingdom: Security Features
Scan Engine: SCA (Structural)

Sink Details

Sink: Comment
File: PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/ncdpmsgs/PasswordRequestType.java:17
Taint Flags:

```

14 import javax.xml.bind.annotation.XmlType;
15
16
17 /**
18  * <p>Java class for PasswordRequestType complex type.
19  *
20  * <p>The following schema fragment specifies the expected content contained within this
   class.
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/ncdpmsgs/PasswordRequestType.java, line 85 (Password Management: Password in Comment)	Low
--------------------------------------------------------------------------------------------------------------------------------------------------	------------

Issue Details

Kingdom: Security Features
Scan Engine: SCA (Structural)

Sink Details

Sink: Comment
File: PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/ncdpmsgs/PasswordRequestType.java:85
Taint Flags:

```

82 return newPassword;
83 }
84
85 /**
86  * Sets the value of the newPassword property.
87  *
88  * @param value
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/ncdpmsgs/PasswordChange.java, line 18 (Password Management: Password in Comment)	Low
---------------------------------------------------------------------------------------------------------------------------------------------	------------

Issue Details

Kingdom: Security Features
Scan Engine: SCA (Structural)

Password Management: Password in Comment**Low****Package: .src.main.java.gov.va.med.pharmacy.ncdpmsgs****PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/ncdpmsgs/PasswordChange.java, line 18 (Password Management: Password in Comment)****Low****Sink Details****Sink:** Comment**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/ncdpmsgs/PasswordChange.java:18**Taint Flags:**

```
15 import javax.xml.bind.annotation.XmlType;
16
17
18 /**
19  * <p>Java class for anonymous complex type.
20  *
21  * <p>The following schema fragment specifies the expected content contained within this
  class.
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/ncdpmsgs/UsernameTokenType.java, line 19 (Password Management: Password in Comment)**Low****Issue Details****Kingdom:** Security Features**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Comment**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/ncdpmsgs/UsernameTokenType.java:19**Taint Flags:**

```
16 import javax.xml.datatype.XMLGregorianCalendar;
17
18
19 /**
20  * <p>Java class for UsernameTokenType complex type.
21  *
22  * <p>The following schema fragment specifies the expected content contained within this
  class.
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/ncdpmsgs/BodyType.java, line 361 (Password Management: Password in Comment)**Low****Issue Details****Kingdom:** Security Features**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Comment**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/ncdpmsgs/BodyType.java:361

Password Management: Password in Comment**Low****Package: .src.main.java.gov.va.med.pharmacy.ncdpmsgs****PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/ncdpmsgs/
BodyType.java, line 361 (Password Management: Password in Comment)****Low****Taint Flags:**

```
358 return passwordChange;  
359 }  
360  
361 /**  
362  * Sets the value of the passwordChange property.  
363  *  
364  * @param value
```

**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/ncdpmsgs/
PasswordRequestType.java, line 73 (Password Management: Password in
Comment)****Low****Issue Details**

Kingdom: Security Features
Scan Engine: SCA (Structural)

Sink Details

Sink: Comment
File: PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/ncdpmsgs/PasswordRequestType.java:73
Taint Flags:

```
70 this.oldPassword = value;  
71 }  
72  
73 /**  
74  * Gets the value of the newPassword property.  
75  *  
76  * @return
```

**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/ncdpmsgs/
PasswordChange.java, line 47 (Password Management: Password in Comment)****Low****Issue Details**

Kingdom: Security Features
Scan Engine: SCA (Structural)

Sink Details

Sink: Comment
File: PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/ncdpmsgs/PasswordChange.java:47
Taint Flags:

```
44 @XmlElement(name = "Request", required = true)  
45 protected PasswordRequestType request;  
46
```

Password Management: Password in Comment		Low
Package: .src.main.java.gov.va.med.pharmacy.ncpdmsgs		
PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/ncpdmsgs/PasswordChange.java, line 47 (Password Management: Password in Comment)		Low
<pre> 47 /** 48 * Gets the value of the request property. 49 * 50 * @return </pre>		

Poor Error Handling: Overly Broad Catch (25 issues)

Abstract

The catch block handles a broad swath of exceptions, potentially trapping dissimilar issues or problems that should not be dealt with at this point in the program.

Explanation

Multiple catch blocks can get ugly and repetitive, but "condensing" catch blocks by catching a high-level class like `Exception` can obscure exceptions that deserve special treatment or that should not be caught at this point in the program. Catching an overly broad exception essentially defeats the purpose of Java's typed exceptions, and can become particularly dangerous if the program grows and begins to throw new types of exceptions. The new exception types will not receive any attention.

Example: The following code excerpt handles three types of exceptions in an identical fashion.

```
try {
    doExchange();
}
catch (IOException e) {
    logger.error("doExchange failed", e);
}
catch (InvocationTargetException e) {
    logger.error("doExchange failed", e);
}
catch (SQLException e) {
    logger.error("doExchange failed", e);
}
```

At first blush, it may seem preferable to deal with these exceptions in a single catch block, as follows:

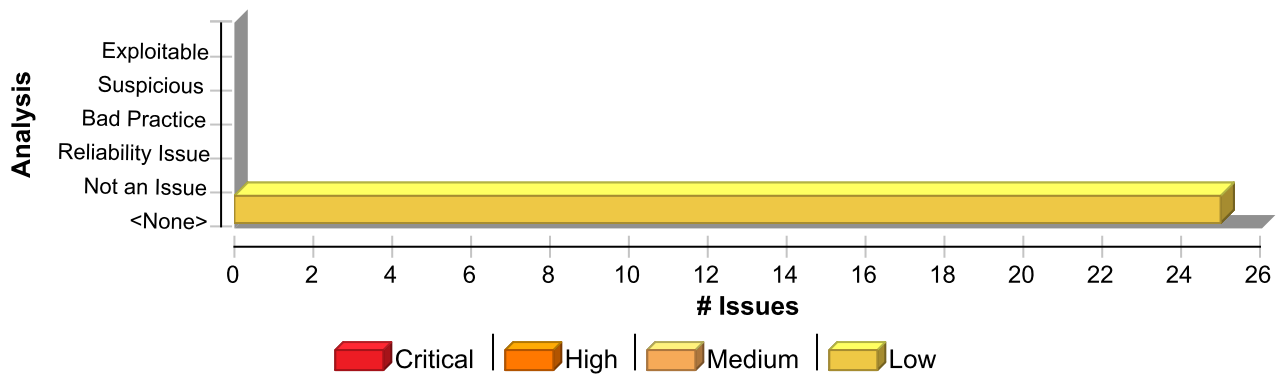
```
try {
    doExchange();
}
catch (Exception e) {
    logger.error("doExchange failed", e);
}
```

However, if `doExchange()` is modified to throw a new type of exception that should be handled in some different kind of way, the broad catch block will prevent the compiler from pointing out the situation. Further, the new catch block will now also handle exceptions derived from `RuntimeException` such as `ClassCastException`, and `NullPointerException`, which is not the programmer's intent.

Recommendation

Do not catch broad exception classes like `Exception`, `Throwable`, `Error`, or `Exception` except at the very top level of the program or thread.

Issue Summary



Engine Breakdown

	SCA	WebInspect	SecurityScope	Total
Poor Error Handling: Overly Broad Catch	25	0	0	25
Total	25	0	0	25

Poor Error Handling: Overly Broad Catch

Low

Package: gov.va.med.pharmacy.jaxrs.drug.service.impl

PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/drug/service/impl/DrugSearchImpl.java, line 54 (Poor Error Handling: Overly Broad Catch)

Low

Issue Details

Kingdom: Errors

Scan Engine: SCA (Structural)

Sink Details

Sink: CatchBlock

Enclosing Method: search()

File: PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/drug/service/impl/DrugSearchImpl.java:54

Taint Flags:

```

51  searchResponse.setSuccess(searchResults.getSuccess());
52
53
54  } catch (Exception e) {
55  searchResponse.setSuccess(false);
56
57  searchResponse.setErrorMessage("Error while searching drug: " + e.getMessage());

```

Package: gov.va.med.pharmacy.jaxrs.eAnde.services.impl

PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/eAnde/services/impl/PatientInfoService.java, line 47 (Poor Error Handling: Overly Broad Catch)

Low

Issue Details

Kingdom: Errors

Scan Engine: SCA (Structural)

Sink Details

Poor Error Handling: Overly Broad Catch**Low****Package:** gov.va.med.pharmacy.jaxrs.eAnde.services.impl**PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/eAnde/services/impl/PatientInfoService.java, line 47 (Poor Error Handling: Overly Broad Catch)****Low****Sink:** CatchBlock**Enclosing Method:** fetchEligibilityStatusByKey()**File:** PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/eAnde/services/impl/PatientInfoService.java:47**Taint Flags:**

```
44 // response.setEnrollmentStatus(getPatientInfoDao().lookupPatientByKey(  
45 //request.getPatientInfo().getKey()).getEnrollmentStatus());  
46 }  
47 catch (Exception e)  
48 {  
49 response.setSuccess(false);  
50 response.setErrorMessage(e.getClass() + ": " + e.getMessage());
```

Package: gov.va.med.pharmacy.jaxrs.inboundncdpdpmessage.service.impl**PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/inboundncdpdpmessage/service/impl/InboundNCPDPMMessageServiceImpl.java, line 336 (Poor Error Handling: Overly Broad Catch)****Low****Issue Details****Kingdom:** Errors**Scan Engine:** SCA (Structural)**Sink Details****Sink:** CatchBlock**Enclosing Method:** getInboundMessage()**File:** PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/inboundncdpdpmessage/service/impl/InboundNCPDPMMessageServiceImpl.java:336**Taint Flags:**

```
333  
334 response = responseBuffer.toString();  
335  
336 } catch (Exception e) {  
337  
338 LOG.error("Error in InboundNCPDPMMessageServiceImpl:" + e.getMessage());  
339
```

Package: gov.va.med.pharmacy.jaxrs.mvi.service.impl**PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/mvi/service/impl/PatientSearchImpl.java, line 93 (Poor Error Handling: Overly Broad Catch)****Low****Issue Details****Kingdom:** Errors**Scan Engine:** SCA (Structural)**Sink Details**

Poor Error Handling: Overly Broad Catch**Low****Package:** gov.va.med.pharmacy.jaxrs.mvi.service.impl**PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/mvi/service/impl/PatientSearchImpl.java, line 93 (Poor Error Handling: Overly Broad Catch)****Low****Sink:** CatchBlock**Enclosing Method:** searchPatientByName()**File:** PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/mvi/service/impl/PatientSearchImpl.java:93**Taint Flags:**

```
90 break;
91 }
92
93 } catch (Exception e) {
94 LOG.error("Error in PatientSearchImpl:"+e.getMessage());
95
96 searchResponse.setSuccess(false);
```

Package: gov.va.med.pharmacy.jaxrs.outboundncpdpmmessage.service.impl**PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/outboundncpdpmmessage/service/impl/OutboundNCPDPMMessageServiceImpl.java, line 198 (Poor Error Handling: Overly Broad Catch)****Low****Issue Details****Kingdom:** Errors**Scan Engine:** SCA (Structural)**Sink Details****Sink:** CatchBlock**Enclosing Method:** sendOutboundMessage()**File:** PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/outboundncpdpmmessage/service/impl/OutboundNCPDPMMessageServiceImpl.java:198**Taint Flags:**

```
195 wsResponse.setSuccess(false);
196 }
197
198 } catch (Exception e) {
199
200 LOG.error("Error in OutboundNCPDPMMessageServiceImpl:" + e.getMessage());
201
```

Package: gov.va.med.pharmacy.jaxrs.provider.service.impl**PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/provider/service/impl/ProviderSearchImpl.java, line 53 (Poor Error Handling: Overly Broad Catch)****Low****Issue Details****Kingdom:** Errors**Scan Engine:** SCA (Structural)

Poor Error Handling: Overly Broad Catch**Low****Package:** gov.va.med.pharmacy.jaxrs.provider.service.impl**PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/provider/service/impl/ProviderSearchImpl.java, line 53 (Poor Error Handling: Overly Broad Catch)****Low****Sink Details****Sink:** CatchBlock**Enclosing Method:** search()**File:** PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/provider/service/impl/ProviderSearchImpl.java:53**Taint Flags:**

```
50
51
52
53 } catch (Exception e) {
54
55 LOG.error("Error in ProviderSearchImpl:"+e.getMessage());
56
```

Package: gov.va.med.pharmacy.jaxrs.vistaoutboundmsg.service.impl**PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/vistaoutboundmsg/service/impl/VistaOutboundMsgImpl.java, line 132 (Poor Error Handling: Overly Broad Catch)****Low****Issue Details****Kingdom:** Errors**Scan Engine:** SCA (Structural)**Sink Details****Sink:** CatchBlock**Enclosing Method:** persistXMLMessage()**File:** PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/vistaoutboundmsg/service/impl/VistaOutboundMsgImpl.java:132**Taint Flags:**

```
129 wsResponse.setSuccess(true);
130
131
132 } catch (Exception e) {
133
134 LOG.error("Error in VistaOutboundMsgImpl:"+e.getMessage());
135
```

PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/vistaoutboundmsg/service/impl/VistaOutboundMsgImpl.java, line 88 (Poor Error Handling: Overly Broad Catch)**Low****Issue Details****Kingdom:** Errors**Scan Engine:** SCA (Structural)

Poor Error Handling: Overly Broad Catch**Low****Package:** gov.va.med.pharmacy.jaxrs.vistaoutboundmsg.service.impl**PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/vistaoutboundmsg/service/impl/VistaOutboundMsgImpl.java, line 88 (Poor Error Handling: Overly Broad Catch)****Low****Sink Details****Sink:** CatchBlock**Enclosing Method:** persistMessage()**File:** PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/vistaoutboundmsg/service/impl/VistaOutboundMsgImpl.java:88**Taint Flags:**

```
85 wsResponse.setSuccess(true);
86
87
88 } catch (Exception e) {
89
90 LOG.error("Error in VistaOutboundMsgImpl:"+e.getMessage());
91
```

Package: gov.va.med.pharmacy.jms.messaging**PS_INB_ERX_JMS/src/main/java/gov/va/med/pharmacy/jms/messaging/InboundMsgProcessor.java, line 57 (Poor Error Handling: Overly Broad Catch)****Low****Issue Details****Kingdom:** Errors**Scan Engine:** SCA (Structural)**Sink Details****Sink:** CatchBlock**Enclosing Method:** getERxMessage()**File:** PS_INB_ERX_JMS/src/main/java/gov/va/med/pharmacy/jms/messaging/InboundMsgProcessor.java:57**Taint Flags:**

```
54
55 inboundNcpdpMsgService.saveInboundERx(inboundERx);
56
57 } catch (Exception e) {
58
59 LOG.error("Error in getERxMessage:"+e.getMessage());
60 }
```

Package: gov.va.med.pharmacy.persistence.service.impl**PS_INB_ERX_Model/src/main/java/gov/va/med/pharmacy/persistence/service/impl/UserServiceImpl.java, line 53 (Poor Error Handling: Overly Broad Catch)****Low****Issue Details****Kingdom:** Errors**Scan Engine:** SCA (Structural)

Poor Error Handling: Overly Broad Catch**Low****Package:** gov.va.med.pharmacy.persistence.service.impl**PS_INB_ERX_Model/src/main/java/gov/va/med/pharmacy/persistence/service/impl/UserServiceImpl.java, line 53 (Poor Error Handling: Overly Broad Catch)****Low****Sink Details****Sink:** CatchBlock**Enclosing Method:** updateVAUser()**File:** PS_INB_ERX_Model/src/main/java/gov/va/med/pharmacy/persistence/service/impl/UserServiceImpl.java:53**Taint Flags:**

```
50 {  
51     userDao.save(user);  
52  
53 } catch (Exception e) {  
54     e.printStackTrace();  
55 }  
56 }
```

PS_INB_ERX_Model/src/main/java/gov/va/med/pharmacy/persistence/service/impl/UserServiceImpl.java, line 40 (Poor Error Handling: Overly Broad Catch)**Low****Issue Details****Kingdom:** Errors**Scan Engine:** SCA (Structural)**Sink Details****Sink:** CatchBlock**Enclosing Method:** addNewVAUser()**File:** PS_INB_ERX_Model/src/main/java/gov/va/med/pharmacy/persistence/service/impl/UserServiceImpl.java:40**Taint Flags:**

```
37 {  
38     userDao.save(user);  
39  
40 } catch (Exception e) {  
41     // TODO Auto-generated catch block  
42     e.printStackTrace();  
43 }
```

Package: gov.va.med.pharmacy.utility**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/ESAPIValidator.java, line 254 (Poor Error Handling: Overly Broad Catch)****Low****Issue Details****Kingdom:** Errors**Scan Engine:** SCA (Structural)**Sink Details****Sink:** CatchBlock

Poor Error Handling: Overly Broad Catch**Low****Package:** gov.va.med.pharmacy.utility**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/ESAPIValidator.java, line 254 (Poor Error Handling: Overly Broad Catch)****Low****Enclosing Method:** isValidInput()**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/ESAPIValidator.java:254**Taint Flags:**

```
251 try {
252     validateStringInput(input, type);
253     return true;
254 } catch (Exception e) {
255     return false;
256 }
257 }
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/ESAPIValidator.java, line 97 (Poor Error Handling: Overly Broad Catch)**Low****Issue Details****Kingdom:** Errors**Scan Engine:** SCA (Structural)**Sink Details****Sink:** CatchBlock**Enclosing Method:** validateStringInput()**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/ESAPIValidator.java:97**Taint Flags:**

```
94 input = input.replace('\n', ' ').replace('\r', ' ');
95 try {
96     return validator().getValidInput("logForging", input, "logForging", Integer.MAX_VALUE,
false, false);
97 } catch (Exception e) {
98     return null;
99 }
100
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/ESAPIValidator.java, line 135 (Poor Error Handling: Overly Broad Catch)**Low****Issue Details****Kingdom:** Errors**Scan Engine:** SCA (Structural)**Sink Details****Sink:** CatchBlock**Enclosing Method:** validateStringInput()**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/ESAPIValidator.java:135**Taint Flags:**

Poor Error Handling: Overly Broad Catch**Low****Package: gov.va.med.pharmacy.utility****PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/ESAPIValidator.java, line 135 (Poor Error Handling: Overly Broad Catch)****Low**

```
132 input = input.replace('\n', ' ').replace('\r', ' ');
133 try {
134     return validator().getValidInput("privacyViolation", input, "privacyViolation",
Integer.MAX_VALUE, false, false);
135 } catch (Exception e) {
136     return null;
137 }
138
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/ESAPIValidator.java, line 144 (Poor Error Handling: Overly Broad Catch)**Low****Issue Details****Kingdom:** Errors**Scan Engine:** SCA (Structural)**Sink Details****Sink:** CatchBlock**Enclosing Method:** validateStringInput()**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/ESAPIValidator.java:144**Taint Flags:**

```
141 input = input.replace('\n', ' ').replace('\r', ' ');
142 try {
143     return validator().getValidInput("sqlInjection", input, "sqlInjection",
Integer.MAX_VALUE, false, false);
144 } catch (Exception e) {
145     return null;
146 }
147
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/ESAPIValidator.java, line 151 (Poor Error Handling: Overly Broad Catch)**Low****Issue Details****Kingdom:** Errors**Scan Engine:** SCA (Structural)**Sink Details****Sink:** CatchBlock**Enclosing Method:** validateStringInput()**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/ESAPIValidator.java:151**Taint Flags:**

```
148 case SYSTEM_INFORMATION_LEAK_EXTERNAL:
149     try {
```

Poor Error Handling: Overly Broad Catch**Low****Package: gov.va.med.pharmacy.utility****PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/
ESAPIValidator.java, line 151 (Poor Error Handling: Overly Broad Catch)****Low**

```
150 return validator().getValidInput("systemInformationLeakExternal", input,  
"systemInformationLeakExternal",Integer.MAX_VALUE, false, false);  
151 } catch (Exception e) {  
152 return null;  
153 }  
154
```

Package: gov.va.med.pharmacy.web.administration**PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/administration/
UserManagementController.java, line 441 (Poor Error Handling: Overly Broad
Catch)****Low****Issue Details****Kingdom:** Errors**Scan Engine:** SCA (Structural)**Sink Details****Sink:** CatchBlock**Enclosing Method:** processForm()**File:** PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/administration/UserManagementController.java:441**Taint Flags:**

```
438  
439 // one exception for any error (add, update or delete).  
440  
441 } catch (Exception ex) {  
442 result.addError(new ObjectError(USER_MANAGEMENT_MODEL, "A system problem is preventing  
the action to update the user at this time. Please report this error to the production  
support."));  
443  
444 }
```

**PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/administration/
PharmacyManagementController.java, line 270 (Poor Error Handling: Overly
Broad Catch)****Low****Issue Details****Kingdom:** Errors**Scan Engine:** SCA (Structural)**Sink Details****Sink:** CatchBlock**Enclosing Method:** updatePharmacy()**File:** PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/administration/PharmacyManagementController.java:270**Taint Flags:**

Poor Error Handling: Overly Broad Catch**Low****Package: gov.va.med.pharmacy.web.administration****PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/administration/PharmacyManagementController.java, line 270 (Poor Error Handling: Overly Broad Catch)****Low**

```
267 errorsList.add("Update Failed. Unable to save record. Please contact production
support.");
268 }
269 }
270 catch (Exception e) {
271
272 e.printStackTrace();
273
```

PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/administration/PharmacyManagementController.java, line 599 (Poor Error Handling: Overly Broad Catch)**Low****Issue Details****Kingdom:** Errors**Scan Engine:** SCA (Structural)**Sink Details****Sink:** CatchBlock**Enclosing Method:** addNewPharmacy()**File:** PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/administration/PharmacyManagementController.java:599**Taint Flags:**

```
596
597 hasErrors = true;
598 }
599 catch (Exception e) {
600
601 e.printStackTrace();
602
```

PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/administration/UserManagementController.java, line 545 (Poor Error Handling: Overly Broad Catch)**Low****Issue Details****Kingdom:** Errors**Scan Engine:** SCA (Structural)**Sink Details****Sink:** CatchBlock**Enclosing Method:** processForm()**File:** PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/administration/UserManagementController.java:545**Taint Flags:**

Poor Error Handling: Overly Broad Catch**Low****Package:** gov.va.med.pharmacy.web.administration**PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/administration/
UserManagementController.java, line 545 (Poor Error Handling: Overly Broad
Catch)****Low**

```
542 }  
543  
544  
545 } catch (Exception ex) {  
546  
547     result.addError(new ObjectError(USER_MANAGEMENT_MODEL, "A system problem is preventing  
the action to add a new user at this time. Please report this error to the production  
support."));  
548
```

Package: gov.va.med.pharmacy.web.auth**PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/auth/
LoginController.java, line 136 (Poor Error Handling: Overly Broad Catch)****Low****Issue Details****Kingdom:** Errors**Scan Engine:** SCA (Structural)**Sink Details****Sink:** CatchBlock**Enclosing Method:** authenticateUser()**File:** PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/auth/LoginController.java:136**Taint Flags:**

```
133 } catch (IntrusionException e) {  
134 // TODO Auto-generated catch block  
135 e.printStackTrace();  
136 } catch (Exception e) {  
137 // TODO Auto-generated catch block  
138 e.printStackTrace();  
139 }
```

Package: gov.va.med.pharmacy.web.reports**PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/reports/
SummaryReportController.java, line 170 (Poor Error Handling: Overly Broad
Catch)****Low****Issue Details****Kingdom:** Errors**Scan Engine:** SCA (Structural)**Sink Details****Sink:** CatchBlock**Enclosing Method:** csvExport()

Poor Error Handling: Overly Broad Catch**Low****Package:** gov.va.med.pharmacy.web.reports**PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/reports/SummaryReportController.java, line 170 (Poor Error Handling: Overly Broad Catch)****Low**

File: PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/reports/SummaryReportController.java:170
Taint Flags:

```
167 response.getOutputStream().flush();
168
169
170 } catch (Exception e) {
171 // TODO Auto-generated catch block
172 e.printStackTrace();
173 }
```

Package: gov.va.med.pharmacy.web.track**PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/track/TrackRxController.java, line 220 (Poor Error Handling: Overly Broad Catch)****Low****Issue Details**

Kingdom: Errors
Scan Engine: SCA (Structural)

Sink Details

Sink: CatchBlock
Enclosing Method: csvExport()
File: PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/track/TrackRxController.java:220
Taint Flags:

```
217 }
218
219
220 } catch (Exception e) {
221 // TODO Auto-generated catch block
222 e.printStackTrace();
223 }
```

Package: gov.va.med.pharmacy.wsclients.eAnde**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/eAnde/EeSummaryPortService.java, line 33 (Poor Error Handling: Overly Broad Catch)****Low****Issue Details**

Kingdom: Errors
Scan Engine: SCA (Structural)

Sink Details

Sink: CatchBlock
Enclosing Method: ()

Poor Error Handling: Overly Broad Catch**Low****Package:** gov.va.med.pharmacy.wsclients.eAnde**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/eAnde/EeSummaryPortService.java, line 33 (Poor Error Handling: Overly Broad Catch)****Low****File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/eAnde/EeSummaryPortService.java:33**Taint Flags:**

```
30 URL url = null;
31 try {
32 url = EeSummaryPortService.class.getResource("wsdl/eAnde/eeSummary.wsdl");
33 } catch (Exception e) {
34 java.util.logging.Logger.getLogger(EeSummaryPortService.class.getName())
35 .log(java.util.logging.Level.INFO,
36 "Can not initialize the default wsdl from {0}", "wsdl/eAnde/eeSummary.wsdl");
```

Package: gov.va.med.pharmacy.wsclients.mvi**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/VAIdM.java, line 30 (Poor Error Handling: Overly Broad Catch)****Low****Issue Details****Kingdom:** Errors**Scan Engine:** SCA (Structural)**Sink Details****Sink:** CatchBlock**Enclosing Method:** ()**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/VAIdM.java:30**Taint Flags:**

```
27 URL url = null;
28 try {
29 url = VAIdM.class.getResource("wsdl/mvi/PREeRX_IdmHl7v3_FlatFile.wsdl");
30 } catch (Exception e) {
31 java.util.logging.Logger.getLogger(VAIdM.class.getName())
32 .log(java.util.logging.Level.INFO,
33 "Can not initialize the default wsdl from {0}", "wsdl/mvi/PREeRX_IdmHl7v3_FlatFile.wsdl");
```

Poor Error Handling: Overly Broad Throws (14 issues)

Abstract

The method throws a generic exception making it harder for callers to do a good job of error handling and recovery.

Explanation

Declaring a method to throw `Exception` or `Throwable` makes it difficult for callers to do good error handling and error recovery. Java's exception mechanism is set up to make it easy for callers to anticipate what can go wrong and write code to handle each specific exceptional circumstance. Declaring that a method throws a generic form of exception defeats this system.

Example: The following method throws three types of exceptions.

```
public void doExchange()  
    throws IOException, InvocationTargetException,  
           SQLException {  
    ...  
}
```

While it might seem tidier to write

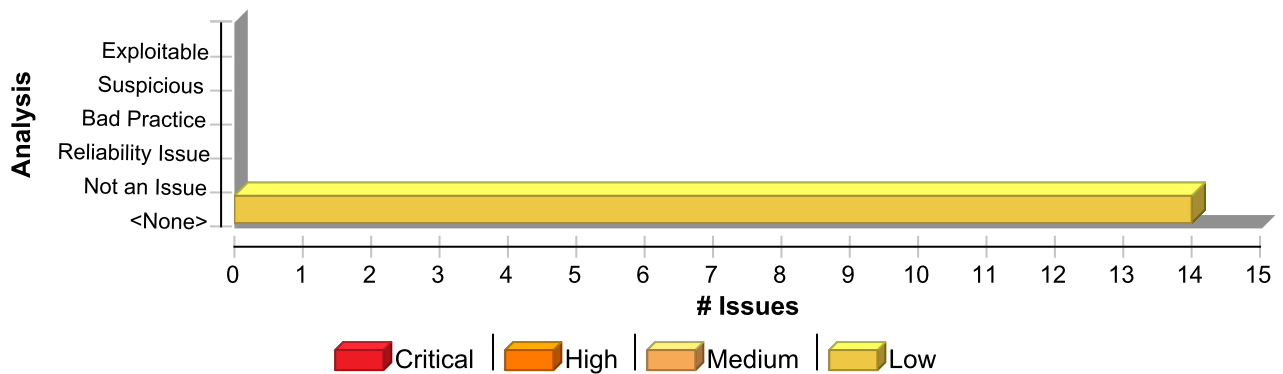
```
public void doExchange()  
    throws Exception {  
    ...  
}
```

doing so hampers the caller's ability to understand and handle the exceptions that occur. Further, if a later revision of `doExchange()` introduces a new type of exception that should be treated differently than previous exceptions, there is no easy way to enforce this requirement.

Recommendation

Do not declare methods to throw `Exception` or `Throwable`. If the exceptions thrown by a method are not recoverable or should not generally be caught by the caller, consider throwing unchecked exceptions rather than checked exceptions. This can be accomplished by implementing exception classes that extend `RuntimeException` or `Error` instead of `Exception`, or add a try/catch wrapper in your method to convert checked exceptions to unchecked exceptions.

Issue Summary



Engine Breakdown

	SCA	WebInspect	SecurityScope	Total
Poor Error Handling: Overly Broad Throws	14	0	0	14
Total	14	0	0	14

Poor Error Handling: Overly Broad Throws

Low

Package: gov.va.med.pharmacy.jaxrs.drug.dao

PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/drug/dao/DrugSearchDao.java, line 13 (Poor Error Handling: Overly Broad Throws)

Low

Issue Details

Kingdom: Errors

Scan Engine: SCA (Structural)

Sink Details

Sink: Function: lookupDrug

Enclosing Method: lookupDrug()

File: PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/drug/dao/DrugSearchDao.java:13

Taint Flags:

```

10 * @return
11 * @throws Exception
12 */
13 public Drug lookupDrug(Drug drugObj) throws Exception;
14 }
15
16 undefined

```

Package: gov.va.med.pharmacy.jaxrs.drug.dao.impl

PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/drug/dao/impl/DrugRpc.java, line 27 (Poor Error Handling: Overly Broad Throws)

Low

Issue Details

Kingdom: Errors

Scan Engine: SCA (Structural)

Sink Details

Poor Error Handling: Overly Broad Throws

Low

Package: gov.va.med.pharmacy.jaxrs.drug.dao.impl

PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/drug/dao/impl/DrugRpc.java, line 27 (Poor Error Handling: Overly Broad Throws)

Low

Sink: Function: lookupDrug

Enclosing Method: lookupDrug()

File: PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/drug/dao/impl/DrugRpc.java:27

Taint Flags:

```
24 this.vistaLinkConnectionUtility = vistaLinkConnectionUtility;
25 }
26
27 public Drug lookupDrug(Drug searchObj) throws Exception {
28
29     Drug searchResults = new Drug();
30     //inject
```

Package: gov.va.med.pharmacy.jaxrs.eAnde.dao

PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/eAnde/dao/PatientInfoDao.java, line 7 (Poor Error Handling: Overly Broad Throws)

Low

Issue Details

Kingdom: Errors

Scan Engine: SCA (Structural)

Sink Details

Sink: Function: lookupPatientByKey

Enclosing Method: lookupPatientByKey()

File: PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/eAnde/dao/PatientInfoDao.java:7

Taint Flags:

```
4
5 public interface PatientInfoDao {
6
7     public PatientInfo lookupPatientByKey(String key) throws Exception;
8 }
9
10 undefined
```

Package: gov.va.med.pharmacy.jaxrs.eAnde.services.impl

PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/eAnde/services/impl/EESummary_Client.java, line 56 (Poor Error Handling: Overly Broad Throws)

Low

Issue Details

Kingdom: Errors

Scan Engine: SCA (Structural)

Sink Details

Sink: Function: returnResponse

Poor Error Handling: Overly Broad Throws**Low****Package:** gov.va.med.pharmacy.jaxrs.eAnde.services.impl**PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/eAnde/services/impl/EESummary_Client.java, line 56 (Poor Error Handling: Overly Broad Throws)****Low****Enclosing Method:** returnResponse()**File:** PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/eAnde/services/impl/EESummary_Client.java:56**Taint Flags:**

```
53 private static final String KEYSTORE_FILE_NAME_PROPERTY = "keystore.filename";
54 private static final String KEYSTORE_PASSWD_PROPERTY = "keystore.password";
55
56 public getEESummaryResponse returnResponse(String key) throws java.lang.Exception {
57
58 Properties properties = new Properties();
59
```

Package: gov.va.med.pharmacy.jaxrs.mvi.dao**PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/mvi/dao/PatientSearchDao.java, line 15 (Poor Error Handling: Overly Broad Throws)****Low****Issue Details****Kingdom:** Errors**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Function: lookupPatientByName**Enclosing Method:** lookupPatientByName()**File:** PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/mvi/dao/PatientSearchDao.java:15**Taint Flags:**

```
12 * @return Patient
13 * @throws Exception
14 */
15 public Patient lookupPatientByName(Patient patientObj) throws Exception;
16 }
17
18 undefined
```

Package: gov.va.med.pharmacy.jaxrs.mvi.dao.impl**PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/mvi/dao/impl/MVIClient.java, line 150 (Poor Error Handling: Overly Broad Throws)****Low****Issue Details****Kingdom:** Errors**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Function: getMVIData**Enclosing Method:** getMVIData()

Poor Error Handling: Overly Broad Throws**Low****Package:** gov.va.med.pharmacy.jaxrs.mvi.dao.impl**PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/mvi/dao/impl/MVIClient.java, line 150 (Poor Error Handling: Overly Broad Throws)****Low****File:** PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/mvi/dao/impl/MVIClient.java:150**Taint Flags:**

```
147 // @Autowired
148 // private Environment environment;
149
150 public Patient getMVIData(Patient patientSearchObj) throws java.lang.Exception {
151
152 // The following prints out a lot of debug information.
153 // It should only be uncommented in dev environment or for
```

Package: gov.va.med.pharmacy.jaxrs.provider.dao**PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/provider/dao/ProviderSearchDao.java, line 14 (Poor Error Handling: Overly Broad Throws)****Low****Issue Details****Kingdom:** Errors**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Function: lookupProvider**Enclosing Method:** lookupProvider()**File:** PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/provider/dao/ProviderSearchDao.java:14**Taint Flags:**

```
11 * @return Provider
12 * @throws Exception
13 */
14 public Provider lookupProvider(Provider providerObj) throws Exception;
15 }
16
17 undefined
```

Package: gov.va.med.pharmacy.jaxrs.provider.dao.impl**PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/provider/dao/impl/ProviderRPC.java, line 19 (Poor Error Handling: Overly Broad Throws)****Low****Issue Details****Kingdom:** Errors**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Function: lookupProvider**Enclosing Method:** lookupProvider()**File:** PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/provider/dao/impl/ProviderRPC.java:19

Poor Error Handling: Overly Broad Throws**Low****Package:** gov.va.med.pharmacy.jaxrs.provider.dao.impl**PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/provider/dao/impl/ProviderRPC.java, line 19 (Poor Error Handling: Overly Broad Throws)****Low****Taint Flags:**

```
16
17 private static final org.apache.logging.log4j.Logger LOG =
org.apache.logging.log4j.LogManager.getLogger(ProviderRPC.class);
18
19 public Provider lookupProvider(Provider searchObj) throws Exception {
20
21 Provider searchResults = new Provider();
22
```

Package: gov.va.med.pharmacy.jms.messaging**PS_INB_ERX_JMS/src/main/java/gov/va/med/pharmacy/jms/messaging/InboundMsgProducer.java, line 21 (Poor Error Handling: Overly Broad Throws)****Low****Issue Details****Kingdom:** Errors**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Function: enqueueERxMessage**Enclosing Method:** enqueueERxMessage()**File:** PS_INB_ERX_JMS/src/main/java/gov/va/med/pharmacy/jms/messaging/InboundMsgProducer.java:21**Taint Flags:**

```
18 @Autowired
19 private JmsTemplate jmsTemplate;
20
21 public void enqueueERxMessage(MessageType eRxMessage) throws Exception {
22
23 try {
24
```

Package: gov.va.med.pharmacy.persistence.service**PS_INB_ERX_Model/src/main/java/gov/va/med/pharmacy/persistence/service/UserService.java, line 21 (Poor Error Handling: Overly Broad Throws)****Low****Issue Details****Kingdom:** Errors**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Function: updateUser**Enclosing Method:** updateUser()**File:** PS_INB_ERX_Model/src/main/java/gov/va/med/pharmacy/persistence/service/UserService.java:21

Poor Error Handling: Overly Broad Throws**Low****Package: gov.va.med.pharmacy.persistence.service****PS_INB_ERX_Model/src/main/java/gov/va/med/pharmacy/persistence/service/UserService.java, line 21 (Poor Error Handling: Overly Broad Throws)****Low****Taint Flags:**

```
18
19 public void updateUserInfo (VaUser user);
20
21 public void updateUsers (List<VaUser> users) throws Exception;
22
23 public void deleteUsers (List<VaUser> users) throws Exception;
24
```

PS_INB_ERX_Model/src/main/java/gov/va/med/pharmacy/persistence/service/OutboundNcpdpMsgService.java, line 7 (Poor Error Handling: Overly Broad Throws)**Low****Issue Details****Kingdom:** Errors**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Function: saveOutboundMsg**Enclosing Method:** saveOutboundMsg()**File:** PS_INB_ERX_Model/src/main/java/gov/va/med/pharmacy/persistence/service/OutboundNcpdpMsgService.java:7**Taint Flags:**

```
4
5 public interface OutboundNcpdpMsgService {
6
7 public void saveOutboundMsg (OutboundNcpdpMsgEntity outboundMsg) throws Exception ;
8
9 public OutboundNcpdpMsgEntity findById (long id);
10 }
```

PS_INB_ERX_Model/src/main/java/gov/va/med/pharmacy/persistence/service/PharmacyService.java, line 17 (Poor Error Handling: Overly Broad Throws)**Low****Issue Details****Kingdom:** Errors**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Function: findById**Enclosing Method:** findById()**File:** PS_INB_ERX_Model/src/main/java/gov/va/med/pharmacy/persistence/service/PharmacyService.java:17**Taint Flags:**

```
14
```

Poor Error Handling: Overly Broad Throws

Low

Package: gov.va.med.pharmacy.persistence.service

PS_INB_ERX_Model/src/main/java/gov/va/med/pharmacy/persistence/service/PharmacyService.java, line 17 (Poor Error Handling: Overly Broad Throws)

Low

```
15 public PharmacyEntity findByNCPDPIId(String NCPDPIId);
16
17 public PharmacyEntity findById(Long pharmacyId) throws Exception;
18
19 public void updatePharmacyInfo(PharmacyEntity pharmacy) throws HibernateException;
20
```

PS_INB_ERX_Model/src/main/java/gov/va/med/pharmacy/persistence/service/InboundNcpdpMsgService.java, line 7 (Poor Error Handling: Overly Broad Throws)

Low

Issue Details

Kingdom: Errors

Scan Engine: SCA (Structural)

Sink Details

Sink: Function: saveInboundERx

Enclosing Method: saveInboundERx()

File: PS_INB_ERX_Model/src/main/java/gov/va/med/pharmacy/persistence/service/InboundNcpdpMsgService.java:7

Taint Flags:

```
4
5 public interface InboundNcpdpMsgService {
6
7 void saveInboundERx(InboundNcpdpMsgEntity inboundERx) throws Exception ;
8
9 }
10
```

PS_INB_ERX_Model/src/main/java/gov/va/med/pharmacy/persistence/service/UserService.java, line 23 (Poor Error Handling: Overly Broad Throws)

Low

Issue Details

Kingdom: Errors

Scan Engine: SCA (Structural)

Sink Details

Sink: Function: deleteUsers

Enclosing Method: deleteUsers()

File: PS_INB_ERX_Model/src/main/java/gov/va/med/pharmacy/persistence/service/UserService.java:23

Taint Flags:

```
20
21 public void updateUsers(List<VaUser> users) throws Exception;
22
23 public void deleteUsers(List<VaUser> users) throws Exception;
```

Poor Error Handling: Overly Broad Throws		Low
Package: gov.va.med.pharmacy.persistence.service		
PS_INB_ERX_Model/src/main/java/gov/va/med/pharmacy/persistence/service/UserService.java, line 23 (Poor Error Handling: Overly Broad Throws)		Low
<div> <div>24</div> <div>25 }</div> <div>26</div> </div>		

Poor Error Handling: Throw Inside Finally (1 issue)

Abstract

Using a `throw` statement inside a `finally` block breaks the logical progression through the `try-catch-finally`.

Explanation

In Java, `finally` blocks are always executed after their corresponding `try-catch` blocks and are often used to free allocated resources, such as file handles or database cursors. Throwing an exception in a `finally` block can bypass critical cleanup code since normal program execution will be disrupted.

Example 1: In the following code, the call to `stmt.close()` is bypassed when the `FileNotFoundException` is thrown.

```
public void processTransaction(Connection conn) throws FileNotFoundException
{
    FileInputStream fis = null;
    Statement stmt = null;
    try
    {
        stmt = conn.createStatement();
        fis = new FileInputStream("badFile.txt");
        ...
    }
    catch (FileNotFoundException fe)
    {
        log("File not found.");
    }
    catch (SQLException se)
    {
        //handle error
    }
    finally
    {
        if (fis == null)
        {
            throw new FileNotFoundException();
        }

        if (stmt != null)
        {
            try
            {
                stmt.close();
            }
            catch (SQLException e)
            {
                log(e);
            }
        }
    }
}
```

This category is from the Cigital Java Rulepack. <http://www.cigital.com/>

Recommendation

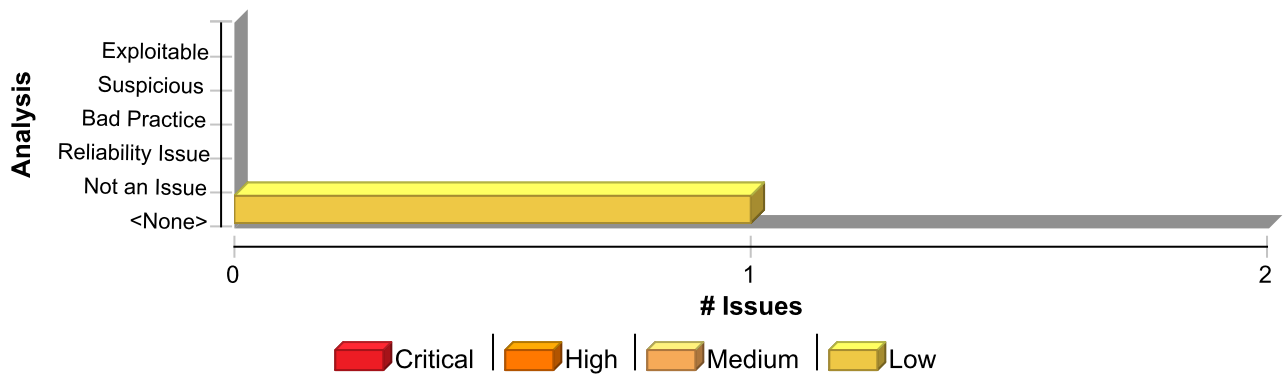
Never throw exceptions from within `finally` blocks. If you must re-throw an exception, do it inside a `catch` block so as not to interrupt the normal execution of the `finally` block.

Example 2: The following code re-throws the `FileNotFoundException` in the `catch` block.

```
public void processTransaction(Connection conn) throws FileNotFoundException
{
    FileInputStream fis = null;
    Statement stmt = null;
    try
    {
        stmt = conn.createStatement();
        fis = new FileInputStream("badFile.txt");
        ...
    }
    catch (FileNotFoundException fe)
    {
        log("File not found.");
        throw fe;
    }
    catch (SQLException se)
    {
        //handle error
    }
    finally
    {
        if (fis != null)
        {
            try
            {
                fis.close();
            }
            catch (IOException ie)
            {
                log(ie);
            }
        }

        if (stmt != null)
        {
            try
            {
                stmt.close();
            }
            catch (SQLException e)
            {
                log(e);
            }
        }
    }
}
```

Issue Summary



Engine Breakdown

	SCA	WebInspect	SecurityScope	Total
Poor Error Handling: Throw Inside Finally	1	0	0	1
Total	1	0	0	1

Poor Error Handling: Throw Inside Finally

Low

Package: gov.va.med.pharmacy.utility

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/VistaLinkConnectionUtility.java, line 159 (Poor Error Handling: Throw Inside Finally)

Low

Issue Details

Kingdom: Errors

Scan Engine: SCA (Structural)

Sink Details

Sink: FinallyBlock

Enclosing Method: getConnection()

File: PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/VistaLinkConnectionUtility.java:159

Taint Flags:

```

156 catch (ResourceException e) {
157 //LOG.error("VistALink error while retrieving connection.", e);
158 throw new ResourceException(e);
159 }finally {
160 if (ic != null){
161 ic.close();
162 };

```

Poor Style: Confusing Naming (167 issues)

Abstract

The class contains a field and a method with the same name.

Explanation

It is confusing to have a member field and a method with the same name. It makes it easy for a programmer to accidentally call the method when attempting to access the field or vice versa.

Example 1:

```
public class Totaller {  
    private int total;  
    public int total() {  
        ...  
    }  
}
```

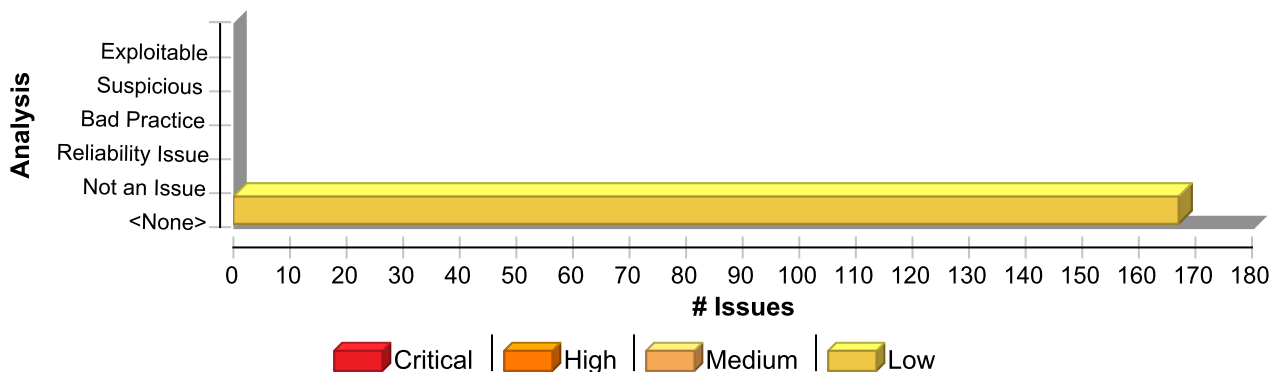
Recommendation

Rename either the method or the field. If the method returns the field, consider following the standard getter/setter naming convention.

Example 2: The code in Example 1 could be rewritten in the following way:

```
public class Totaller {  
    private int total;  
    public int getTotal() {  
        ...  
    }  
}
```

Issue Summary



Engine Breakdown

	SCA	WebInspect	SecurityScope	Total
Poor Style: Confusing Naming	167	0	0	167
Total	167	0	0	167

Poor Style: Confusing Naming

Low

Package: gov.va.med.pharmacy.wsclients.eAnde

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/eAnde/NotificationType.java, line 35 (Poor Style: Confusing Naming)

Low

Issue Details

Kingdom: Code Quality

Scan Engine: SCA (Structural)

Sink Details

Sink: Field: value

File: PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/eAnde/NotificationType.java:35

Taint Flags:

```
32 LINK("Link"),
33 @XmlEnumValue("Move")
34 MOVE("Move");
35 private final String value;
36
37 NotificationType(String v) {
38     value = v;
```

Package: gov.va.med.pharmacy.wsclients.mvi

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/TableCellVerticalAlign.java, line 38 (Poor Style: Confusing Naming)

Low

Issue Details

Kingdom: Code Quality

Scan Engine: SCA (Structural)

Sink Details

Sink: Field: value

File: PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/TableCellVerticalAlign.java:38

Taint Flags:

```
35 MIDDLE("middle"),
36 @XmlEnumValue("top")
37 TOP("top");
38 private final String value;
39
40 TableCellVerticalAlign(String v) {
41     value = v;
```

Poor Style: Confusing Naming**Low****Package:** gov.va.med.pharmacy.wsclients.mvi**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ParameterizedDataTypeInterval.java, line 29 (Poor Style: Confusing Naming)****Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ParameterizedDataTypeInterval.java:29**Taint Flags:**

```
26
27 @XmlEnumValue("IVL<T>")
28 IVL_T("IVL<T>");
29 private final String value;
30
31 ParameterizedDataTypeInterval(String v) {
32     value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/DataTypeUncertainProbabilisticConceptDescriptor.java, line 29 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/DataTypeUncertainProbabilisticConceptDescriptor.java:29**Taint Flags:**

```
26
27 @XmlEnumValue("UVP<CD>")
28 UVP_CD("UVP<CD>");
29 private final String value;
30
31 DataTypeUncertainProbabilisticConceptDescriptor(String v) {
32     value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/CentralNumic.java, line 35 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)

Poor Style: Confusing Naming**Low****Package:** gov.va.med.pharmacy.wsclients.mvi**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/
CentralNumic.java, line 35 (Poor Style: Confusing Naming)****Low****Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/CentralNumic.java:35**Taint Flags:**

```
32 X_PAR("x-PAR"),  
33 @XmlEnumValue("x-SHH")  
34 X_SHH("x-SHH");  
35 private final String value;  
36  
37 CentralNumic(String v) {  
38     value = v;
```

**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/
DataSetOfCharacterStrings.java, line 29 (Poor Style: Confusing Naming)****Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/DataSetOfCharacterStrings.java:29**Taint Flags:**

```
26  
27 @XmlEnumValue("SET<ST>")  
28 SET_ST("SET<ST>");  
29 private final String value;  
30  
31 DataSetOfCharacterStrings(String v) {  
32     value = v;
```

**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/
ParameterizedDataTypeHistorical.java, line 29 (Poor Style: Confusing Naming)****Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ParameterizedDataTypeHistorical.java:
29**Taint Flags:**

Poor Style: Confusing Naming**Low****Package: gov.va.med.pharmacy.wsclients.mvi****PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/
ParameterizedDataTypeHistorical.java, line 29 (Poor Style: Confusing Naming)****Low**

```
26
27 @XmlEnumValue("HXIT<T>")
28 HXIT_T("HXIT<T>");
29 private final String value;
30
31 ParameterizedDataTypeHistorical(String v) {
32     value = v;
```

**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/
ConceptCodeRelationship.java, line 35 (Poor Style: Confusing Naming)****Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ConceptCodeRelationship.java:35**Taint Flags:**

```
32 HAS_SUBTYPE("hasSubtype"),
33 @XmlEnumValue("smallerThan")
34 SMALLER_THAN("smallerThan");
35 private final String value;
36
37 ConceptCodeRelationship(String v) {
38     value = v;
```

**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/
Pai.java, line 29 (Poor Style: Confusing Naming)****Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/Pai.java:29**Taint Flags:**

```
26
27 @XmlEnumValue("x-YUF")
28 X_YUF("x-YUF");
29 private final String value;
30
31 Pai(String v) {
```

Poor Style: Confusing Naming**Low****Package:** gov.va.med.pharmacy.wsclients.mvi**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/
Pai.java, line 29 (Poor Style: Confusing Naming)****Low**

```
32 value = v;
```

**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/
RealmOfUse.java, line 36 (Poor Style: Confusing Naming)****Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/RealmOfUse.java:36**Taint Flags:**

```
33 NORTH_AMERICA("NorthAmerica"),  
34 USA("USA"),  
35 UV("UV");  
36 private final String value;  
37  
38 RealmOfUse(String v) {  
39 value = v;
```

**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/
TextMediaType.java, line 44 (Poor Style: Confusing Naming)****Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/TextMediaType.java:44**Taint Flags:**

```
41 TEXT_SGML("text/sgml"),  
42 @XmlEnumValue("text/xml")  
43 TEXT_XML("text/xml");  
44 private final String value;  
45  
46 TextMediaType(String v) {  
47 value = v;
```

Poor Style: Confusing Naming	Low
-------------------------------------	------------

Package: gov.va.med.pharmacy.wsclients.mvi

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/DataTypeParametricProbabilityDistribution.java, line 29 (Poor Style: Confusing Naming)	Low
-----------------------------------------------------------------------------------------------------------------------------------------------------------------	------------

Issue Details

Kingdom: Code Quality

Scan Engine: SCA (Structural)

Sink Details

Sink: Field: value

File: PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/DataTypeParametricProbabilityDistribution.java:29

Taint Flags:

```

26
27 @XmlEnumValue("PPD<QTY>")
28 PPD_QTY("PPD<QTY>");
29 private final String value;
30
31 DataTypeParametricProbabilityDistribution(String v) {
32 value = v;

```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ParameterizedDataTypeUncertainValueProbabilistic.java, line 29 (Poor Style: Confusing Naming)	Low
------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------

Issue Details

Kingdom: Code Quality

Scan Engine: SCA (Structural)

Sink Details

Sink: Field: value

File: PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ParameterizedDataTypeUncertainValueProbabilistic.java:29

Taint Flags:

```

26
27 @XmlEnumValue("UVP<T>")
28 UVP_T("UVP<T>");
29 private final String value;
30
31 ParameterizedDataTypeUncertainValueProbabilistic(String v) {
32 value = v;

```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/OregonAthapaskan.java, line 32 (Poor Style: Confusing Naming)	Low
----------------------------------------------------------------------------------------------------------------------------------------	------------

Issue Details

Kingdom: Code Quality

Poor Style: Confusing Naming**Low****Package:** gov.va.med.pharmacy.wsclients.mvi**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/
OregonAthapaskan.java, line 32 (Poor Style: Confusing Naming)****Low****Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/OregonAthapaskan.java:32**Taint Flags:**

```
29 X_TOL("x-TOL"),
30 @XmlEnumValue("x-TUU")
31 X_TUU("x-TUU");
32 private final String value;
33
34 OregonAthapaskan(String v) {
35 value = v;
```

**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/
Palaihnihan.java, line 32 (Poor Style: Confusing Naming)****Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/Palaihnihan.java:32**Taint Flags:**

```
29 X_ACH("x-ACH"),
30 @XmlEnumValue("x-ATW")
31 X_ATW("x-ATW");
32 private final String value;
33
34 Palaihnihan(String v) {
35 value = v;
```

**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/
XLabSpecimenCollectionProviders.java, line 47 (Poor Style: Confusing Naming)****Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/XLabSpecimenCollectionProviders.java:

Poor Style: Confusing Naming**Low****Package: gov.va.med.pharmacy.wsclients.mvi****PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/XLabSpecimenCollectionProviders.java, line 47 (Poor Style: Confusing Naming)****Low**

47

Taint Flags:

```
44 SELF("self"),
45 @XmlEnumValue("thirdParty")
46 THIRD_PARTY("thirdParty");
47 private final String value;
48
49 XLabSpecimenCollectionProviders(String v) {
50 value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ApplicationMediaType.java, line 35 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ApplicationMediaType.java:35**Taint Flags:**

```
32 APPLICATION_MSWORD("application/msword"),
33 @XmlEnumValue("application/pdf")
34 APPLICATION_PDF("application/pdf");
35 private final String value;
36
37 ApplicationMediaType(String v) {
38 value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ActExposureCode.java, line 63 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ActExposureCode.java:63**Taint Flags:**

```
60 SOCIAL_2("SOCIAL2"),
61 @XmlEnumValue("WORK2")
62 WORK_2("WORK2");
```


Poor Style: Confusing Naming**Low****Package: gov.va.med.pharmacy.wsclients.mvi****PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ActExposureCode.java, line 63 (Poor Style: Confusing Naming)****Low**

```
63 private final String value;  
64  
65 ActExposureCode(String v) {  
66 value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/CodingRationale.java, line 33 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/CodingRationale.java:33**Taint Flags:**

```
30 @XmlEnumValue("HL7")  
31 HL_7("HL7"),  
32 SRC("SRC");  
33 private final String value;  
34  
35 CodingRationale(String v) {  
36 value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/Tsimshianic.java, line 29 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/Tsimshianic.java:29**Taint Flags:**

```
26  
27 @XmlEnumValue("x-TSI")  
28 X_TSI("x-TSI");  
29 private final String value;  
30  
31 Tsimshianic(String v) {  
32 value = v;
```

Poor Style: Confusing Naming**Low****Package:** gov.va.med.pharmacy.wsclients.mvi**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/MdfRmimRowType.java, line 41 (Poor Style: Confusing Naming)****Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/MdfRmimRowType.java:41**Taint Flags:**

```
38 RMIM("rmim"),
39 @XmlEnumValue("stc")
40 STC("stc");
41 private final String value;
42
43 MdfRmimRowType(String v) {
44     value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/XPhoneOrEmailURLScheme.java, line 35 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/XPhoneOrEmailURLScheme.java:35**Taint Flags:**

```
32 MAILTO("mailto"),
33 @XmlEnumValue("tel")
34 TEL("tel");
35 private final String value;
36
37 XPhoneOrEmailURLScheme(String v) {
38     value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ValueSetPropertyId.java, line 35 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details**

Poor Style: Confusing Naming**Low****Package:** gov.va.med.pharmacy.wsclients.mvi**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ValueSetPropertyId.java, line 35 (Poor Style: Confusing Naming)****Low****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ValueSetPropertyId.java:35**Taint Flags:**

```
32 HOW_APPLIES("howApplies"),
33 @XmlEnumValue("openIssue")
34 OPEN_ISSUE("openIssue");
35 private final String value;
36
37 ValueSetPropertyId(String v) {
38     value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/KutchinHan.java, line 32 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/KutchinHan.java:32**Taint Flags:**

```
29 X_HAA("x-HAA"),
30 @XmlEnumValue("x-KUC")
31 X_KUC("x-KUC");
32 private final String value;
33
34 KutchinHan(String v) {
35     value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ActMoodCriterion.java, line 31 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ActMoodCriterion.java:31**Taint Flags:**

```
28 CRT("CRT"),
29 @XmlEnumValue("EVN.CRT")
```

Poor Style: Confusing Naming**Low****Package: gov.va.med.pharmacy.wsclients.mvi****PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ActMoodCriterion.java, line 31 (Poor Style: Confusing Naming)****Low**

```
30 EVN_CRT("EVN.CRT");
31 private final String value;
32
33 ActMoodCriterion(String v) {
34 value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/Pomoan.java, line 41 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/Pomoan.java:41**Taint Flags:**

```
38 X_PEO("x-PEO"),
39 @XmlEnumValue("x-PEQ")
40 X_PEQ("x-PEQ");
41 private final String value;
42
43 Pomoan(String v) {
44 value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/WesternMiwok.java, line 32 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/WesternMiwok.java:32**Taint Flags:**

```
29 X_CSI("x-CSI"),
30 @XmlEnumValue("x-LMW")
31 X_LMW("x-LMW");
32 private final String value;
33
34 WesternMiwok(String v) {
35 value = v;
```

Poor Style: Confusing Naming**Low****Package:** gov.va.med.pharmacy.wsclients.mvi**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/Tsamosan.java, line 38 (Poor Style: Confusing Naming)****Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/Tsamosan.java:38**Taint Flags:**

```
35 X_QUN("x-QUN"),
36 @XmlEnumValue("x-CJH")
37 X_CJH("x-CJH");
38 private final String value;
39
40 Tsamosan(String v) {
41     value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/DataTypeBagOfPhysicalQuantities.java, line 29 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/DataTypeBagOfPhysicalQuantities.java:29**Taint Flags:**

```
26
27 @XmlEnumValue("BAG<PQ>")
28 BAG_PQ("BAG<PQ>");
29 private final String value;
30
31 DataTypeBagOfPhysicalQuantities(String v) {
32     value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/DataTypeEventRelatedInterval.java, line 29 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details**

Poor Style: Confusing Naming**Low****Package:** gov.va.med.pharmacy.wsclients.mvi**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/DataTypeEventRelatedInterval.java, line 29 (Poor Style: Confusing Naming)****Low****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/DataTypeEventRelatedInterval.java:29**Taint Flags:**

```
26
27 @XmlEnumValue("EIVL<TS>")
28 EIVL_TS("EIVL<TS>");
29 private final String value;
30
31 DataTypeEventRelatedInterval(String v) {
32 value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/UnitOfMeasureAtomBaseUnitSens.java, line 45 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/UnitOfMeasureAtomBaseUnitSens.java:45**Taint Flags:**

```
42 RAD("rad"),
43 @XmlEnumValue("s")
44 S("s");
45 private final String value;
46
47 UnitOfMeasureAtomBaseUnitSens(String v) {
48 value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ArtificialDentition.java, line 578 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ArtificialDentition.java:578**Taint Flags:**

```
575 TID_9_PD("TID9pd"),
576 @XmlEnumValue("TID9pm")
```

Poor Style: Confusing Naming**Low****Package: gov.va.med.pharmacy.wsclients.mvi****PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/
ArtificialDentition.java, line 578 (Poor Style: Confusing Naming)****Low**

```
577 TID_9_PM("TID9pm");  
578 private final String value;  
579  
580 ArtificialDentition(String v) {  
581 value = v;
```

**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/
DataTypeParametricProbabilityDistributionOfPhysicalQuantities.java, line 29
(Poor Style: Confusing Naming)****Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/
DataTypeParametricProbabilityDistributionOfPhysicalQuantities.java:29**Taint Flags:**

```
26  
27 @XmlEnumValue("PPD<PQ>")  
28 PPD_PQ("PPD<PQ>");  
29 private final String value;  
30  
31 DataTypeParametricProbabilityDistributionOfPhysicalQuantities(String v) {  
32 value = v;
```

**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/
ChiwereWinnebago.java, line 32 (Poor Style: Confusing Naming)****Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ChiwereWinnebago.java:32**Taint Flags:**

```
29 X_IOW("x-IOW"),  
30 @XmlEnumValue("x-WIN")  
31 X_WIN("x-WIN");  
32 private final String value;  
33  
34 ChiwereWinnebago(String v) {
```

Poor Style: Confusing Naming	Low
Package: gov.va.med.pharmacy.wsclients.mvi	
PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ChiwereWinnebago.java, line 32 (Poor Style: Confusing Naming)	Low
<pre> 35 value = v; </pre>	
PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/XActStatusActiveComplete.java, line 32 (Poor Style: Confusing Naming)	Low
Issue Details	
Kingdom: Code Quality Scan Engine: SCA (Structural)	
Sink Details	
Sink: Field: value File: PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/XActStatusActiveComplete.java:32 Taint Flags:	
<pre> 29 ACTIVE("active"), 30 @XmlEnumValue("completed") 31 COMPLETED("completed"); 32 private final String value; 33 34 XActStatusActiveComplete(String v) { 35 value = v; </pre>	
PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/InuitInupiaq.java, line 32 (Poor Style: Confusing Naming)	Low
Issue Details	
Kingdom: Code Quality Scan Engine: SCA (Structural)	
Sink Details	
Sink: Field: value File: PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/InuitInupiaq.java:32 Taint Flags:	
<pre> 29 X_ESI("x-ESI"), 30 @XmlEnumValue("x-ESK") 31 X_ESK("x-ESK"); 32 private final String value; 33 34 InuitInupiaq(String v) { 35 value = v; </pre>	
PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ActSupplyFulfillmentRefusalReason.java, line 44 (Poor Style: Confusing Naming)	Low
Issue Details	

Poor Style: Confusing Naming**Low****Package:** gov.va.med.pharmacy.wsclients.mvi**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ActSupplyFulfillmentRefusalReason.java, line 44 (Poor Style: Confusing Naming)****Low****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ActSupplyFulfillmentRefusalReason.java:44**Taint Flags:**

```
41 FRR_02("FRR02"),
42 @XmlEnumValue("FRR06")
43 FRR_06("FRR06");
44 private final String value;
45
46 ActSupplyFulfillmentRefusalReason(String v) {
47     value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ParameterizedDataTypeNonParametricProbabilityDistribution.java, line 29 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ParameterizedDataTypeNonParametricProbabilityDistribution.java:29**Taint Flags:**

```
26
27 @XmlEnumValue("NPPD<T>")
28 NPPD_T("NPPD<T>");
29 private final String value;
30
31 ParameterizedDataTypeNonParametricProbabilityDistribution(String v) {
32     value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ManagedParticipationStatusNormal.java, line 41 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)

Poor Style: Confusing Naming**Low****Package:** gov.va.med.pharmacy.wsclients.mvi**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ManagedParticipationStatusNormal.java, line 41 (Poor Style: Confusing Naming)****Low****Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ManagedParticipationStatusNormal.java:41**Taint Flags:**

```
38 COMPLETED("completed"),
39 @XmlEnumValue("pending")
40 PENDING("pending");
41 private final String value;
42
43 ManagedParticipationStatusNormal(String v) {
44     value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/IntegrityCheckAlgorithm.java, line 32 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/IntegrityCheckAlgorithm.java:32**Taint Flags:**

```
29 SHA_1("SHA-1"),
30 @XmlEnumValue("SHA-256")
31 SHA_256("SHA-256");
32 private final String value;
33
34 IntegrityCheckAlgorithm(String v) {
35     value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/Nootkan.java, line 29 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/Nootkan.java:29**Taint Flags:**

Poor Style: Confusing Naming**Low****Package: gov.va.med.pharmacy.wsclients.mvi****PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/
Nootkan.java, line 29 (Poor Style: Confusing Naming)****Low**

```
26
27 @XmlEnumValue("x-MYH")
28 X_MYH("x-MYH");
29 private final String value;
30
31 Nootkan(String v) {
32     value = v;
```

**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/
WesternNumic.java, line 32 (Poor Style: Confusing Naming)****Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/WesternNumic.java:32**Taint Flags:**

```
29 X_MON("x-MON"),
30 @XmlEnumValue("x-PAO")
31 X_PAO("x-PAO");
32 private final String value;
33
34 WesternNumic(String v) {
35     value = v;
```

**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/
TableCellHorizontalAlign.java, line 41 (Poor Style: Confusing Naming)****Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/TableCellHorizontalAlign.java:41**Taint Flags:**

```
38 LEFT("left"),
39 @XmlEnumValue("right")
40 RIGHT("right");
41 private final String value;
42
43 TableCellHorizontalAlign(String v) {
```

Poor Style: Confusing Naming	Low
Package: gov.va.med.pharmacy.wsclients.mvi	
PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/TableCellHorizontalAlign.java, line 41 (Poor Style: Confusing Naming)	Low
<pre> 44 value = v; </pre>	
PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/Sahaptian.java, line 38 (Poor Style: Confusing Naming)	Low
Issue Details	
Kingdom: Code Quality Scan Engine: SCA (Structural)	
Sink Details	
Sink: Field: value File: PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/Sahaptian.java:38 Taint Flags:	
<pre> 35 X_WAA("x-WAA"), 36 @XmlEnumValue("x-YAK") 37 X_YAK("x-YAK"); 38 private final String value; 39 40 Sahaptian(String v) { 41 value = v; </pre>	
PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/Sireniskiyupik.java, line 35 (Poor Style: Confusing Naming)	Low
Issue Details	
Kingdom: Code Quality Scan Engine: SCA (Structural)	
Sink Details	
Sink: Field: value File: PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/Sireniskiyupik.java:35 Taint Flags:	
<pre> 32 X_ESS("x-ESS"), 33 @XmlEnumValue("x-EMS") 34 X_EMS("x-EMS"); 35 private final String value; 36 37 Sireniskiyupik(String v) { 38 value = v; </pre>	
PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/WesternMuskogean.java, line 32 (Poor Style: Confusing Naming)	Low
Issue Details	

Poor Style: Confusing Naming**Low****Package:** gov.va.med.pharmacy.wsclients.mvi**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/WesternMuskogean.java, line 32 (Poor Style: Confusing Naming)****Low****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/WesternMuskogean.java:32**Taint Flags:**

```
29 X_CIC("x-CIC"),
30 @XmlEnumValue("x-CCT")
31 X_CCT("x-CCT");
32 private final String value;
33
34 WesternMuskogean(String v) {
35     value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/SerranoGabrielino.java, line 29 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/SerranoGabrielino.java:29**Taint Flags:**

```
26
27 @XmlEnumValue("x-SER")
28 X_SER("x-SER");
29 private final String value;
30
31 SerranoGabrielino(String v) {
32     value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/Maiduan.java, line 35 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value

Poor Style: Confusing Naming**Low****Package: gov.va.med.pharmacy.wsclients.mvi****PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/Maiduan.java, line 35 (Poor Style: Confusing Naming)****Low****File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/Maiduan.java:35**Taint Flags:**

```
32 X_NMU("x-NMU"),
33 @XmlEnumValue("x-MAI")
34 X_MAI("x-MAI");
35 private final String value;
36
37 Maiduan(String v) {
38 value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/Coosan.java, line 29 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/Coosan.java:29**Taint Flags:**

```
26
27 @XmlEnumValue("x-COS")
28 X_COS("x-COS");
29 private final String value;
30
31 Coosan(String v) {
32 value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/WesternApachean.java, line 35 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/WesternApachean.java:35**Taint Flags:**

```
32 X_APM("x-APM"),
33 @XmlEnumValue("x-APW")
34 X_APW("x-APW");
```

Poor Style: Confusing Naming**Low****Package: gov.va.med.pharmacy.wsclients.mvi****PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/WesternApachean.java, line 35 (Poor Style: Confusing Naming)****Low**

```
35 private final String value;
36
37 WesternApachean(String v) {
38     value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/Charset.java, line 55 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/Charset.java:55**Taint Flags:**

```
52 UTF_7("UTF-7"),
53 @XmlEnumValue("UTF-8")
54 UTF_8("UTF-8");
55 private final String value;
56
57 Charset(String v) {
58     value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/PermanentDentition.java, line 158 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/PermanentDentition.java:158**Taint Flags:**

```
155 TID_8("TID8"),
156 @XmlEnumValue("TID9")
157 TID_9("TID9");
158 private final String value;
159
160 PermanentDentition(String v) {
161     value = v;
```

Poor Style: Confusing Naming**Low****Package:** gov.va.med.pharmacy.wsclients.mvi**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/KoyukonIngalik.java, line 35 (Poor Style: Confusing Naming)****Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/KoyukonIngalik.java:35**Taint Flags:**

```
32 X_HOI("x-HOI"),
33 @XmlEnumValue("x-KOY")
34 X_KOY("x-KOY");
35 private final String value;
36
37 KoyukonIngalik(String v) {
38     value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ConceptPropertyId.java, line 43 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ConceptPropertyId.java:43**Taint Flags:**

```
40 INVERSE_RELATIONSHIP("inverseRelationship"),
41 @XmlEnumValue("openIssue")
42 OPEN_ISSUE("openIssue");
43 private final String value;
44
45 ConceptPropertyId(String v) {
46     value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/XActStatusActiveSuspended.java, line 32 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details**

Poor Style: Confusing Naming**Low****Package:** gov.va.med.pharmacy.wsclients.mvi**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/XActStatusActiveSuspended.java, line 32 (Poor Style: Confusing Naming)****Low****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/XActStatusActiveSuspended.java:32**Taint Flags:**

```
29 ACTIVE("active"),
30 @XmlEnumValue("suspended")
31 SUSPENDED("suspended");
32 private final String value;
33
34 XActStatusActiveSuspended(String v) {
35     value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ParameterizedDataTypeEventRelatedInterval.java, line 29 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ParameterizedDataTypeEventRelatedInterval.java:29**Taint Flags:**

```
26
27 @XmlEnumValue("EIVL<T>")
28 EIVL_T("EIVL<T>");
29 private final String value;
30
31 ParameterizedDataTypeEventRelatedInterval(String v) {
32     value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/CentralSalish.java, line 35 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/CentralSalish.java:35**Taint Flags:**

```
32 X_LUT("x-LUT"),
```

Poor Style: Confusing Naming**Low****Package: gov.va.med.pharmacy.wsclients.mvi****PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/
CentralSalish.java, line 35 (Poor Style: Confusing Naming)****Low**

```
33 @XmlEnumValue("x-STR")
34 X_STR("x-STR");
35 private final String value;
36
37 CentralSalish(String v) {
38     value = v;
```

**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/
AudioMediaType.java, line 35 (Poor Style: Confusing Naming)****Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/AudioMediaType.java:35**Taint Flags:**

```
32 AUDIO_K_32_ADPCM("audio/k32adpcm"),
33 @XmlEnumValue("audio/mpeg")
34 AUDIO_MPEG("audio/mpeg");
35 private final String value;
36
37 AudioMediaType(String v) {
38     value = v;
```

**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/
MissouriRiver.java, line 32 (Poor Style: Confusing Naming)****Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/MissouriRiver.java:32**Taint Flags:**

```
29 X_CRO("x-CRO"),
30 @XmlEnumValue("x-HID")
31 X_HID("x-HID");
32 private final String value;
33
34 MissouriRiver(String v) {
35     value = v;
```

Poor Style: Confusing Naming**Low****Package:** gov.va.med.pharmacy.wsclients.mvi**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/MissouriRiver.java, line 32 (Poor Style: Confusing Naming)****Low****PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/TableFrame.java, line 53 (Poor Style: Confusing Naming)****Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/TableFrame.java:53**Taint Flags:**

```
50 VOID("void"),
51 @XmlEnumValue("vsides")
52 VSIDES("vsides");
53 private final String value;
54
55 TableFrame(String v) {
56     value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/SupernumeraryTooth.java, line 182 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/SupernumeraryTooth.java:182**Taint Flags:**

```
179 TID_SS("TIDSS"),
180 @XmlEnumValue("TIDTs")
181 TID_TS("TIDTs");
182 private final String value;
183
184 SupernumeraryTooth(String v) {
185     value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/Chimakuan.java, line 29 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality

Poor Style: Confusing Naming**Low****Package:** gov.va.med.pharmacy.wsclients.mvi**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/Chimakuan.java, line 29 (Poor Style: Confusing Naming)****Low****Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/Chimakuan.java:29**Taint Flags:**

```
26
27 @XmlEnumValue("x-QUI")
28 X_QUI("x-QUI");
29 private final String value;
30
31 Chimakuan(String v) {
32     value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/PaymentTerms.java, line 37 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/PaymentTerms.java:37**Taint Flags:**

```
34 N_60("N60"),
35 @XmlEnumValue("N90")
36 N_90("N90");
37 private final String value;
38
39 PaymentTerms(String v) {
40     value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/SouthernNumic.java, line 32 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/SouthernNumic.java:32

Poor Style: Confusing Naming**Low****Package: gov.va.med.pharmacy.wsclients.mvi****PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/
SouthernNumic.java, line 32 (Poor Style: Confusing Naming)****Low****Taint Flags:**

```
29 X_KAW("x-KAW"),  
30 @XmlEnumValue("x-UTE")  
31 X_UTE("x-UTE");  
32 private final String value;  
33  
34 SouthernNumic(String v) {  
35 value = v;
```

**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/
Diegueno.java, line 29 (Poor Style: Confusing Naming)****Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/Diegueno.java:29**Taint Flags:**

```
26  
27 @XmlEnumValue("x-DIH")  
28 X_DIH("x-DIH");  
29 private final String value;  
30  
31 Diegueno(String v) {  
32 value = v;
```

**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/
Aleut.java, line 29 (Poor Style: Confusing Naming)****Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/Aleut.java:29**Taint Flags:**

```
26  
27 @XmlEnumValue("x-ALW")  
28 X_ALW("x-ALW");  
29 private final String value;
```

Poor Style: Confusing Naming**Low****Package:** gov.va.med.pharmacy.wsclients.mvi**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/Aleut.java, line 29 (Poor Style: Confusing Naming)****Low**

```
30
31 Aleut(String v) {
32     value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/DataSetOfCodedSimpleValue.java, line 29 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/DataSetOfCodedSimpleValue.java:29**Taint Flags:**

```
26
27 @XmlEnumValue("SET<CS>")
28 SET_CS("SET<CS>");
29 private final String value;
30
31 DataSetOfCodedSimpleValue(String v) {
32     value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/DataTypeNonParametricProbabilityDistributionOfIntervalOfPhysicalQuantities.java, line 29 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/DataTypeNonParametricProbabilityDistributionOfIntervalOfPhysicalQuantities.java:29**Taint Flags:**

```
26
27 @XmlEnumValue("NPPD<IVL<PQ>>")
28 NPPD_IVL_PQ("NPPD<IVL<PQ>>");
29 private final String value;
30
31 DataTypeNonParametricProbabilityDistributionOfIntervalOfPhysicalQuantities(String v) {
32     value = v;
```

Poor Style: Confusing Naming	Low
Package: gov.va.med.pharmacy.wsclients.mvi	
PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/DataTypeNonParametricProbabilityDistributionOfIntervalOfPhysicalQuantities.java, line 29 (Poor Style: Confusing Naming)	Low

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/OrderedListStyle.java, line 41 (Poor Style: Confusing Naming)	Low
----------------------------------------------------------------------------------------------------------------------------------------	------------

Issue Details

Kingdom: Code Quality
Scan Engine: SCA (Structural)

Sink Details

Sink: Field: value
File: PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/OrderedListStyle.java:41
Taint Flags:

```

38  LITTLE_ALPHA("LittleAlpha"),
39  @XmlEnumValue("LittleRoman")
40  LITTLE_ROMAN("LittleRoman");
41  private final String value;
42
43  OrderedListStyle(String v) {
44  value = v;

```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/RoleStatusNormal.java, line 44 (Poor Style: Confusing Naming)	Low
----------------------------------------------------------------------------------------------------------------------------------------	------------

Issue Details

Kingdom: Code Quality
Scan Engine: SCA (Structural)

Sink Details

Sink: Field: value
File: PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/RoleStatusNormal.java:44
Taint Flags:

```

41  SUSPENDED("suspended"),
42  @XmlEnumValue("terminated")
43  TERMINATED("terminated");
44  private final String value;
45
46  RoleStatusNormal(String v) {
47  value = v;

```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/QueryStatusCode.java, line 41 (Poor Style: Confusing Naming)	Low
---------------------------------------------------------------------------------------------------------------------------------------	------------

Issue Details

Poor Style: Confusing Naming**Low****Package:** gov.va.med.pharmacy.wsclients.mvi**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/QueryStatusCode.java, line 41 (Poor Style: Confusing Naming)****Low****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/QueryStatusCode.java:41**Taint Flags:**

```
38  NEW("new"),
39  @XmlEnumValue("waitContinuedQueryResponse")
40  WAIT_CONTINUED_QUERY_RESPONSE("waitContinuedQueryResponse");
41  private final String value;
42
43  QueryStatusCode(String v) {
44  value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/InteriorSalish.java, line 38 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/InteriorSalish.java:38**Taint Flags:**

```
35  X_FLA("x-FLA"),
36  @XmlEnumValue("x-OKA")
37  X_OKA("x-OKA");
38  private final String value;
39
40  InteriorSalish(String v) {
41  value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/EasternMiwok.java, line 38 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value

Poor Style: Confusing Naming**Low****Package: gov.va.med.pharmacy.wsclients.mvi****PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/
EasternMiwok.java, line 38 (Poor Style: Confusing Naming)****Low****File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/EasternMiwok.java:38**Taint Flags:**

```
35 X_PMW("x-PMW"),  
36 @XmlEnumValue("x-SKD")  
37 X_SKD("x-SKD");  
38 private final String value;  
39  
40 EasternMiwok(String v) {  
41     value = v;
```

**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/
DataTypeIntervalOfIntegerNumbers.java, line 29 (Poor Style: Confusing Naming)****Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/
DataTypeIntervalOfIntegerNumbers.java:29**Taint Flags:**

```
26  
27 @XmlEnumValue("IVL<INT>")  
28 IVL_INT("IVL<INT>");  
29 private final String value;  
30  
31 DataTypeIntervalOfIntegerNumbers(String v) {  
32     value = v;
```

**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/
FontStyle.java, line 38 (Poor Style: Confusing Naming)****Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/FontStyle.java:38**Taint Flags:**

```
35 ITALICS("italics"),  
36 @XmlEnumValue("underline")
```

Poor Style: Confusing Naming**Low****Package: gov.va.med.pharmacy.wsclients.mvi****PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/FontStyle.java, line 38 (Poor Style: Confusing Naming)****Low**

```
37 UNDERLINE("underline");
38 private final String value;
39
40 FontStyle(String v) {
41 value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/LocalMarkupIgnore.java, line 32 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/LocalMarkupIgnore.java:32**Taint Flags:**

```
29 ALL("all"),
30 @XmlEnumValue("markup")
31 MARKUP("markup");
32 private final String value;
33
34 LocalMarkupIgnore(String v) {
35 value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ActSpecObsDilutionCode.java, line 38 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ActSpecObsDilutionCode.java:38**Taint Flags:**

```
35 AUTO_LOW("AUTO-LOW"),
36 PRE("PRE"),
37 RERUN("RERUN");
38 private final String value;
39
40 ActSpecObsDilutionCode(String v) {
41 value = v;
```

Poor Style: Confusing Naming**Low****Package:** gov.va.med.pharmacy.wsclients.mvi**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/SouthernCaddoan.java, line 29 (Poor Style: Confusing Naming)****Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/SouthernCaddoan.java:29**Taint Flags:**

```
26
27 @XmlEnumValue("x-CAD")
28 X_CAD("x-CAD");
29 private final String value;
30
31 SouthernCaddoan(String v) {
32     value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ExtendedReleaseSuspension.java, line 34 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ExtendedReleaseSuspension.java:34**Taint Flags:**

```
31 ERSUSP_12("ERSUSP12"),
32 @XmlEnumValue("ERSUSP24")
33 ERSUSP_24("ERSUSP24");
34 private final String value;
35
36 ExtendedReleaseSuspension(String v) {
37     value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/DataTypeSetOfCodedValue.java, line 29 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details**

Poor Style: Confusing Naming**Low****Package:** gov.va.med.pharmacy.wsclients.mvi**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/
DataSetOfCodedValue.java, line 29 (Poor Style: Confusing Naming)****Low****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/DataSetOfCodedValue.java:29**Taint Flags:**

```
26
27 @XmlEnumValue("SET<CV>")
28 SET_CV("SET<CV>");
29 private final String value;
30
31 DataSetOfCodedValue(String v) {
32     value = v;
```

**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/
ImageMediaType.java, line 41 (Poor Style: Confusing Naming)****Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ImageMediaType.java:41**Taint Flags:**

```
38 IMAGE_PNG("image/png"),
39 @XmlEnumValue("image/tiff")
40 IMAGE_TIFF("image/tiff");
41 private final String value;
42
43 ImageMediaType(String v) {
44     value = v;
```

**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/
ExtendedReleaseTablet.java, line 36 (Poor Style: Confusing Naming)****Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ExtendedReleaseTablet.java:36**Taint Flags:**

```
33 @XmlEnumValue("ERTAB24")
34 ERTAB_24("ERTAB24"),
```

Poor Style: Confusing Naming**Low****Package: gov.va.med.pharmacy.wsclients.mvi****PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/
ExtendedReleaseTablet.java, line 36 (Poor Style: Confusing Naming)****Low**

```
35  ERECTAB("ERECTAB");  
36  private final String value;  
37  
38  ExtendedReleaseTablet(String v) {  
39  value = v;
```

**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/
Kalapuyan.java, line 29 (Poor Style: Confusing Naming)****Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/Kalapuyan.java:29**Taint Flags:**

```
26  
27  @XmlEnumValue("x-KAL")  
28  X_KAL("x-KAL");  
29  private final String value;  
30  
31  Kalapuyan(String v) {  
32  value = v;
```

**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/
ParameterizedDataTypeBag.java, line 29 (Poor Style: Confusing Naming)****Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ParameterizedDataTypeBag.java:29**Taint Flags:**

```
26  
27  @XmlEnumValue("BAG<T>")  
28  BAG_T("BAG<T>");  
29  private final String value;  
30  
31  ParameterizedDataTypeBag(String v) {  
32  value = v;
```

Poor Style: Confusing Naming**Low****Package:** gov.va.med.pharmacy.wsclients.mvi**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/DataTypeIntervalOfRealNumbers.java, line 29 (Poor Style: Confusing Naming)****Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/DataTypeIntervalOfRealNumbers.java:29**Taint Flags:**

```
26
27 @XmlEnumValue("IVL<REAL>")
28 IVL_REAL("IVL<REAL>");
29 private final String value;
30
31 DataTypeIntervalOfRealNumbers(String v) {
32     value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ExtendedReleaseCapsule.java, line 36 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ExtendedReleaseCapsule.java:36**Taint Flags:**

```
33 @XmlEnumValue("ERCAP24")
34 ERCAP_24("ERCAP24"),
35 ERECCAP("ERECCAP");
36 private final String value;
37
38 ExtendedReleaseCapsule(String v) {
39     value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/Delawaran.java, line 29 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details**

Poor Style: Confusing Naming**Low****Package:** gov.va.med.pharmacy.wsclients.mvi**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/Delawaran.java, line 29 (Poor Style: Confusing Naming)****Low****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/Delawaran.java:29**Taint Flags:**

```
26
27 @XmlEnumValue("x-DEL")
28 X_DEL("x-DEL");
29 private final String value;
30
31 Delawaran(String v) {
32 value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/Shasta.java, line 29 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/Shasta.java:29**Taint Flags:**

```
26
27 @XmlEnumValue("x-SHT")
28 X_SHT("x-SHT");
29 private final String value;
30
31 Shasta(String v) {
32 value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/AcknowledgementDetailNotSupportedCode.java, line 44 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/AcknowledgementDetailNotSupportedCode.java:44**Taint Flags:**

```
41 NS_202("NS202"),
```

Poor Style: Confusing Naming**Low****Package: gov.va.med.pharmacy.wsclients.mvi****PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/AcknowledgementDetailNotSupportedCode.java, line 44 (Poor Style: Confusing Naming)****Low**

```
42 @XmlEnumValue("NS203")
43 NS_203("NS203");
44 private final String value;
45
46 AcknowledgementDetailNotSupportedCode(String v) {
47     value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ParameterizedDataTypeSequence.java, line 29 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ParameterizedDataTypeSequence.java:29**Taint Flags:**

```
26
27 @XmlEnumValue("LIST<T>")
28 LIST_T("LIST<T>");
29 private final String value;
30
31 ParameterizedDataTypeSequence(String v) {
32     value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/DataTypeSetOfCodedWithEquivalents.java, line 29 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/DataTypeSetOfCodedWithEquivalents.java:29**Taint Flags:**

```
26
27 @XmlEnumValue("SET<CE>")
28 SET_CE("SET<CE>");
29 private final String value;
```


Poor Style: Confusing Naming**Low****Package:** gov.va.med.pharmacy.wsclients.mvi**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/DataTypeSetOfCodedWithEquivalents.java, line 29 (Poor Style: Confusing Naming)****Low**

```
30
31  DataTypeSetOfCodedWithEquivalents(String v) {
32  value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ActNonObservationIndicationCode.java, line 41 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ActNonObservationIndicationCode.java:41**Taint Flags:**

```
38  IND_03("IND03"),
39  @XmlEnumValue("IND04")
40  IND_04("IND04");
41  private final String value;
42
43  ActNonObservationIndicationCode(String v) {
44  value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/EntityStatusNormal.java, line 35 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/EntityStatusNormal.java:35**Taint Flags:**

```
32  ACTIVE("active"),
33  @XmlEnumValue("inactive")
34  INACTIVE("inactive");
35  private final String value;
36
37  EntityStatusNormal(String v) {
38  value = v;
```

Poor Style: Confusing Naming**Low****Package:** gov.va.med.pharmacy.wsclients.mvi**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/HL7DefinedRoseProperty.java, line 120 (Poor Style: Confusing Naming)****Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/HL7DefinedRoseProperty.java:120**Taint Flags:**

```
117 VOCAB_DOMAIN("Vocab_domain"),
118 @XmlEnumValue("Vocab_strength")
119 VOCAB_STRENGTH("Vocab_strength");
120 private final String value;
121
122 HL7DefinedRoseProperty(String v) {
123     value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ProbabilityDistributionType.java, line 45 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ProbabilityDistributionType.java:45**Taint Flags:**

```
42 LN("LN"),
43 N("N"),
44 U("U");
45 private final String value;
46
47 ProbabilityDistributionType(String v) {
48     value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/HtmlLinkType.java, line 71 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details**

Poor Style: Confusing Naming**Low****Package: gov.va.med.pharmacy.wsclients.mvi****PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/HtmlLinkType.java, line 71 (Poor Style: Confusing Naming)****Low****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/HtmlLinkType.java:71**Taint Flags:**

```
68  STYLE SHEET("stylesheet"),
69  @XmlEnumValue("subsection")
70  SUBSECTION("subsection");
71  private final String value;
72
73  HtmlLinkType(String v) {
74  value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/CodeSystem.java, line 709 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/CodeSystem.java:709**Taint Flags:**

```
706  W_4("W4"),
707  @XmlEnumValue("W1-W2")
708  W_1_W_2("W1-W2");
709  private final String value;
710
711  CodeSystem(String v) {
712  value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/Cahitan.java, line 29 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/Cahitan.java:29**Taint Flags:**

```
26
27  @XmlEnumValue("x-YAQ")
```

Poor Style: Confusing Naming**Low****Package: gov.va.med.pharmacy.wsclients.mvi****PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/Cahitan.java, line 29 (Poor Style: Confusing Naming)****Low**

```
28 X_YAQ("x-YAQ");
29 private final String value;
30
31 Cahitan(String v) {
32 value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/Dhegiha.java, line 38 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/Dhegiha.java:38**Taint Flags:**

```
35 X_OSA("x-OSA"),
36 @XmlEnumValue("x-QUA")
37 X_QUA("x-QUA");
38 private final String value;
39
40 Dhegiha(String v) {
41 value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/DataTypeUncertainNarrativeConceptDescriptor.java, line 29 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/DataTypeUncertainNarrativeConceptDescriptor.java:29**Taint Flags:**

```
26
27 @XmlEnumValue("UVN<CD>")
28 UVN_CD("UVN<CD>");
29 private final String value;
30
31 DataTypeUncertainNarrativeConceptDescriptor(String v) {
```

Poor Style: Confusing Naming	Low
Package: gov.va.med.pharmacy.wsclients.mvi	
PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/DataTypeUncertainNarrativeConceptDescriptor.java, line 29 (Poor Style: Confusing Naming)	Low

```
32 value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ArapahoGrosVentre.java, line 32 (Poor Style: Confusing Naming)	Low
-----------------------------------------------------------------------------------------------------------------------------------------	------------

Issue Details

Kingdom: Code Quality
Scan Engine: SCA (Structural)

Sink Details

Sink: Field: value
File: PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ArapahoGrosVentre.java:32
Taint Flags:

```
29 X_ARP("x-ARP"),
30 @XmlEnumValue("x-ATS")
31 X_ATS("x-ATS");
32 private final String value;
33
34 ArapahoGrosVentre(String v) {
35 value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/Ojibwayan.java, line 32 (Poor Style: Confusing Naming)	Low
---------------------------------------------------------------------------------------------------------------------------------	------------

Issue Details

Kingdom: Code Quality
Scan Engine: SCA (Structural)

Sink Details

Sink: Field: value
File: PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/Ojibwayan.java:32
Taint Flags:

```
29 X_POT("x-POT"),
30 @XmlEnumValue("x-OJB")
31 X_OJB("x-OJB");
32 private final String value;
33
34 Ojibwayan(String v) {
35 value = v;
```

Poor Style: Confusing Naming	Low
-------------------------------------	------------

Package: gov.va.med.pharmacy.wsclients.mvi

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/TableCellScope.java, line 38 (Poor Style: Confusing Naming)	Low
--------------------------------------------------------------------------------------------------------------------------------------	------------

Issue Details

Kingdom: Code Quality

Scan Engine: SCA (Structural)

Sink Details

Sink: Field: value

File: PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/TableCellScope.java:38

Taint Flags:

```

35 ROW("row"),
36 @XmlEnumValue("rowgroup")
37 ROWGROUP("rowgroup");
38 private final String value;
39
40 TableCellScope(String v) {
41     value = v;

```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/TransdermalPatch.java, line 42 (Poor Style: Confusing Naming)	Low
----------------------------------------------------------------------------------------------------------------------------------------	------------

Issue Details

Kingdom: Code Quality

Scan Engine: SCA (Structural)

Sink Details

Sink: Field: value

File: PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/TransdermalPatch.java:42

Taint Flags:

```

39 @XmlEnumValue("TPATH2WK")
40 TPATH_2_WK("TPATH2WK"),
41 TPATHWK("TPATHWK");
42 private final String value;
43
44 TransdermalPatch(String v) {
45     value = v;

```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/DataTypeUncertainProbabilisticIntervalOfPhysicalQuantities.java, line 29 (Poor Style: Confusing Naming)	Low
----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------

Issue Details

Kingdom: Code Quality

Scan Engine: SCA (Structural)

Sink Details

Poor Style: Confusing Naming	Low
Package: gov.va.med.pharmacy.wsclients.mvi	
PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/DataTypeUncertainProbabilisticIntervalOfPhysicalQuantities.java, line 29 (Poor Style: Confusing Naming)	Low

Sink: Field: value

File: PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/DataTypeUncertainProbabilisticIntervalOfPhysicalQuantities.java:29

Taint Flags:

```

26
27 @XmlEnumValue("UVP<IVL<PQ>>")
28 UVP_IVL_PQ("UVP<IVL<PQ>>");
29 private final String value;
30
31 DataTypeUncertainProbabilisticIntervalOfPhysicalQuantities(String v) {
32     value = v;

```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/TableRules.java, line 41 (Poor Style: Confusing Naming)	Low
----------------------------------------------------------------------------------------------------------------------------------	------------

Issue Details

Kingdom: Code Quality

Scan Engine: SCA (Structural)

Sink Details

Sink: Field: value

File: PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/TableRules.java:41

Taint Flags:

```

38 NONE("none"),
39 @XmlEnumValue("rows")
40 ROWS("rows");
41 private final String value;
42
43 TableRules(String v) {
44     value = v;

```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/BinaryDataEncoding.java, line 31 (Poor Style: Confusing Naming)	Low
------------------------------------------------------------------------------------------------------------------------------------------	------------

Issue Details

Kingdom: Code Quality

Scan Engine: SCA (Structural)

Sink Details

Sink: Field: value

File: PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/BinaryDataEncoding.java:31

Taint Flags:

```

28 @XmlEnumValue("B64")

```

Poor Style: Confusing Naming**Low****Package: gov.va.med.pharmacy.wsclients.mvi****PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/BinaryDataEncoding.java, line 31 (Poor Style: Confusing Naming)****Low**

```
29 B_64("B64"),
30 TXT("TXT");
31 private final String value;
32
33 BinaryDataEncoding(String v) {
34 value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ParameterizedDataTypeParametricProbabilityDistribution.java, line 29 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ParameterizedDataTypeParametricProbabilityDistribution.java:29**Taint Flags:**

```
26
27 @XmlEnumValue("PPD<T>")
28 PPD_T("PPD<T>");
29 private final String value;
30
31 ParameterizedDataTypeParametricProbabilityDistribution(String v) {
32 value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/DataTypeNonParametricProbabilityDistribution.java, line 29 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/DataTypeNonParametricProbabilityDistribution.java:29**Taint Flags:**

```
26
27 @XmlEnumValue("NPPD<ANY>")
28 NPPD_ANY("NPPD<ANY>");
```


Poor Style: Confusing Naming**Low****Package:** gov.va.med.pharmacy.wsclients.mvi**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/DataTypeNonParametricProbabilityDistribution.java, line 29 (Poor Style: Confusing Naming)****Low**

```
29 private final String value;  
30  
31 DataTypeNonParametricProbabilityDistribution(String v) {  
32 value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/SaukFoxKickapoo.java, line 35 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/SaukFoxKickapoo.java:35**Taint Flags:**

```
32 X_SAC("x-SAC"),  
33 @XmlEnumValue("x-SJW")  
34 X_SJW("x-SJW");  
35 private final String value;  
36  
37 SaukFoxKickapoo(String v) {  
38 value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/AcknowledgementDetailSyntaxErrorCode.java, line 49 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/AcknowledgementDetailSyntaxErrorCode.java:49**Taint Flags:**

```
46 SYN_101("SYN101"),  
47 @XmlEnumValue("SYN103")  
48 SYN_103("SYN103");  
49 private final String value;  
50  
51 AcknowledgementDetailSyntaxErrorCode(String v) {
```

Poor Style: Confusing Naming**Low****Package:** gov.va.med.pharmacy.wsclients.mvi**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/AcknowledgementDetailSyntaxErrorCode.java, line 49 (Poor Style: Confusing Naming)****Low**

```
52 value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/Tepiman.java, line 29 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/Tepiman.java:29**Taint Flags:**

```
26
27 @XmlEnumValue("x-PAP")
28 X_PAP("x-PAP");
29 private final String value;
30
31 Tepiman(String v) {
32 value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/Cupan.java, line 35 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/Cupan.java:35**Taint Flags:**

```
32 X_CUP("x-CUP"),
33 @XmlEnumValue("x-LUI")
34 X_LUI("x-LUI");
35 private final String value;
36
37 Cupan(String v) {
38 value = v;
```

Poor Style: Confusing Naming**Low****Package:** gov.va.med.pharmacy.wsclients.mvi**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/DataTypeNonParametricProbabilityDistributionOfConceptDescriptor.java, line 29 (Poor Style: Confusing Naming)****Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/DataTypeNonParametricProbabilityDistributionOfConceptDescriptor.java:29**Taint Flags:**

```
26
27 @XmlEnumValue("NPPD<CD>")
28 NPPD_CD("NPPD<CD>");
29 private final String value;
30
31 DataTypeNonParametricProbabilityDistributionOfConceptDescriptor(String v) {
32 value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/CombinedPharmacyOrderSuspendReasonCode.java, line 53 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/CombinedPharmacyOrderSuspendReasonCode.java:53**Taint Flags:**

```
50 CLARIF("CLARIF"),
51 ALTCHOICE("ALTCHOICE"),
52 WASHOUT("WASHOUT");
53 private final String value;
54
55 CombinedPharmacyOrderSuspendReasonCode(String v) {
56 value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/DataSetOfRealNumbers.java, line 32 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality

Poor Style: Confusing Naming**Low****Package:** gov.va.med.pharmacy.wsclients.mvi**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/DataTypeSetOfRealNumbers.java, line 32 (Poor Style: Confusing Naming)****Low****Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/DataTypeSetOfRealNumbers.java:32**Taint Flags:**

```
29 SET_REAL("SET<REAL>"),
30 @XmlEnumValue("IVL<REAL>")
31 IVL_REAL("IVL<REAL>");
32 private final String value;
33
34 DataTypeSetOfRealNumbers(String v) {
35     value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/SetOperator.java, line 39 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/SetOperator.java:39**Taint Flags:**

```
36 I("I"),
37 A("A"),
38 P("P");
39 private final String value;
40
41 SetOperator(String v) {
42     value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/Pidgin.java, line 29 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/Pidgin.java:29

Poor Style: Confusing Naming**Low****Package: gov.va.med.pharmacy.wsclients.mvi****PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/
Pidgin.java, line 29 (Poor Style: Confusing Naming)****Low****Taint Flags:**

```
26
27 @XmlEnumValue("x-CHH")
28 X_CHH("x-CHH");
29 private final String value;
30
31 Pidgin(String v) {
32 value = v;
```

**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/
Abenakian.java, line 35 (Poor Style: Confusing Naming)****Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/Abenakian.java:35**Taint Flags:**

```
32 X_MAC("x-MAC"),
33 @XmlEnumValue("x-ABE")
34 X_ABE("x-ABE");
35 private final String value;
36
37 Abenakian(String v) {
38 value = v;
```

**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/
NonDrugAgentEntity.java, line 77 (Poor Style: Confusing Naming)****Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/NonDrugAgentEntity.java:77**Taint Flags:**

```
74 NDA_11("NDA11"),
75 @XmlEnumValue("NDA07")
76 NDA_07("NDA07");
77 private final String value;
```

Poor Style: Confusing Naming**Low****Package: gov.va.med.pharmacy.wsclients.mvi****PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/
NonDrugAgentEntity.java, line 77 (Poor Style: Confusing Naming)****Low**

```
78  
79 NonDrugAgentEntity(String v) {  
80     value = v;
```

**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/
Dakotan.java, line 38 (Poor Style: Confusing Naming)****Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/Dakotan.java:38**Taint Flags:**

```
35 X_LKT("x-LKT"),  
36 @XmlEnumValue("x-NKT")  
37 X_NKT("x-NKT");  
38 private final String value;  
39  
40 Dakotan(String v) {  
41     value = v;
```

**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/
River.java, line 35 (Poor Style: Confusing Naming)****Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/River.java:35**Taint Flags:**

```
32 X_MOV("x-MOV"),  
33 @XmlEnumValue("x-YUM")  
34 X_YUM("x-YUM");  
35 private final String value;  
36  
37 River(String v) {  
38     value = v;
```

Poor Style: Confusing Naming**Low****Package:** gov.va.med.pharmacy.wsclients.mvi**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/XPhoneURLScheme.java, line 32 (Poor Style: Confusing Naming)****Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/XPhoneURLScheme.java:32**Taint Flags:**

```
29 FAX("fax"),
30 @XmlEnumValue("tel")
31 TEL("tel");
32 private final String value;
33
34 XPhoneURLScheme(String v) {
35     value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/Cree.java, line 29 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/Cree.java:29**Taint Flags:**

```
26
27 @XmlEnumValue("x-CRP")
28 X_CRP("x-CRP");
29 private final String value;
30
31 Cree(String v) {
32     value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ParameterizedDataTypeAnnotated.java, line 29 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details**

Poor Style: Confusing Naming**Low****Package:** gov.va.med.pharmacy.wsclients.mvi**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ParameterizedDataTypeAnnotated.java, line 29 (Poor Style: Confusing Naming)****Low****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ParameterizedDataTypeAnnotated.java:29**Taint Flags:**

```
26
27 @XmlEnumValue("ANT<T>")
28 ANT_T("ANT<T>");
29 private final String value;
30
31 ParameterizedDataTypeAnnotated(String v) {
32     value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/DataTypeBagOfConceptDescriptors.java, line 29 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/DataTypeBagOfConceptDescriptors.java:29**Taint Flags:**

```
26
27 @XmlEnumValue("BAG<CD>")
28 BAG_CD("BAG<CD>");
29 private final String value;
30
31 DataTypeBagOfConceptDescriptors(String v) {
32     value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ModelMediaType.java, line 29 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ModelMediaType.java:29**Taint Flags:**

```
26
```


Poor Style: Confusing Naming**Low****Package: gov.va.med.pharmacy.wsclients.mvi****PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/
ModelMediaType.java, line 29 (Poor Style: Confusing Naming)****Low**

```
27 @XmlEnumValue("model/vrml")
28 MODEL_VRML("model/vrml");
29 private final String value;
30
31 ModelMediaType(String v) {
32     value = v;
```

**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/
Tanana.java, line 35 (Poor Style: Confusing Naming)****Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/Tanana.java:35**Taint Flags:**

```
32 X_TCB("x-TCB"),
33 @XmlEnumValue("x-TAU")
34 X_TAU("x-TAU");
35 private final String value;
36
37 Tanana(String v) {
38     value = v;
```

**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/
DataSetOfIntegerNumbers.java, line 32 (Poor Style: Confusing Naming)****Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/DataSetOfIntegerNumbers.java:32**Taint Flags:**

```
29 SET_INT("SET<INT>"),
30 @XmlEnumValue("IVL<INT>")
31 IVL_INT("IVL<INT>");
32 private final String value;
33
34 DataSetOfIntegerNumbers(String v) {
35     value = v;
```

Poor Style: Confusing Naming	Low
Package: gov.va.med.pharmacy.wsclients.mvi	
PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/DataTypeSetOfIntegerNumbers.java, line 32 (Poor Style: Confusing Naming)	Low

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/UnorderedListStyle.java, line 35 (Poor Style: Confusing Naming)	Low
------------------------------------------------------------------------------------------------------------------------------------------	------------

Issue Details

Kingdom: Code Quality
Scan Engine: SCA (Structural)

Sink Details

Sink: Field: value
File: PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/UnorderedListStyle.java:35
Taint Flags:

```

32  DISC("Disc"),
33  @XmlEnumValue("Square")
34  SQUARE("Square");
35  private final String value;
36
37  UnorderedListStyle(String v) {
38  value = v;

```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ActStatusNormal.java, line 50 (Poor Style: Confusing Naming)	Low
---------------------------------------------------------------------------------------------------------------------------------------	------------

Issue Details

Kingdom: Code Quality
Scan Engine: SCA (Structural)

Sink Details

Sink: Field: value
File: PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ActStatusNormal.java:50
Taint Flags:

```

47  NEW("new"),
48  @XmlEnumValue("suspended")
49  SUSPENDED("suspended");
50  private final String value;
51
52  ActStatusNormal(String v) {
53  value = v;

```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/DataTypeAnnotatedPhysicalQuantity.java, line 29 (Poor Style: Confusing Naming)	Low
---------------------------------------------------------------------------------------------------------------------------------------------------------	------------

Issue Details

Kingdom: Code Quality

Poor Style: Confusing Naming**Low****Package:** gov.va.med.pharmacy.wsclients.mvi**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/DataTypeAnnotatedPhysicalQuantity.java, line 29 (Poor Style: Confusing Naming)** **Low****Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/DataTypeAnnotatedPhysicalQuantity.java:29**Taint Flags:**

```
26
27 @XmlEnumValue("ANT<PQ>")
28 ANT_PQ("ANT<PQ>");
29 private final String value;
30
31 DataTypeAnnotatedPhysicalQuantity(String v) {
32 value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/UpperChinook.java, line 29 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/UpperChinook.java:29**Taint Flags:**

```
26
27 @XmlEnumValue("x-WAC")
28 X_WAC("x-WAC");
29 private final String value;
30
31 UpperChinook(String v) {
32 value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/GTSAbbreviationHolidaysUSNational.java, line 59 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details**

Poor Style: Confusing Naming**Low****Package:** gov.va.med.pharmacy.wsclients.mvi**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/GTSAbbreviationHolidaysUSNational.java, line 59 (Poor Style: Confusing Naming)****Low****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/GTSAbbreviationHolidaysUSNational.java:59**Taint Flags:**

```
56 @XmlEnumValue("JHNUSTKS5")
57 JHNUSTKS_5("JHNUSTKS5"),
58 JHNUSVET("JHNUSVET");
59 private final String value;
60
61 GTSAbbreviationHolidaysUSNational(String v) {
62     value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/MaterialEntityAdditive.java, line 147 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/MaterialEntityAdditive.java:147**Taint Flags:**

```
144 TOLU("TOLU"),
145 URETM("URETM"),
146 VIRTM("VIRTM");
147 private final String value;
148
149 MaterialEntityAdditive(String v) {
150     value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ParameterizedDataTypeUncertainValueNarrative.java, line 29 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ParameterizedDataTypeUncertainValueNarrative.java:29

Poor Style: Confusing Naming**Low****Package:** gov.va.med.pharmacy.wsclients.mvi**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ParameterizedDataTypeUncertainValueNarrative.java, line 29 (Poor Style: Confusing Naming)****Low****Taint Flags:**

```
26
27 @XmlEnumValue("UVN<T>")
28 UVN_T("UVN<T>");
29 private final String value;
30
31 ParameterizedDataTypeUncertainValueNarrative(String v) {
32 value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/EasternApachean.java, line 32 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/EasternApachean.java:32**Taint Flags:**

```
29 X_APJ("x-APJ"),
30 @XmlEnumValue("x-APL")
31 X_APL("x-APL");
32 private final String value;
33
34 EasternApachean(String v) {
35 value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/CaliforniaAthapaskan.java, line 32 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/CaliforniaAthapaskan.java:32**Taint Flags:**

```
29 X_KTW("x-KTW"),
30 @XmlEnumValue("x-HUP")
31 X_HUP("x-HUP");
```

Poor Style: Confusing Naming**Low****Package: gov.va.med.pharmacy.wsclients.mvi****PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/CaliforniaAthapaskan.java, line 32 (Poor Style: Confusing Naming)****Low**

```
32 private final String value;  
33  
34 CaliforniaAthapaskan(String v) {  
35     value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/TableRuleStyle.java, line 38 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/TableRuleStyle.java:38**Taint Flags:**

```
35 RRULE("Rrule"),  
36 @XmlEnumValue("Toprule")  
37 TOPRULE("Toprule");  
38 private final String value;  
39  
40 TableRuleStyle(String v) {  
41     value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/Wintuan.java, line 29 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/Wintuan.java:29**Taint Flags:**

```
26  
27 @XmlEnumValue("x-WIT")  
28 X_WIT("x-WIT");  
29 private final String value;  
30  
31 Wintuan(String v) {  
32     value = v;
```

Poor Style: Confusing Naming**Low****Package:** gov.va.med.pharmacy.wsclients.mvi**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/VideoMediaType.java, line 32 (Poor Style: Confusing Naming)****Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/VideoMediaType.java:32**Taint Flags:**

```
29 VIDEO_MPEG("video/mpeg"),
30 @XmlEnumValue("video/x-avi")
31 VIDEO_X_AVI("video/x-avi");
32 private final String value;
33
34 VideoMediaType(String v) {
35     value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/MultipartMediaType.java, line 29 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/MultipartMediaType.java:29**Taint Flags:**

```
26
27 @XmlEnumValue("multipart/x-hl7-cda-level-one")
28 MULTIPART_X_HL_7_CDA_LEVEL_ONE("multipart/x-hl7-cda-level-one");
29 private final String value;
30
31 MultipartMediaType(String v) {
32     value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/NorthernIroquoian.java, line 44 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details**

Poor Style: Confusing Naming**Low****Package:** gov.va.med.pharmacy.wsclients.mvi**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/
NorthernIroquoian.java, line 44 (Poor Style: Confusing Naming)****Low****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/NorthernIroquoian.java:44**Taint Flags:**

```
41 X_SEE("x-SEE"),
42 @XmlEnumValue("x-TUS")
43 X_TUS("x-TUS");
44 private final String value;
45
46 NorthernIroquoian(String v) {
47     value = v;
```

**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/
DataTypeHistoryOfAddress.java, line 29 (Poor Style: Confusing Naming)****Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/DataTypeHistoryOfAddress.java:29**Taint Flags:**

```
26
27 @XmlEnumValue("HIST<AD>")
28 HIST_AD("HIST<AD>");
29 private final String value;
30
31 DataTypeHistoryOfAddress(String v) {
32     value = v;
```

**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/
CentralMuskogean.java, line 35 (Poor Style: Confusing Naming)****Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/CentralMuskogean.java:35**Taint Flags:**

```
32 X_CKU("x-CKU"),
33 @XmlEnumValue("x-MIK")
```


Poor Style: Confusing Naming**Low****Package: gov.va.med.pharmacy.wsclients.mvi****PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/
CentralMuskogean.java, line 35 (Poor Style: Confusing Naming)****Low**

```
34 X_MIK("x-MIK");  
35 private final String value;  
36  
37 CentralMuskogean(String v) {  
38 value = v;
```

**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/
OtherIndicationValue.java, line 35 (Poor Style: Confusing Naming)****Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/OtherIndicationValue.java:35**Taint Flags:**

```
32 INDICATION_VALUE("_IndicationValue"),  
33 @XmlEnumValue("_SymptomValue")  
34 SYMPTOM_VALUE("_SymptomValue");  
35 private final String value;  
36  
37 OtherIndicationValue(String v) {  
38 value = v;
```

**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/
HL7CommitteeIDInRIM.java, line 59 (Poor Style: Confusing Naming)****Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/HL7CommitteeIDInRIM.java:59**Taint Flags:**

```
56 C_01("C01"),  
57 @XmlEnumValue("C21")  
58 C_21("C21");  
59 private final String value;  
60  
61 HL7CommitteeIDInRIM(String v) {  
62 value = v;
```

Poor Style: Confusing Naming**Low****Package:** gov.va.med.pharmacy.wsclients.mvi**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/Yokutsan.java, line 38 (Poor Style: Confusing Naming)****Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/Yokutsan.java:38**Taint Flags:**

```
35 X_PYL("x-PYL"),
36 @XmlEnumValue("x-TKH")
37 X_TKH("x-TKH");
38 private final String value;
39
40 Yokutsan(String v) {
41     value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/HL7StandardVersionCode.java, line 57 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/HL7StandardVersionCode.java:57**Taint Flags:**

```
54 PAST("PAST"),
55 PREVSUM("PREVSUM"),
56 SUM("SUM");
57 private final String value;
58
59 HL7StandardVersionCode(String v) {
60     value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/DataSetOfPhysicalQuantities.java, line 29 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details**

Poor Style: Confusing Naming**Low****Package:** gov.va.med.pharmacy.wsclients.mvi**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/DataTypeSetOfPhysicalQuantities.java, line 29 (Poor Style: Confusing Naming)****Low****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/DataTypeSetOfPhysicalQuantities.java:29**Taint Flags:**

```
26
27 @XmlEnumValue("SET<PQ>")
28 SET_PQ("SET<PQ>");
29 private final String value;
30
31 DataTypeSetOfPhysicalQuantities(String v) {
32 value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ParameterizedDataTypePeriodicInterval.java, line 29 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ParameterizedDataTypePeriodicInterval.java:29**Taint Flags:**

```
26
27 @XmlEnumValue("PIVL<T>")
28 PIVL_T("PIVL<T>");
29 private final String value;
30
31 ParameterizedDataTypePeriodicInterval(String v) {
32 value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/Keresan.java, line 32 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/Keresan.java:32**Taint Flags:**

Poor Style: Confusing Naming**Low****Package: gov.va.med.pharmacy.wsclients.mvi****PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/
Keresan.java, line 32 (Poor Style: Confusing Naming)****Low**

```
29 X_KJQ("x-KJQ"),  
30 @XmlEnumValue("x-KEE")  
31 X_KEE("x-KEE");  
32 private final String value;  
33  
34 Keresan(String v) {  
35     value = v;
```

**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/
Yukian.java, line 32 (Poor Style: Confusing Naming)****Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/Yukian.java:32**Taint Flags:**

```
29 X_WAO("x-WAO"),  
30 @XmlEnumValue("x-YUK")  
31 X_YUK("x-YUK");  
32 private final String value;  
33  
34 Yukian(String v) {  
35     value = v;
```

**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/
DataTypeParametricProbabilityDistributionOfRealNumbers.java, line 29 (Poor
Style: Confusing Naming)****Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/
DataTypeParametricProbabilityDistributionOfRealNumbers.java:29**Taint Flags:**

```
26  
27 @XmlEnumValue("PPD<REAL>")  
28 PPD_REAL("PPD<REAL>");  
29 private final String value;
```

Poor Style: Confusing Naming	Low
Package: gov.va.med.pharmacy.wsclients.mvi	
PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/DataTypeParametricProbabilityDistributionOfRealNumbers.java, line 29 (Poor Style: Confusing Naming)	Low

```

30
31  DataTypeParametricProbabilityDistributionOfRealNumbers (String v) {
32  value = v;

```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/DataTypeAnnotatedConceptDescriptor.java, line 29 (Poor Style: Confusing Naming)	Low
----------------------------------------------------------------------------------------------------------------------------------------------------------	------------

Issue Details

Kingdom: Code Quality
Scan Engine: SCA (Structural)

Sink Details

Sink: Field: value
File: PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/DataTypeAnnotatedConceptDescriptor.java:29
Taint Flags:

```

26
27  @XmlEnumValue ("ANT<CD>")
28  ANT_CD ("ANT<CD>");
29  private final String value;
30
31  DataTypeAnnotatedConceptDescriptor (String v) {
32  value = v;

```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ActAdministrativeRuleDetectedIssueCode.java, line 32 (Poor Style: Confusing Naming)	Low
--------------------------------------------------------------------------------------------------------------------------------------------------------------	------------

Issue Details

Kingdom: Code Quality
Scan Engine: SCA (Structural)

Sink Details

Sink: Field: value
File: PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ActAdministrativeRuleDetectedIssueCode.java:32
Taint Flags:

```

29  KEY_205 ("KEY205"),
30  @XmlEnumValue ("KEY204")
31  KEY_204 ("KEY204");
32  private final String value;
33

```

Poor Style: Confusing Naming**Low****Package: gov.va.med.pharmacy.wsclients.mvi****PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ActAdministrativeRuleDetectedIssueCode.java, line 32 (Poor Style: Confusing Naming)****Low**

```
34 ActAdministrativeRuleDetectedIssueCode(String v) {  
35     value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/EntityHandling.java, line 63 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/EntityHandling.java:63**Taint Flags:**

```
60 NTR("NTR"),  
61 PSO("PSO"),  
62 UPR("UPR");  
63 private final String value;  
64  
65 EntityHandling(String v) {  
66     value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ActRelationshipSplit.java, line 36 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/ActRelationshipSplit.java:36**Taint Flags:**

```
33 @XmlEnumValue("I1")  
34 I_1("I1"),  
35 IW("IW");  
36 private final String value;  
37  
38 ActRelationshipSplit(String v) {  
39     value = v;
```

Poor Style: Confusing Naming**Low****Package:** gov.va.med.pharmacy.wsclients.mvi**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/
SouthernAlaska.java, line 32 (Poor Style: Confusing Naming)****Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/SouthernAlaska.java:32**Taint Flags:**

```
29 X_AHT("x-AHT"),  
30 @XmlEnumValue("x-TFN")  
31 X_TFN("x-TFN");  
32 private final String value;  
33  
34 SouthernAlaska(String v) {  
35     value = v;
```

**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/
HL7ITSVersionCode.java, line 29 (Poor Style: Confusing Naming)****Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/HL7ITSVersionCode.java:29**Taint Flags:**

```
26  
27 @XmlEnumValue("XMLV1PR1")  
28 XMLV_1_PR_1("XMLV1PR1");  
29 private final String value;  
30  
31 HL7ITSVersionCode(String v) {  
32     value = v;
```

**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/
DataTypePeriodicIntervalOfTime.java, line 29 (Poor Style: Confusing Naming)****Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details**

Poor Style: Confusing Naming**Low****Package:** gov.va.med.pharmacy.wsclients.mvi**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/DataTypePeriodicIntervalOfTime.java, line 29 (Poor Style: Confusing Naming)****Low****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/DataTypePeriodicIntervalOfTime.java:29**Taint Flags:**

```
26
27 @XmlEnumValue("PIVL<TS>")
28 PIVL_TS("PIVL<TS>");
29 private final String value;
30
31 DataTypePeriodicIntervalOfTime(String v) {
32 value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/Tiwa.java, line 32 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/Tiwa.java:32**Taint Flags:**

```
29 X_TAO("x-TAO"),
30 @XmlEnumValue("x-TIX")
31 X_TIX("x-TIX");
32 private final String value;
33
34 Tiwa(String v) {
35 value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/Ritwan.java, line 29 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/Ritwan.java:29**Taint Flags:**

```
26
27 @XmlEnumValue("x-YUR")
```


Poor Style: Confusing Naming**Low****Package: gov.va.med.pharmacy.wsclients.mvi****PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/
Ritwan.java, line 29 (Poor Style: Confusing Naming)****Low**

```
28 X_YUR("x-YUR");  
29 private final String value;  
30  
31 Ritwan(String v) {  
32 value = v;
```

**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/
XDocumentStatus.java, line 38 (Poor Style: Confusing Naming)****Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/XDocumentStatus.java:38**Taint Flags:**

```
35 NEW("new"),  
36 @XmlEnumValue("obsolete")  
37 OBSOLETE("obsolete");  
38 private final String value;  
39  
40 XDocumentStatus(String v) {  
41 value = v;
```

**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/
NorthernCaddoan.java, line 35 (Poor Style: Confusing Naming)****Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/NorthernCaddoan.java:35**Taint Flags:**

```
32 X_PAW("x-PAW"),  
33 @XmlEnumValue("x-WIC")  
34 X_WIC("x-WIC");  
35 private final String value;  
36  
37 NorthernCaddoan(String v) {  
38 value = v;
```

Poor Style: Confusing Naming**Low****Package:** gov.va.med.pharmacy.wsclients.mvi**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/DataTypeHistoricalAddress.java, line 29 (Poor Style: Confusing Naming)****Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/DataTypeHistoricalAddress.java:29**Taint Flags:**

```
26
27 @XmlEnumValue("HXIT<AD>")
28 HXIT_AD("HXIT<AD>");
29 private final String value;
30
31 DataTypeHistoricalAddress(String v) {
32     value = v;
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/MdfHmdRowType.java, line 44 (Poor Style: Confusing Naming)**Low****Issue Details****Kingdom:** Code Quality**Scan Engine:** SCA (Structural)**Sink Details****Sink:** Field: value**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/wsclients/mvi/MdfHmdRowType.java:44**Taint Flags:**

```
41 CLASS("class"),
42 @XmlEnumValue("stc")
43 STC("stc");
44 private final String value;
45
46 MdfHmdRowType(String v) {
47     value = v;
```

Poor Style: Value Never Read (1 issue)

Abstract

The variable's value is assigned but never used, making it a dead store.

Explanation

This variable's value is not used. After the assignment, the variable is either assigned another value or goes out of scope.

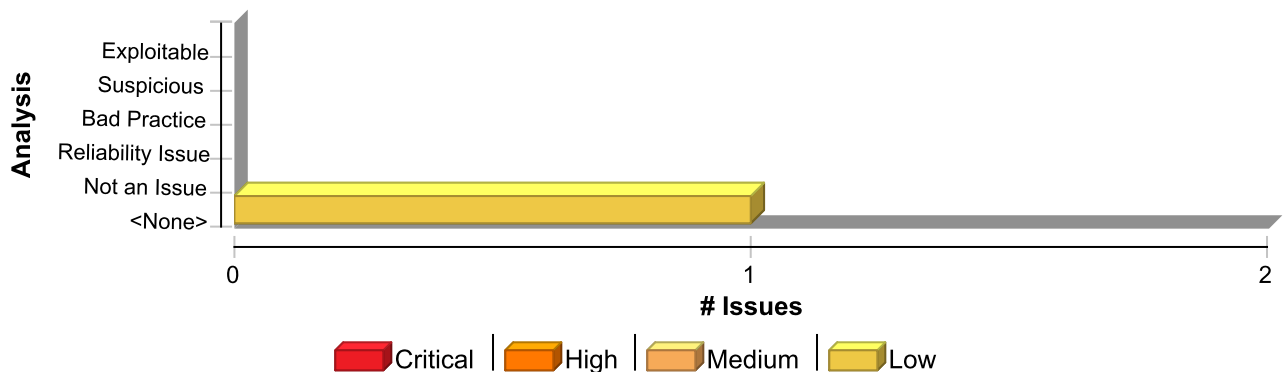
Example: The following code excerpt assigns to the variable `r` and then overwrites the value without using it.

```
r = getName( ) ;  
r = getNewBuffer(buf) ;
```

Recommendation

Remove unnecessary assignments in order to make the code easier to understand and maintain.

Issue Summary



Engine Breakdown

	SCA	WebInspect	SecurityScope	Total
Poor Style: Value Never Read	1	0	0	1
Total	1	0	0	1

Poor Style: Value Never Read	Low
Package: gov.va.med.pharmacy.jms.messaging	
PS_INB_ERX_JMS/src/main/java/gov/va/med/pharmacy/jms/messaging/InboundMsgProducer.java, line 37 (Poor Style: Value Never Read)	Low
Issue Details	

Kingdom: Code Quality

Scan Engine: SCA (Structural)

Poor Style: Value Never Read**Low****Package:** gov.va.med.pharmacy.jms.messaging**PS_INB_ERX_JMS/src/main/java/gov/va/med/pharmacy/jms/messaging/
InboundMsgProducer.java, line 37 (Poor Style: Value Never Read)****Low****Sink Details****Sink:** VariableAccess: messageRead**Enclosing Method:** postProcessMessage()**File:** PS_INB_ERX_JMS/src/main/java/gov/va/med/pharmacy/jms/messaging/InboundMsgProducer.java:37**Taint Flags:**

```
34 Long length = byteMessage.getBodyLength();  
35  
36 byte[] newMessage = new byte[length.intValue()];  
37 int messageRead = byteMessage.readBytes(newMessage);  
38  
39 LOG.debug("--- sending message", new String(newMessage));  
40
```

Redundant Null Check (1 issue)

Abstract

The program can dereference a null pointer, thereby causing a null pointer exception.

Explanation

Null pointer exceptions usually occur when one or more of the programmer's assumptions is violated. Specifically, dereference-after-check errors occur when a program makes an explicit check for null, but proceeds to dereference the object when it is known to be null. Errors of this type are often the result of a typo or programmer oversight.

Most null pointer issues result in general software reliability problems, but if attackers can intentionally cause the program to dereference a null pointer, they can use the resulting exception to mount a denial of service attack or to cause the application to reveal debugging information that will be valuable in planning subsequent attacks.

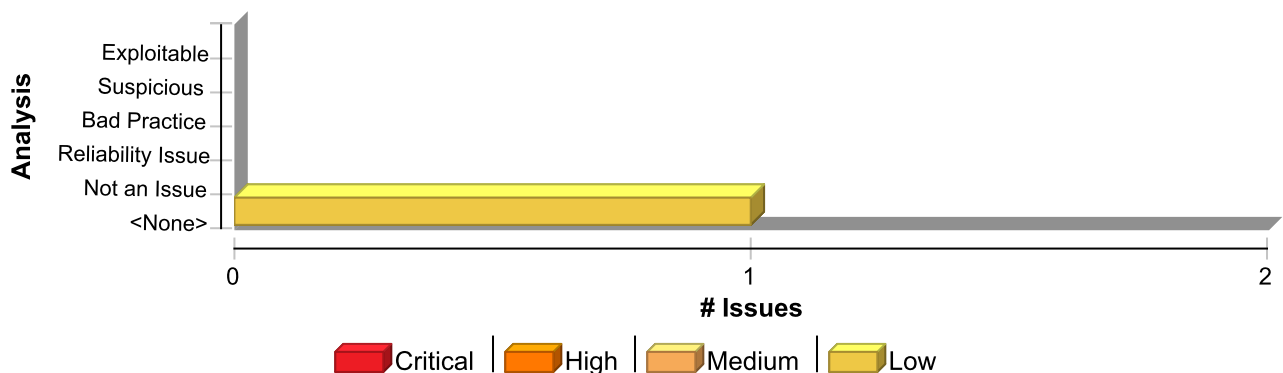
Example 1: In the following code, the programmer confirms that the variable `foo` is `null` and subsequently dereferences it erroneously. If `foo` is `null` when it is checked in the `if` statement, then a null dereference will occur, thereby causing a null pointer exception.

```
if (foo == null) {  
    foo.setBar(val);  
    ...  
}
```

Recommendation

Implement careful checks before dereferencing objects that might be `null`. When possible, abstract null checks into wrappers around code that manipulates resources to ensure that they are applied in all cases and to minimize the places where mistakes can occur.

Issue Summary



Engine Breakdown

	SCA	WebInspect	SecurityScope	Total
Redundant Null Check	1	0	0	1
Total	1	0	0	1

Redundant Null Check	Low
Package: gov.va.med.pharmacy.persistence.dao.impl	
PS_INB_ERX_Model/src/main/java/gov/va/med/pharmacy/persistence/dao/impl/SummaryReportDaoImpl.java, line 97 (Redundant Null Check)	Low

Issue Details

Kingdom: Code Quality
Scan Engine: SCA (Control Flow)

Sink Details

Sink: Dereferenced : visn
Enclosing Method: find()
File: PS_INB_ERX_Model/src/main/java/gov/va/med/pharmacy/persistence/dao/impl/SummaryReportDaoImpl.java:97
Taint Flags:

```

94  if (visn != null && visn.length() > 0){
95  visn = visn.substring(0, visn.length()-1);
96  }
97  if (visn.compareTo("") == 0){ //check for All value
98  visn = "%";
99  }
100

```

SQL Injection (1 issue)

Abstract

Constructing a dynamic SQL statement with input coming from an untrusted source could allow an attacker to modify the statement's meaning or to execute arbitrary SQL commands.

Explanation

SQL injection errors occur when:

1. Data enters a program from an untrusted source.

In this case HPE Security Fortify Static Code Analyzer could not determine that the source of the data is trusted.

2. The data is used to dynamically construct a SQL query.

Example 1: The following code dynamically constructs and executes a SQL query that searches for items matching a specified name. The query restricts the items displayed to those where the owner matches the user name of the currently-authenticated user.

```
...
String userName = ctx.getAuthenticatedUserName();
String itemName = request.getParameter("itemName");
String query = "SELECT * FROM items WHERE owner = '"
    + userName + "' AND itemname = '"
    + itemName + "'";
ResultSet rs = stmt.execute(query);
...
```

The query that this code intends to execute follows:

```
SELECT * FROM items
WHERE owner = <userName>
AND itemname = <itemName>;
```

However, because the query is constructed dynamically by concatenating a constant base query string and a user input string, the query only behaves correctly if `itemName` does not contain a single-quote character. If an attacker with the user name `wiley` enters the string `"name' OR 'a'='a"` for `itemName`, then the query becomes the following:

```
SELECT * FROM items
WHERE owner = 'wiley'
AND itemname = 'name' OR 'a'='a';
```

The addition of the `OR 'a'='a'` condition causes the where clause to always evaluate to true, so the

query becomes logically equivalent to the much simpler query:

```
SELECT * FROM items;
```

This simplification of the query allows the attacker to bypass the requirement that the query only return items owned by the authenticated user; the query now returns all entries stored in the `items` table, regardless of their specified owner.

Example 2: This example examines the effects of a different malicious value passed to the query constructed and executed in Example 1. If an attacker with the user name `wiley` enters the string `"name'; DELETE FROM items; --"` for `itemName`, then the query becomes the following two queries:

```
SELECT * FROM items
  WHERE owner = 'wiley'
 AND itemname = 'name';

DELETE FROM items;

-- '
```

Many database servers, including Microsoft(R) SQL Server 2000, allow multiple SQL statements separated by semicolons to be executed at once. While this attack string results in an error on Oracle and other database servers that do not allow the batch-execution of statements separated by semicolons, on databases that do allow batch execution, this type of attack allows the attacker to execute arbitrary commands against the database.

Notice the trailing pair of hyphens (`--`), which specifies to most database servers that the remainder of the statement is to be treated as a comment and not executed [4]. In this case the comment character serves to remove the trailing single-quote left over from the modified query. On a database where comments are not allowed to be used in this way, the general attack could still be made effective using a trick similar to the one used in Example 1. If an attacker enters the string `"name'); DELETE FROM items; SELECT * FROM items WHERE 'a'='a'"`, the following three valid statements will be created:

```
SELECT * FROM items
  WHERE owner = 'wiley'
 AND itemname = 'name';

DELETE FROM items;

SELECT * FROM items WHERE 'a'='a';
```

Some think that in the mobile world, classic web application vulnerabilities, such as SQL injection, do not make sense -- why would the user attack themselves? However, keep in mind that the essence of mobile platforms is applications that are downloaded from various sources and run alongside each other on the same device. The likelihood of running a piece of malware next to a banking application is high, which necessitates expanding the attack surface of mobile applications to include inter-process communication.

Example 3: The following code adapts Example 1 to the Android platform.


```

...
    PasswordAuthentication pa = authenticator.getPasswordAuthentication();
    String userName = pa.getUserName();
    String itemName = this.getIntent().getExtras().getString("itemName");
    String query = "SELECT * FROM items WHERE owner = '"
                  + userName + "' AND itemname = '"
                  + itemName + "'";
    SQLiteDatabase db = this.openOrCreateDatabase("DB", MODE_PRIVATE,
null);
    Cursor c = db.rawQuery(query, null);
...

```

One traditional approach to preventing SQL injection attacks is to handle them as an input validation problem and either accept only characters from a whitelist of safe values or identify and escape a blacklist of potentially malicious values. Whitelisting can be a very effective means of enforcing strict input validation rules, but parameterized SQL statements require less maintenance and can offer more guarantees with respect to security. As is almost always the case, blacklisting is riddled with loopholes that make it ineffective at preventing SQL injection attacks. For example, attackers may:

- Target fields that are not quoted
- Find ways to bypass the need for certain escaped meta-characters
- Use stored procedures to hide the injected meta-characters

Manually escaping characters in input to SQL queries can help, but it will not make your application secure from SQL injection attacks.

Another solution commonly proposed for dealing with SQL injection attacks is to use stored procedures. Although stored procedures prevent some types of SQL injection attacks, they fail to protect against many others. Stored procedures typically help prevent SQL injection attacks by limiting the types of statements that can be passed to their parameters. However, there are many ways around the limitations and many interesting statements that can still be passed to stored procedures. Again, stored procedures can prevent some exploits, but they will not make your application secure against SQL injection attacks.

Recommendation

The root cause of a SQL injection vulnerability is the ability of an attacker to change context in the SQL query, causing a value that the programmer intended to be interpreted as data to be interpreted as a command instead. When a SQL query is constructed, the programmer knows what should be interpreted as part of the command and what should be interpreted as data. Parameterized SQL statements can enforce this behavior by disallowing data-directed context changes and preventing nearly all SQL injection attacks. Parameterized SQL statements are constructed using strings of regular SQL, but when user-supplied data needs to be included, they create bind parameters, which are placeholders for data that is subsequently inserted. Bind parameters allow the program to explicitly specify to the database what should be treated as a command and what should be treated as data. When the program is ready to execute a statement, it specifies to the database the runtime values to use for the value of each of the bind parameters, without the risk of the data being interpreted as commands.

Example 1 can be rewritten to use parameterized SQL statements (instead of concatenating user supplied strings) as follows:

```

...
    String userName = ctx.getAuthenticatedUserName();
    String itemName = request.getParameter("itemName");
    String query =

```

```

        "SELECT * FROM items WHERE itemname=? AND owner=?";
        PreparedStatement stmt = conn.prepareStatement(query);
        stmt.setString(1, itemName);
        stmt.setString(2, userName);
        ResultSet results = stmt.execute();
        ...

```

And here is an Android equivalent:

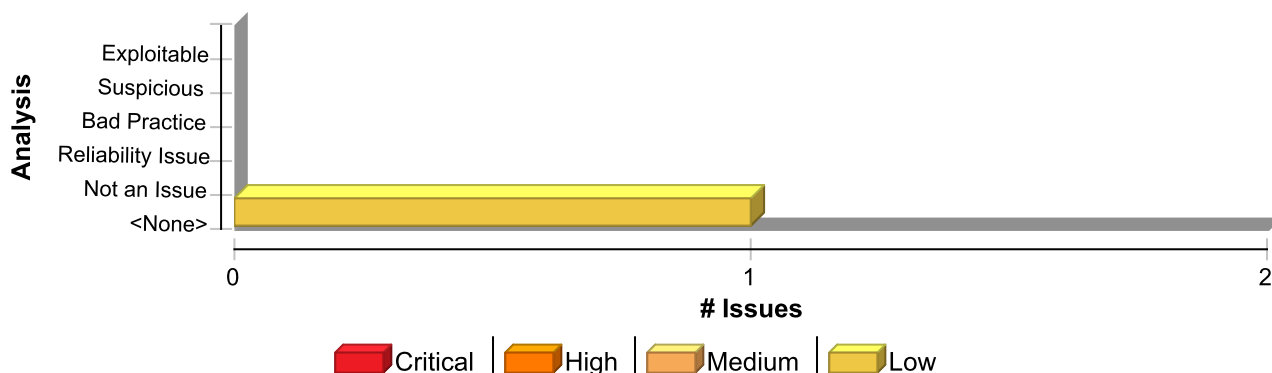
```

...
    PasswordAuthentication pa = authenticator.getPasswordAuthentication();
    String userName = pa.getUserName();
    String itemName = this.getIntent().getExtras().getString("itemName");
    String query = "SELECT * FROM items WHERE itemname=? AND owner=?";
    SQLiteDatabase db = this.openOrCreateDatabase("DB", MODE_PRIVATE, null);
    Cursor c = db.rawQuery(query, new Object[]{itemName, userName});
    ...

```

More complicated scenarios, often found in report generation code, require that user input affect the command structure of the SQL statement, such as the addition of dynamic constraints in the `WHERE` clause. Do not use this requirement to justify concatenating user input into query strings. Prevent SQL injection attacks where user input must affect statement command structure with a level of indirection: create a set of legitimate strings that correspond to different elements you might include in a SQL statement. When constructing a statement, use input from the user to select from this set of application-controlled values.

Issue Summary



Engine Breakdown

	SCA	WebInspect	SecurityScope	Total
SQL Injection	1	0	0	1
Total	1	0	0	1

SQL Injection	Low
Package: gov.va.med.pharmacy.persistence.track.impl	
PS_INB_ERX_Model/src/main/java/gov/va/med/pharmacy/persistence/track/impl/NcpdpMessagesDaoImpl.java, line 701 (SQL Injection)	Low
Issue Details	

SQL Injection	Low
Package: gov.va.med.pharmacy.persistence.track.impl	
PS_INB_ERX_Model/src/main/java/gov/va/med/pharmacy/persistence/track/impl/NcpdpMessagesDaoImpl.java, line 701 (SQL Injection)	Low

Kingdom: Input Validation and Representation

Scan Engine: SCA (Semantic)

Sink Details

Sink: query()

Enclosing Method: searchMessages()

File: PS_INB_ERX_Model/src/main/java/gov/va/med/pharmacy/persistence/track/impl/NcpdpMessagesDaoImpl.java:701

Taint Flags:

```

698 try {
699 //LOG.info("Retrieving NCPDP message details.");
700 //System.out.println("Retrieving NCPDP message details.");
701 ncpdpMsgList = jdbcTemplate.query(sql,new NcpdpMsgListRowMapper(),messageId, relatesToId,
vaStationId, patientLastName, patientFirstName, prescriberLastName, prescriberFirstName,
prescriberNpi, prescribedDrug, inboundNcpdpMsgId);
702 } catch (DataAccessException e) {
703 //ncpdpMsg.setDataError(e.getMessage());
704 //System.out.println("data error is:" + e.getMessage());

```

System Information Leak: External (7 issues)

Abstract

Revealing system data or debugging information helps an adversary learn about the system and form a plan of attack.

Explanation

An external information leak occurs when system data or debugging information leaves the program to a remote machine via a socket or network connection. External leaks can help an attacker by revealing specific data about operating systems, full pathnames, the existence of usernames, or locations of configuration files, and are more serious than internal information leaks which are more difficult for an attacker to access.

Example 1: The following code leaks Exception information in the HTTP response:

```
protected void doPost (HttpServletRequest req, HttpServletResponse res) throws
IOException {
    ...
    PrintWriter out = res.getWriter();
    try {
        ...
    } catch (Exception e) {
        out.println(e.getMessage());
    }
}
```

This information can be exposed to a remote user. In some cases the error message tells the attacker precisely what sort of an attack the system is vulnerable to. For example, a database error message can reveal that the application is vulnerable to a SQL injection attack. Other error messages can reveal more oblique clues about the system. In the example above, the leaked information could imply information about the type of operating system, the applications installed on the system, and the amount of care that the administrators have put into configuring the program.

In the mobile world, information leaks are also a concern. The essence of mobile platforms is applications that are downloaded from various sources and run alongside each other on the same device. The likelihood of running a piece of malware next to a banking application is high, which is why application authors need to be careful about what information they include in messages addressed to other applications running on the device.

Example 2: The code below broadcasts the stack trace of a caught exception to all the registered Android receivers.

```
...
try {
    ...
} catch (Exception e) {
    String exception = Log.getStackTraceString(e);
    Intent i = new Intent();
    i.setAction("SEND_EXCEPTION");
}
```

```

        i.putExtra("exception", exception);
        view.getContext().sendBroadcast(i);
    }
    ...

```

Here is another scenario specific to the mobile world. Most mobile devices now implement a Near-Field Communication (NFC) protocol for quickly sharing information between devices using radio communication. It works by bringing devices to close proximity or simply having them touch each other. Even though the communication range of NFC is limited to just a few centimeters, eavesdropping, data modification and various other types of attacks are possible, since NFC alone does not ensure secure communication.

Example 3: The Android platform provides support for NFC. The following code creates a message that gets pushed to the other device within the range.

```

...
public static final String TAG = "NfcActivity";
private static final String DATA_SPLITTER = "__:DATA:__";
private static final String MIME_TYPE = "application/my.applications.mimetype";
...
TelephonyManager tm =
    (TelephonyManager)Context.getSystemService(Context.TELEPHONY_SERVICE);
String VERSION = tm.getDeviceSoftwareVersion();
...
NfcAdapter nfcAdapter = NfcAdapter.getDefaultAdapter(this);
if (nfcAdapter == null)
    return;

String text = TAG + DATA_SPLITTER + VERSION;
NdefRecord record = new NdefRecord(NdefRecord.TNF_MIME_MEDIA,
    MIME_TYPE.getBytes(), new byte[0], text.getBytes());
NdefRecord[] records = { record };
NdefMessage msg = new NdefMessage(records);
nfcAdapter.setNdefPushMessage(msg, this);
...

```

NFC Data Exchange Format (NDEF) message contains typed data, a URI, or a custom application payload. If the message contains information about the application, such as its name, MIME type, or device software version, this information could be leaked to an eavesdropper.

Recommendation

Write error messages with security in mind. In production environments, turn off detailed error information in favor of brief messages. Restrict the generation and storage of detailed output that can help administrators and programmers diagnose problems. Be careful, debugging traces can sometimes appear in non-obvious places (embedded in comments in the HTML for an error page, for example).

Even brief error messages that do not reveal stack traces or database dumps can potentially aid an attacker. For example, an "Access Denied" message can reveal that a file or user exists on the system. Due to this, it's advised to always keep information instead of sending it to a resource directly outside the program.

Example 4: The code below broadcasts the stack trace of a caught exception within your app only, so that it cannot be leaked to other apps on the system. There is also the added bonus that this is more efficient than globally broadcasting through the system.

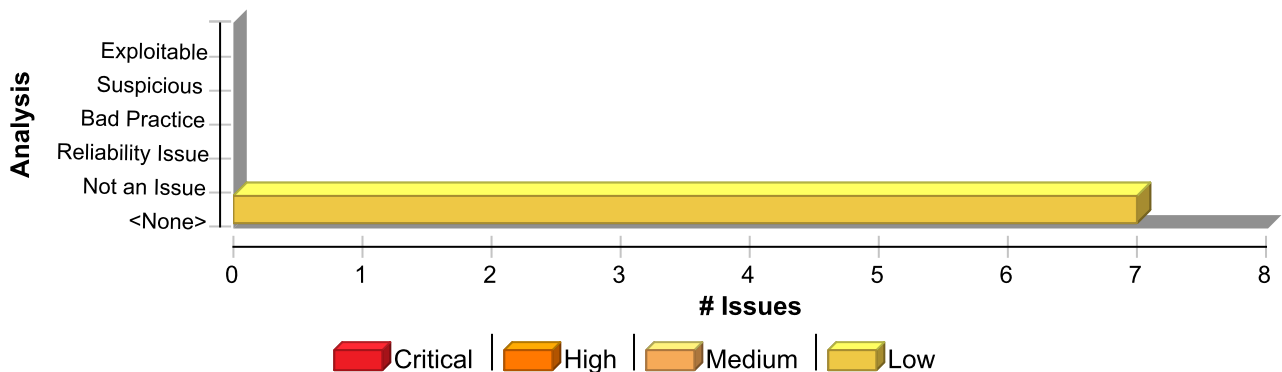
```

...
try {
    ...
} catch (Exception e) {
    String exception = Log.getStackTraceString(e);
    Intent i = new Intent();
    i.setAction("SEND_EXCEPTION");
    i.putExtra("exception", exception);
    LocalBroadcastManager.getInstance(view.getContext()).sendBroadcast(i);
}
...

```

If you are concerned about leaking system data via NFC on an Android device, you could do one of the following three things. Either do not include system data in the messages pushed to other devices in range, or encrypt the payload of the message, or establish secure communication channel at a higher layer.

Issue Summary



Engine Breakdown

	SCA	WebInspect	SecurityScope	Total
System Information Leak: External	7	0	0	7
Total	7	0	0	7

System Information Leak: External	Low
------------------------------------------	------------

Package: gov.va.med.pharmacy.jaxrs.drug.service.impl

PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/drug/service/impl/DrugSearchImpl.java, line 62 (System Information Leak: External)	Low
------------------------------------------------------------------------------------------------------------------------------------------	-----

Issue Details

Kingdom: Encapsulation
Scan Engine: SCA (Data Flow)

Source Details

Source: java.lang.Throwable.getMessage()
From: gov.va.med.pharmacy.jaxrs.drug.service.impl.DrugSearchImpl.search
File: PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/drug/service/impl/DrugSearchImpl.java:57

System Information Leak: External**Low****Package:** gov.va.med.pharmacy.jaxrs.drug.service.impl**PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/drug/service/impl/DrugSearchImpl.java, line 62 (System Information Leak: External)****Low**

```
54 } catch (Exception e) {  
55     searchResponse.setSuccess(false);  
56  
57     searchResponse.setErrorMessage("Error while searching drug: " +  
e.getMessage());  
58  
59     LOG.error("Error in DrugSearchImpl:" + e.getMessage());  
60 }
```

Sink Details**Sink:** Return searchResponse**Enclosing Method:** search()**File:** PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/drug/service/impl/DrugSearchImpl.java:62**Taint Flags:** EXCEPTIONINFO, SYSTEMINFO

```
59 LOG.error("Error in DrugSearchImpl:" + e.getMessage());  
60 }  
61  
62 return searchResponse;  
63 }  
64  
65 undefined
```

Package: gov.va.med.pharmacy.jaxrs.mvi.service.impl**PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/mvi/service/impl/PatientSearchImpl.java, line 101 (System Information Leak: External)****Low****Issue Details****Kingdom:** Encapsulation**Scan Engine:** SCA (Data Flow)**Source Details****Source:** java.lang.Throwable.getMessage()**From:** gov.va.med.pharmacy.jaxrs.mvi.service.impl.PatientSearchImpl.searchPatientByName**File:** PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/mvi/service/impl/PatientSearchImpl.java:98

```
95  
96     searchResponse.setSuccess(false);  
97  
98     searchResponse.setErrorMessage("Error while searching patient: " +  
e.getMessage());  
99 }
```

System Information Leak: External**Low****Package:** gov.va.med.pharmacy.jaxrs.mvi.service.impl**PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/mvi/service/impl/
PatientSearchImpl.java, line 101 (System Information Leak: External)****Low**

```
100
101 return searchResponse;
```

Sink Details**Sink:** Return searchResponse**Enclosing Method:** searchPatientByName()**File:** PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/mvi/service/impl/PatientSearchImpl.java:101**Taint Flags:** EXCEPTIONINFO, SYSTEMINFO

```
98 searchResponse.setErrorMessage("Error while searching patient: " + e.getMessage());
99 }
100
101 return searchResponse;
102 }
103
104 }
```

Package: gov.va.med.pharmacy.jaxrs.outboundncpdpmmessage.service.impl**PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/
outboundncpdpmmessage/service/impl/
OutboundNCPDPMMessageServiceImpl.java, line 207 (System Information Leak:
External)****Low****Issue Details****Kingdom:** Encapsulation**Scan Engine:** SCA (Data Flow)**Source Details****Source:** java.lang.Throwable.getMessage()**From:** gov.va.med.pharmacy.jaxrs.outboundncpdpmmessage.service.impl.OutboundNCPDPMMessageServiceImpl.sendMessage()**File:** PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/outboundncpdpmmessage/service/impl/OutboundNCPDPMMessageServiceImpl.java:204

```
201
202 wsResponse.setSuccess(false);
203
204 wsResponse.setErrorMessage("Error while processing outbound message: " +
e.getMessage());
205 }
206
207 return wsResponse;
```

Sink Details

System Information Leak: External	Low
Package: gov.va.med.pharmacy.jaxrs.outboundncdpdpmessage.service.impl	
PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/outboundncdpdpmessage/service/impl/OutboundNCPDPMMessageServiceImpl.java, line 207 (System Information Leak: External)	Low

Sink: Return wsResponse
Enclosing Method: sendOutboundMessage()
File: PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/outboundncdpdpmessage/service/impl/OutboundNCPDPMMessageServiceImpl.java:207
Taint Flags: EXCEPTIONINFO, SYSTEMINFO

```

204 wsResponse.setErrorMessage("Error while processing outbound message: " + e.getMessage());
205 }
206
207 return wsResponse;
208 }
209
210 /*
  
```

Package: gov.va.med.pharmacy.jaxrs.provider.service.impl	
PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/provider/service/impl/ProviderSearchImpl.java, line 62 (System Information Leak: External)	Low

Issue Details

Kingdom: Encapsulation
Scan Engine: SCA (Data Flow)

Source Details

Source: java.lang.Throwable.getMessage()
From: gov.va.med.pharmacy.jaxrs.provider.service.impl.ProviderSearchImpl.search
File: PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/provider/service/impl/ProviderSearchImpl.java:59

```

56
57 searchResponse.setSuccess(false);
58
59 searchResponse.setErrorMessage("Error while searching provider: " +
e.getMessage());
60 }
61
62 return searchResponse;
  
```

Sink Details

Sink: Return searchResponse
Enclosing Method: search()
File: PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/provider/service/impl/ProviderSearchImpl.java:62
Taint Flags: EXCEPTIONINFO, SYSTEMINFO

System Information Leak: External**Low****Package: gov.va.med.pharmacy.jaxrs.provider.service.impl****PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/provider/service/impl/ProviderSearchImpl.java, line 62 (System Information Leak: External)****Low**

```
59 searchResponse.setErrorMessage("Error while searching provider: " + e.getMessage());
60 }
61
62 return searchResponse;
63 }
64
65 undefined
```

Package: gov.va.med.pharmacy.jaxrs.tovista.service.impl**PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/tovista/service/impl/VistaInboundSendImpl.java, line 55 (System Information Leak: External)****Low****Issue Details****Kingdom:** Encapsulation**Scan Engine:** SCA (Data Flow)**Source Details****Source:** java.lang.Throwable.getMessage()**From:** gov.va.med.pharmacy.jaxrs.tovista.service.impl.VistaInboundSendImpl.send**File:** PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/tovista/service/impl/VistaInboundSendImpl.java:52

```
49 } catch (IOException e) {
50     sendResponse.setSuccess(false);
51
52     sendResponse.setErrorMessage("Error while sending vista inbound message: " + e.getMessage());
53 }
54
55 return sendResponse;
```

Sink Details**Sink:** Return sendResponse**Enclosing Method:** send()**File:** PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/tovista/service/impl/VistaInboundSendImpl.java:55**Taint Flow:** EXCEPTIONINFO, SYSTEMINFO

```
52 sendResponse.setErrorMessage("Error while sending vista inbound message: " + e.getMessage());
53 }
54
55 return sendResponse;
56 }
57
```

System Information Leak: External	Low
Package: gov.va.med.pharmacy.jaxrs.tovista.service.impl	
PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/tovista/service/impl/VistaInboundSendImpl.java, line 55 (System Information Leak: External)	Low

58 undefined

Package: gov.va.med.pharmacy.jaxrs.vistaoutboundmsg.service.impl	
PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/vistaoutboundmsg/service/impl/VistaOutboundMsgImpl.java, line 97 (System Information Leak: External)	Low

Issue Details

Kingdom: Encapsulation

Scan Engine: SCA (Data Flow)

Source Details

Source: java.lang.Throwable.getMessage()

From: gov.va.med.pharmacy.jaxrs.vistaoutboundmsg.service.impl.VistaOutboundMsgImpl.persistMessage

File: PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/vistaoutboundmsg/service/impl/VistaOutboundMsgImpl.java:94

```

91
92  wsResponse.setSuccess(false);
93
94  wsResponse.setErrorMessage("Error while saving vista outbound message: "
+ e.getMessage());
95  }
96
97  return wsResponse;

```

Sink Details

Sink: Return wsResponse

Enclosing Method: persistMessage()

File: PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/vistaoutboundmsg/service/impl/VistaOutboundMsgImpl.java:97

Taint Flags: EXCEPTIONINFO, SYSTEMINFO

```

94  wsResponse.setErrorMessage("Error while saving vista outbound message: " + e.getMessage());
95  }
96
97  return wsResponse;
98  }
99
100 @POST

```

System Information Leak: External	Low
Package: gov.va.med.pharmacy.jaxrs.vistaoutboundmsg.service.impl	
PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/vistaoutboundmsg/service/impl/VistaOutboundMsgImpl.java, line 141 (System Information Leak: External)	Low

Issue Details

Kingdom: Encapsulation

Scan Engine: SCA (Data Flow)

Source Details

Source: java.lang.Throwable.getMessage()

From: gov.va.med.pharmacy.jaxrs.vistaoutboundmsg.service.impl.VistaOutboundMsgImpl.persistXMLMessage

File: PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/vistaoutboundmsg/service/impl/VistaOutboundMsgImpl.java:138

```

135
136  wsResponse.setSuccess(false);
137
138  wsResponse.setErrorMessage("Error while saving vista outbound message: "
+ e.getMessage());
139  }
140
141  return wsResponse;

```

Sink Details

Sink: Return wsResponse

Enclosing Method: persistXMLMessage()

File: PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/vistaoutboundmsg/service/impl/VistaOutboundMsgImpl.java:141

Taint Flags: EXCEPTIONINFO, SYSTEMINFO

```

138  wsResponse.setErrorMessage("Error while saving vista outbound message: " +
e.getMessage());
139  }
140
141  return wsResponse;
142  }
143
144  undefined

```

System Information Leak: HTML Comment in JSP (5 issues)

Abstract

Any information revealed in an HTML comment might help an adversary learn about the system and form a plan of attack.

Explanation

HTML comments provide an attacker with an easy source of information about a dynamically generated web page.

Example 1:

```
<!-- TBD: this needs a security audit -->
<form method="POST" action="recalcOrbit">
...
```

Even comments that seem innocuous may be useful to someone trying to understand the way the system is built.

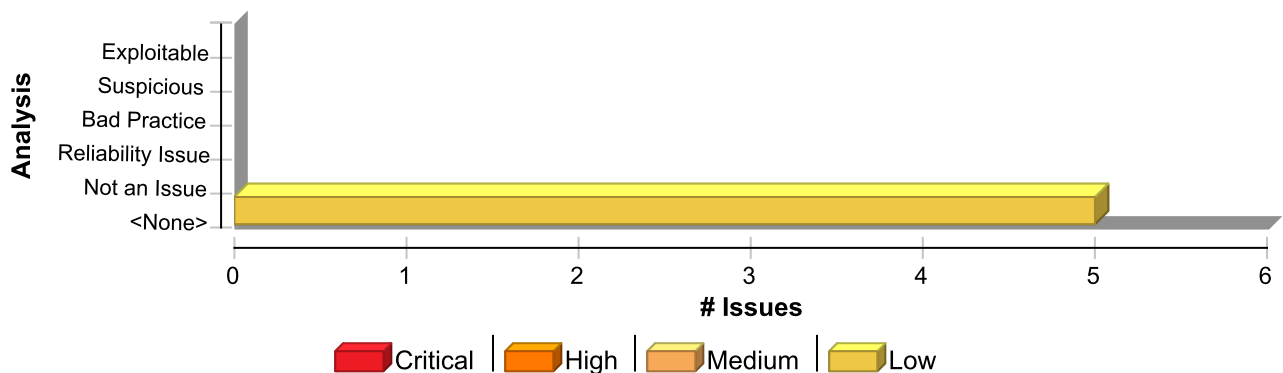
Recommendation

Replace HTML comments with JSP comments (which will not be transmitted to the user).

Example 2: The previous example is rewritten to use JSP comments, which will not be displayed to the user.

```
<%-- TBD: this needs a security audit --%>
<form method="POST" action="recalcOrbit">
...
```

Issue Summary



Engine Breakdown

	SCA	WebInspect	SecurityScope	Total
System Information Leak: HTML Comment in JSP	5	0	0	5
Total	5	0	0	5

System Information Leak: HTML Comment in JSP

Low

Package: .src.main.webapp.WEB-INF

PS_INB_ERX_UI/src/main/webapp/WEB-INF/logout.jsp, line 30 (System Information Leak: HTML Comment in JSP)

Low

Issue Details

Kingdom: Encapsulation

Scan Engine: SCA (Structural)

Sink Details

Sink: Comment

File: PS_INB_ERX_UI/src/main/webapp/WEB-INF/logout.jsp:30

Taint Flags:

```
27 <hr />
28 </div>
29 </body>
30 <!-- Included to resolve IE caching bugs -->
31 <head>
32 <meta http-equiv="pragma" content="no-cache" />
33 <meta http-equiv="cache-control" content="no-cache" />
```

PS_INB_ERX_UI/src/main/webapp/WEB-INF/manageusers.jsp, line 30 (System Information Leak: HTML Comment in JSP)

Low

Issue Details

Kingdom: Encapsulation

Scan Engine: SCA (Structural)

Sink Details

Sink: Comment

File: PS_INB_ERX_UI/src/main/webapp/WEB-INF/manageusers.jsp:30

Taint Flags:

```
27 <c:if test="${fn:length(data.successMessage) > 0}">
28 <div id="successMessages" class="warning">${data.successMessage} </div>
29 </c:if>
30 <!-- CSRF Spring Security protection
31 <form:hidden path="${_csrf.parameterName}" value="${_csrf.token}" /> -->
32 <form:hidden path="modifiedIds" value="" />
33 <form:hidden path="modifiedFields" value="" />
```

System Information Leak: HTML Comment in JSP	Low
Package: .src.main.webapp.WEB-INF	
PS_INB_ERX_UI/src/main/webapp/WEB-INF/landing.jsp, line 49 (System Information Leak: HTML Comment in JSP)	Low

Issue Details

Kingdom: Encapsulation
Scan Engine: SCA (Structural)

Sink Details

Sink: Comment
File: PS_INB_ERX_UI/src/main/webapp/WEB-INF/landing.jsp:49
Taint Flags:

```

46 <br/>
47 <p>${ sessionScope.loginErrorMessage}</p>
48 </div>
49 <!-- CSRF Spring Security protection -->
50 <input type="hidden" name="${_csrf.parameterName}" value="${_csrf.token}"/>
51 </form>
52 </div>

```

PS_INB_ERX_UI/src/main/webapp/WEB-INF/reports.jsp, line 46 (System Information Leak: HTML Comment in JSP)	Low
------------------------------------------------------------------------------------------------------------------	------------

Issue Details

Kingdom: Encapsulation
Scan Engine: SCA (Structural)

Sink Details

Sink: Comment
File: PS_INB_ERX_UI/src/main/webapp/WEB-INF/reports.jsp:46
Taint Flags:

```

43 <input type="text" name="dateTo" id="dateTo" value="now"
44 data-dojo-type="dijit/form/DateTextBox" required="true" />
45
46 <!-- <button id="runReportButton" type="button" >Run Report</button> -->
47 <button dojoType="dijit.form.Button" type="button">Run Report
48 <script type="dojo/method" event="onClick" args="evt">
49 getSummaryReport();

```

PS_INB_ERX_UI/src/main/webapp/WEB-INF/errorPage.jsp, line 31 (System Information Leak: HTML Comment in JSP)	Low
--------------------------------------------------------------------------------------------------------------------	------------

Issue Details

Kingdom: Encapsulation
Scan Engine: SCA (Structural)

Sink Details

System Information Leak: HTML Comment in JSP	Low
Package: .src.main.webapp.WEB-INF	
PS_INB_ERX_UI/src/main/webapp/WEB-INF/errorPage.jsp, line 31 (System Information Leak: HTML Comment in JSP)	Low

Sink: Comment

File: PS_INB_ERX_UI/src/main/webapp/WEB-INF/errorPage.jsp:31

Taint Flags:

```

28  <br>
29  </p>
30  <br />
31  <!--
32  <p>
33  Please <a href="${pageContext.request.contextPath}/public/welcome">login</a> again.
34  </p>

```


System Information Leak: Internal (3 issues)

Abstract

Revealing system data or debugging information helps an adversary learn about the system and form a plan of attack.

Explanation

An internal information leak occurs when system data or debugging information is sent to a local file, console, or screen via printing or logging.

Example 1: The following code prints an exception to the standard error stream:

```
try {  
    ...  
} catch (Exception e) {  
    e.printStackTrace();  
}
```

Depending upon the system configuration, this information can be dumped to a console, written to a log file, or exposed to a user. In some cases the error message tells the attacker precisely what sort of an attack the system is vulnerable to. For example, a database error message can reveal that the application is vulnerable to a SQL injection attack. Other error messages can reveal more oblique clues about the system. In the example above, the leaked information could imply information about the type of operating system, the applications installed on the system, and the amount of care that the administrators have put into configuring the program.

In the mobile world, information leaks are also a concern.

Example 2: The code below logs the stack trace of a caught exception on the Android platform.

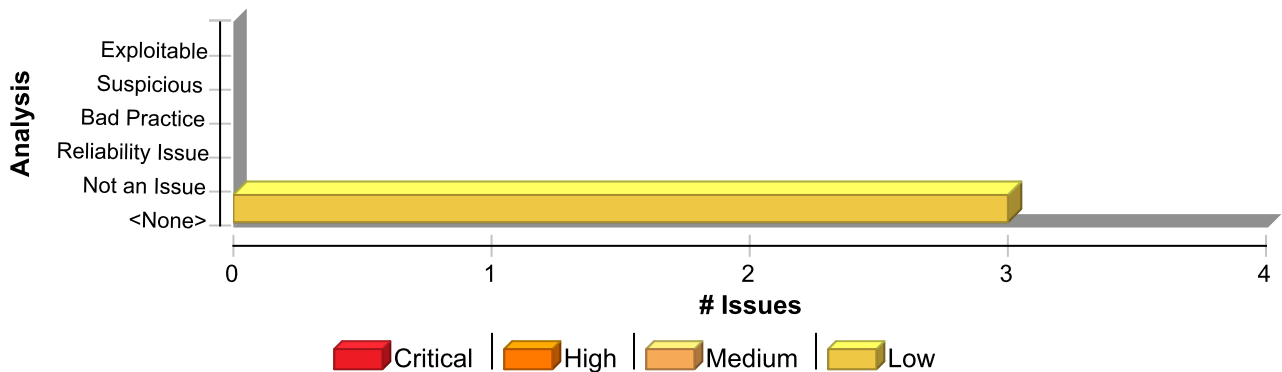
```
...  
try {  
    ...  
} catch (Exception e) {  
    Log.e(TAG, Log.getStackTraceString(e));  
}  
...
```

Recommendation

Write error messages with security in mind. In production environments, turn off detailed error information in favor of brief messages. Restrict the generation and storage of detailed output that can help administrators and programmers diagnose problems. Be careful, debugging traces can sometimes appear in non-obvious places (embedded in comments in the HTML for an error page, for example).

Even brief error messages that do not reveal stack traces or database dumps can potentially aid an attacker. For example, an "Access Denied" message can reveal that a file or user exists on the system.

Issue Summary



Engine Breakdown

	SCA	WebInspect	SecurityScope	Total
System Information Leak: Internal	3	0	0	3
Total	3	0	0	3

System Information Leak: Internal

Low

Package: gov.va.med.pharmacy.utility

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/
StreamUtilities.java, line 15 (System Information Leak: Internal)

Low

Issue Details

Kingdom: Encapsulation

Scan Engine: SCA (Data Flow)

Source Details

Source: Read e

From: gov.va.med.pharmacy.utility.StreamUtilities.safeClose

File: PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/StreamUtilities.java:15

```
12 try {
13   fileInputStream.close();
14 } catch (IOException e) {
15   System.out.print(e);
16 }
17 }
18 }
```

Sink Details

Sink: java.io.PrintStream.print()

Enclosing Method: safeClose()

File: PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/StreamUtilities.java:15

Taint Flags: EXCEPTIONINFO, SYSTEMINFO

```
12 try {
```

System Information Leak: Internal**Low****Package:** gov.va.med.pharmacy.utility**PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/StreamUtilities.java, line 15 (System Information Leak: Internal)****Low**

```
13  fileInputStream.close();
14  } catch (IOException e) {
15  System.out.print(e);
16  }
17  }
18  }
```

PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/StreamUtilities.java, line 25 (System Information Leak: Internal)**Low****Issue Details****Kingdom:** Encapsulation**Scan Engine:** SCA (Data Flow)**Source Details****Source:** Read e**From:** gov.va.med.pharmacy.utility.StreamUtilities.safeClose**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/StreamUtilities.java:25

```
22  try {
23  inputStream.close();
24  } catch (IOException e) {
25  System.out.print(e);
26  }
27  }
28  }
```

Sink Details**Sink:** java.io.PrintStream.print()**Enclosing Method:** safeClose()**File:** PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/StreamUtilities.java:25**Taint Flags:** EXCEPTIONINFO, SYSTEMINFO

```
22  try {
23  inputStream.close();
24  } catch (IOException e) {
25  System.out.print(e);
26  }
27  }
28  }
```

System Information Leak: Internal	Low
Package: gov.va.med.pharmacy.utility	
PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/StreamUtilities.java, line 35 (System Information Leak: Internal)	Low

Issue Details

Kingdom: Encapsulation

Scan Engine: SCA (Data Flow)

Source Details

Source: Read e

From: gov.va.med.pharmacy.utility.StreamUtilities.safeClose

File: PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/StreamUtilities.java:35

```

32  try {
33  bufferedReader.close();
34  } catch (IOException e) {
35  System.out.print(e);
36  }
37  }
38  }
```

Sink Details

Sink: java.io.PrintStream.print()

Enclosing Method: safeClose()

File: PS_INB_ERX_Common/src/main/java/gov/va/med/pharmacy/utility/StreamUtilities.java:35

Taint Flags: EXCEPTIONINFO, SYSTEMINFO

```

32  try {
33  bufferedReader.close();
34  } catch (IOException e) {
35  System.out.print(e);
36  }
37  }
38  }
```

Trust Boundary Violation (11 issues)

Abstract

Commingling trusted and untrusted data in the same data structure encourages programmers to mistakenly trust unvalidated data.

Explanation

A trust boundary can be thought of as line drawn through a program. On one side of the line, data is untrusted. On the other side of the line, data is assumed to be trustworthy. The purpose of validation logic is to allow data to safely cross the trust boundary--to move from untrusted to trusted.

A trust boundary violation occurs when a program blurs the line between what is trusted and what is untrusted. The most common way to make this mistake is to allow trusted and untrusted data to commingle in the same data structure.

Example: The following Java code accepts an HTTP request and stores the `username` parameter in the HTTP session object before checking to ensure that the user has been authenticated.

```
username = request.getParameter("username");
if (session.getAttribute(ATTR_USR) != null) {
    session.setAttribute(ATTR_USR, username);
}
```

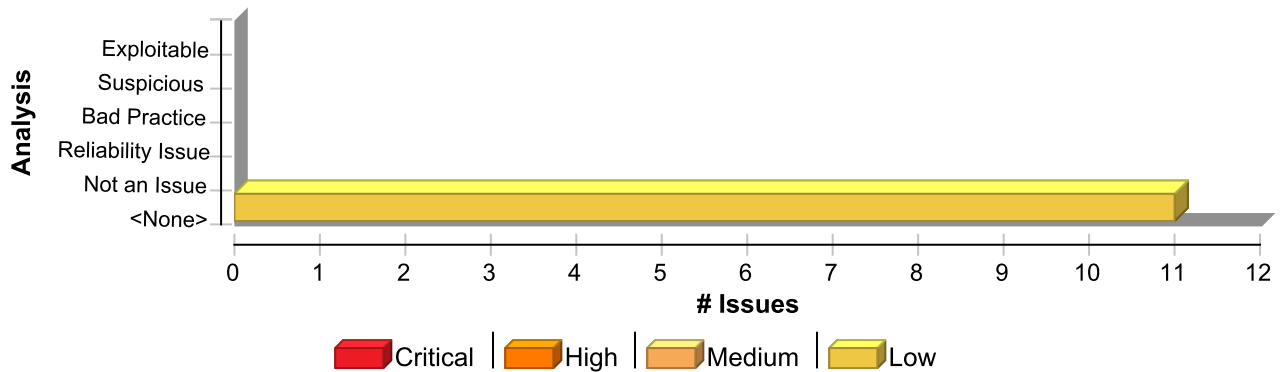
Without well-established and maintained trust boundaries, programmers will inevitably lose track of which pieces of data have been validated and which have not. This confusion will eventually allow some data to be used without first being validated.

Recommendation

Define clear trust boundaries in the application. Do not use the same data structure to hold trusted data in some contexts and untrusted data in other contexts. Minimize the number of ways that data can move across a trust boundary.

Trust boundary violations sometimes occur when input needs to be built up over a series of user interactions before being processed. It may not be possible to do complete input validation until all of the data has arrived. In these situations, it is still important to maintain a trust boundary. The untrusted data should be built up in a single untrusted data structure, validated, and then moved into a trusted location.

Issue Summary



Engine Breakdown

	SCA	WebInspect	SecurityScope	Total
Trust Boundary Violation	11	0	0	11
Total	11	0	0	11

Trust Boundary Violation	Low
Package: gov.va.med.pharmacy.web.administration	
PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/administration/PharmacyManagementController.java, line 107 (Trust Boundary Violation)	Low

Issue Details

Kingdom: Encapsulation
Scan Engine: SCA (Data Flow)

Source Details

Source: org.hibernate.Criteria.uniqueResult()
From: gov.va.med.pharmacy.persistence.dao.impl.PharmacyDaoImpl.findByNCPDPIId
File: PS_INB_ERX_Model/src/main/java/gov/va/med/pharmacy/persistence/dao/impl/PharmacyDaoImpl.java:71

```

68  }
69
70
71  PharmacyEntity pharmacy = (PharmacyEntity) criteria.uniqueResult();
72
73  return pharmacy;
74  }
```

Sink Details

Sink: org.springframework.web.servlet.ModelAndView.addObject()
Enclosing Method: editPharmacy()
File: PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/administration/PharmacyManagementController.java:107
Taint Flags: DATABASE, XSS

```

104
105  PharmacyEntity pharmacyInfo = pharmacyService.findByNCPDPIId(NCPDPIId);
106
```

Trust Boundary Violation	Low
---------------------------------	------------

Package: gov.va.med.pharmacy.web.administration

PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/administration/PharmacyManagementController.java, line 107 (Trust Boundary Violation)	Low
--------------------------------------------------------------------------------------------------------------------------------------------------	------------

```

107 view.addObject("pharmacyInfo",pharmacyInfo );
108
109 Map<String, String> statesMap = getStatesHashMap();
110

```

PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/administration/PharmacyManagementController.java, line 289 (Trust Boundary Violation)	Low
--------------------------------------------------------------------------------------------------------------------------------------------------	------------

Issue Details

Kingdom: Encapsulation

Scan Engine: SCA (Data Flow)

Source Details

Source: org.hibernate.Session.get()

From: gov.va.med.pharmacy.persistence.BaseDao.getByKey

File: PS_INB_ERX_Model/src/main/java/gov/va/med/pharmacy/persistence/BaseDao.java:29

```

26
27 @SuppressWarnings("unchecked")
28 public T getByKey(long id) {
29     return (T) getSession().get(persistentClass, id);
30 }
31
32 public void persist(T entity) {

```

Sink Details

Sink: org.springframework.web.servlet.ModelAndView.addObject()

Enclosing Method: updatePharmacy()

File: PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/administration/PharmacyManagementController.java:289

Taint Flags: DATABASE, PRIMARY_KEY, XSS

```

286 }
287
288
289 view.addObject("pharmacyInfo",pharmacyInfo );
290
291 Map<String, String> statesMap = getStatesHashMap();
292

```

PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/administration/UserManagementController.java, line 128 (Trust Boundary Violation)	Low
----------------------------------------------------------------------------------------------------------------------------------------------	------------

Issue Details

Kingdom: Encapsulation

Trust Boundary Violation

Low

Package: gov.va.med.pharmacy.web.administration

PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/administration/
UserManagementController.java, line 128 (Trust Boundary Violation)

Low

Scan Engine: SCA (Data Flow)

Source Details

Source: org.hibernate.Criteria.list()

From: gov.va.med.pharmacy.persistence.dao.impl.UserDaoImpl.findAll

File: PS_INB_ERX_Model/src/main/java/gov/va/med/pharmacy/persistence/dao/impl/UserD
aoImpl.java:65

```
62
63 criteria.setResultTransformer(Criteria.DISTINCT_ROOT_ENTITY); // for
unique results
64
65 List<VaUser> users = (List<VaUser>) criteria.list();
66
67 return users;
68 }
```

Sink Details

Sink: org.springframework.web.servlet.ModelAndView.addObject()

Enclosing Method: saveUsers()

File: PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/administration/UserManagementController.java:128

Taint Flags: DATABASE, NUMBER, XSS

```
125
126 List<UserManagementModel> userRoles = getUsersAndRoles();
127
128 mav.addObject("userMgmt", userRoles);
129
130 return mav;
131 }
```

PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/administration/
UserManagementController.java, line 137 (Trust Boundary Violation)

Low

Issue Details

Kingdom: Encapsulation

Scan Engine: SCA (Data Flow)

Source Details

Source: org.hibernate.Criteria.list()

From: gov.va.med.pharmacy.persistence.dao.impl.UserDaoImpl.findAll

File: PS_INB_ERX_Model/src/main/java/gov/va/med/pharmacy/persistence/dao/impl/UserD
aoImpl.java:65

```
62
```


Trust Boundary Violation

Low

Package: gov.va.med.pharmacy.web.administration

PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/administration/
UserManagementController.java, line 137 (Trust Boundary Violation)

Low

```
63 criteria.setResultTransformer(Criteria.DISTINCT_ROOT_ENTITY); // for
unique results
64
65 List<VaUser> users = (List<VaUser>) criteria.list();
66
67 return users;
68 }
```

Sink Details

Sink: org.springframework.web.servlet.ModelAndView.addObject()

Enclosing Method: saveUsers()

File: PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/administration/UserManagementController.java:137

Taint Flags: DATABASE, NUMBER, XSS

```
134
135 List<UserManagementModel> userRoles = getUsersAndRoles();
136
137 mav.addObject("userMgmt", userRoles);
138
139 if (result.hasErrors()) {
140
```

PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/administration/
UserManagementController.java, line 65 (Trust Boundary Violation)

Low

Issue Details

Kingdom: Encapsulation

Scan Engine: SCA (Data Flow)

Source Details

Source: org.hibernate.Criteria.list()

From: gov.va.med.pharmacy.persistence.dao.impl.UserDaoImpl.findAll

File: PS_INB_ERX_Model/src/main/java/gov/va/med/pharmacy/persistence/dao/impl/UserD
aoImpl.java:65

```
62
63 criteria.setResultTransformer(Criteria.DISTINCT_ROOT_ENTITY); // for
unique results
64
65 List<VaUser> users = (List<VaUser>) criteria.list();
66
67 return users;
68 }
```

Trust Boundary Violation	Low
Package: gov.va.med.pharmacy.web.administration	
PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/administration/UserManagementController.java, line 65 (Trust Boundary Violation)	Low

Sink Details

Sink: org.springframework.web.servlet.ModelAndView.addObject()
Enclosing Method: getMainPage()
File: PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/administration/UserManagementController.java:65
Taint Flags: DATABASE, NUMBER, XSS

```

62
63 List<UserManagementModel> userRoles = getUsersAndRoles();
64
65 mav.addObject("userMgmt", userRoles);
66
67 return mav;
68 }

```

PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/administration/PharmacyManagementController.java, line 92 (Trust Boundary Violation)	Low
-------------------------------------------------------------------------------------------------------------------------------------------------	------------

Issue Details

Kingdom: Encapsulation
Scan Engine: SCA (Data Flow)

Source Details

Source: org.hibernate.Criteria.list()
From: gov.va.med.pharmacy.persistence.dao.impl.PharmacyDaoImpl.find
File: PS_INB_ERX_Model/src/main/java/gov/va/med/pharmacy/persistence/dao/impl/PharmacyDaoImpl.java:53

```

50
51 criteria.setResultTransformer(Criteria.ALIAS_TO_ENTITY_MAP);
52
53 List<PharmacyEntity> pharmacies = criteria.list();
54
55 return pharmacies;
56

```

Sink Details

Sink: org.springframework.web.servlet.ModelAndView.addObject()
Enclosing Method: getPharmacyList()
File: PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/administration/PharmacyManagementController.java:92
Taint Flags: DATABASE, XSS

```

89
90 List<PharmacyEntity> pharmacyList = pharmacyService.find(managePharmacyFilter);
91
92 mav.addObject("items", pharmacyList);

```

Trust Boundary Violation

Low

Package: gov.va.med.pharmacy.web.administration

PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/administration/
PharmacyManagementController.java, line 92 (Trust Boundary Violation)

Low

```
93  
94 return mav;  
95 }
```

Package: gov.va.med.pharmacy.web.auth

PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/auth/
LoginController.java, line 103 (Trust Boundary Violation)

Low

Issue Details

Kingdom: Encapsulation
Scan Engine: SCA (Data Flow)

Source Details

Source: javax.servlet.http.HttpServletRequestWrapper.getHeader()
From: gov.va.med.pharmacy.web.filter.XSSRequestWrapper.getHeader
File: PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/filter/XSSRequestWrapper.
java:175

```
172 @Override  
173 public String getHeader(String name) {  
174  
175 String value = super.getHeader(name);  
176  
177 return stripXSS(value);  
178 }
```

Sink Details

Sink: javax.servlet.http.HttpSession.setAttribute()
Enclosing Method: authenticateUser()
File: PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/auth/LoginController.java:103
Taint Flags: WEB, XSS

```
100 {  
101 session.removeAttribute(Constants.SSOI_LANDING_URL);  
102  
103 session.setAttribute(Constants.SSOI_LANDING_URL, logoutURL);  
104 }  
105  
106 }
```

PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/auth/
LoginController.java, line 103 (Trust Boundary Violation)

Low

Issue Details

Trust Boundary Violation

Low

Package: gov.va.med.pharmacy.web.auth

PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/auth/LoginController.java, line 103 (Trust Boundary Violation)

Low

Kingdom: Encapsulation

Scan Engine: SCA (Data Flow)

Source Details

Source: javax.servlet.http.HttpServletRequest.getHeader()

From: gov.va.med.pharmacy.web.auth.LoginController.authenticateUser

File: PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/auth/LoginController.java:97

```
94 // logout should take to the IAM Landing.
95 if(request.getHeader(Constants.SSOI_LANDING_URL) !=null)
96 {
97     String logoutURL = request.getHeader(Constants.SSOI_LANDING_URL);
98
99     if(ESAPIValidator.isValidInput(logoutURL,ESAPIValidationType.IAM_LOGOUT_URL) )
100     {
```

Sink Details

Sink: javax.servlet.http.HttpSession.setAttribute()

Enclosing Method: authenticateUser()

File: PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/auth/LoginController.java:103

Taint Flags: WEB, XSS

```
100 {
101     session.removeAttribute(Constants.SSOI_LANDING_URL);
102
103     session.setAttribute(Constants.SSOI_LANDING_URL, logoutURL);
104 }
105
106 }
```

Package: gov.va.med.pharmacy.web.track

PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/track/TrackRxController.java, line 85 (Trust Boundary Violation)

Low

Issue Details

Kingdom: Encapsulation

Scan Engine: SCA (Data Flow)

Source Details

Source: org.springframework.jdbc.core.JdbcTemplate.query()

From: gov.va.med.pharmacy.persistence.track.impl.NcpdpMessagesDaoImpl.sendMessage
s

Trust Boundary Violation

Low

Package: gov.va.med.pharmacy.web.track

PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/track/TrackRxController.java, line 85 (Trust Boundary Violation)

Low

File: PS_INB_ERX_Model/src/main/java/gov/va/med/pharmacy/persistence/track/impl/NcpdpMessagesDaoImpl.java:701

```
698 try {
699 //LOG.info("Retrieving NCPDP message details.");
700 //System.out.println("Retrieving NCPDP message details.");
701 ncpdpMsgList = jdbcTemplate.query(sql,new
NcpdpMsgListRowMapper(),messageId, relatesToId, vaStationId, patientLastName,
patientFirstName, prescriberLastName, prescriberFirstName, prescriberNpi,
prescribedDrug, inboundNcpdpMsgId);
702 } catch (DataAccessException e) {
703 //ncpdpMsg.setDataError(e.getMessage());
704 //System.out.println("data error is:" + e.getMessage());
```

Sink Details

Sink: org.springframework.web.servlet.ModelAndView.addObject()

Enclosing Method: getMessages()

File: PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/track/TrackRxController.java:85

Taint Flags: DATABASE, XSS

```
82 // Refactored code into a method to be shared between the UI and the CSV as both use same
parameters to avoid code duplication.
83 List<NcpdpMessageListModel> eRxMessageList = trackAuditSearch(json);
84
85 mav.addObject("items", eRxMessageList);
86
87 return mav;
88 }
```

URL: /managePharm/addNewPharmacy

PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/administration/PharmacyManagementController.java, line 626 (Trust Boundary Violation)

Low

Issue Details

Kingdom: Encapsulation

Scan Engine: SCA (Data Flow)

Source Details

Source: addNewPharmacy(1)

From: gov.va.med.pharmacy.web.administration.PharmacyManagementController.addNewPharmacy

File: PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/administration/PharmacyManagementController.java:448

URL: /managePharm/addNewPharmacy

Trust Boundary Violation

Low

URL: /managePharm/addNewPharmacy

PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/administration/PharmacyManagementController.java, line 626 (Trust Boundary Violation)

Low

```
445 }
446
447 @RequestMapping(value = "/addNewPharmacy", method = RequestMethod.POST)
448 public ModelAndView addNewPharmacy(HttpServletRequest request, @Valid
@ModelAttribute("pharmacyAddForm") PharmacyForm pharmacyForm, BindingResult
bindingResult) throws IOException {
449
450 LOG.info("Trying to persist pharmacy information.");
451
```

Sink Details

Sink: org.springframework.web.servlet.ModelAndView.addObject()

Enclosing Method: addNewPharmacy()

File: PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/administration/PharmacyManagementController.java:626

Taint Flags: WEB, XSS

```
623 responseMessage.setSuccessMessage("Pharmacy information added successfully.");
624 }
625
626 view.addObject("pharmacyInfo", pharmacyInfo );
627
628 Map<String, String> statesMap = getStatesHashMap();
629
```

URL: /managePharm/updatePharmacy

PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/administration/PharmacyManagementController.java, line 289 (Trust Boundary Violation)

Low

Issue Details

Kingdom: Encapsulation

Scan Engine: SCA (Data Flow)

Source Details

Source: updatePharmacy(1)

From: gov.va.med.pharmacy.web.administration.PharmacyManagementController.updatePharmacy

File: PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/administration/PharmacyManagementController.java:126

URL: /managePharm/updatePharmacy

```
123 }
124
125 @RequestMapping(value = "/updatePharmacy", method = RequestMethod.POST)
126 public ModelAndView updatePharmacy(HttpServletRequest request, @Valid
```

Trust Boundary Violation	Low
URL: /managePharm/updatePharmacy	
PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/administration/PharmacyManagementController.java, line 289 (Trust Boundary Violation)	Low

```

@ModelAttribute("pharmacyEditForm") PharmacyForm pharmacyForm, BindingResult
bindingResult) throws IOException {
127
128     LOG.info("Trying to persist pharmacy information.");
129

```

Sink Details

Sink: org.springframework.web.servlet.ModelAndView.addObject()

Enclosing Method: updatePharmacy()

File: PS_INB_ERX_UI/src/main/java/gov/va/med/pharmacy/web/administration/PharmacyManagementController.java:289

Taint Flags: WEB, XSS

```

286     }
287
288
289     view.addObject("pharmacyInfo", pharmacyInfo );
290
291     Map<String, String> statesMap = getStatesHashMap();
292

```

XML Entity Expansion Injection (1 issue)

Abstract

Using XML parsers configured to not prevent nor limit Document Type Definition (DTD) entity resolution can expose the parser to an XML Entity Expansion injection

Explanation

XML Entity Expansion injection also known as XML Bombs are DoS attacks that benefit from valid and well-formed XML blocks that expand exponentially until they exhaust the server allocated resources. XML allows to define custom entities which act as string substitution macros. By nesting recurrent entity resolutions, an attacker may easily crash the server resources.

The following XML document shows an example of an XML Bomb.

```
<?xml version="1.0"?>
<!DOCTYPE lolz [
  <!ENTITY lol "lol">
  <!ENTITY lol2 "&lol;&lol;&lol;&lol;&lol;&lol;&lol;&lol;&lol;&lol;">
  <!ENTITY lol3 "&lol2;&lol2;&lol2;&lol2;&lol2;&lol2;&lol2;&lol2;&lol2;&lol2;">
  <!ENTITY lol4 "&lol3;&lol3;&lol3;&lol3;&lol3;&lol3;&lol3;&lol3;&lol3;&lol3;">
  <!ENTITY lol5 "&lol4;&lol4;&lol4;&lol4;&lol4;&lol4;&lol4;&lol4;&lol4;&lol4;">
  <!ENTITY lol6 "&lol5;&lol5;&lol5;&lol5;&lol5;&lol5;&lol5;&lol5;&lol5;&lol5;">
  <!ENTITY lol7 "&lol6;&lol6;&lol6;&lol6;&lol6;&lol6;&lol6;&lol6;&lol6;&lol6;">
  <!ENTITY lol8 "&lol7;&lol7;&lol7;&lol7;&lol7;&lol7;&lol7;&lol7;&lol7;&lol7;">
  <!ENTITY lol9 "&lol8;&lol8;&lol8;&lol8;&lol8;&lol8;&lol8;&lol8;&lol8;&lol8;">
]>
<lolz>&lol9;</lolz>
```

This test could crash the server by expanding the small XML document into more than 3GB in memory.

Recommendation

An XML parser should be configured securely so that it does not allow document type definition (DTD) custom entities as part of an incoming XML document.

To avoid XML Entity Expansion injection the "secure-processing" property should be set for an XML factory, parser or reader:

```
factory.setFeature("http://javax.xml.XMLConstants/feature/secure-processing",
true);
```

In JAXP 1.3 and earlier versions, when the secure processing feature is on, default limitations are set for DOM and SAX parsers. These limits are:

```
entityExpansionLimit = 64,000
elementAttributeLimit = 10,000
```

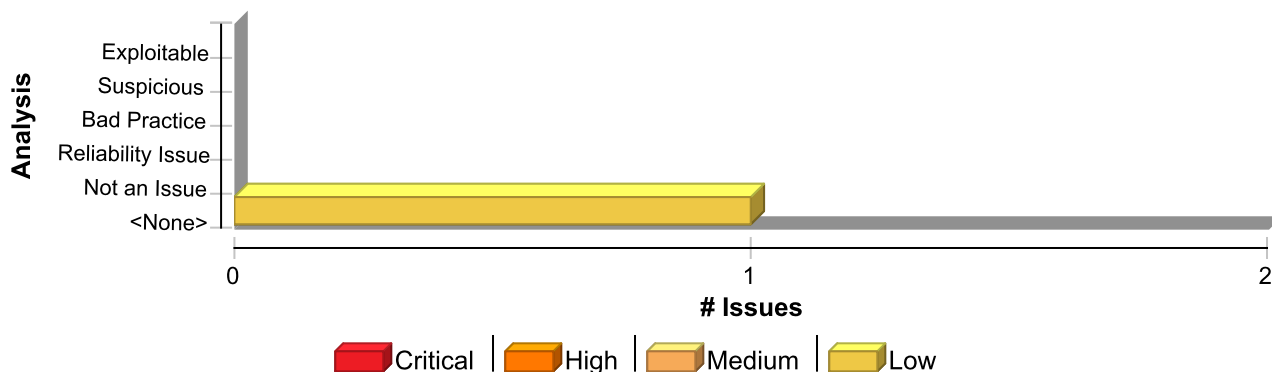
Since JAXP 1.4, the secure processing feature is turned on by default. In addition to the above limits, a new maxOccur limit is added to the validating parser. The limit is:

```
maxOccur = 5,000
```


If inline DOCTYPE declaration is not needed, it can be completely disabled with the following property:

```
factory.setFeature("http://apache.org/xml/features/disallow-doctype-decl", true);
```

Issue Summary



Engine Breakdown

	SCA	WebInspect	SecurityScope	Total
XML Entity Expansion Injection	1	0	0	1
Total	1	0	0	1

XML Entity Expansion Injection

Low

Package: gov.va.med.pharmacy.jaxrs.inboundncdpdpmessage.service.impl

PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/inboundncdpdpmessage/service/impl/InboundNCPDPMMessageServiceImpl.java, line 244 (XML Entity Expansion Injection)

Low

Issue Details

Kingdom: Input Validation and Representation
Scan Engine: SCA (Control Flow)

Sink Details

Sink: xmlReader.parse(...) : XML document parsed allowing external entity resolution

Enclosing Method: getInboundMessage()

File: PS_INB_ERX_WS/src/main/java/gov/va/med/pharmacy/jaxrs/inboundncdpdpmessage/service/impl/InboundNCPDPMMessageServiceImpl.java:244

Taint Flags:

```
241 InputSource inputparseXML = new InputSource(new StringReader(incomingMessage));
242 inputparseXML.setEncoding("UTF-8");
243
244 xmlReader.parse(inputparseXML);
245
246 // if validation is successful proceed further.
247
```

