



**Hewlett Packard**  
**Enterprise**

**Fortify Security Report**

Mar 7, 2017

administrator

Executive Summary

Issues Overview

On March 7, 2017, a source code review was performed over the Btsss.Plugins.VIMT code base. 18 files, 100086 lines of code were scanned and reviewed for defects that could lead to potential security vulnerabilities. A total of 22 reviewed findings were uncovered during the analysis.

Issues by Fortify Priority Order

Low	19
High	3

Recommendations and Conclusions

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

## Project Summary

### Code Base Summary

Code location: C:/Subversion/CRM/trunk

Number of Files: 18

Lines of Code: 100086

Build Label: <No Build Label>

### Scan Information

Scan time: 06:45

SCA Engine version: 16.20.0157

Machine Name: BASE2012

Username running scan: administrator

### Results Certification

Results Certification Valid

Details:

Results Signature:

SCA Analysis Results has Valid signature

Rules Signature:

There were no custom rules used in this scan

### Attack Surface

Attack Surface:

\$ATTACK\_SURFACES\$

### Filter Set Summary

Current Enabled Filter Set:

Security Auditor View

Filter Set Details:

Folder Filters:

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

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

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

If [fortify priority order] contains low Then set folder to Low

### Audit Guide Summary

Audit guide not enabled

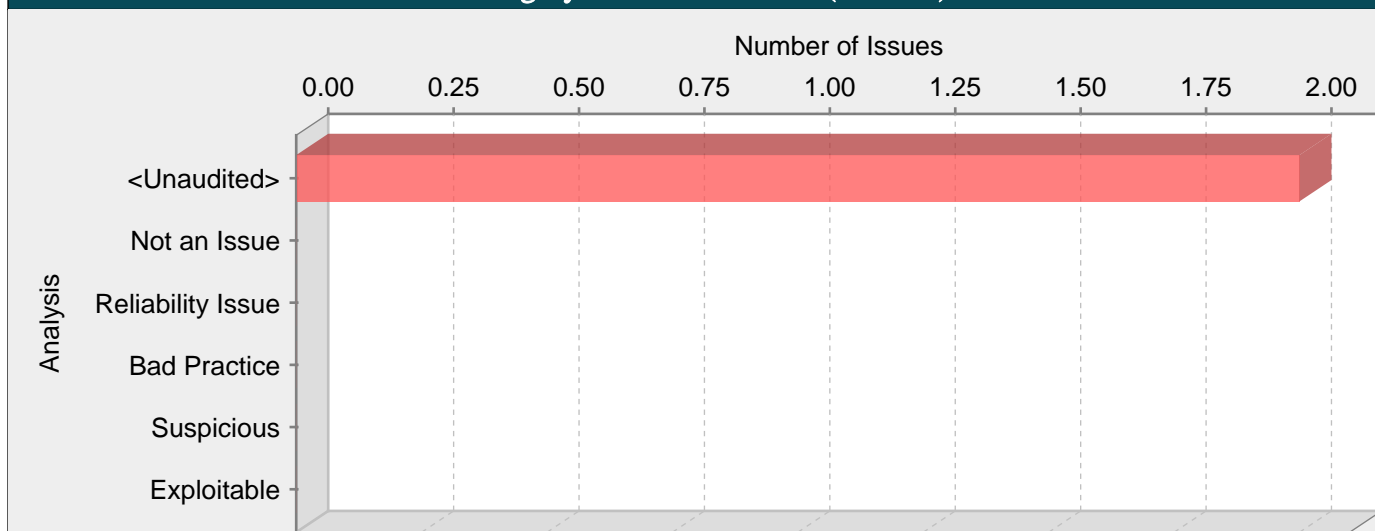
## Results Outline

## Overall number of results

The scan found 22 issues.

## Vulnerability Examples by Category

## Category: Null Dereference (2 Issues)

**Abstract:**

The method Execute() in RetrieveMultipleContactRunner.cs can dereference a null pointer on line 38, thereby raising a NullException.

**Explanation:**

Null pointer errors are usually the result of one or more programmer assumptions being violated.

Most null pointer issues result in general software reliability problems, but if an attacker can intentionally trigger a null pointer dereference, the attacker may be able to use the resulting exception to bypass security logic 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 assumes that the system always has a property named "cmd" defined. If an attacker can control the program's environment so that "cmd" is not defined, the program throws a null pointer exception when it attempts to call the Trim() method.

```
string cmd = null;
...
cmd = Environment.GetEnvironmentVariable("cmd");
cmd = cmd.Trim();
```

**Recommendations:**

Security problems caused by dereferencing null pointers are almost always related to the way in which the program handles runtime exceptions. If the software has a solid and well-executed approach to dealing with runtime exceptions, the potential for security damage is significantly diminished.

## RetrieveMultipleContactRunner.cs, line 38 (Null Dereference)

**Fortify Priority:**

Folder

High

**Kingdom:**

Code Quality

**Abstract:**

The method Execute() in RetrieveMultipleContactRunner.cs can dereference a null pointer on line 38, thereby raising a NullException.

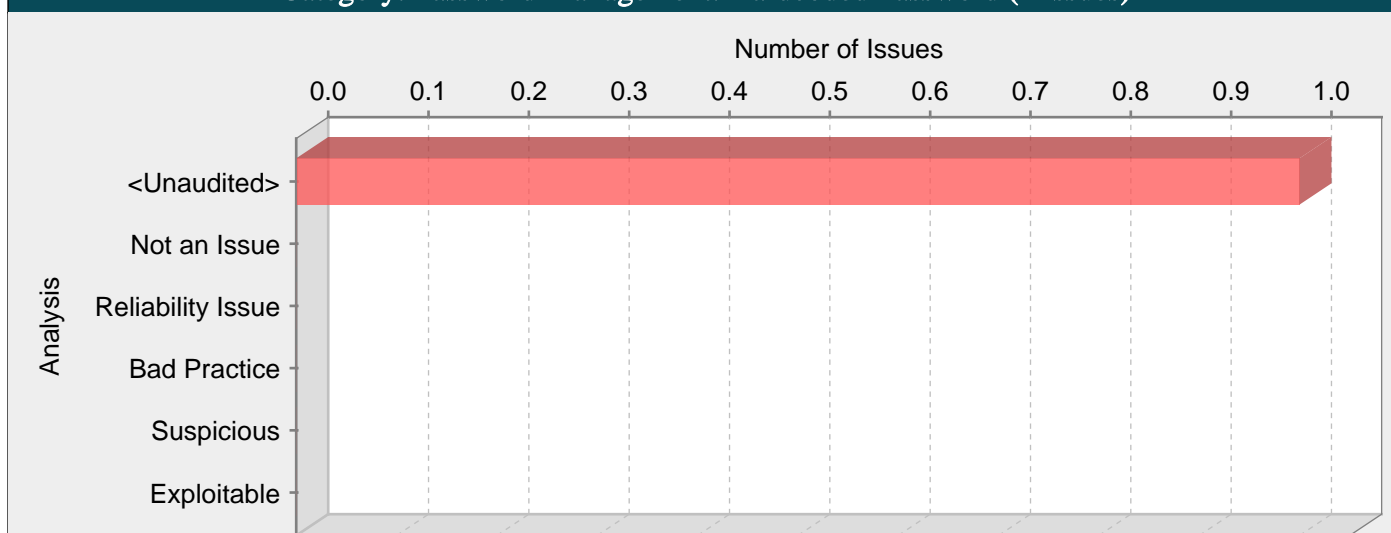
**Sink:**

RetrieveMultipleContactRunner.cs:38 businessEntityCollection.get\_Entities() : businessEntityCollection is not checked for null value before being dereferenced()

```
35             if
36             (this.PluginExecutionContext.OutputParameters.ContainsKey("BusinessEntityCollection"))
37             {
38                 var businessEntityCollection =
39                 this.PluginExecutionContext.OutputParameters["BusinessEntityCollection"] as
40                 EntityCollection;
41                 if (businessEntityCollection.Entities.Count == 1)
```

```
39                                     {  
40                                     base.UpdateBusinessEntity(businessEntityCollection.Entities[0]);  
41                                     }
```

## Category: Password Management: Hardcoded Password (1 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: The following code uses a hardcoded password to create a network credential:

```
...
NetworkCredential netCred =
new NetworkCredential("scott", "tiger", domain);
...
```

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 network credential 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 executable for the application they can disassemble the code, which will contain the values of the passwords used.

**Recommendations:**

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.

Microsoft(R) provides a tool that can be used in conjunction with the Windows Data Protection application programming interface (DPAPI) to protect sensitive application entries in configuration files [1].

**Tips:**

When identifying null, empty, or hardcoded passwords, default rules only consider fields and variables that contain the word password. However, the HPE Security Fortify Custom Rules Editor provides the Password Management wizard that makes it easy to create rules for detecting password management issues on custom-named fields and variables.

## crmservicehelpers.cs, line 164 (Password Management: Hardcoded Password)

**Fortify Priority:**

Folder

High

**Kingdom:**

Security Features

**Abstract:**

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

**Sink:**

crmservicehelpers.cs:164 NetworkCredential()

```
161 // credentials.Windows.ClientCredential =
System.Net.CredentialCache.DefaultNetworkCredentials;

162
163 //credentials.Windows.ClientCredential =
System.Net.CredentialCache.DefaultCredentials.GetCredential(config.DiscoveryUri,
"AD");

164 credentials.Windows.ClientCredential = new
System.Net.NetworkCredential("administrator", "pw4Catapult7&", "crm2011demo");

165 return credentials;

166 }
```



## Detailed Project Summary

### Files Scanned

Code base location: C:/Subversion/CRM/trunk

Files Scanned:

Plugins/BTSSS.Plugins.VIMT/Btsss.Plugins.VIMT.ContactProfile/Messages/MessageRegistry.cs 3 Lines 413 bytes 2/23/2017 11:23:18 AM

Plugins/BTSSS.Plugins.VIMT/Btsss.Plugins.VIMT.ContactProfile/Messages/Message.cs 116 Lines 4 KB 3/2/2017 6:06:10 PM

Plugins/BTSSS.Plugins.VIMT/Btsss.Plugins.VIMT.ContactProfile/bin/Debug/Microsoft.Xrm.Sdk.xml 2 MB 1/3/2017 4:12:30 PM

Plugins/BTSSS.Plugins.VIMT/Btsss.Plugins.VIMT.ContactProfile/RetrieveMultipleContact.cs 2 Lines 376 bytes 1/24/2017 8:41:40 PM

Common/Project Template/Helpers/UtilityFunctions.cs 75 Lines 6 KB 1/3/2017 4:16:21 PM

Plugins/BTSSS.Plugins.VIMT/Btsss.Plugins.VIMT.ContactProfile/Runner/RetrieveMultipleContactRunner.cs 6 Lines 1 KB 1/24/2017 8:41:40 PM

Plugins/BTSSS.Plugins.VIMT/Btsss.Plugins.VIMT.ContactProfile/Runner/ContactProfileBaseRunner.cs 107 Lines 26 KB 3/3/2017 2:11:29 AM

Common/Project Template/Helpers/PluginRunner.cs 45 Lines 5 KB 1/3/2017 4:16:21 PM

Plugins/BTSSS.Plugins.VIMT/Btsss.Plugins.VIMT.ContactProfile/RetrieveProfileContact.cs 4 Lines 589 bytes 2/28/2017 2:32:47 AM

Common/Project Template/Helpers/crmservicehelpers.cs 89 Lines 10 KB 1/3/2017 4:16:21 PM

Common/Project Template/Helpers/Initialize.cs 80 Lines 8 KB 1/3/2017 4:16:21 PM

Common/Project Template/Helpers/MCSSettings.cs 70 Lines 6 KB 1/3/2017 4:16:21 PM

Plugins/BTSSS.Plugins.VIMT/Btsss.Plugins.VIMT.ContactProfile/Runner/RetrieveContactRunner.cs 14 Lines 2 KB 1/24/2017 11:52:54 PM

Common/Project Template/Helpers/Utility.cs 109 Lines 14 KB 1/3/2017 4:16:21 PM

Common/Project Template/Helpers/MCSLogger.cs 46 Lines 5 KB 1/3/2017 4:16:21 PM

Common/Project Template/Helpers/MCSHelper.cs 46 Lines 6 KB 1/3/2017 4:16:21 PM

Common/Project Template/Helpers/mcsExtensions.cs 60288 Lines 6 MB 1/3/2017 4:16:21 PM

Plugins/BTSSS.Plugins.VIMT/Btsss.Plugins.VIMT.ContactProfile/bin/Debug/Microsoft.Crm.Sdk.Proxy.xml 1 MB 1/3/2017 4:12:30 PM

### Reference Elements

Classpath:

Libdirs:

### Rulepacks

Valid Rulepacks:

Name: HPE Security Fortify Secure Coding Rules, Core, .NET

Version: 2016.4.0.0007

ID: D57210E5-E762-4112-97DD-019E61D32D0E

SKU: RUL13002

Name: HPE Security Fortify Secure Coding Rules, Extended, Configuration



Version: 2016.4.0.0007

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

SKU: RUL13005

Name: HPE Security Fortify Secure Coding Rules, Extended, Content

Version: 2016.4.0.0007

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

SKU: RUL13067

Name: HPE Security Fortify Secure Coding Rules, Extended, .NET

Version: 2016.4.0.0007

ID: 557BCC56-CD42-43A7-B4FE-CDD00D58577E

SKU: RUL13027

## Properties

java.vendor=Oracle Corporation

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

os.name=Windows Server 2012

sun.boot.class.path=C:\Program Files\HPE\_Security\Fortify\_SCA\_and\_Apps\_16.20\jre\lib\resources.jar;C:\Program

Files\HPE\_Security\Fortify\_SCA\_and\_Apps\_16.20\jre\lib\rt.jar;C:\Program

Files\HPE\_Security\Fortify\_SCA\_and\_Apps\_16.20\jre\lib\sunrsasign.jar;C:\Program

Files\HPE\_Security\Fortify\_SCA\_and\_Apps\_16.20\jre\lib\jsse.jar;C:\Program

Files\HPE\_Security\Fortify\_SCA\_and\_Apps\_16.20\jre\lib\jce.jar;C:\Program

Files\HPE\_Security\Fortify\_SCA\_and\_Apps\_16.20\jre\lib\charsets.jar;C:\Program

Files\HPE\_Security\Fortify\_SCA\_and\_Apps\_16.20\jre\lib\jfr.jar;C:\Program

Files\HPE\_Security\Fortify\_SCA\_and\_Apps\_16.20\jre\classes

com.fortify.sca.ProjectRoot=C:\Users\Administrator\AppData\Local\Fortify

sun.desktop=windows

com.sun.management.jmxremote=true

java.vm.specification.vendor=Oracle Corporation

java.runtime.version=1.8.0\_102-b14

user.name=administrator

dotnet.install.dir=C:\Windows\Microsoft.NET\Framework64\

dotnet.v30.referenceAssemblies=C:\Program Files\Reference Assemblies\Microsoft\Framework\v3.0\

user.language=en

com.fortify.sca.cpfe.options=--remove\_unneeded\_entities --suppress\_vtbl -tused

sun.boot.library.path=C:\Program Files\HPE\_Security\Fortify\_SCA\_and\_Apps\_16.20\jre\bin

com.fortify.sca.env.exesearchpath=C:\Program Files (x86)\Microsoft Visual Studio 14.0\Common7\IDE;C:\Program

Files\HPE\_Security\Fortify\_SCA\_and\_Apps\_16.20\bin;C:\Windows\system32;C:\Windows;C:\Windows\System32\Wbem;C:\Wi

ndows\System32\WindowsPowerShell\v1.0\;C:\Program Files\Microsoft SQL Server\110\DTS\Binn\;C:\Program Files

(x86)\Microsoft SQL Server\110\Tools\Binn\;C:\Program Files\Microsoft SQL Server\110\Tools\Binn\;C:\Program Files

(x86)\Microsoft SQL Server\110\Tools\Binn\ManagementStudio\;C:\Program Files (x86)\Microsoft SQL

Server\110\DTS\Binn\;C:\Program Files (x86)\Microsoft ASP.NET\ASP.NET Web Pages\v1.0\;C:\Program Files\Microsoft SQL

Server\120\Tools\Binn\;C:\Program Files\Microsoft SQL Server\130\Tools\Binn\;C:\Program Files (x86)\Microsoft SQL

Server\120\DTS\Binn\;C:\Program Files (x86)\Microsoft SQL Server\130\DTS\Binn\;C:\Program Files\Microsoft\Web Platform

Installer\;C:\Program Files\dotnet\;C:\Program Files\TortoiseSVN\bin;C:\Users\Administrator\Documents

java.version=1.8.0\_102

user.timezone=America/New\_York

sun.arch.data.model=64

```
java.endorsed.dirs=C:\Program Files\HPE_Security\Fortify_SCA_and_Apps_16.20\jre\lib\endorsed
java.rmi.server.randomIDs=true
sun.cpu.isalist=amd64
sun.jnu.encoding=Cp1252
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file.separator=\
java.specification.name=Java Platform API Specification
dotnet.sdk.v20.install.dir=
java.class.version=52.0
com.fortify.TotalPhysicalMemory=17179398144
user.country=US
java.home=C:\Program Files\HPE_Security\Fortify_SCA_and_Apps_16.20\jre
java.vm.info=mixed mode
stdout.isatty=false
os.version=6.2
path.separator=;
java.vm.version=25.102-b14
user.variant=
java.awt.printerjob=sun.awt.windows.WPrinterJob
sun.io.unicode.encoding=UnicodeLittle
awt.toolkit=sun.awt.windows.WToolkit
user.script=
com.fortify.sca.JVMArgs=-XX:SoftRefLRUPolicyMSPerMB=3000 -Xmx15031914496 -Xss16M
com.fortify.InstallRoot=C:\Program Files\HPE_Security\Fortify_SCA_and_Apps_16.20
user.home=C:\Users\Administrator
vs.110.dotnet.clr.version=v4.0.30319
java.specification.vendor=Oracle Corporation
java.library.path=C:\Program
Files\HPE_Security\Fortify_SCA_and_Apps_16.20\bin;C:\Windows\Sun\Java\bin;C:\Windows\system32;C:\Windows;C:\Progra
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Files\HPE_Security\Fortify_SCA_and_Apps_16.20\bin;C:\Windows\system32;C:\Windows;C:\Windows\System32\Wbem;C:\Wi
ndows\System32\WindowsPowerShell\v1.0;C:\Program Files\Microsoft SQL Server\110\DTS\Binn;C:\Program Files
(x86)\Microsoft SQL Server\110\Tools\Binn;C:\Program Files\Microsoft SQL Server\110\Tools\Binn;C:\Program Files
(x86)\Microsoft SQL Server\110\Tools\Binn\ManagementStudio;C:\Program Files (x86)\Microsoft SQL
Server\110\DTS\Binn;C:\Program Files (x86)\Microsoft ASP.NET\ASP.NET Web Pages\v1.0;C:\Program Files\Microsoft SQL
Server\120\Tools\Binn;C:\Program Files\Microsoft SQL Server\130\Tools\Binn;C:\Program Files (x86)\Microsoft SQL
Server\120\DTS\Binn;C:\Program Files (x86)\Microsoft SQL Server\130\DTS\Binn;C:\Program Files\Microsoft\Web Platform
Installer;C:\Program Files\dotnet;C:\Program Files\TortoiseSVN\bin;C:\Users\Administrator\Documents;.
java.vendor.url=http://java.oracle.com/
java.vm.vendor=Oracle Corporation
java.runtime.name=Java(TM) SE Runtime Environment
sun.java.command=sourceanalyzer -Djava.awt.headless=true -Dcom.sun.management.jmxremote=true -
XX:SoftRefLRUPolicyMSPerMB=3000 -Dwin32.LocalAppdata=C:\Users\Administrator\AppData\Local -
Ddotnet.install.dir=C:\Windows\Microsoft.NET\Framework64\ -Ddotnet.sdk.v11.install.dir= -Ddotnet.sdk.v20.install.dir= -
Ddotnet.sdk.v3x.install.dir= -Ddotnet.v30.referenceAssemblies=C:\Program Files\Reference
Assemblies\Microsoft\Framework\v3.0\ -Ddotnet.v35.referenceAssemblies=C:\Program Files\Reference
Assemblies\Microsoft\Framework\v3.5\ -Dvs.110.dotnet.clr.version=v4.0.30319 -Dvs.140.dotnet.clr.version=v4.0.30319 -
Dcom.fortify.sca.env.exesearchpath=C:\Program Files (x86)\Microsoft Visual Studio 14.0\Common7\IDE;C:\Program
Files\HPE_Security\Fortify_SCA_and_Apps_16.20\bin;C:\Windows\system32;C:\Windows;C:\Windows\System32\Wbem;C:\Wi
ndows\System32\WindowsPowerShell\v1.0;C:\Program Files\Microsoft SQL Server\110\DTS\Binn;C:\Program Files
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```

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(x86)\Microsoft SQL Server\110\Tools\Binn\ManagementStudio\;C:\Program Files (x86)\Microsoft SQL
Server\110\DTS\Binn\;C:\Program Files (x86)\Microsoft ASP.NET\ASP.NET Web Pages\v1.0\;C:\Program Files\Microsoft SQL
Server\120\Tools\Binn\;C:\Program Files\Microsoft SQL Server\130\Tools\Binn\;C:\Program Files (x86)\Microsoft SQL
Server\120\DTS\Binn\;C:\Program Files (x86)\Microsoft SQL Server\130\DTS\Binn\;C:\Program Files\Microsoft\Web Platform
Installer\;C:\Program Files\dotnet\;C:\Program Files\TortoiseSVN\bin;C:\Users\Administrator\Documents -
Dcom.fortify.sca.ProjectRoot=C:\Users\Administrator\AppData\Local\Fortify -Dstdout.isatty=false -Dstderr.isatty=false -
Dcom.fortify.sca.PID=5040 -Xmx15031914496 -Dcom.fortify.TotalPhysicalMemory=17179398144 -Xss16M -
Dcom.fortify.sca.JVMArgs=-XX:SoftRefLRUPolicyMSPerMB=3000 -Xmx15031914496 -Xss16M -
Djava.class.path=C:\Program Files\HPE_Security\Fortify_SCA_and_Apps_16.20\Core\lib\exe\sca-exe.jar -scan
@C:\Users\Administrator\AppData\Local\Fortify\VS-14.0-16.20\Btss.Plugins.VIMT\Btss.Plugins.VIMT_Scan.txt
java.class.path=C:\Program Files\HPE_Security\Fortify_SCA_and_Apps_16.20\Core\lib\exe\sca-exe.jar
dotnet.v35.referenceAssemblies=C:\Program Files\Reference Assemblies\Microsoft\Framework\v3.5\
java.vm.specification.name=Java Virtual Machine Specification
java.vm.specification.version=1.8
sun.cpu.endian=little
vs.140.dotnet.clr.version=v4.0.30319
sun.os.patch.level=
java.awt.headless=true
com.fortify.sca.PID=5040
java.io.tmpdir=C:\Users\ADMINI~1\AppData\Local\Temp\2\
java.vendor.url.bug=http://bugreport.sun.com/bugreport/
stderr.isatty=false
os.arch=amd64
java.awt.graphicsenv=sun.awt.Win32GraphicsEnvironment
java.ext.dirs=C:\Program Files\HPE_Security\Fortify_SCA_and_Apps_16.20\jre\lib\ext;C:\Windows\Sun\Java\lib\ext
user.dir=C:\Program Files (x86)\Microsoft Visual Studio 14.0\Common7\IDE
line.separator=

java.vm.name=Java HotSpot(TM) 64-Bit Server VM
file.encoding=Cp1252
win32.LocalAppdata=C:\Users\Administrator\AppData\Local
dotnet.sdk.v3x.install.dir=
dotnet.sdk.v11.install.dir=
java.specification.version=1.8
com.fortify.Core=C:\Program Files\HPE_Security\Fortify_SCA_and_Apps_16.20\Core
com.fortify.VS.RequireASPPrecompilation=true
com.fortify.VS.Frameworks.DotNetFrameworkv11.SDKRegistry="SOFTWARE\Microsoft\.NETFramework", "sdkInstallRootv1.
1", "\bin"
com.fortify.VS.Frameworks.default.VSProjectVersionCode=-1
com.fortify.VS.Frameworks.DotNetFrameworkv40.DotNetFolder="v4.0.30319"
com.fortify.VS.Frameworks.DotNetFrameworkv45.DotNetFolder="v4.0.30319"
com.fortify.VS.Frameworks.DotNetFrameworkv11.VSProjectVersionCode=1;
com.fortify.VS.Frameworks.DotNetFrameworkv20.VSProjectVersionCode=131072
com.fortify.VS.Frameworks.DotNetFrameworkv451.DotNetFolder="v4.0.30319"
com.fortify.VS.DefaultFramework.11.0=DotNetFrameworkv45
com.fortify.VS.Frameworks.DotNetFrameworkv40.VSProjectVersionCode=262144
com.fortify.VS.Frameworks.DotNetFrameworkv451.VSProjectVersionCode=451
com.fortify.VS.Frameworks.DotNetFrameworkv35.SDKRegistry="SOFTWARE\Microsoft\Microsoft
SDKs\Windows\v6.0A", "InstallationFolder"
com.fortify.VS.Frameworks.DotNetFrameworkv45.VSProjectVersionCode=262149
com.fortify.VS.Frameworks.DotNetFrameworkv45.SDKRegistry="SOFTWARE\Microsoft\Microsoft
```

```
SDKs\Windows\v8.0A\WinSDK-NetFx40Tools-x86", "InstallationFolder"
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Tools\";"Microsoft SDKs\Windows\v8.0A\bin\";"Microsoft SDKs\Windows\v8.0\bin\NETFX 4.0 Tools\";"Microsoft
SDKs\Windows\v8.0\bin\"
com.fortify.VS.Frameworks.DotNetFrameworkv20.SDKRegistry="SOFTWARE\Microsoft\NETFramework", "sdkInstallRootv2.
0", "\bin"
com.fortify.WorkingDirectory=C:\Users\Administrator\AppData\Local\Fortify
com.fortify.VS.Frameworks.DotNetFrameworkv451.SDKRegistry="SOFTWARE\Microsoft\Microsoft
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com.fortify.VS.Frameworks.DotNetFrameworkv30.SDKRegistry="SOFTWARE\Microsoft\Microsoft
SDKs\Windows\v6.0A", "InstallationFolder"
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com.fortify.VS.Frameworks.DotNetFrameworkv451.SDKPaths="Microsoft SDKs\Windows\v8.1A\bin\NETFX 4.5.1
Tools\";"Microsoft SDKs\Windows\v8.1A\bin\";"Microsoft SDKs\Windows\v8.1\bin\NETFX 4.5.1 Tools\";"Microsoft
SDKs\Windows\v8.1\bin\"
com.fortify.AuthenticationKey=C:\Users\Administrator\AppData\Local\Fortify/config/tools
com.fortify.VS.DefaultFramework.10.0=DotNetFrameworkv40
com.fortify.SCAExecutablePath=C:\Program Files\HPE_Security\Fortify_SCA_and_Apps_16.20\bin\sourceanalyzer.exe
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com.fortify.locale=en
com.fortify.VS.DefaultFramework.14.0=DotNetFrameworkv451
com.fortify.search.defaultSyntaxVer=2
com.fortify.VS.Frameworks.DotNetFrameworkv30.VSProjectVersionCode=196608
max.file.path.length=255
com.fortify.VS.Frameworks.DotNetFrameworkv40.SDKRegistry="SOFTWARE\Microsoft\Microsoft
SDKs\Windows\v7.0A\WinSDK-NetFx40Tools-x86", "InstallationFolder"
com.fortify.VS.Frameworks.default.SDKRegistry="SOFTWARE\Microsoft\Microsoft SDKs\Windows\v8.0A\WinSDK-
NetFx35Tools-x86", "InstallationFolder";"SOFTWARE\Microsoft\Microsoft SDKs\Windows\v7.0A\WinSDK-NetFx35Tools-
x86", "InstallationFolder";"SOFTWARE\Microsoft\Microsoft SDKs\Windows\v6.1", "InstallationFolder", "\bin"
com.fortify.InstallationUserName=administrator
WinForms.TransformMessageLoops=true
com.fortify.sca.compilers.ant=com.fortify.sca.util.compilers.AntAdapter
WinForms.TransformChangeNotificationPattern=true
com.fortify.sca.fileextensions.xaml=ASPNET
com.fortify.sca.EnableStructuralMatchCache=true
com.fortify.sca.DefaultRulesDir=C:\Program Files\HPE_Security\Fortify_SCA_and_Apps_16.20\Core\config\rules
com.fortify.sca.compilers.ld=com.fortify.sca.util.compilers.LdCompiler
com.fortify.sca.fileextensions.ctp=PHP
com.fortify.sca.fileextensions.py=PYTHON
com.fortify.sca.fileextensions.settings=XML
com.fortify.sca.LowSeverityCutoff=1.0
com.fortify.sca.fileextensions.ctl=VB6
com.fortify.sca.fileextensions.cscfg=XML
com.fortify.sca.fileextensions.tld=TLD
com.fortify.sca.SuppressLowSeverity=true
com.fortify.sca.fileextensions.bas=VB6
com.fortify.sca.fileextensions.winmd=MSIL
com.fortify.sca.EnableNestedWrappers=true
com.fortify.sca.fileextensions.cs=CSHARP
com.fortify.sca.SolverTimeout=15
com.fortify.sca.fileextensions.wadcfg=XML
```

```
com.fortify.sca.OldVbNetExcludeFileTypes=vb,asax,ascx,ashx,asmx,aspx,xaml,cshtml,vbhtml
com.fortify.sca.compilers.xilink=com.fortify.sca.util.compilers.MicrosoftLinker
com.fortify.sca.fileextensions.Config=XML
com.fortify.sca.TypeInferenceLanguages=javascript,python,ruby
com.fortify.sca.fileextensions.asp=ASP
com.fortify.sca.fileextensions.pks=PLSQL
com.fortify.sca.fileextensions.sql=SQL
com.fortify.sca.parser.python.ignore.module.8=test.badsyntax_nocaret
com.fortify.sca.parser.python.ignore.module.7=test.badsyntax_future9
com.fortify.sca.parser.python.ignore.module.6=test.badsyntax_future8
com.fortify.sca.parser.python.ignore.module.5=test.badsyntax_future7
com.fortify.sca.parser.python.ignore.module.4=test.badsyntax_future6
com.fortify.sca.MachineOutputMode=
com.fortify.sca.parser.python.ignore.module.3=test.badsyntax_future5
com.fortify.sca.fileextensions.pkh=PLSQL
com.fortify.sca.parser.python.ignore.module.2=test.badsyntax_future4
com.fortify.sca.parser.python.ignore.module.1=test.badsyntax_future3
com.fortify.sca.fileextensions.cfm=CFML
com.fortify.sca.fileextensions.master=ASPNET
com.fortify.sca.fileextensions.pkb=PLSQL
com.fortify.sca.fileextensions.dll=MSIL
com.fortify.sca.fileextensions.appxmanifest=XML
com.fortify.sca.fileextensions.cfc=CFML
com.fortify.sca.fileextensions.vbhtml=ASPNET
com.fortify.sca.DotnetDecompiler=C:\Program Files\HPE_Security\Fortify_SCA_and_Apps_16.20\Core/private-bin/sca/dotnet-
decompiler.exe
com.fortify.sca.fileextensions.erb=RUBY_ERB
com.fortify.sca.DaemonCompilers=com.fortify.sca.util.compilers.GppCompiler,com.fortify.sca.util.compilers.GccCompiler,com.f
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osoftCompiler,com.fortify.sca.util.compilers.MicrosoftLinker,com.fortify.sca.util.compilers.LdCompiler,com.fortify.sca.util.com
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com.fortify.sca.cpe.441.command=C:\Program Files\HPE_Security\Fortify_SCA_and_Apps_16.20\Core/private-
bin/sca/cpe441.rfct
com.fortify.sca.fileextensions.ashx=ASPNET
com.fortify.sca.PrintPerformanceDataAfterScan=false
com.fortify.sca.compilers.armcc=com.fortify.sca.util.compilers.ArmCcCompiler
com.fortify.sca.fileextensions.mdl=MSIL
com.fortify.sca.compilers.devenv=com.fortify.sca.util.compilers.DevenvNetAdapter
com.fortify.sca.TypeInferencePhase0Timeout=300
com.fortify.sca.Phase0HigherOrder.Languages=python,ruby,swift
com.fortify.sca.DeadCodeFilter=true
com.fortify.sca.fileextensions.as=ACTIONSCRIPT
com.fortify.sca.compilers.mvn=com.fortify.sca.util.compilers.MavenAdapter
com.fortify.sca.analyzer.controlflow.EnableMachineFiltering=false
com.fortify.sca.compilers.tcc=com.fortify.sca.util.compilers.ArmCcCompiler
com.fortify.sca.UniversalBlacklist=.*yparse.*
com.fortify.sca.fileextensions.java=JAVA
com.fortify.sca.IndirectCallGraphBuilders=WinFormsAdHocFunctionBuilder,VirtualCGBuilder,J2EEIndirectCGBuilder,JNICG
```



Builder,StoredProcedureResolver,JavaWSCGBuilder,StrutsCGBuilder,DotNetWSCGBuilder,SqlServerSPResolver,ASPCGBuilder,ScriptedCGBuilder,NewJspCustomTagCGBuilder,DotNetCABCBuilder,StateInjectionCGBuilder,SqlServerSPResolver2,PHPLambdaResolver,JavaWebCGBuilder

com.fortify.sca.compilers.g++\*=com.fortify.sca.util.compilers.GppCompiler

com.fortify.sca.fileextensions.swift=SWIFT

com.fortify.sca.jsp.UseNativeParser=true

com.fortify.sca.fileextensions.vbscript=VBSCRIPT

com.fortify.sca.fileextensions.cpx=XML

com.fortify.sca.compilers.gcc4\*=com.fortify.sca.util.compilers.GccCompiler

com.fortify.sca.fileextensions.faces=JSPX

com.fortify.sca.RequireMapKeys=classrule

com.fortify.sca.fileextensions.properties=JAVA\_PROPERTIES

com.fortify.sca.fileextensions.wsdl=XML

com.fortify.sca.Renderer=fpr

com.fortify.sca.fileextensions.mod=MSIL

com.fortify.sca.JdkVersion=1.8

com.fortify.sca.fileextensions.wsdd=XML

com.fortify.sca.fileextensions.php=PHP

com.fortify.sca.compilers.msbuild=com.fortify.sca.util.compilers.MSBuildAdapter

com.fortify.sca.fileextensions.config=XML

com.fortify.sca.fileextensions.jsff=JSPX

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com.fortify.sca.ResultsFile=C:\Users\Administrator\AppData\Local\Fortify\VS-14.0-16.20\Btsss.Plugins.VIMT\Scan.fpr

WinForms.CollectionMutationMonitor.Label=WinFormsDataSource

com.fortify.sca.compilers.gcc3\*=com.fortify.sca.util.compilers.GccCompiler

com.fortify.sca.analyzer.controlflow.EnableTimeOut=true

WinForms.TransformDataBindings=true

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com.fortify.sca.compilers.touchless=com.fortify.sca.util.compilers.FortifyCompiler

com.fortify.sca.fileextensions.xsd=XML

com.fortify.sca.BuildID=Btsss.Plugins.VIMT

com.fortify.sca.FVDLStylesheet=C:\Program Files\HPE\_Security\Fortify\_SCA\_and\_Apps\_16.20\Core/resources/sca/fvd12html.xml

com.fortify.sca.DisableGlobals=false

com.fortify.sca.DotnetTranslator=C:\Program Files\HPE\_Security\Fortify\_SCA\_and\_Apps\_16.20\Core/private-bin/sca/dotnet-translator.exe

com.fortify.sca.fileextensions.ini=JAVA\_PROPERTIES

com.fortify.sca.fileextensions.abap=ABAP

com.fortify.sca.fileextensions.htm=HTML

com.fortify.sca.compilers.icpc=com.fortify.sca.util.compilers.IntelCompiler

com.fortify.sca.compilers.jam=com.fortify.sca.util.compilers.TouchlessCompiler

com.fortify.sca.fileextensions.cshtml=ASPNET

com.fortify.sca.compilers.gcc2\*=com.fortify.sca.util.compilers.GccCompiler

com.fortify.sca.fileextensions.xhtml=JSPX

com.fortify.sca.fileextensions.ABAP=ABAP

com.fortify.sca.CollectPerformanceData=true

com.fortify.sca.compilers.c89=com.fortify.sca.util.compilers.C89Compiler

com.fortify.sca.FVDLDisableProgramData=false

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com.fortify.sca.compilers.gradle=com.fortify.sca.util.compilers.GradleAdapter
com.fortify.sca.fileextensions.js=JAVASCRIPT
com.fortify.sca.fileextensions.jspx=JSPX
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com.fortify.sca.CustomRulesDir=C:\Program Files\HPE_Security\Fortify_SCA_and_Apps_16.20\Core\config\customrules
com.fortify.sca.compilers.g++=com.fortify.sca.util.compilers.GppCompiler
com.fortify.sca.fileextensions.xcfg=XML
com.fortify.sca.DisableInferredConstants=false
com.fortify.sca.DeadCodeIgnoreTrivialPredicates=true
com.fortify.sca.fileextensions.BSP=ABAP
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com.fortify.sca.fileextensions.csdef=XML
com.fortify.sca.fileextensions.bsp=ABAP
com.fortify.sca.JavaNewBeta=true
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com.fortify.sca.ThreadCount.NameTableLoading=1
com.fortify.sca.EnableInterproceduralConstantResolution=true
com.fortify.sca.fileextensions.ascx=ASPNET
com.fortify.sca.AntCompilerClass=com.fortify.dev.ant.SCACompiler
com.fortify.sca.alias.mode.javascript=fi
com.fortify.sca.fileextensions.cls=VB6
com.fortify.sca.fileextensions.frm=VB6
com.fortify.sca.BytecodePreview=true
com.fortify.sca.EnableWrapperDetection=true
WinForms.ExtractEventHandlers=true
com.fortify.sca.analyzer.controlflow.EnableRefRuleOptimization=false
com.fortify.sca.fileextensions.exe=MSIL
com.fortify.sca.compilers.g++4*=com.fortify.sca.util.compilers.GppCompiler
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com.fortify.sca.compilers.cl=com.fortify.sca.util.compilers.MicrosoftCompiler
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com.fortify.sca.Phase0HigherOrder.Level=1
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com.fortify.sca.fileextensions.phtml=PHP
com.fortify.sca.cpfe.file.option=--gen_c_file_name
com.fortify.sca.ProjectRoot=C:\Users\Administrator\AppData\Local\Fortify
com.fortify.sca.FVDLDisableSnippets=false
com.fortify.sca.compilers.make=com.fortify.sca.util.compilers.TouchlessCompiler
com.fortify.sca.compilers.g++3*=com.fortify.sca.util.compilers.GppCompiler
com.fortify.sca.fileextensions.asax=ASPNET
com.fortify.sca.fileextensions.vbs=VBSCRIPT
com.fortify.sca.SqlLanguage=TSQL
com.fortify.sca.DisableFunctionPointers=false
com.fortify.sca.NoNestedOutTagOutput=org.apache.taglibs.standard.tag.rt.core.RemoveTag,org.apache.taglibs.standard.tag.rt.cor
e.SetTag
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```
com.fortify.sca.fileextensions.asmx=ASPNET
com.fortify.sca.compilers.tcpgp=com.fortify.sca.util.compilers.ArmCppCompiler
com.fortify.sca.DefaultJarsDirs=default_jars
com.fortify.sca.compilers.icl=com.fortify.sca.util.compilers.MicrosoftCompiler
com.fortify.sca.BundleControlflowIssues=true
com.fortify.sca.AspnetTranslator=C:\Program Files\HPE_Security\Fortify_SCA_and_Apps_16.20\Core/private-
bin/sca/aspcodegen.exe
com.fortify.sca.cpfe.options=--remove_unneeded_entities --suppress_vtbl -tused
com.fortify.sca.fileextensions.html=HTML
com.fortify.sca.compilers.icc=com.fortify.sca.util.compilers.IntelCompiler
com.fortify.sca.compilers.g++2*=com.fortify.sca.util.compilers.GppCompiler
com.fortify.sca.compilers.ar=com.fortify.sca.util.compilers.ArUtil
com.fortify.sca.AddImpliedMethods=true
com.fortify.sca.cpfe.command=C:\Program Files\HPE_Security\Fortify_SCA_and_Apps_16.20\Core/private-bin/sca/cpfe48.exe
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com.fortify.sca.TypeInferenceFunctionTimeout=60
com.fortify.sca.compilers.gradlew=com.fortify.sca.util.compilers.GradleAdapter
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com.fortify.sca.fileextensions.xml=XML
com.fortify.sca.fileextensions.mxml=MXML
com.fortify.sca.compilers.gmake=com.fortify.sca.util.compilers.TouchlessCompiler
com.fortify.sca.fileextensions.xmi=XML
com.fortify.sca.DisableDeadCodeElimination=false
com.fortify.sca.fileextensions.rb=RUBY
com.fortify.sca.fileextensions.tag=JSP
com.fortify.sca.compilers.nmake=com.fortify.sca.util.compilers.TouchlessCompiler
com.fortify.sca.FVDLDisableDescriptions=false
com.fortify.sca.compilers.clearmake=com.fortify.sca.util.compilers.TouchlessCompiler
```

### Commandline Arguments

```
-scan
-b
Btsss.Plugins.VIMT
-machine-output
-f
C:\Users\Administrator\AppData\Local\Fortify\VS-14.0-16.20\Btsss.Plugins.VIMT\Scan.fpr
-format
fpr
```

### Warnings

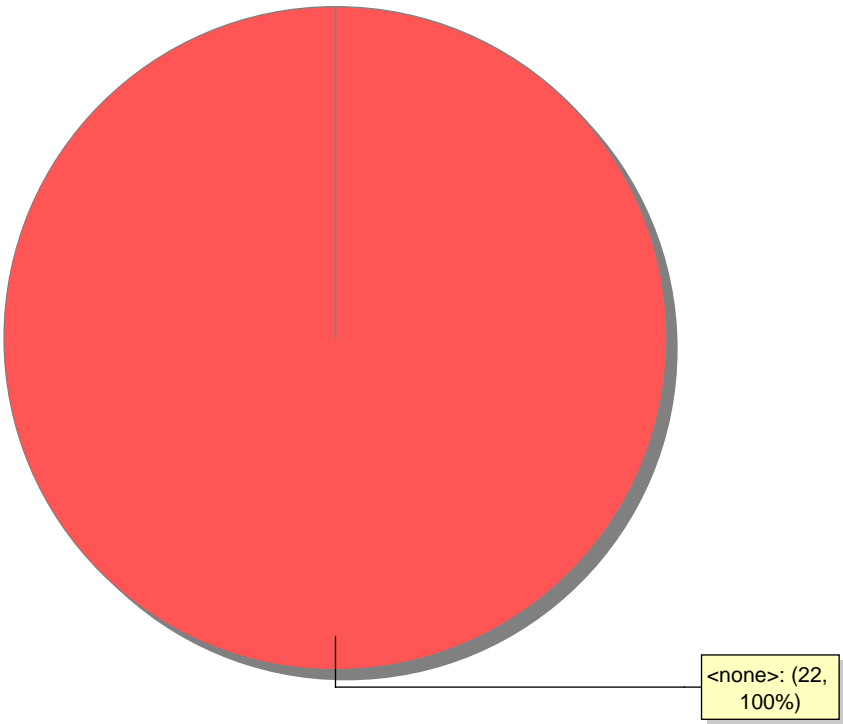
No warnings occurred during analysis



Issue Count by Category	
Issues by Category	
Poor Error Handling: Overly Broad Catch	12
Null Dereference	2
Password Management: Null Password	2
Password Management: Password in Comment	2
Poor Error Handling: Empty Catch Block	2
Dead Code: Unused Method	1
Password Management: Hardcoded Password	1

Issue Breakdown by Analysis

Issues by Analysis

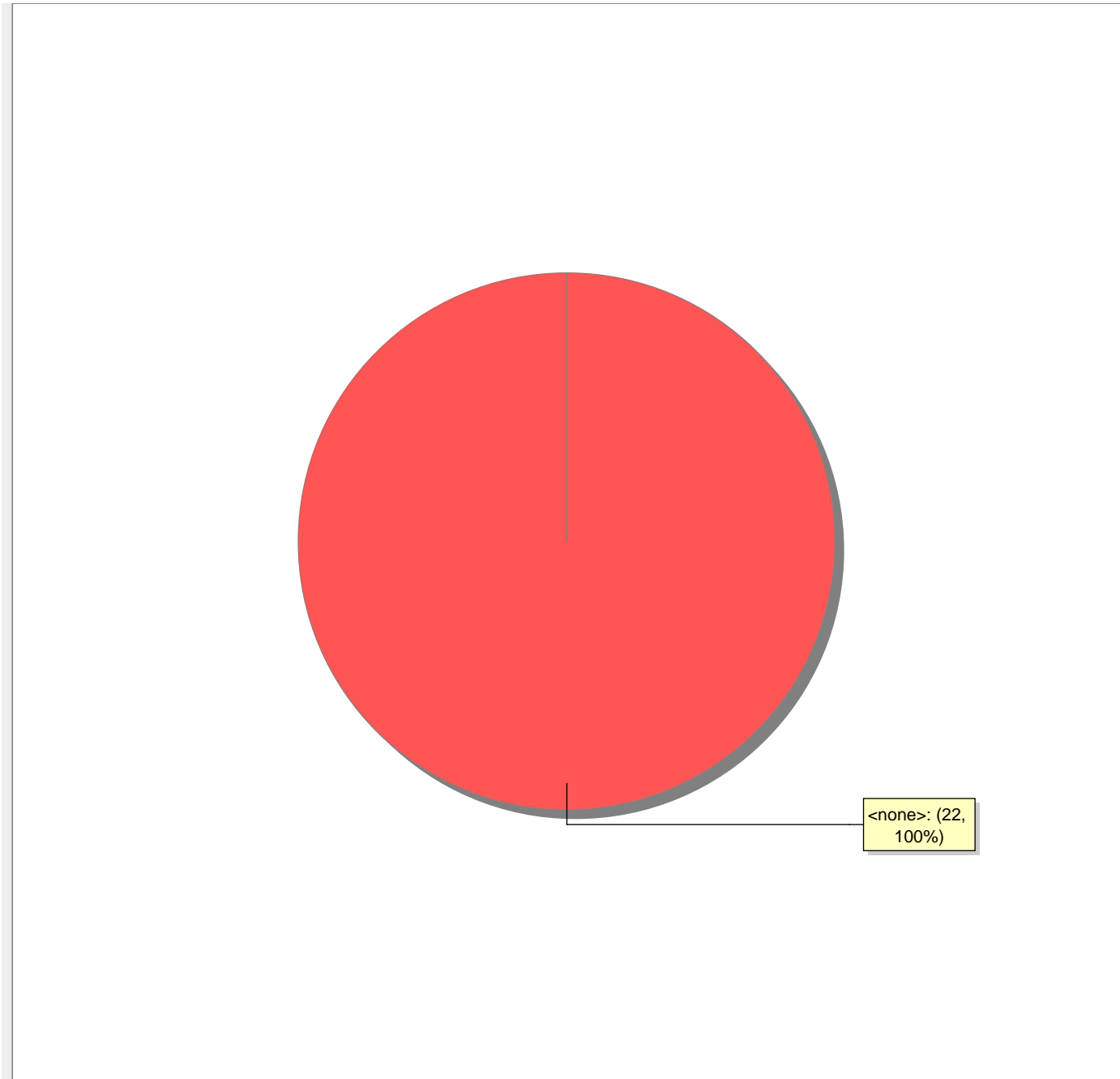



● <none>

New Issues

Issues by New Issue

The following issues have been discovered since the last scan.



 <none>