



# **Security Findings of Project "aes 192"**

Anal	/sis	Date:	2020-03-07	03:04:26
, viiai		Date.	2020 00 01	UU.UT.EU

## **Analyzed Workspace:**

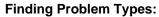
Packages:	1	Total LOC:	41
Classes:	1	No. of Bytecode Instructions:	175

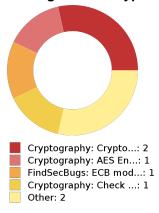
# **Computed Call Graph:**

Classes not in Call Graph: 0 Methods not in Call Graph: 0

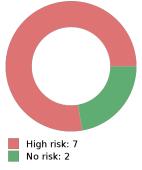
#### **Findings in List:**

All Findings: 9 Problematic Findings: 7

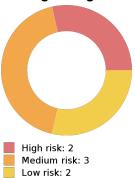




# Finding Classifications:



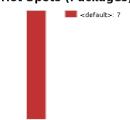
#### **Finding Ratings:**



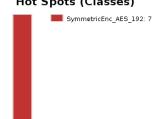
#### OWASP Top 10 2017



#### Hot Spots (Packages)



#### Hot Spots (Classes)





Finding ID: 7 Problem Type: Cryptography: AES Encryption (Protocol Check

Findings)

Classification: Warning Date: 2020-03-07 03:04:26 - new

Rating: 5.00 Reviewed State: Not Reviewed

**Location:** SymmetricEnc\_AES\_192.java (<Source Code>):29

Tags: no tags assigned
Comment: no comment

**Description:** An identified location for problem type 'Cryptography: AES Encryption'.

The protocol check detected something wrong when encountering symbol

'CipherInitializationForEncryption\_IVMissing':

An initialization vector should be used when encrypting.

Violated protocol: Creation of an AES Cipher for Encryption

Protocol description:

Creation of a cipher for AES consists of creating an uninitialized cipher, and then initializing it

properly.

Matching pattern in protocol check kind 'CipherInitializationForEncryption\_IVMissing':

void javax.crypto.Cipher.init(int, java.security.Key)

Finding ID: 6 Problem Type: Cryptography: Check that only allowed crypto

algorithms are used (Protocol Check Findings)

Classification: Warning Date: 2020-03-07 03:04:26 - new

Rating: 5.00 Reviewed State: Not Reviewed

Location: SymmetricEnc\_AES\_192.java (<Source Code>):27

Tags: no tags assigned
Comment: no comment

**Description:** An identified location for problem type 'Cryptography: Check that only allowed crypto algorithms are

used'.

The protocol check detected something wrong when encountering symbol

'AnyAlgorithm CipherConstruction':

Only AES is allowed as algorithm for encryption or decryption.

Violated protocol: Check Allowed Cryptography Algorithms

Protocol description:

Allow only a given set of cryptography algorithm names where algorithm names are expected.

The algorithm names are configured via constant value constraint variables.

Names to be checked against can be found here: https://docs.oracle.com/javase/8/docs/technotes/

guides/security/StandardNames.html

Matching pattern in protocol check kind 'AnyAlgorithm\_CipherConstruction': static javax.crypto.Cipher javax.crypto.Cipher.getInstance(java.lang.String, \*\*\*)

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Finding ID: 4 Problem Type: Cryptography: Cryptographic Algorithms Used in Project

(Special Code)

Classification: Information Date: 2020-03-07 03:04:26 - new

Rating: 0.00 Reviewed State: Not Reviewed

**Location:** SymmetricEnc\_AES\_192.java (<Source Code>):18

Tags:no tags assignedComment:no comment

**Description:** An identified location for problem type 'Cryptography: Cryptographic Algorithms Used in Project'.

Declared in: javax.crypto.KeyGenerator

Matching pattern in special code kind 'Cryptography: Cryptographic Algorithms Used in Project':

static javax.crypto.\*\* javax.crypto.\*\*.getInstance(java.lang.String)

Finding ID: 5 Problem Type: Cryptography: Cryptographic Algorithms Used in Project

(Special Code)

Classification: Information Date: 2020-03-07 03:04:26 - new

Rating: 0.00 Reviewed State: Not Reviewed

Location: SymmetricEnc\_AES\_192.java (<Source Code>):27

Tags: no tags assigned Comment: no comment

**Description:** An identified location for problem type 'Cryptography: Cryptographic Algorithms Used in Project'.

Declared in: javax.crypto.Cipher

Matching pattern in special code kind 'Cryptography: Cryptographic Algorithms Used in Project':

static javax.crypto.\*\* javax.crypto.\*\*.getInstance(java.lang.String)

Finding ID: 1 Problem Type: Cryptography: Cryptographic Algorithms w/o Specified

Crypto-Provider (Special Code)

Classification: Warning Date: 2020-03-07 03:04:26 - new

Rating: 1.00 Reviewed State: Not Reviewed

**Location:** SymmetricEnc\_AES\_192.java (<Source Code>):18

Tags:no tags assignedComment:no comment

Description: An identified location for problem type 'Cryptography: Cryptographic Algorithms w/o Specified Crypto-

Provider'.

Declared in: javax.crypto.KeyGenerator

Matching pattern in special code kind 'Cryptography: Cryptographic Algorithms w/o Specified Crypto-

Provider':

static javax.crypto.\*\* javax.crypto.\*\*.getInstance(java.lang.String)

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Finding ID: 2 Problem Type: Cryptography: Cryptographic Algorithms w/o Specified

Crypto-Provider (Special Code)

Classification: Warning Date: 2020-03-07 03:04:26 - new

Rating: 1.00 Reviewed State: Not Reviewed

**Location:** SymmetricEnc\_AES\_192.java (<Source Code>):27

Tags: no tags assigned
Comment: no comment

Description: An identified location for problem type 'Cryptography: Cryptographic Algorithms w/o Specified Crypto-

Provider'.

Declared in: javax.crypto.Cipher

Matching pattern in special code kind 'Cryptography: Cryptographic Algorithms w/o Specified Crypto-

Provider':

static javax.crypto.\*\* javax.crypto.\*\*.getInstance(java.lang.String)

Finding ID: 9 Problem Type: FindSecBugs: ECB mode is insecure (SpotBugs

Security Issues)

Classification: Warning Date: 2020-03-07 03:04:26 - new

Rating: 8.00 Reviewed State: Not Reviewed

**Location:** SymmetricEnc\_AES\_192.java (<Source Code>):27

Tags: no tags assigned
Comment: no comment

**Description:** A finding identified by the external 'SpotBugs' plugin:

The cipher uses ECB mode, which provides poor confidentiality for encrypted data

- In method SymmetricEnc\_AES\_192.main(String[])

Finding ID: 3 Problem Type: Usage: PrintStackTrace (Special Code)

Classification: Warning Date: 2020-03-07 03:04:26 - new

Rating: 5.00 Reviewed State: Not Reviewed

Location: SymmetricEnc\_AES\_192.java (<Source Code>):38

Tags: no tags assigned
Comment: no comment

**Description:** An identified location for problem type 'Usage: PrintStackTrace'.

Declared in: java.security.GeneralSecurityException

Matching pattern in special code kind 'Usage: PrintStackTrace':

public void java.lang.Throwable.printStackTrace()

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Finding ID: 8 Problem Type: FindSecBugs: Cipher with no integrity (SpotBugs

Security Issues)

Classification: Warning Date: 2020-03-07 03:04:26 - new

Rating: 8.00 Reviewed State: Not Reviewed

**Location:** SymmetricEnc\_AES\_192.java (<Source Code>):27

Tags: no tags assigned
Comment: no comment

**Description:** A finding identified by the external 'SpotBugs' plugin:

The cipher does not provide data integrity

- In method SymmetricEnc\_AES\_192.main(String[])

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