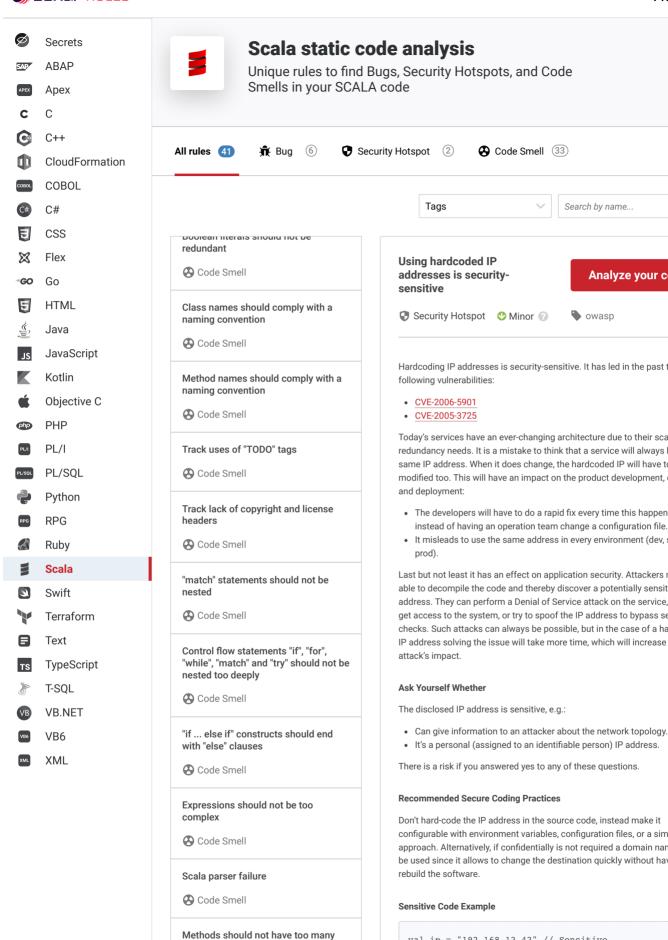


Products ∨



Search by name... Using hardcoded IP addresses is security-Analyze your code owasp Hardcoding IP addresses is security-sensitive. It has led in the past to the following vulnerabilities: Today's services have an ever-changing architecture due to their scaling and redundancy needs. It is a mistake to think that a service will always have the same IP address. When it does change, the hardcoded IP will have to be modified too. This will have an impact on the product development, delivery, • The developers will have to do a rapid fix every time this happens, instead of having an operation team change a configuration file. • It misleads to use the same address in every environment (dev, sys, ga, Last but not least it has an effect on application security. Attackers might be able to decompile the code and thereby discover a potentially sensitive address. They can perform a Denial of Service attack on the service, try to get access to the system, or try to spoof the IP address to bypass security checks. Such attacks can always be possible, but in the case of a hardcoded IP address solving the issue will take more time, which will increase an Ask Yourself Whether The disclosed IP address is sensitive, e.g.:

Don't hard-code the IP address in the source code, instead make it configurable with environment variables, configuration files, or a similar approach. Alternatively, if confidentially is not required a domain name can be used since it allows to change the destination quickly without having to

Sensitive Code Example

val ip = "192.168.12.42" // Sensitive val socket = new Socket(ip, 6667)

Compliant Solution

lines of code

Code Smell

Statements should be on separate

Scala static code analysis

Code Smell

"match case" clauses should not have too many lines of code

Code Smell

Files should not have too many lines of code

Code Smell

Lines should not be too long

Code Smell

Tabulation characters should not be used

Code Smell

val ips = Source.fromFile(configuration_file).getLines.
val socket = new Socket(ips(0), 6667)

Exceptions

No issue is reported for the following cases because they are not considered sensitive:

- Loopback addresses 127.0.0.0/8 in CIDR notation (from 127.0.0.0 to 127.255.255.255)
- Broadcast address 255.255.255.255
- Non routable address 0.0.0.0
- Strings of the form 2.5.<number>.<number> as they often match
 Object Identifiers (OID).

See

- OWASP Top 10 2021 Category A1 Broken Access Control
- OWASP Top 10 2017 Category A3 Sensitive Data Exposure

Available In:

sonarcloud <equation-block> sonarqube

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