

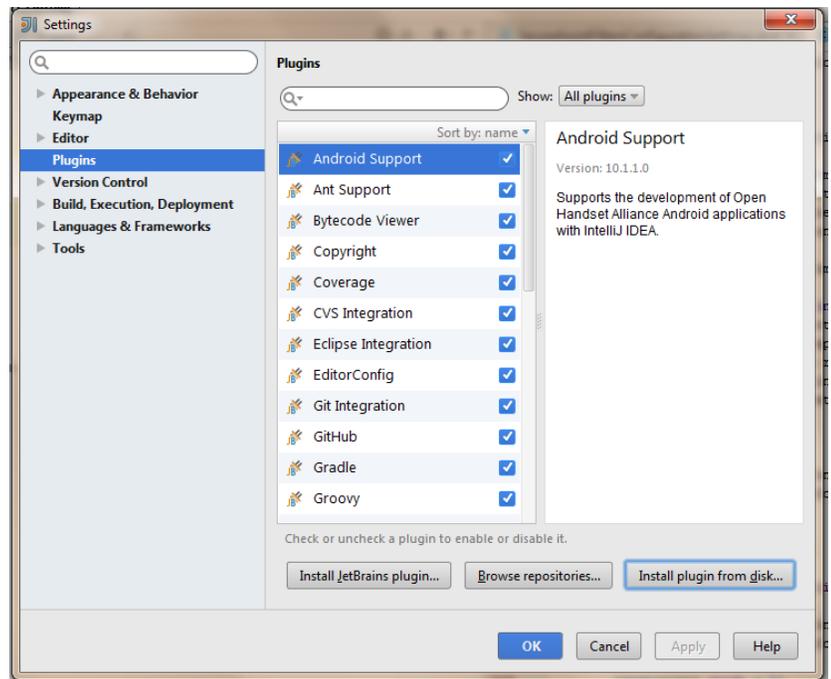
# Getting Started with SecureAssist IntelliJ IDEA

August 2015

SecureAssist is an IDE plug-in that points out common security vulnerabilities in real time as you're coding. When you open a file, it quickly runs in the background and populates an Issue List with any problems. At any time, you can review the issues in the list and read guidance about why the code might be a problem. SecureAssist even shows you sample code for how to fix it yourself before the problem ever goes into the security review process.

## Install

1. Go to **File -> Settings**.
2. In the left-hand pane, select **Plugins**, then click the **Install plugin from disk** button.
3. Browse to select the SecureAssist plugin file, then click **OK**.
4. Click **OK** to close the Settings dialog.
5. Restart IntelliJ. The License Agreement dialog appears.
6. Accept the terms of the license and begin using SecureAssist.



*Install plugin from disk*

## Opening Tool Windows

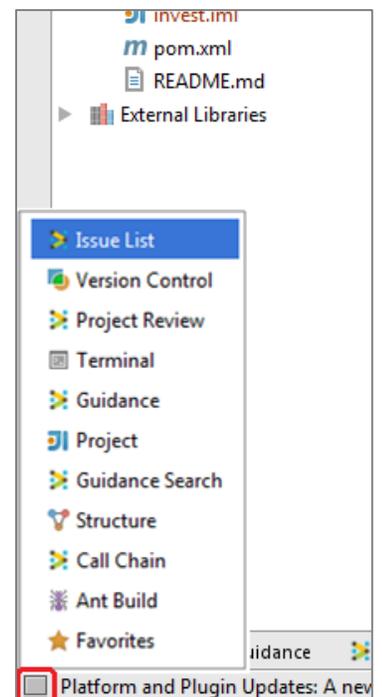
SecureAssist has several tool windows to work with. The Issue List is the primary tool window and displays potential security vulnerabilities in your active file. The first time you restart IntelliJ after installing SecureAssist, you must manually select at least the Issue List for SecureAssist to function. You can move and resize tool windows using actions from the context menu.

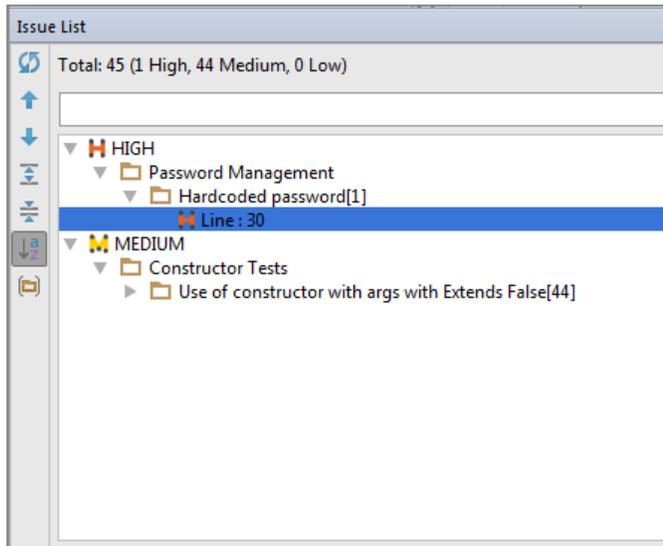
1. Go to **View -> Tool Windows**.
2. Select Issue List and any other desired tool windows. The tool windows you selected will now appear in IntelliJ.

## Quick Access to Tool Windows

In the lower left corner of the workspace, click the  or  button to open a quick-access menu to tool windows.

*Click this button to open a quick-access menu to tool windows*





Issue List identifies possible problems in your code.

## Scanning

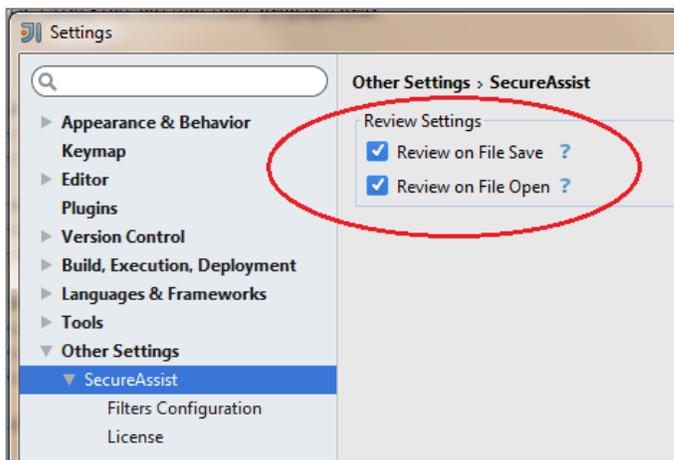
You don't have to do anything special to scan your code with SecureAssist. When you open a file, SecureAssist automatically reviews that file for potential security bugs and populates the Issue List if anything is found. After you've updated your code, you can rescan your file by clicking the **Review File** button in the Issue List view.

You can adjust when scans happen in the SecureAssist Settings:

**File -> Settings -> Other Settings -> SecureAssist Settings.**



Click the Review File button to scan on demand.

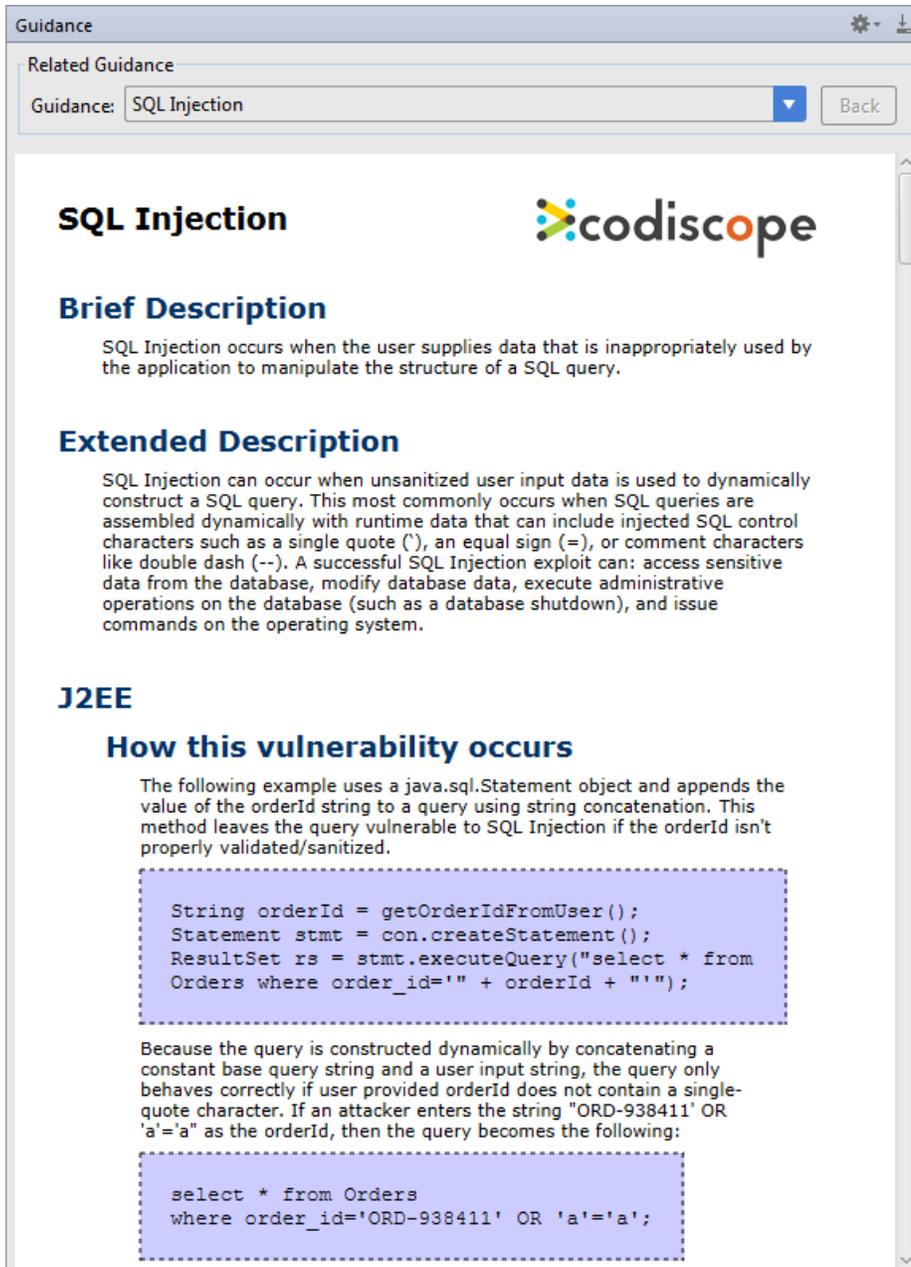


Adjust your review settings.

## Reviewing and Fixing Issues

If SecureAssist finds an issue, it's indicated in three ways: it's shown in the Issue List tool window, in the code margin by a colored marker, and in the other margin with an icon.

To read an explanation about why that code is a potential security concern, open the Guidance tool window by either double-clicking the line number of the issue in the Issue List, or right-clicking the SecureAssist icon in the left code margin and selecting **Show Guidance** from the menu.



The screenshot shows the Guidance tool window with the following content:

- Related Guidance**: A search bar with "SQL Injection" and a "Back" button.
- SQL Injection**: The title of the guidance, with the Codiscope logo.
- Brief Description**: "SQL Injection occurs when the user supplies data that is inappropriately used by the application to manipulate the structure of a SQL query."
- Extended Description**: "SQL Injection can occur when unsanitized user input data is used to dynamically construct a SQL query. This most commonly occurs when SQL queries are assembled dynamically with runtime data that can include injected SQL control characters such as a single quote ('), an equal sign (=), or comment characters like double dash (--). A successful SQL Injection exploit can: access sensitive data from the database, modify database data, execute administrative operations on the database (such as a database shutdown), and issue commands on the operating system."
- J2EE**: A section header.
- How this vulnerability occurs**: "The following example uses a java.sql.Statement object and appends the value of the orderId string to a query using string concatenation. This method leaves the query vulnerable to SQL Injection if the orderId isn't properly validated/sanitized."
- Code Example**:

```
String orderId = getOrderIdFromUser();
Statement stmt = con.createStatement();
ResultSet rs = stmt.executeQuery("select * from
Orders where order_id='" + orderId + "'");
```
- Explanation**: "Because the query is constructed dynamically by concatenating a constant base query string and a user input string, the query only behaves correctly if user provided orderId does not contain a single-quote character. If an attacker enters the string 'ORD-938411' OR 'a'='a' as the orderId, then the query becomes the following:"
- Attacker's Query**:

```
select * from Orders
where order_id='ORD-938411' OR 'a'='a';
```

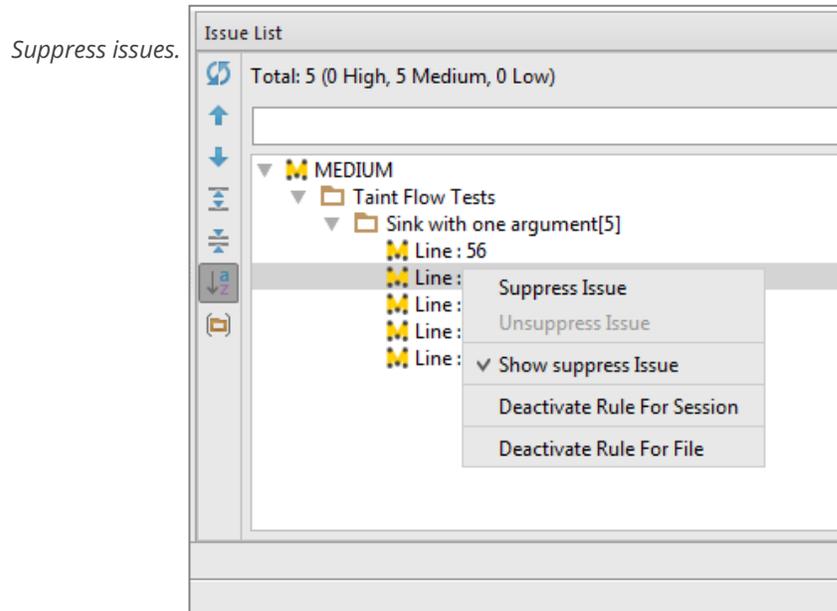
The Guidance tool window provides a description of the vulnerability, an example of code that causes it, a preferred code example that you can follow to avoid the issue, and additional information. It's like having a software security expert with you whenever you need him!

*The Guidance tool window: problem identification, sample code, preferred code you can use, and more.*

## Suppressing Issues

Just as a spellchecker in your word processor might identify a misspelling that you don't want to correct, you can suppress an issue that SecureAssist finds if you wish.

1. In the Issue List tool window, right-click the instance of the issue and select **Suppress Issue**. This will hide that specific issue from view for the remainder of the session.



2. If you change your mind, right-click the issue again and select **Unsuppress**.
3. If you want to stop seeing results for a given vulnerability altogether, you can deactivate the rule: In the Issue List, right-click the instance of the issue and select **Deactivate rule**. You can select whether to deactivate it just in the active file, or for all files for the whole session.

## Getting Help

We hope this document has helped you get started with SecureAssist. You can submit a support request at [support.codiscope.com](http://support.codiscope.com). You will also find other manuals, release notes, system requirements, and more.

Thanks for using Codiscope SecureAssist!