# Protocol Buffers Development Tools

protobuf-dt is an Eclipse plug-in that provides support for <u>Protocol Buffers</u> (protobuf.)

```
Outline 🖾
🕝 *person.proto 🔀
  message Person {
                                                            required string name = 1;
                                                                 P name [1]: string
      required int32 id = 2;
                                                                 id [2]: int32
      optional string email = 3;
                                                                 of email [3]: string
                                                               ▶ 1 PhoneType
      enum PhoneType {

▼ M PhoneNumber

        MOBILE = 0;
                                                                   number [1]: string
        HOME = 1;
        WORK = 2;
                                                                   🕏 phone [4] : PhoneNumber
     message PhoneNumber {
        required string number = 1;
0
        optional PhoneType type = 2 [default = i];
                                                ■ HOME
                                                ■ MOBILE
      repeated PhoneNumber phone = 4;
                                                ■ WORK
```

#### News

• 10/29/2012: protobuf-dt v1.3.3 released. More details can be found <u>here</u>. This version includes bug fixes and performance improvements.

### Features

- Syntax highlighting
- Content-assist based on syntax, context and data types
- Automatic generation of numeric tags "as you type"
- 'Outline View' linked to editor
- "Open Declaration" (hyperlinking) support, including imported .proto files
- Content-assist for built-in and custom options
- Javadoc-like documentation
- Configurable integration with protoc
- Automatic removal of trailing whitespace
- Spell checking

#### See Also

- Releases
- Installing the plug-in
- Configuring import paths
- Getting the source code

This plug-in requires <u>Eclipse 3.7</u> (Indigo) and <u>Xtext 2.3.0</u>.

#### IntegrationWithProtoc

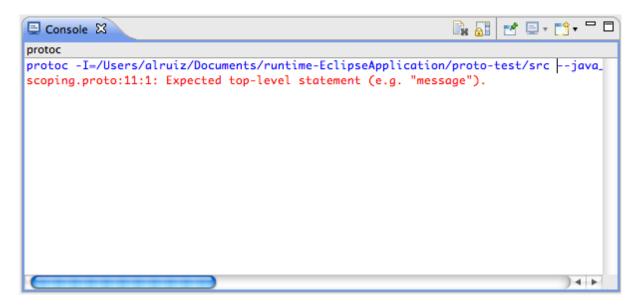
Updated Jan 24, 2012 by alr...@google.com

protobuf-dt provides integration with protoc, protobuf's compiler, to compile the proto file being currently edited and generate Java, C++ or Python code from such file. protobuf-dt creates error markers in the editor if protoc finds any errors.

Integration with protoc is disabled by default.

#### New in v1.2.0!

If integration with protoc is enabled, the output of protoc will be shown in Eclipse's console:



## Configuring protoc integration

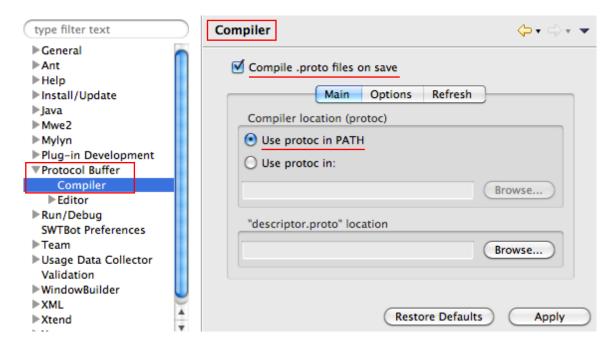
protoc integration can be configured at the workspace level or project level. Both types of configuration offer exactly the same options.

Before integrating protobuf-dt with protoc, you'll need to download and install the latest protobuf distribution.

#### Workspace preferences

To configure workspace-level protoc integration, go to the menu "Window" > "Preferences." In the "Preferences" dialog, open the "Protocol Buffer" element on the tree view on the left-hand side and select "Compiler."

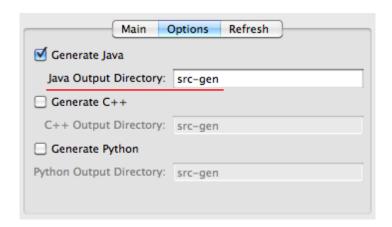
#### 1. Main Tab



In this tab, you can

- 1. compile a .proto file (with protoc,) every time it is saved
- 2. specify the path of protoc
- 3. specify the path of the descriptor.proto file to use when compiling .proto files (optional)

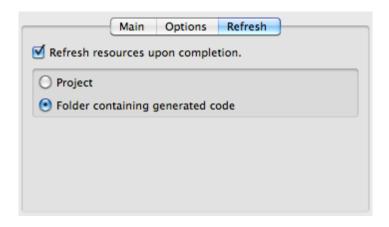
#### 2. Options Tab



In this tab, you can

- 1. specify the target language for code generation
- 2. specify the folder where to store the generated code

#### 3. Refresh Tab



In this tab, you can specify whether resources should be refreshed after invoking protoc.

### Project preferences

To configure project-specific protoc integration, simply right-click and project and select "Properties" from the pop-up menu. Project-level preferences are exactly the same as workspace-level ones.

#### Note

By default, the option "Compile .proto files on save" is disabled in both workspace and project preferences.