Svres Manual

ISP RAS

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Content

1 Introduction

Svace analyzer saves analysis result to svres-file. Library svace-res.jar allows to read/write this file format. Library is a part of svace distirbutive and can be found at path "svace-current/prog/svace-res.jar".

It is not recomended to work with svres-file other way. The format may be changed in future version. Despite looking like xml svres-file is not xml-file.

Svace has utility "svace svres2json" which may be used for convertation svres file to json-file. For getting more information type "svace svres2json –help".

2 Reading

For reading svres-file follow code can be used:

```java
public void read(File file)
    throws ClassNotFoundException, IOException {
    SvResReader reader = api.getReaderForFile(file);
    reader.load();//other way is to use SvResAI.readFile

    System.out.println("Content of svres file:");

    Iterator<ProjectResult> prIt = reader.projectIterator();

    while(prIt.hasNext()) {
      ProjectResult pr = prIt.next();
      System.out.println("===================================");
      System.out.println("Project: " + pr.getProjectName());

      Iterator<Warning> it = pr.warningIterator();
      while(it.hasNext()) {
        Warning warn = it.next();

        System.out.print(warn.getWarnClass());
        System.out.print(" at ");
        System.out.print(warn.getFile());
        System.out.print(":");
        System.out.print(warn.getLine());
        System.out.println(":");

        System.out.println(warn.getMsg());

        for(RoleTraceInfo trace : warn.getTraces()) {
          System.out.print("\tTrace '");
          System.out.println(trace.getRole() + "':");

          for(LocInfo info : trace.getLocations()) {
```

```
            System.out.print("\t\t");
            System.out.print(info.getFile());
            System.out.print(":");
            System.out.print(info.getLine());
            System.out.print(": ");
            System.out.println(info.getInfo());
        }
      }
    }
  }

  System.out.println("===================================");
}
```

3 Writing

For creation svres-file follow code can be used:

```
public void write(File file) throws IOException {
    SvResAPI api = new SvResAPI();

    SvResBuilder builder = api.createSvResBuilder();

    ProjectBuilder prBuilder = builder
        .addProject("test1", new File("/home/user1/test1"));

    String srcFile = "/home/user1/test1/file1.c";
    WarningBuilder warnBuilder = prBuilder
        .addWarning("DEREF_OF_NULL", 7, srcFile,
                "Possible null pointer dereference.");

    TraceBuilder traceBuilder = warnBuilder
        .addTrace("Trace role(header)")
        .addLoc(srcFile, 100, 10, false, "set to null");

    traceBuilder
        .addLoc(srcFile, 120, 10, false, "call func")
        .build();

    warnBuilder
        .setFunc("foo")
        .setLanguage("CXX")
        .build();

    prBuilder
```

```java
        .addWarning("DEREF_OF_NULL", 16, srcFile,
            "Possible null pointer dereference.")
        .build();

    prBuilder
        .addWarning("DEREF_OF_NULL", 106, srcFile,
            "Possible null pointer dereference too.")
        .build();

    //important. Otherwise project won't be added.
    prBuilder.build();

    SvResResults svRes = builder.build(SvResVersion.curVersion());
    api.saveFile(file, svRes);
}
```