

## **Drillinginfo: Database Manager Remote Updating and Repair**

### Client:

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### Background:

The DI Transform software is a full-featured oil and gas interpretation, visualization, and analysis desktop application written in Java. It stores and integrates data from multiple databases both locally and over networks. Database management is provided through our own toolkit which abstracts out the underlying database. This includes user management, table creation for our data model, data backup and restoration, and table migration between versions and new data model changes. We occasionally have to release patches of the entire 200+ plugin application to clients just to deploy a fix for database repair.

### Project Goals:

The main goal of the project is to provide a self-updating system for our DBMS tools where micro-jars could be deployed securely to a hosted server (Amazon S3) and downloaded into our application without delivery of a new software release. The team will collaborate with our developers to create a new set of detect and repair interfaces that will be hosted in our application as an OSGi plugin where multiple fragments could be delivered containing fixes. The minimum requirements is a system capable of validating remote fragment jars, securely downloading them, and incorporating them into the application dynamically. Advanced work includes versioning management for the fragments (where some fixes may expire after a later software release) and a UI capable of showing a collection of fixes with summaries available for download.

### Suggested Team Size:

2-3 students

Some onsite work (Littleton office)

### Skillset:

Java - required

Web services - optional

Potential for continuing work through a summer internship that would involve exposing a full application plugin updating system similar to a launcher for modern MMOs.