

# Configuring Drill to Use libjpam

*You can configure Drill to use libjpam for Plain authentication between a client, such as ODBC, and the Drillbit.*

To configure Drill to use libjpam, complete the following steps:

1. Copy the libjpam.so file from /opt/mapr/lib to a directory that does not contain other Hadoop components, for example /opt/pam/.
2. Add the following line to /opt/mapr/drill/drill-<version>/conf/drill-env.sh, including the directory where the libjpam.so file is located, as shown:

```
export DRILLBIT_JAVA_OPTS="$DRILLBIT_JAVA_OPTS -Djava.library.path=<directory>"  
Example: export DRILLBIT_JAVA_OPTS="$DRILLBIT_JAVA_OPTS -Djava.library.path=/opt/pam/"
```

3. Add the following configuration to the drill.exec block in /opt/mapr/drill/drill-<version>/conf/drill-override.conf:

```
drill.exec: {  
  cluster-id: "drillbits1",  
  zk.connect: "qa102-81.qa.lab:5181,qa102-82.qa.lab:5181,qa102-83.qa.lab:5181",  
  impersonation: {  
    enabled: true,  
    max_chained_user_hops: 3  
  },  
  security: {  
    auth.mechanisms : ["PLAIN"],  
  },  
  security.user.auth: {  
    enabled: true,  
    packages += "org.apache.drill.exec.rpc.user.security",  
    impl: "pam",  
    pam_profiles: [ "sudo", "login", "mapr-admin" ]  
  }  
}
```

4. (Optional) To add or remove different PAM profiles, add or delete the profile names in the pam\_profiles array portion of the configuration:

```
pam_profiles: [ "sudo", "login" ]
```

5. Restart the Drillbit process on each Drill node, as shown:

```
/opt/mapr/drill/drill-<version>/bin/drillbit.sh restart
```