

2.3 Database Management System Tasks

The Elevate platform enforces strict version control of the schemas in the database, and will refuse to start if the installed schema is not as expected. Two mechanisms are used to perform the schema control:

1. The installed schema in the database is compared with the schema in the current installation.
2. The versions of artifacts installed in the database are compared to the versions of all artifacts in the current installation.

The utility *schemactrl.sh* is used to perform management tasks such as installation, deletion and upgrade of the database schema. This utility is located in the bin directory of the current installation (*/opt/colibria/current/bin*), and has the following command syntax:

```
schemactrl.sh <command>
```

The available commands are as follows:

Commands	Description
<code>print</code>	Prints the complete schema required by the current installation. The output is in the form of SQL statements, which may be used in an interactive SQL command utility such as <i>sqlplus</i> .
<code>print-update</code>	Prints the SQL statements that will be executed when upgrading the schemas in the current database to the schemas in the current installation.
<code>live-install</code>	Installs the schemas in a clean database.
<code>live-upgrade</code>	Performs the upgrade scripts on the schemas in the current database.
<code>live-drop</code>	Deletes all tables in the database (NOTE: the database will not be removed.)
<code>validate</code>	Validates the schema in the current installation using the <i>persistence.properties</i> file.

All operations performed by the *schemactrl.sh* use the database configured in the *persistence.properties* file.

2.4 Troubleshooting Tasks

Alarms are issued for any system event that is not completed successfully, as well as for certain critical incidents such as server shutdown or database connection failures.

Alarms are recorded in the alarm log at */opt/colibria/log/alarm.log* and any currently active alarms can also be viewed on the alarms page of the administration console. The application server is configured with an SNMP agent that will send out application-specific SNMP traps notifying you of alarms by means of your SNMP management centre.

Alarms are assigned a severity level of minor, major, warning or critical. The alarm severity relates to the following:

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| MINOR | an event which may prevent the end user from receiving a response within the specified timeframe. |
| MAJOR | an error which may prevent some part of the system from handling or completing a request. |
| WARNING | a message which requires administrator attention but doesn't prevent the server from handling the current request. |
| CRITICAL | a failure of the system which will prevent any and all successful operation. This should be noticed and corrected immediately. |

Please see the application-specific section for a list of possible alarms and their meanings.