> deprecated, or removed features and capabilities. Consequently, SQL extracted from a previous MySQL release may require modification to enable a logical upgrade.
>
> To identify incompatibilities before upgrading to the latest MySQL 8.0 release, perform the steps described in Section 2.11.5, "Preparing Your Installation for Upgrade".

To perform a logical upgrade:

1. Review the information in Section 2.11.1, "Before You Begin".

2. Export your existing data from the previous MySQL installation:

```
mysqldump -u root -p
  --add-drop-table --routines --events
  --all-databases --force > data-for-upgrade.sql
```

> **Note**
>
> Use the `--routines` and `--events` options with `mysqldump` (as shown above) if your databases include stored programs. The `--all-databases` option includes all databases in the dump, including the `mysql` database that holds the system tables.

> **Important**
>
> If you have tables that contain generated columns, use the `mysqldump` utility provided with MySQL 5.7.9 or higher to create your dump files. The `mysqldump` utility provided in earlier releases uses incorrect syntax for generated column definitions (Bug #20769542). You can use the `INFORMATION_SCHEMA.COLUMNS` table to identify tables with generated columns.

3. Shut down the old MySQL server. For example:

```
mysqladmin -u root -p shutdown
```

4. Install MySQL 8.0. For installation instructions, see Chapter 2, *Installing and Upgrading MySQL*.

5. Initialize a new data directory, as described in Section 2.10.1, "Initializing the Data Directory". For example:

```
mysqld --initialize --datadir=/path/to/8.0-datadir
```

Copy the temporary `'root'@'localhost'` password displayed to your screen or written to your error log for later use.

6. Start the MySQL 8.0 server, using the new data directory. For example:

```
mysqld_safe --user=mysql --datadir=/path/to/8.0-datadir &
```

7. Reset the `root` password:

```
shell> mysql -u root -p
Enter password: ****  <- enter temporary root password

mysql> ALTER USER USER() IDENTIFIED BY 'your new password';
```