

18.8.1 Combining Different Member Versions in a Group

Group Replication is versioned according to the MySQL Server version that the Group Replication plugin was bundled with. For example, if a member is running MySQL 5.7.26 then that is the version of the Group Replication plugin. To check the version of MySQL Server on a group member issue:

```
SELECT MEMBER_HOST, MEMBER_PORT, MEMBER_VERSION FROM performance_schema.replication_group_members;
```

member_host	member_port	member_version
example.com	3306	8.0.13

For guidance on understanding the MySQL Server version and selecting a version, see [Section 2.1.2, “Which MySQL Version and Distribution to Install”](#).

For optimal compatibility and performance, all members of a group should run the same version of MySQL Server and therefore of Group Replication. However, while you are in the process of upgrading an online group, in order to maximize availability, you might need to have members with different MySQL Server versions running at the same time. Depending on the changes made between the versions of MySQL, you could encounter incompatibilities in this situation. For example, if a feature has been deprecated between major versions, then combining the versions in a group might cause members that rely on the deprecated feature to fail. Conversely, writing to a member running a newer MySQL version while there are read-write members in the group running an older MySQL version might cause issues on members that lack functions introduced in the newer release.

To prevent these issues, Group Replication includes compatibility policies that enable you to safely combine members running different versions of MySQL in the same group. A member applies these policies to decide whether to join the group normally, or join in read-only mode, or not join the group, depending on which choice results in the safe operation of the joining member and of the existing members of the group. In an upgrade scenario, each server must leave the group, be upgraded, and rejoin the group with its new server version. At this point the member applies the policies for its new server version, which might have changed from the policies it applied when it originally joined the group.

As the administrator, you can instruct any server to attempt to join any group by configuring the server appropriately and issuing a `START GROUP_REPLICATION` statement. A decision to join or not join the group, or to join the group in read-only mode, is made and implemented by the joining member itself after you attempt to add it to the group. The joining member receives information on the MySQL Server versions of the current group members, assesses its own compatibility with those members, and applies the policies used in its own MySQL Server version (*not* the policies used by the existing members) to decide whether it is compatible.

The compatibility policies that a joining member applies when attempting to join a group are as follows:

- A member does not join a group if it is running a lower MySQL Server version than the lowest version that the existing group members are running.
- A member joins a group normally if it is running the same MySQL Server version as the lowest version that the existing group members are running.
- A member joins a group but remains in read-only mode if it is running a higher MySQL Server version than the lowest version that the existing group members are running. This behavior only makes a difference when the group is running in multi-primary mode, because in a group that is running in single-primary mode, newly added members default to being read-only in any case.

Members running MySQL 8.0.17 or higher take into account the patch version of the release when checking their compatibility. Members running MySQL 8.0.16 or lower, or MySQL 5.7, only take into