```
SET PERSIST protocol_compression_algorithms='zstd';
```

- To permit the `mysql` client to initiate `zlib` or `uncompressed` connections, invoke it like this:

```
mysql --compression-algorithms=zlib,uncompressed
```

- To configure replicas to connect to the source using `zlib` or `zstd` connections, with a compression level of 7 for `zstd` connections, use a `CHANGE REPLICATION SOURCE TO` statement (from MySQL 8.0.23) or `CHANGE MASTER TO` statement (before MySQL 8.0.23):

```
CHANGE REPLICATION SOURCE TO
  SOURCE_COMPRESSION_ALGORITHMS = 'zlib,zstd',
  SOURCE_ZSTD_COMPRESSION_LEVEL = 7;
```

  This assumes that the `slave_compressed_protocol` system variable is disabled, for reasons described in Configuring Legacy Connection Compression.

For successful connection setup, both sides of the connection must agree on a mutually permitted compression algorithm. The algorithm-negotiation process attempts to use `zlib`, then `zstd`, then `uncompressed`. If the two sides can find no common algorithm, the connection attempt fails.

Because both sides must agree on the compression algorithm, and because `uncompressed` is an algorithm value that is not necessarily permitted, fallback to an uncompressed connection does not necessarily occur. For example, if the server is configured to permit `zstd` and a client is configured to permit `zlib,uncompressed`, the client cannot connect at all. In this case, no algorithm is common to both sides, so connection attempts fail.

Configuration parameters that enable specifying the `zstd` compression level take an integer value from 1 to 22, with larger values indicating increasing levels of compression. The default `zstd` compression level is 3. The compression level setting has no effect on connections that do not use `zstd` compression.

A configurable `zstd` compression level enables choosing between less network traffic and higher CPU load versus more network traffic and lower CPU load. Higher compression levels reduce network congestion but the additional CPU load may reduce server performance.

Configuring Legacy Connection Compression

Prior to MySQL 8.0.18, these configuration parameters are available for controlling connection compression:

- Client programs support a `--compress` command-line option to specify use of compression for the connection to the server.
- For programs that use the MySQL C API, enabling the `MYSQL_OPT_COMPRESS` option for the `mysql_options()` function specifies use of compression for the connection to the server.
- For source/replica replication, enabling the `slave_compressed_protocol` system variable specifies use of compression for replica connections to the source.

In each case, when use of compression is specified, the connection uses the `zlib` compression algorithm if both sides permit it, with fallback to an uncompressed connection otherwise.

As of MySQL 8.0.18, the compression parameters just described become legacy parameters, due to the additional compression parameters introduced for more control over connection compression that are described in Configuring Connection Compression. An exception is MySQL Shell, where the `--compress` command-line option remains current, and can be used to request compression without selecting compression algorithms. For information on MySQL Shell's connection compression control, see Using Compressed Connections.