The handling of `localhost` on Unix depends on the type of transport protocol. Connections using classic MySQL protocol handle `localhost` the same way as other MySQL clients, which means that `localhost` is assumed to be for socket-based connections. For connections using X Protocol, the behavior of `localhost` differs in that it is assumed to represent the loopback address, for example, IPv4 address 127.0.0.1.

Additional Connection parameters

You can specify options for the connection, either as attributes in a URI-like string by appending `?attribute=value`, or as key-value pairs. The following options are available:

- `ssl-mode`: The desired security state for the connection. The following modes are permissible:

  - `DISABLED`

  - `PREFERRED`

  - `REQUIRED`

  - `VERIFY_CA`

  - `VERIFY_IDENTITY`

  For information about these modes, see the `--ssl-mode` option description in Command Options for Encrypted Connections.

- `ssl-ca`: The path to the X.509 certificate authority file in PEM format.

- `ssl-capath`: The path to the directory that contains the X.509 certificates authority files in PEM format.

- `ssl-cert`: The path to the X.509 certificate file in PEM format.

- `ssl-cipher`: The encryption cipher to use for connections that use TLS protocols up through TLSv1.2.

- `ssl-crl`: The path to the file that contains certificate revocation lists in PEM format.

- `ssl-crlpath`: The path to the directory that contains certificate revocation-list files in PEM format.

- `ssl-key`: The path to the X.509 key file in PEM format.

- `tls-version`: The TLS protocols permitted for classic MySQL protocol encrypted connections. This option is supported by MySQL Shell only. The value of `tls-version` (singular) is a comma separated list, for example `TLSv1.1,TLSv1.2`. For details, see Section 6.3.2, "Encrypted Connection TLS Protocols and Ciphers". This option depends on the `ssl-mode` option not being set to `DISABLED`.

- `tls-versions`: The permissible TLS protocols for encrypted X Protocol connections. The value of `tls-versions` (plural) is an array such as `[TLSv1.2,TLSv1.3]`. For details, see Section 6.3.2, "Encrypted Connection TLS Protocols and Ciphers". This option depends on the `ssl-mode` option not being set to `DISABLED`.

- `tls-ciphersuites`: The permitted TLS cipher suites. The value of `tls-ciphersuites` is a list of IANA cipher suite names as listed at TLS Ciphersuites. For details, see Section 6.3.2, "Encrypted Connection TLS Protocols and Ciphers". This option depends on the `ssl-mode` option not being set to `DISABLED`.

- `auth-method`: The authentication method to use for the connection. The default is `AUTO`, meaning that the server attempts to guess. The following methods are permissible: