

- To restore a `NOT NULL` column as `NULL`, use the `--promote-attributes` option.

For more information, see the descriptions of the indicated `ndb_restore` options.

- **SQL-compliant NULL comparison mode for NdbScanFilter.** Traditionally, when making comparisons involving `NULL`, `NdbScanFilter` treats `NULL` as equal to `NULL` (and thus considers `NULL == NULL` to be `TRUE`). This is not the same as specified by the SQL Standard, which requires that any comparison with `NULL` return `NULL`, including `NULL == NULL`.

Previously, it was not possible for an NDB API application to override this behavior; beginning with NDB 8.0.26, you can do so by calling `NdbScanFilter::setSqlCmpSemantics()` prior to creating a scan filter. (Thus, this method is always invoked as a class method and not as an instance method.) Doing so causes the next `NdbScanFilter` object to be created to employ SQL-compliant `NULL` comparison for all comparison operations performed over the lifetime of the instance. You must invoke the method for each `NdbScanFilter` object that should use SQL-compliant comparisons.

For more information, see [NdbScanFilter::setSqlCmpSemantics\(\)](#).

- **Deprecation of NDB API .FRM file methods.** MySQL 8.0 and NDB 8.0 no longer use `.FRM` files for storing table metadata. For this reason, the NDB API methods `getFrmData()`, `getFrmLength()`, and `setFrm()` are deprecated as of NDB 8.0.27, and subject to removal in a future release. For reading and writing table metadata, use `getExtraMetadata()` and `setExtraMetadata()` instead.
- **Preference for IPv4 or IPv6 Addressing.** NDB 8.0.26 adds the `PreferIPVersion` configuration parameter, which controls the addressing preference for DNS resolution. IPv4 (`PreferIPVersion=4`) is the default. Because configuration retrieval in NDB requires that this preference be the same for all TCP connections, you should set it only in the `[tcp default]` section of the cluster global configuration (`config.ini`) file.

See [Section 23.3.3.10, “NDB Cluster TCP/IP Connections”](#), for more information.

MySQL Cluster Manager 1.4.8 also provides experimental support for NDB Cluster 8.0. MySQL Cluster Manager has an advanced command-line interface that can simplify many complex NDB Cluster management tasks. See [MySQL™ Cluster Manager 1.4.8 User Manual](#), for more information.

23.1.5 Options, Variables, and Parameters Added, Deprecated or Removed in NDB 8.0

- [Parameters Introduced in NDB 8.0](#)
- [Parameters Deprecated in NDB 8.0](#)
- [Parameters Removed in NDB 8.0](#)
- [Options and Variables Introduced in NDB 8.0](#)
- [Options and Variables Deprecated in NDB 8.0](#)
- [Options and Variables Removed in NDB 8.0](#)

The next few sections contain information about `NDB` node configuration parameters and NDB-specific `mysqld` options and variables that have been added to, deprecated in, or removed from NDB 8.0.

Parameters Introduced in NDB 8.0

The following node configuration parameters have been added in NDB 8.0.