

Block Encryption Mode	Initialization Vector Required
OFB	Yes

Statements that use `AES_ENCRYPT()` or `AES_DECRYPT()` are unsafe for statement-based replication.

If `AES_ENCRYPT()` is invoked from within the `mysql` client, binary strings display using hexadecimal notation, depending on the value of the `--binary-as-hex`. For more information about that option, see [Section 4.5.1, “mysql — The MySQL Command-Line Client”](#).

- `COMPRESS(string_to_compress)`

Compresses a string and returns the result as a binary string. This function requires MySQL to have been compiled with a compression library such as `zlib`. Otherwise, the return value is always `NULL`. The compressed string can be uncompressed with `UNCOMPRESS()`.

```
mysql> SELECT LENGTH(COMPRESS(REPEAT('a',1000)));
-> 21
mysql> SELECT LENGTH(COMPRESS(''));
-> 0
mysql> SELECT LENGTH(COMPRESS('a'));
-> 13
mysql> SELECT LENGTH(COMPRESS(REPEAT('a',16)));
-> 15
```

The compressed string contents are stored the following way:

- Empty strings are stored as empty strings.
- Nonempty strings are stored as a 4-byte length of the uncompressed string (low byte first), followed by the compressed string. If the string ends with space, an extra `.` character is added to avoid problems with endspace trimming should the result be stored in a `CHAR` or `VARCHAR` column. (However, use of nonbinary string data types such as `CHAR` or `VARCHAR` to store compressed strings is not recommended anyway because character set conversion may occur. Use a `VARBINARY` or `BLOB` binary string column instead.)

If `COMPRESS()` is invoked from within the `mysql` client, binary strings display using hexadecimal notation, depending on the value of the `--binary-as-hex`. For more information about that option, see [Section 4.5.1, “mysql — The MySQL Command-Line Client”](#).

- `MD5(str)`

Calculates an MD5 128-bit checksum for the string. The value is returned as a string of 32 hexadecimal digits, or `NULL` if the argument was `NULL`. The return value can, for example, be used as a hash key. See the notes at the beginning of this section about storing hash values efficiently.

The return value is a string in the connection character set.

If FIPS mode is enabled, `MD5()` returns `NULL`. See [Section 6.8, “FIPS Support”](#).

```
mysql> SELECT MD5('testing');
-> 'ae2b1fca515949e5d54fb22b8ed95575'
```

This is the “RSA Data Security, Inc. MD5 Message-Digest Algorithm.”

See the note regarding the MD5 algorithm at the beginning this section.