and is multibyte safe. The `REGEXP_LIKE()` function performs regular expression matching in the manner of the `REGEXP` and `RLIKE` operators, which now are synonyms for that function. In addition, the `REGEXP_INSTR()`, `REGEXP_REPLACE()`, and `REGEXP_SUBSTR()` functions are available to find match positions and perform substring substitution and extraction, respectively. The `regexp_stack_limit` and `regexp_time_limit` system variables provide control over resource consumption by the match engine. For more information, see Section 12.8.2, “Regular Expressions”. For information about ways in which applications that use regular expressions may be affected by the implementation change, see Regular Expression Compatibility Considerations.

- **Internal temporary tables.** The `TempTable` storage engine replaces the `MEMORY` storage engine as the default engine for in-memory internal temporary tables. The `TempTable` storage engine provides efficient storage for `VARCHAR` and `VARBINARY` columns. The `internal_tmp_mem_storage_engine` session variable defines the storage engine for in-memory internal temporary tables. Permitted values are `TempTable` (the default) and `MEMORY`. The `temptable_max_ram` variable defines the maximum amount of memory that the `TempTable` storage engine can use before data is stored to disk.

- **Logging.** Error logging was rewritten to use the MySQL component architecture. Traditional error logging is implemented using built-in components, and logging using the system log is implemented as a loadable component. In addition, a loadable JSON log writer is available. To control which log components to enable, use the `log_error_services` system variable. For more information, see Section 5.4.2, “The Error Log”.

- **Backup lock.** A new type of backup lock permits DML during an online backup while preventing operations that could result in an inconsistent snapshot. The new backup lock is supported by `LOCK INSTANCE FOR BACKUP` and `UNLOCK INSTANCE` syntax. The `BACKUP_ADMIN` privilege is required to use these statements.

- **Replication.** The following enhancements have been made to MySQL Replication:

  - MySQL Replication now supports binary logging of partial updates to JSON documents using a compact binary format, saving space in the log over logging complete JSON documents. Such compact logging is done automatically when statement-based logging is in use, and can be enabled by setting the new `binlog_row_value_options` system variable to `PARTIAL_JSON`. For more information, see Partial Updates of JSON Values, as well as the description of `binlog_row_value_options`.

- **Connection management.** MySQL Server now permits a TCP/IP port to be configured specifically for administrative connections. This provides an alternative to the single administrative connection that is permitted on the network interfaces used for ordinary connections even when `max_connections` connections are already established. See Section 5.1.12.1, “Connection Interfaces”.

  MySQL now provides more control over the use of compression to minimize the number of bytes sent over connections to the server. Previously, a given connection was either uncompressed or used the `zlib` compression algorithm. Now, it is also possible to use the `zstd` algorithm, and to select a compression level for `zstd` connections. The permitted compression algorithms can be configured on the server side, as well as on the connection-origination side for connections by client programs and by servers participating in source/replica replication or Group Replication. For more information, see Section 4.2.8, “Connection Compression Control”.

- **Configuration.** The maximum permitted length of host names throughout MySQL has been raised to 255 ASCII characters, up from the previous limit of 60 characters. This applies to, for example, host name-related columns in the data dictionary, `mysql` system schema, Performance Schema, `INFORMATION_SCHEMA`, and `sys` schema; the `MASTER_HOST` value for the `CHANGE MASTER TO` statement; the `Host` column in `SHOW PROCESSLIST` statement output; host names in account names (such as used in account-management statements and in `DEFINER` attributes); and host name-related command options and system variables.