# 安裝 MariaDB 10.11 版

## 1 MariaDB 10.11 套件說明

根據 MariaDB 官方資訊所示，目前 10.11 為 LTS(Long Term Support) 版本，並支援到 2028 年 2 月，所以建議佈署該版本，而在 Rocky Linux 8 預設使用的是 10 .3 版本，安裝 MariaDB 10.11 相當容易，安裝指令如下所示。

| | | | |
|---|---|---|---|
| 10.11 (LTS) | 1 year and 8 months ago (16 Feb 2023) | Ends in 3 years and 4 months (16 Feb 2028) | 10.11.9 (08 Aug 2024) |

## 2 切換 MariaDB 的來源套件庫

先查詢目前 MariaDB 的 repo 來源版本清單，指令如下:

```
$ sudo yum module list mariadb
```

結果如下，會發現有官方的來源。

```
上次中介資料過期檢查: 0:07:54 前，時間點為西元2024年10月17日 (週四) 14時59分33秒。
Rocky Linux 8 - AppStream
Name                    Stream                  Profiles
Summary
mariadb                 10.3 [d]                client, galera, server [d]
MariaDB Module
mariadb                 10.5                    client, galera, server [d]
MariaDB Module
mariadb                 10.11                   client, galera, server [d]
MariaDB Module

提示: 預設[d]、已啟用[e]、已停用[x]、已安裝[i]
```

先重設 MariaDB 的模組來源，指令如下:

```
$ sudo yum module reset mariadb -y
上次中介資料過期檢查: 0:22:23 前，時間點為西元2024年10月17日 (週四) 14時59分33秒。
依賴關係解析完畢。
無事可做。
```

```
完成!
```

接下來直接重新將 MariaDB 關聯到 10.11 的模組來源，指令如下:

```
$ sudo yum module enable mariadb:10.11 -y
上次中介資料過期檢查: 0:24:31 前，時間點為西元2024年10月17日 (週四) 14時59分33秒。
依賴關係解析完畢。
================================================================================
 軟體包                  架構                  版本                  軟體庫
                                大小
================================================================================
正在啟用模組串流:
 mariadb                                      10.11

處理事項摘要
================================================================================

完成!
```

再次查詢 MariaDB 的 repo 來源版本清單。

```
$ sudo yum module list mariadb
上次中介資料過期檢查: 0:25:55 前，時間點為西元2024年10月17日 (週四) 14時59分33秒。
Rocky Linux 8 - AppStream
Name                    Stream                  Profiles
Summary
mariadb                 10.3 [d]                client, galera, server [d]
MariaDB Module
mariadb                 10.5                    client, galera, server [d]
MariaDB Module
mariadb                 10.11 [e]               client, galera, server [d]
MariaDB Module

提示: 預設[d]、已啟用[e]、已停用[x]、已安裝[i]
```

10.11 的部份已經變成「 e」囉~

## 3 安裝 MariaDB 10.11 套件

□□□□□□□□□□

```
sudo yum install mariadb mariadb-server php-mysql -y
□□□□□□□□□□□□□0:30:01 □□□□□□□□□2024□10□17□ (□□) 14□59□33□□
□□□□□□□□□□
================================================================================
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 □□□                            □□         □□                                    □□□
           □□
================================================================================
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□□:
 mariadb                           x86_64       3:10.11.6-
1.module+el8.10.0+1674+fa55eae9        appstream       7.3 M
 mariadb-server                    x86_64       3:10.11.6-
1.module+el8.10.0+1674+fa55eae9        appstream        20 M
□□□□□□□□:
 mariadb-common                    x86_64       3:10.11.6-
1.module+el8.10.0+1674+fa55eae9        appstream        68 k
 mariadb-connector-c               x86_64       3.1.11-
2.el8_3                                  appstream       199 k
 mariadb-connector-c-config        noarch       3.1.11-
2.el8_3                                  appstream        14 k
 mariadb-errmsg                    x86_64       3:10.11.6-
1.module+el8.10.0+1674+fa55eae9        appstream       339 k
 mysql-selinux                     noarch       1.0.10-
1.el8                                    appstream        37 k
 perl-Carp                         noarch       1.42-
396.el8                                   baseos           29 k
 perl-DBD-MySQL                    x86_64       4.046-
3.module+el8.9.0+1501+450eec3b            appstream       155 k
 perl-DBI                          x86_64       1.641-
4.module+el8.9.0+1495+f278a004            appstream       739 k
 perl-Data-Dumper                  x86_64       2.167-
399.el8                                   baseos           57 k
 perl-Digest                       noarch       1.17-
395.el8                                    appstream        26 k
 perl-Digest-MD5                   x86_64       2.55-
396.el8                                    appstream        36 k
 perl-Encode                       x86_64       4:2.97-
```

```
3.el8                                    baseos          1.5 M
 perl-Errno                        x86_64       1.28-
422.el8                                   baseos           75 k
 perl-Exporter                     noarch       5.72-
396.el8                                   baseos           33 k
 perl-File-Path                    noarch       2.15-
2.el8                                     baseos           37 k
 perl-File-Temp                    noarch       0.230.600-
1.el8                                  baseos           62 k
 perl-Getopt-Long                  noarch       1:2.50-
4.el8                                    baseos           62 k
 perl-HTTP-Tiny                    noarch       0.074-
3.el8                                     baseos           58 k
 perl-IO                           x86_64       1.38-
422.el8                                   baseos          141 k
 perl-IO-Socket-IP                 noarch       0.39-
5.el8                                     appstream        46 k
 perl-IO-Socket-SSL                noarch       2.066-
4.module+el8.9.0+1517+e71a7a62            appstream       297 k
 perl-MIME-Base64                  x86_64       3.15-
396.el8                                   baseos           30 k
 perl-Math-BigInt                  noarch       1:1.9998.11-
7.el8                                  baseos          194 k
 perl-Math-Complex                 noarch       1.59-
422.el8                                   baseos          108 k
 perl-Mozilla-CA                   noarch       20160104-
7.module+el8.9.0+1521+0101edce         appstream        14 k
 perl-Net-SSLeay                   x86_64       1.88-
2.module+el8.9.0+1517+e71a7a62            appstream       378 k
 perl-PathTools                    x86_64       3.74-
1.el8                                     baseos           89 k
 perl-Pod-Escapes                  noarch       1:1.07-
395.el8                                   baseos           19 k
 perl-Pod-Perldoc                  noarch       3.28-
396.el8                                   baseos           85 k
 perl-Pod-Simple                   noarch       1:3.35-
395.el8                                   baseos          212 k
 perl-Pod-Usage                    noarch       4:1.69-
395.el8                                   baseos           33 k
 perl-Scalar-List-Utils            x86_64       3:1.49-
```

```
2.el8                                    baseos           67 k
 perl-Socket                      x86_64       4:2.027-
3.el8                                   baseos           58 k
 perl-Storable                    x86_64       1:3.11-
3.el8                                    baseos           97 k
 perl-Term-ANSIColor              noarch       4.06-
396.el8                                  baseos           45 k
 perl-Term-Cap                    noarch       1.17-
395.el8                                  baseos           22 k
 perl-Text-ParseWords             noarch       3.30-
395.el8                                  baseos           17 k
 perl-Text-Tabs+Wrap              noarch       2013.0523-
395.el8                                 baseos           23 k
 perl-Time-Local                  noarch       1:1.280-
1.el8                                   baseos           32 k
 perl-URI                         noarch       1.73-
3.el8                                    appstream       115 k
 perl-Unicode-Normalize           x86_64       1.25-
396.el8                                  baseos           81 k
 perl-constant                    noarch       1.33-
396.el8                                  baseos           24 k
 perl-interpreter                 x86_64       4:5.26.3-
422.el8                                 baseos          6.3 M
 perl-libnet                      noarch       3.11-
3.el8                                    appstream       120 k
 perl-libs                        x86_64       4:5.26.3-
422.el8                                 baseos          1.6 M
 perl-macros                      x86_64       4:5.26.3-
422.el8                                 baseos           71 k
 perl-parent                      noarch       1:0.237-
1.el8                                   baseos           19 k
 perl-podlators                   noarch       4.11-
1.el8                                    baseos          117 k
 perl-threads                     x86_64       1:2.21-
2.el8                                    baseos           60 k
 perl-threads-shared              x86_64       1.58-
2.el8                                    baseos           47 k
□□□□□□□□:
 mariadb-backup                   x86_64       3:10.11.6-
1.module+el8.10.0+1674+fa55eae9        appstream       7.3 M
```

```
 mariadb-gssapi-server            x86_64       3:10.11.6-
1.module+el8.10.0+1674+fa55eae9        appstream        56 k
 mariadb-server-utils             x86_64       3:10.11.6-
1.module+el8.10.0+1674+fa55eae9        appstream       1.4 M
□□□□□□□□□□:
 perl                                          5.26
 perl-DBD-MySQL                                4.046
 perl-DBI                                      1.641
 perl-IO-Socket-SSL                            2.066
 perl-libwww-perl                              6.34

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□□  55 □□□

□□□□□□□50 M
□□□□□□□243 M
□□□□□□□
(1/55): mariadb-common-10.11.6-1.module+el8.10.0+1674+fa55eae9.x86_64.rpm             188 kB/s
|  68 kB     00:00
(2/55): mariadb-connector-c-3.1.11-2.el8_3.x86_64.rpm                                 854 kB/s
| 199 kB     00:00
(3/55): mariadb-connector-c-config-3.1.11-2.el8_3.noarch.rpm                           56 kB/s
|  14 kB     00:00
(4/55): mariadb-errmsg-10.11.6-1.module+el8.10.0+1674+fa55eae9.x86_64.rpm             793 kB/s
| 339 kB     00:00
(5/55): mariadb-10.11.6-1.module+el8.10.0+1674+fa55eae9.x86_64.rpm                    4.3 MB/s
| 7.3 MB     00:01
(6/55): mariadb-gssapi-server-10.11.6-1.module+el8.10.0+1674+fa55eae9.x86_64.rpm      127 kB/s
|  56 kB     00:00
(7/55): mariadb-backup-10.11.6-1.module+el8.10.0+1674+fa55eae9.x86_64.rpm             3.7 MB/s
| 7.3 MB     00:01
(8/55): mysql-selinux-1.0.10-1.el8.noarch.rpm                                         374 kB/s
|  37 kB     00:00
(9/55): perl-DBD-MySQL-4.046-3.module+el8.9.0+1501+450eec3b.x86_64.rpm                1.4 MB/s
| 155 kB     00:00
(10/55): perl-DBI-1.641-4.module+el8.9.0+1495+f278a004.x86_64.rpm                     2.1 MB/s
| 739 kB     00:00
(11/55): perl-Digest-1.17-395.el8.noarch.rpm                                          318 kB/s
```

```
|  26 kB     00:00
(12/55): mariadb-server-utils-10.11.6-1.module+el8.10.0+1674+fa55eae9.x86_64.rpm      1.5 MB/s
| 1.4 MB     00:00
(13/55): perl-Digest-MD5-2.55-396.el8.x86_64.rpm                                     395 kB/s
|  36 kB     00:00
(14/55): perl-IO-Socket-IP-0.39-5.el8.noarch.rpm                                     446 kB/s
|  46 kB     00:00
(15/55): perl-IO-Socket-SSL-2.066-4.module+el8.9.0+1517+e71a7a62.noarch.rpm          2.2 MB/s
| 297 kB     00:00
(16/55): perl-Mozilla-CA-20160104-7.module+el8.9.0+1521+0101edce.noarch.rpm          143 kB/s
|  14 kB     00:00
(17/55): perl-Net-SSLeay-1.88-2.module+el8.9.0+1517+e71a7a62.x86_64.rpm              2.7 MB/s
| 378 kB     00:00
(18/55): perl-URI-1.73-3.el8.noarch.rpm                                              927 kB/s
| 115 kB     00:00
(19/55): perl-libnet-3.11-3.el8.noarch.rpm                                           1.2 MB/s
| 120 kB     00:00
(20/55): perl-Carp-1.42-396.el8.noarch.rpm                                            16 kB/s
|  29 kB     00:01
(21/55): mariadb-server-10.11.6-1.module+el8.10.0+1674+fa55eae9.x86_64.rpm           6.1 MB/s
|  20 MB     00:03
(22/55): perl-Data-Dumper-2.167-399.el8.x86_64.rpm                                    28 kB/s
|  57 kB     00:02
(23/55): perl-Exporter-5.72-396.el8.noarch.rpm                                        34 kB/s
|  33 kB     00:00
(24/55): perl-Errno-1.28-422.el8.x86_64.rpm                                           71 kB/s
|  75 kB     00:01
(25/55): perl-Encode-2.97-3.el8.x86_64.rpm                                           1.0 MB/s
| 1.5 MB     00:01
(26/55): perl-File-Temp-0.230.600-1.el8.noarch.rpm                                   108 kB/s
|  62 kB     00:00
(27/55): perl-Getopt-Long-2.50-4.el8.noarch.rpm                                      118 kB/s
|  62 kB     00:00
(28/55): perl-File-Path-2.15-2.el8.noarch.rpm                                         43 kB/s
|  37 kB     00:00
(29/55): perl-IO-1.38-422.el8.x86_64.rpm                                             237 kB/s
| 141 kB     00:00
(30/55): perl-MIME-Base64-3.15-396.el8.x86_64.rpm                                     62 kB/s
|  30 kB     00:00
(31/55): perl-HTTP-Tiny-0.074-3.el8.noarch.rpm                                        59 kB/s
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```
|  58 kB     00:00
(32/55): perl-Math-Complex-1.59-422.el8.noarch.rpm                                212 kB/s
| 108 kB     00:00
(33/55): perl-Pod-Escapes-1.07-395.el8.noarch.rpm                                  44 kB/s
|  19 kB     00:00
(34/55): perl-PathTools-3.74-1.el8.x86_64.rpm                                     101 kB/s
|  89 kB     00:00
(35/55): perl-Math-BigInt-1.9998.11-7.el8.noarch.rpm                              130 kB/s
| 194 kB     00:01
(36/55): perl-Pod-Perldoc-3.28-396.el8.noarch.rpm                                 131 kB/s
|  85 kB     00:00
(37/55): perl-Pod-Simple-3.35-395.el8.noarch.rpm                                  339 kB/s
| 212 kB     00:00
(38/55): perl-Pod-Usage-1.69-395.el8.noarch.rpm                                    60 kB/s
|  33 kB     00:00
(39/55): perl-Socket-2.027-3.el8.x86_64.rpm                                        85 kB/s
|  58 kB     00:00
(40/55): perl-Storable-3.11-3.el8.x86_64.rpm                                      171 kB/s
|  97 kB     00:00
(41/55): perl-Scalar-List-Utils-1.49-2.el8.x86_64.rpm                              53 kB/s
|  67 kB     00:01
(42/55): perl-Term-ANSIColor-4.06-396.el8.noarch.rpm                               80 kB/s
|  45 kB     00:00
(43/55): perl-Term-Cap-1.17-395.el8.noarch.rpm                                     40 kB/s
|  22 kB     00:00
(44/55): perl-Text-ParseWords-3.30-395.el8.noarch.rpm                              36 kB/s
|  17 kB     00:00
(45/55): perl-Text-Tabs+Wrap-2013.0523-395.el8.noarch.rpm                          49 kB/s
|  23 kB     00:00
(46/55): perl-Time-Local-1.280-1.el8.noarch.rpm                                    64 kB/s
|  32 kB     00:00
(47/55): perl-Unicode-Normalize-1.25-396.el8.x86_64.rpm                           193 kB/s
|  81 kB     00:00
(48/55): perl-constant-1.33-396.el8.noarch.rpm                                     58 kB/s
|  24 kB     00:00
(49/55): perl-macros-5.26.3-422.el8.x86_64.rpm                                    121 kB/s
|  71 kB     00:00
(50/55): perl-libs-5.26.3-422.el8.x86_64.rpm                                      1.1 MB/s
| 1.6 MB     00:01
(51/55): perl-interpreter-5.26.3-422.el8.x86_64.rpm                               3.6 MB/s
```

```
| 6.3 MB     00:01
(52/55): perl-parent-0.237-1.el8.noarch.rpm                                    21 kB/s
|  19 kB     00:00
(53/55): perl-podlators-4.11-1.el8.noarch.rpm                                 173 kB/s
| 117 kB     00:00
(54/55): perl-threads-shared-1.58-2.el8.x86_64.rpm                             83 kB/s
|  47 kB     00:00
(55/55): perl-threads-2.21-2.el8.x86_64.rpm                                    70 kB/s
|  60 kB     00:00
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□□                                                                  3.4 MB/s
|  50 MB     00:14
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  □□
:
      1/1
  □□□□    : mariadb-connector-c-config-3.1.11-
2.el8_3.noarch                                          1/55
  □□□□    : mariadb-common-3:10.11.6-
1.module+el8.10.0+1674+fa55eae9.x86_64                      2/55
  □□□□    : mariadb-errmsg-3:10.11.6-
1.module+el8.10.0+1674+fa55eae9.x86_64                      3/55
  □□□□    : perl-Digest-1.17-
395.el8.noarch                                                  4/55
  □□□□    : perl-Digest-MD5-2.55-
396.el8.x86_64                                                 5/55
  □□□□    : perl-Data-Dumper-2.167-
399.el8.x86_64                                                6/55
  □□□□    : perl-libnet-3.11-
3.el8.noarch                                                    7/55
  □□□□    : perl-URI-1.73-
3.el8.noarch                                                   8/55
  □□□□    : perl-Pod-Escapes-1:1.07-
395.el8.noarch                                              9/55
  □□□□    : perl-Net-SSLeay-1.88-
```

```
2.module+el8.9.0+1517+e71a7a62.x86_64                                    10/55
  □□□□□    : perl-Mozilla-CA-20160104-
7.module+el8.9.0+1521+0101edce.noarch                                   11/55
  □□□□□    : perl-IO-Socket-IP-0.39-
5.el8.noarch                                                             12/55
  □□□□□    : perl-Time-Local-1:1.280-
1.el8.noarch                                                            13/55
  □□□□□    : perl-IO-Socket-SSL-2.066-
4.module+el8.9.0+1517+e71a7a62.noarch                                   14/55
  □□□□□    : perl-Term-ANSIColor-4.06-
396.el8.noarch                                                          15/55
  □□□□□    : perl-Term-Cap-1.17-
395.el8.noarch                                                             16/55
  □□□□□    : perl-File-Temp-0.230.600-
1.el8.noarch                                                            17/55
  □□□□□    : perl-Pod-Simple-1:3.35-
395.el8.noarch                                                           18/55
  □□□□□    : perl-HTTP-Tiny-0.074-
3.el8.noarch                                                               19/55
  □□□□□    : perl-podlators-4.11-
1.el8.noarch                                                               20/55
  □□□□□    : perl-Pod-Perldoc-3.28-
396.el8.noarch                                                           21/55
  □□□□□    : perl-Text-ParseWords-3.30-
395.el8.noarch                                                          22/55
  □□□□□    : perl-Pod-Usage-4:1.69-
395.el8.noarch                                                           23/55
  □□□□□    : perl-MIME-Base64-3.15-
396.el8.x86_64                                                           24/55
  □□□□□    : perl-Storable-1:3.11-
3.el8.x86_64                                                               25/55
  □□□□□    : perl-Getopt-Long-1:2.50-
4.el8.noarch                                                            26/55
  □□□□□    : perl-Errno-1.28-
422.el8.x86_64                                                                27/55
  □□□□□    : perl-Socket-4:2.027-
3.el8.x86_64                                                               28/55
  □□□□□    : perl-Encode-4:2.97-
3.el8.x86_64                                                               29/55
  □□□□□    : perl-Carp-1.42-
```

```
396.el8.noarch                                                    30/55
  □□□□□    : perl-Exporter-5.72-
396.el8.noarch                                                    31/55
  □□□□□    : perl-libs-4:5.26.3-
422.el8.x86_64                                                    32/55
  □□□□□    : perl-Scalar-List-Utils-3:1.49-
2.el8.x86_64                                                   33/55
  □□□□□    : perl-parent-1:0.237-
1.el8.noarch                                                      34/55
  □□□□□    : perl-macros-4:5.26.3-
422.el8.x86_64                                                    35/55
  □□□□□    : perl-Text-Tabs+Wrap-2013.0523-
395.el8.noarch                                                 36/55
  □□□□□    : perl-Unicode-Normalize-1.25-
396.el8.x86_64                                                   37/55
  □□□□□    : perl-File-Path-2.15-
2.el8.noarch                                                      38/55
  □□□□□    : perl-IO-1.38-
422.el8.x86_64                                                          39/55
  □□□□□    : perl-PathTools-3.74-
1.el8.x86_64                                                      40/55
  □□□□□    : perl-constant-1.33-
396.el8.noarch                                                    41/55
  □□□□□    : perl-threads-1:2.21-
2.el8.x86_64                                                      42/55
  □□□□□    : perl-threads-shared-1.58-
2.el8.x86_64                                                     43/55
  □□□□□    : perl-interpreter-4:5.26.3-
422.el8.x86_64                                                   44/55
  □□□□□    : perl-Math-Complex-1.59-
422.el8.noarch                                                     45/55
  □□□□□    : perl-Math-BigInt-1:1.9998.11-
7.el8.noarch                                                   46/55
  □□□□□    : perl-DBI-1.641-
4.module+el8.9.0+1495+f278a004.x86_64                                   47/55
  □□□□□□  : mysql-selinux-1.0.10-
1.el8.noarch                                                      48/55
  □□□□□    : mysql-selinux-1.0.10-
1.el8.noarch                                                      48/55
  □□□□□□  : mysql-selinux-1.0.10-
```

```
1.el8.noarch                                                                48/55
libsemanage.semanage_direct_install_info: Overriding mysql module at lower priority 100 with
module at priority 200.

  □□□□□    : perl-DBD-MySQL-4.046-
3.module+el8.9.0+1501+450eec3b.x86_64                                       49/55
  □□□□□    : mariadb-connector-c-3.1.11-
2.el8_3.x86_64                                                           50/55
  □□□□□    : mariadb-backup-3:10.11.6-
1.module+el8.10.0+1674+fa55eae9.x86_64                                     51/55
  □□□□□    : mariadb-gssapi-server-3:10.11.6-
1.module+el8.10.0+1674+fa55eae9.x86_64                                  52/55
  □□□□□    : mariadb-server-utils-3:10.11.6-
1.module+el8.10.0+1674+fa55eae9.x86_64                                   53/55
  □□□□□□   : mariadb-server-3:10.11.6-
1.module+el8.10.0+1674+fa55eae9.x86_64                                     54/55
  □□□□□    : mariadb-server-3:10.11.6-
1.module+el8.10.0+1674+fa55eae9.x86_64                                     54/55
  □□□□□□   : mariadb-server-3:10.11.6-
1.module+el8.10.0+1674+fa55eae9.x86_64                                     54/55
  □□□□□    : mariadb-3:10.11.6-
1.module+el8.10.0+1674+fa55eae9.x86_64                                        55/55
  □□□□□□   : mysql-selinux-1.0.10-
1.el8.noarch                                                                55/55
  □□□□□□   : mariadb-3:10.11.6-
1.module+el8.10.0+1674+fa55eae9.x86_64                                        55/55
  □□         : mariadb-3:10.11.6-
1.module+el8.10.0+1674+fa55eae9.x86_64                                         1/55
  □□         : mariadb-backup-3:10.11.6-
1.module+el8.10.0+1674+fa55eae9.x86_64                                       2/55
  □□         : mariadb-common-3:10.11.6-
1.module+el8.10.0+1674+fa55eae9.x86_64                                       3/55
  □□         : mariadb-connector-c-3.1.11-
2.el8_3.x86_64                                                           4/55
  □□         : mariadb-connector-c-config-3.1.11-
2.el8_3.noarch                                                        5/55
  □□         : mariadb-errmsg-3:10.11.6-
1.module+el8.10.0+1674+fa55eae9.x86_64                                       6/55
  □□         : mariadb-gssapi-server-3:10.11.6-
1.module+el8.10.0+1674+fa55eae9.x86_64                                     7/55
```

```
  □□        : mariadb-server-3:10.11.6-
1.module+el8.10.0+1674+fa55eae9.x86_64                                  8/55
  □□        : mariadb-server-utils-3:10.11.6-
1.module+el8.10.0+1674+fa55eae9.x86_64                                 9/55
  □□        : mysql-selinux-1.0.10-
1.el8.noarch                                                             10/55
  □□        : perl-DBD-MySQL-4.046-
3.module+el8.9.0+1501+450eec3b.x86_64                                    11/55
  □□        : perl-DBI-1.641-
4.module+el8.9.0+1495+f278a004.x86_64                                        12/55
  □□        : perl-Digest-1.17-
395.el8.noarch                                                           13/55
  □□        : perl-Digest-MD5-2.55-
396.el8.x86_64                                                           14/55
  □□        : perl-IO-Socket-IP-0.39-
5.el8.noarch                                                            15/55
  □□        : perl-IO-Socket-SSL-2.066-
4.module+el8.9.0+1517+e71a7a62.noarch                                  16/55
  □□        : perl-Mozilla-CA-20160104-
7.module+el8.9.0+1521+0101edce.noarch                                  17/55
  □□        : perl-Net-SSLeay-1.88-
2.module+el8.9.0+1517+e71a7a62.x86_64                                    18/55
  □□        : perl-URI-1.73-
3.el8.noarch                                                                19/55
  □□        : perl-libnet-3.11-
3.el8.noarch                                                             20/55
  □□        : perl-Carp-1.42-
396.el8.noarch                                                             21/55
  □□        : perl-Data-Dumper-2.167-
399.el8.x86_64                                                          22/55
  □□        : perl-Encode-4:2.97-
3.el8.x86_64                                                               23/55
  □□        : perl-Errno-1.28-
422.el8.x86_64                                                             24/55
  □□        : perl-Exporter-5.72-
396.el8.noarch                                                           25/55
  □□        : perl-File-Path-2.15-
2.el8.noarch                                                             26/55
  □□        : perl-File-Temp-0.230.600-
1.el8.noarch                                                           27/55
```

```
  □□        : perl-Getopt-Long-1:2.50-
4.el8.noarch                                                  28/55
  □□        : perl-HTTP-Tiny-0.074-
3.el8.noarch                                                    29/55
  □□        : perl-IO-1.38-
422.el8.x86_64                                                          30/55
  □□        : perl-MIME-Base64-3.15-
396.el8.x86_64                                                  31/55
  □□        : perl-Math-BigInt-1:1.9998.11-
7.el8.noarch                                                32/55
  □□        : perl-Math-Complex-1.59-
422.el8.noarch                                                 33/55
  □□        : perl-PathTools-3.74-
1.el8.x86_64                                                    34/55
  □□        : perl-Pod-Escapes-1:1.07-
395.el8.noarch                                                35/55
  □□        : perl-Pod-Perldoc-3.28-
396.el8.noarch                                                  36/55
  □□        : perl-Pod-Simple-1:3.35-
395.el8.noarch                                                 37/55
  □□        : perl-Pod-Usage-4:1.69-
395.el8.noarch                                                  38/55
  □□        : perl-Scalar-List-Utils-3:1.49-
2.el8.x86_64                                                39/55
  □□        : perl-Socket-4:2.027-
3.el8.x86_64                                                    40/55
  □□        : perl-Storable-1:3.11-
3.el8.x86_64                                                    41/55
  □□        : perl-Term-ANSIColor-4.06-
396.el8.noarch                                               42/55
  □□        : perl-Term-Cap-1.17-
395.el8.noarch                                                    43/55
  □□        : perl-Text-ParseWords-3.30-
395.el8.noarch                                               44/55
  □□        : perl-Text-Tabs+Wrap-2013.0523-
395.el8.noarch                                                45/55
  □□        : perl-Time-Local-1:1.280-
1.el8.noarch                                                   46/55
  □□        : perl-Unicode-Normalize-1.25-
396.el8.x86_64                                                 47/55
```

```
  □□        : perl-constant-1.33-
396.el8.noarch                                                  48/55
  □□        : perl-interpreter-4:5.26.3-
422.el8.x86_64                                                49/55
  □□        : perl-libs-4:5.26.3-
422.el8.x86_64                                                  50/55
  □□        : perl-macros-4:5.26.3-
422.el8.x86_64                                                51/55
  □□        : perl-parent-1:0.237-
1.el8.noarch                                                    52/55
  □□        : perl-podlators-4.11-
1.el8.noarch                                                    53/55
  □□        : perl-threads-1:2.21-
2.el8.x86_64                                                    54/55
  □□        : perl-threads-shared-1.58-
2.el8.x86_64                                                  55/55

□□□:
  mariadb-3:10.11.6-1.module+el8.10.0+1674+fa55eae9.x86_64
  mariadb-backup-3:10.11.6-1.module+el8.10.0+1674+fa55eae9.x86_64
  mariadb-common-3:10.11.6-1.module+el8.10.0+1674+fa55eae9.x86_64
  mariadb-connector-c-3.1.11-2.el8_3.x86_64
  mariadb-connector-c-config-3.1.11-2.el8_3.noarch
  mariadb-errmsg-3:10.11.6-1.module+el8.10.0+1674+fa55eae9.x86_64
  mariadb-gssapi-server-3:10.11.6-1.module+el8.10.0+1674+fa55eae9.x86_64
  mariadb-server-3:10.11.6-1.module+el8.10.0+1674+fa55eae9.x86_64
  mariadb-server-utils-3:10.11.6-1.module+el8.10.0+1674+fa55eae9.x86_64
  mysql-selinux-1.0.10-1.el8.noarch
  perl-Carp-1.42-396.el8.noarch
  perl-DBD-MySQL-4.046-3.module+el8.9.0+1501+450eec3b.x86_64
  perl-DBI-1.641-4.module+el8.9.0+1495+f278a004.x86_64
  perl-Data-Dumper-2.167-399.el8.x86_64
  perl-Digest-1.17-395.el8.noarch
  perl-Digest-MD5-2.55-396.el8.x86_64
  perl-Encode-4:2.97-3.el8.x86_64
  perl-Errno-1.28-422.el8.x86_64
  perl-Exporter-5.72-396.el8.noarch
  perl-File-Path-2.15-2.el8.noarch
  perl-File-Temp-0.230.600-1.el8.noarch
  perl-Getopt-Long-1:2.50-4.el8.noarch
```

```
perl-HTTP-Tiny-0.074-3.el8.noarch
perl-IO-1.38-422.el8.x86_64
perl-IO-Socket-IP-0.39-5.el8.noarch
perl-IO-Socket-SSL-2.066-4.module+el8.9.0+1517+e71a7a62.noarch
perl-MIME-Base64-3.15-396.el8.x86_64
perl-Math-BigInt-1:1.9998.11-7.el8.noarch
perl-Math-Complex-1.59-422.el8.noarch
perl-Mozilla-CA-20160104-7.module+el8.9.0+1521+0101edce.noarch
perl-Net-SSLeay-1.88-2.module+el8.9.0+1517+e71a7a62.x86_64
perl-PathTools-3.74-1.el8.x86_64
perl-Pod-Escapes-1:1.07-395.el8.noarch
perl-Pod-Perldoc-3.28-396.el8.noarch
perl-Pod-Simple-1:3.35-395.el8.noarch
perl-Pod-Usage-4:1.69-395.el8.noarch
perl-Scalar-List-Utils-3:1.49-2.el8.x86_64
perl-Socket-4:2.027-3.el8.x86_64
perl-Storable-1:3.11-3.el8.x86_64
perl-Term-ANSIColor-4.06-396.el8.noarch
perl-Term-Cap-1.17-395.el8.noarch
perl-Text-ParseWords-3.30-395.el8.noarch
perl-Text-Tabs+Wrap-2013.0523-395.el8.noarch
perl-Time-Local-1:1.280-1.el8.noarch
perl-URI-1.73-3.el8.noarch
perl-Unicode-Normalize-1.25-396.el8.x86_64
perl-constant-1.33-396.el8.noarch
perl-interpreter-4:5.26.3-422.el8.x86_64
perl-libnet-3.11-3.el8.noarch
perl-libs-4:5.26.3-422.el8.x86_64
perl-macros-4:5.26.3-422.el8.x86_64
perl-parent-1:0.237-1.el8.noarch
perl-podlators-4.11-1.el8.noarch
perl-threads-1:2.21-2.el8.x86_64
perl-threads-shared-1.58-2.el8.x86_64
```

□□□

□□□□□

## 4 □□ MariaDB □□□□□□

□□□□□□□□□□

```
$ sudo systemctl restart mariadb
$ sudo systemctl enable mariadb
Created symlink /etc/systemd/system/mysql.service → /usr/lib/systemd/system/mariadb.service.
Created symlink /etc/systemd/system/mysqld.service → /usr/lib/systemd/system/mariadb.service.
Created symlink /etc/systemd/system/multi-user.target.wants/mariadb.service →
/usr/lib/systemd/system/mariadb.service.
```

## 5 □□□ MariaDB □□□□□

□□□□□□□□

```
$ sudo mysql_secure_installation
```

□□□□□□□□□□□□□□□□□□□□□□ root □□□□□□□□□□□□□□□□□□□□□□ Enter □□□□

```
NOTE: RUNNING ALL PARTS OF THIS SCRIPT IS RECOMMENDED FOR ALL MariaDB
      SERVERS IN PRODUCTION USE!  PLEASE READ EACH STEP CAREFULLY!

In order to log into MariaDB to secure it, we'll need the current
password for the root user.  If you've just installed MariaDB, and
you haven't set the root password yet, the password will be blank,
so you should just press enter here.

Enter current password for root (enter for none):□□□ Enter □
```

□□□□□ root □□□□□ Y □□□□□□□□

```
OK, successfully used password, moving on...

Setting the root password ensures that nobody can log into the MariaDB
root user without the proper authorisation.

Set root password? [Y/n] Y
New password:
Re-enter new password:
Password updated successfully!
Reloading privilege tables..
 ... Success!
```

□□□□□ anonymous users □□□□□□ Y □□□

```
By default, a MariaDB installation has an anonymous user, allowing anyone
to log into MariaDB without having to have a user account created for
them.  This is intended only for testing, and to make the installation
go a bit smoother.  You should remove them before moving into a
production environment.

Remove anonymous users? [Y/n]
 ... Success!
```

□□□□□ root □□□□□□□□□□□ Y □□□

```
Normally, root should only be allowed to connect from 'localhost'.  This
ensures that someone cannot guess at the root password from the network.

Disallow root login remotely? [Y/n]
 ... Success!
```

□□□□□□□□□□□□ Y □□□

```
By default, MariaDB comes with a database named 'test' that anyone can
access.  This is also intended only for testing, and should be removed
before moving into a production environment.

Remove test database and access to it? [Y/n]
 - Dropping test database...
 ... Success!
 - Removing privileges on test database...
 ... Success!
```

□□□ Reload □□□□□ Y □□□

```
Reloading the privilege tables will ensure that all changes made so far
will take effect immediately.

Reload privilege tables now? [Y/n] Y
 ... Success!

Cleaning up...

All done!  If you've completed all of the above steps, your MariaDB
installation should now be secure.
```

```
Thanks for using MariaDB!
```

□□ MariaDB □□□□□□□□

## 6 □□ MariaDB □□□□□□ (UTF8mb4)

□□ /etc/my.conf.d/ □□□□□□□□□□□□□□□□□□

```
sudo vim /etc/my.cnf.d/default-character.cnf
```

□□□□□

> [client]
> default-character-set = utf8mb4
>
> [mysqld]
> character-set-server = utf8mb4
> collation-server = utf8mb4_unicode_ci

## 7 □□□□ MariaDB □□

```
$ sudo systemctl restart mariadb
```

## 8 □□ MariaDB □□□□

□□ netstat □□□□□□□□□□ (□□□ 3306 port □□□ )□

```
$ sudo netstat -tlnp
Active Internet connections (only servers)
Proto Recv-Q Send-Q Local Address           Foreign Address         State       PID/Program
name
tcp        0      0 0.0.0.0:3306            0.0.0.0:*               LISTEN      12169/mysqld
tcp        0      0 0.0.0.0:22              0.0.0.0:*               LISTEN      608/sshd
tcp6       0      0 :::3306                 :::*                    LISTEN      12169/mysqld
tcp6       0      0 :::80                   :::*                    LISTEN      6998/httpd
tcp6       0      0 :::22                   :::*                    LISTEN      608/sshd
```

□□ systemctl □□□□□□□□□□□□□□□

```
$ sudo systemctl status mariadb
● mariadb.service - MariaDB 10.11 database server
```

```
   Loaded: loaded (/usr/lib/systemd/system/mariadb.service; enabled; vendor preset: disabled)
   Active: active (running) since Thu 2024-10-17 15:53:01 CST; 9s ago
     Docs: man:mysqld(8)
           https://mariadb.com/kb/en/library/systemd/
  Process: 12181 ExecStartPost=/usr/libexec/mysql-check-upgrade (code=exited,
status=0/SUCCESS)
  Process: 12131 ExecStartPre=/usr/libexec/mysql-prepare-db-dir mariadb.service (code=exited,
status=0/SUCCESS)
  Process: 12105 ExecStartPre=/usr/libexec/mysql-check-socket (code=exited, status=0/SUCCESS)
 Main PID: 12169 (mysqld)
   Status: "Taking your SQL requests now..."
    Tasks: 12 (limit: 11167)
   Memory: 176.7M
   CGroup: /system.slice/mariadb.service
           └─12169 /usr/libexec/mysqld --basedir=/usr

10□ 17 15:53:00 ossiidemo.ossii.com.tw systemd[1]: mariadb.service: Succeeded.
10□ 17 15:53:00 ossiidemo.ossii.com.tw systemd[1]: Stopped MariaDB 10.11 database server.
10□ 17 15:53:00 ossiidemo.ossii.com.tw systemd[1]: Starting MariaDB 10.11 database server...
10□ 17 15:53:01 ossiidemo.ossii.com.tw mysql-prepare-db-dir[12131]: Database MariaDB is
probably initialized in /var>
10□ 17 15:53:01 ossiidemo.ossii.com.tw mysql-prepare-db-dir[12131]: If this is not the case,
make sure the /var/lib/>
10□ 17 15:53:01 ossiidemo.ossii.com.tw systemd[1]: Started MariaDB 10.11 database server.
lines 1-21/21 (END)
```

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