Base64編碼簡介

* Base64是一種基於64個可列印字元(包含英文字母A-Z、a-z、數字0-9、+、/等)來表示二進位資料的表示方法。
* Base64以每6個位元(bit)為一個單元來對應上述的某個可列印字元，即3個位元組可由4個可列印字元來表示。
* 例如：「Man」經過Base64的編碼後的結果為TWFu：

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **文字** | **M** | | | | | | | | **a** | | | | | | | | **n** | | | | | | | |
| **ASCII編碼** | 77 | | | | | | | | 97 | | | | | | | | 110 | | | | | | | |
| **位元** | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 0 |
| **索引** | 19 | | | | | | 22 | | | | | | 5 | | | | | | 46 | | | | | |
| **Base64編碼** | **T** | | | | | | **W** | | | | | | **F** | | | | | | **u** | | | | | |

* Base64索引表：

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **數值** | **字元** |  | **數值** | **字元** |  | **數值** | **字元** |  | **數值** | **字元** |
| 0 | A | 16 | Q | 32 | g | 48 | w |
| 1 | B | 17 | R | 33 | h | 49 | x |
| 2 | C | 18 | S | 34 | i | 50 | y |
| 3 | D | 19 | T | 35 | j | 51 | z |
| 4 | E | 20 | U | 36 | k | 52 | 0 |
| 5 | F | 21 | V | 37 | l | 53 | 1 |
| 6 | G | 22 | W | 38 | m | 54 | 2 |
| 7 | H | 23 | X | 39 | n | 55 | 3 |
| 8 | I | 24 | Y | 40 | o | 56 | 4 |
| 9 | J | 25 | Z | 41 | p | 57 | 5 |
| 10 | K | 26 | a | 42 | q | 58 | 6 |
| 11 | L | 27 | b | 43 | r | 59 | 7 |
| 12 | M | 28 | c | 44 | s | 60 | 8 |
| 13 | N | 29 | d | 45 | t | 61 | 9 |
| 14 | O | 30 | e | 46 | u | 62 | + |
| 15 | P | 31 | f | 47 | v | 63 | / |