

## Matching, wildcards and ranges

In a list-lookup, we will test if there exist any records in the list where **incoming Key** (e.g. caller's phone number, entered DTMF or Subject in an email) matches the Key in a row in the list. If a match is found, the (first) matching record's value is returned.

Please do **not** use these special characters in the key field since they will not return a match even if there is a match **ú, û, ù, ÷, õ, ý, ù**

The **incoming Key** can only be a single (constant) element. Wildcards or ranges are not allowed here.

The **Key** field of a record in a list may be a **single element** (constant), a **range**, or a single element containing one or more **wildcards**. Combinations of range and wildcard(s) within a list row's Key is not allowed.

### Ranges in the list's Key field

- The from-value and the to-value is separated by : (colon)
- The to-value is included in the range. Example Key range: 21000000 : 21999999

### Wildcards in the Key field

The wildcard matching, as well as the substitution (next chapter), is based on syntax known from Perl-based regular expressions. Though, there exists a set of restrictions compared to the full Perl syntax. This is what's supported as part of a Key:

- Represent any number of characters: .\* (i.e. a single dot followed by an asterisk)
- Represent any single character: . (i.e. a single dot)

Examples:

Description	Key
Match for any number starting with 47	47.*
Match for numbers starting with 47, and which are 10 digits in total length (i.e. eight digits after 47)	47.....
Match any number starting with 47 and ending with 99. Between the starting 47 and the ending 99, there should be at least two characters.	47...*99
Match for text ending with abc	.*abc
Match for text beginning with abc	abc.*
Match for text containing abc	.*abc.*

### Advanced:

#### Quoting needed for the wildcard characters

If a single dot is going to be part of the key, and not treated as a wildcard, you need to prefix (escape) the dot with a backslash. The same is true for an asterisk if the asterisk follows a single dot. Though, asterisk alone (i.e. not right after a dot) is understood to be part of the key without the backslash. Examples, quoting:

Description	Key
Make a Key that should match an incoming Key with the fixed value 47*1	47\.*
Make a Key that should match an incoming Key starting with 47, then it should have one character of any kind, immediately followed by *9 (sample of such an incoming Key is 473*9)	47.\.*9
Make a Key that should match an incoming Key with the fixed value 47.1.	47\.1

### Substitution:

A return value (from the match in the look-up) can be manipulated so it contains parts of (or the whole) incoming Key. This is how:

- A wildcard expression might be surrounded by parentheses, thereby making a wildcard group
- There might be more than one wildcard group within the same Key. The characters in an incoming Key that matches a particular wildcard group could be part of the returned value.
- Placeholders (in the specified return Value) for these wildcard groups are \$1 for the first group, \$2 for the second, \$3 for the third, and so on.

Examples:

Description	Set Key to	Set Value to
Any incoming Key starting with 22, and which are exactly 8 digits, should be prefixed with the value 0047	22(.....)	004722\$1
Incoming Key starting with 0047, and containing an unknown number of characters thereafter, should have 0047 stripped off.	0047(.*)	\$1