

Bash Parameter extension

BASH PARAMETER EXPANSION

Parameter Expansion Syntax

Syntax	Description
<code>\${parameter%<i>suffix</i>}</code>	Remove suffix
<code>\${parameter#<i>prefix</i>}</code>	Remove prefix
<code>\${parameter%%<i>suffix</i>}</code>	Remove long suffix
<code>\${parameter##<i>prefix</i>}</code>	Remove long prefix
<code>\${parameter/<i>pattern/string</i>}</code>	Replace first pattern match with string
<code>\${parameter//<i>pattern/string</i>}</code>	Replace all the pattern with string
<code>\${parameter/%<i>pattern/string</i>}</code>	Replace suffix pattern with string
<code>\${parameter/#<i>pattern/string</i>}</code>	Replace prefix pattern with string

Default Values

<code>\${FOO:-<i>val</i>}</code>	Uses val if \$FOO is unset, without changing FOO
<code>\${FOO:=<i>val</i>}</code>	Sets \$FOO to val if unset, changing FOO
<code>\${FOO:+<i>val</i>}</code>	Uses val if \$FOO is set (does not change FOO)
<code>\${FOO:?<i>message</i>}</code>	Show message and exit if \$FOO is unset

Substrings

<code>\${FOO:0:3}</code>	Substring (<i>position</i> , <i>length</i>)
<code>\${FOO:(-3):3}</code>	Substring from the right

Length

<code>\${#FOO}</code>	Length of \$FOO
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String Substitutions

```

1 food=           # => food is set to an empty
2                 # string
3
4 echo ${food:-Cake} # => Since $food is empty,
5                   # outputs "Cake"
6
7 STR="/path/to/foo.cpp"
8
9 echo ${STR%.cpp}  # => /path/to/foo
10 echo ${STR%.cpp}.o # => /path/to/foo.o
11 echo ${STR%/*}    # => /path/to
12
13 echo ${STR##*.}   # => cpp (extension)
14 echo ${STR##*/}   # => foo.cpp (basepath)
15
16 echo ${STR#*/}    # => path/to/foo.cpp
17 echo ${STR##*/}   # => foo.cpp
18
19 echo ${STR/foo/bar} # => /path/to/bar.cpp

```

Basepath & Dirpath

```

1 SRC="/path/to/foo.cpp"
2
3 BASEPATH=${SRC##*/}
4 echo $BASEPATH      # => "foo.cpp"
5
6 DIRPATH=${SRC%$BASEPATH}
7 echo $DIRPATH       # => "/path/to/"

```

String Slicing

```

1 name="John"
2
3 echo ${name}      # => John
4 echo ${name:0:2}  # => Jo
5 echo ${name:2}    # => hn
6 echo ${name::-1}  # => Joh
7 echo ${name:~-1}  # => n
8 echo ${name:~-2}  # => hn
9 echo ${name:(-2):2} # => hn
10
11 length=2
12 echo ${name:0:length} # => Jo

```

String Transformation

```

1 STR="HELLO WORLD!"
2
3 echo ${STR,,}      # => hELLO WORLD!
4 echo ${STR,,,}     # => hello world!
5
6 STR="hello world!"
7
8 echo ${STR^}       # => Hello world!
9 echo ${STR^^}      # => HELLO WORLD!
10
11 ARR=(hello World)
12
13 echo "${ARR[@],}"  # => hello world
14 echo "${ARR[@]^}"  # => Hello World

```

sysxplore.com

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