

Cheatsheet - Pattern and String Substitution

String Operations	
<code>\${varname#pattern}</code>	Remove up to the FIRST occurrence of the match from the beginning of the line
<code>\${varname##pattern}</code>	Remove up to the LAST occurrence of the match from the beginning of the line
<code>\${varname%pattern}</code>	Remove the FIRST occurrence of the match starting from the end of the line
<code>\${varname%%pattern}</code>	Remove the LAST occurrence of the match starting from the end of the line
<code>\${varname/pattern/string}</code>	Replace matching pattern with string
<code>\${varname/#pattern/string}</code>	Replace matching pattern at the BEGINNING of the line with string
<code>\${varname/%pattern/string}</code>	Replace matching pattern at the END of the line with string
<code>\${varname//pattern/string}</code>	Replace ALL matching occurrences of pattern with string
<code>\${varname:offset:length}</code>	Returns the substring of \$varname starting at offset and up to the length of characters
<code>\${varname:-length}</code>	Returns the substring of \$varname starting at offset from the END
Variable Manipulations	
<code>\${#varname}</code>	Get length of variable
<code>\${!pattern*}</code>	Indirect reference. Matches all variables names that match the pattern
<code>\${varname^}</code>	Transform first character of string to uppercase
<code>\${varname^^}</code>	Transform all characters of string to uppercase
<code>\${varname,}</code>	Transform first character of string to lowercase
<code>\${varname,,}</code>	Transform all characters of string to lowercase
Expansions to handle empty variables	
<code>\${varname:-\$var}</code>	If \$varname isn't null return it's value, else return \$var
<code>\${varname:= \$var}</code>	If \$varname isn't null return it's value, else assign it to \$var and return it's value
<code>\${varname:? \$var}</code>	If \$varname isn't null return it's value, otherwise print varname: \$var and abort
<code>\${varname:+\$var}</code>	If \$varname isn't null, return \$var, otherwise return null

String Operations Examples	
VAR="The quick brown fox jumped over the fox"	
<code>\${VAR#*fox}</code>	jumped over the fox
<code>\${VAR%fox*}</code>	The quick brown fox jumped over the
<code>\${VAR%%fox*}</code>	The quick brown
<code>\${VAR/fox/dog}</code>	The quick brown dog jumped over the fox
<code>\${VAR//fox/dog}</code>	The quick brown dog jumped over the dog
<code>\${VAR/#The/A}</code>	A quick brown fox jumped over the fox
<code>\${VAR/%fox/dog}</code>	The quick brown fox jumped over the dog