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How To Find BASH Shell Array Length (number of elements)

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Q. How do I define array in a bash shell script? How do I find out bash array length (number of elements) while running a script using for shell loop?

A. Bash provides one-dimensional array variables. Any variable may be used as an array; the declare builtin will explicitly declare an array. There is no maximum limit on the size of an array, nor any requirement that members be indexed or assigned contiguously.

[1]

How do I define bash array?

Array can be defined using following syntax:

```
ArrayName=("element 1" "element 2" "element 3")
```

Define array called distro with 3 elements, enter:

```
distro=("redhat" "debian" "gentoo")
```

How do I reference any element in bash array?

Any element of an array may be referenced using following syntax:

```
${ArrayName[subscript]}
```

To print redhat i.e first element enter:

```
echo ${distro[0]}
echo ${distro[2]}   # will print gentoo
```

How do I find out bash shell array length?

You can easily find out bash shell array length using following syntax:

```
${#ArrayName[@]}
```

To print distro array length enter:

```
echo ${#distro[@]}
```

Sample output:

```
3
```

If subscript is @ or *, the word expands to all members of name. By prefixing # to variable you will find length of an array (i.e number of elements).

Putting it all together

A sample shell script to print array called NAMESERVERS:

```
#!/bin/bash
# define array
```

```
# name server names FQDN
NAMESERVERS=("ns1.nixcraft.net." "ns2.nixcraft.net." "ns3.nixcraft.net.")

# get length of an array
tLen=${#NAMESERVERS[@]}

# use for loop read all nameservers
for (( i=0; i<${tLen}; i++ ));
do
  echo ${NAMESERVERS[$i]}
done
```

Sample output:

```
ns1.nixcraft.net.
ns2.nixcraft.net.
ns3.nixcraft.net.
```

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