

Bash Script to Check if File is Readable

Bash Script to Check if File has Read Permissions

To check if the a file is readable, in other words if the file has read permissions, using bash scripting, use [-r FILE] expression with [bash if](#) statement.

Syntax

The syntax to check if the file is readable or not is given below.

```
[ -r FILE ]
```

where FILE represent path to the file whose permissions we need to check.

The expression returns a true if the file has read permission, and a false if the file does not have read permissions.

Following are the list of examples, that demonstrate us how to check if a file is readable or not.

- [Example 1](#) – Simple if statement to check if file is readable
- [Example 2](#) – Check if argument passed to function is a file and is readable

For the examples in this tutorial, we will use two files shown below:

```
$ ls -lr
total 125016
--w----- 1 root      root      12 Oct  5 09:35 sample.txt
-rwxr--r-- 1 root      root      20 Oct  5 15:33 dummy.txt
```

If you observe the permissions for these files,

- **sample.txt** has no read permissions.
- **dummy.txt** has read permissions for all users.

[Example 1 – Check if File is Readable](#)

In the following example, we shall use `-r` expression, and check if the file specified is readable. We use the expression in a [bash if else](#) statement.

Bash Script File

```
#!/bin/bash

# Scenario - File exists and is readable
if [ -r /home/tutorialkart/dummy.txt ];
then
    echo "/home/tutorialkart/dummy.txt is readable"
else
    echo "/home/tutorialkart/dummy.txt is not readable"
fi

# Scenario - File exists and is not readable
if [ -r /home/tutorialkart/sample.txt ];
then
    echo "/home/tutorialkart/sample.txt is readable"
else
    echo "/home/tutorialkart/sample.txt is not readable"
fi
```

Run this script file in a Terminal, and you shall see the following output, provided you have the files mentioned in your system.

Output

```
arjun@arjun-VPCEH26EN:~/workspace/bash$ ./bash-script-if-file-is-readable
/home/tutorialkart/dummy.txt is readable
/home/tutorialkart/sample.txt is not readable
```

Example 2 – Write a Function that Checks If File is Readable

In this example, we shall write a function whose first argument is path to a file. And in the function we shall check if the passed argument (FILE) is readable or not.

Bash Script File

```
#!/bin/bash

# function to check if passed argument is readable
checkIfReadable() {
    # $1 meaning first argument
    if [ -r "$1" ];
    then
        echo "$1 is readable."
    else
        echo "$1 is not readable."
    fi
}
```

```
# Scenario - File exists and is readable
checkIfReadable "/home/tutorialkart/dummy.txt"

# Scenario - File exists and is not readable
checkIfReadable "/home/tutorialkart/sample.txt"
```

Run the above script and you will get the following output.

Output

```
arjun@arjun-VPCEH26EN:~/workspace/bash$ ./bash-script-if-file-is-readable-2
/home/tutorialkart/dummy.txt is readable.
/home/tutorialkart/sample.txt is not readable.
```

Conclusion

In this [Bash Tutorial](#), we have learnt how to check if the specified file has read permissions or not.

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