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## **Permissions**

## Octal File Permissions

|  |        | Read (4) | Write (2) | Execute (1) | Result |
|--|--------|----------|-----------|-------------|--------|
|  | User   | Γ        | w         | x           | 7      |
|  | Group  | Γ        | -         | х           | 5      |
|  | Others | ٢        | -         | -           | 4      |

## **Octal Values**

| Octal Value | Mode  | Octal Value | Mode |
|-------------|-------|-------------|------|
| 0           |       | 4           | Γ    |
| 1           | x     | 5           | г-х  |
| 2           | - w - | 6           | ΓW - |
| 3           | - w x | 7           | гwх  |

## Symbolic File Permissions

|            | Read (r) | Write (w) | Execute (x) | Result |
|------------|----------|-----------|-------------|--------|
| User (u)   | +        | +         | +           | u+rwx  |
| Group (g)  | =        | -         | -           | g=r    |
| Others (o) | -        | -         | -           | O-ГWX  |

All (a)

• Change file mode (permissions):

```
chmod [permission] [file]
```

• Recursively change file mode (for directories):

```
chmod -R [permission] [file]
```

• Change file user and group owner:

```
chown [user:group] [file]
```

• Recursively change user and group owner:

```
chown -R [user:group] [file]
```

• Change group only:

```
chgrp [group] [file]
```

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• Change group only:

```
chown [:group] file
```

• Change user only:

```
chown [user] [file]
```