### **1. Files in /etc belonging to the sysop user or shadow group**

#!/bin/bash

find /etc -type f \( -user sysop -o -group shadow \) | wc -l

* find /etc -type f searches for regular files.
* \( -user sysop -o -group shadow \) finds files owned by the sysop user or in the shadow group.
* wc -l counts the results.

### **2. Files in /etc that belong to root user but not the shadow group**

#!/bin/bash

find /etc -type f -user root ! -group shadow | wc -l

* ! -group shadow excludes files belonging to the shadow group.

### **3. Files in /etc writable by anyone**

#!/bin/bash

find /etc -type f -perm /222 | wc -l

* -perm /222 finds files writable by any user, group, or others.

### **4. Hidden files in /etc with a February date**

#!/bin/bash

find /etc -type f -name ".\*" -newermt "2024-02-01" ! -newermt "2024-02-28" | wc -l

* -name ".\*" targets hidden files.
* -newermt "2024-02-01" ! -newermt "2024-02-28" limits results to files modified in February.

### **5. Non-directory files larger than 1000B in /etc**

bash

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#!/bin/bash

find /etc -type f -size +1000c | wc -l

* -size +1000c searches for files larger than 1000 bytes.

### **6. Owner-executable files in /etc with a December date**

bash

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#!/bin/bash

find /etc -type f -perm -u=x -newermt "2024-12-01" ! -newermt "2024-12-31" | wc -l

* -perm -u=x finds files executable by the owner.
* -newermt "2024-12-01" ! -newermt "2024-12-31" limits to December files.

### **7. Files in /etc modified 20 days ago with a dot in the name**

bash

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#!/bin/bash

find /etc -type f -name "\*.\*" -mtime 20 | wc -l

* -name "\*.\*" matches files with a dot in their name.
* -mtime 20 selects files modified 20 days ago.

### **8. Directories in /etc with a minus sign in their names**

bash

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#!/bin/bash

find /etc -type d -name "\*-\*" | wc -l

* -name "\*-\*" matches directory names containing a hyphen.

### **9. Links in /etc to other files, accessible through ..**

bash

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#!/bin/bash

find /etc -type l -path "\*../\*" | wc -l

* -path "\*../\*" finds symbolic links containing .. in their path.

### **10. Directories in /etc with more than one link**

bash

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#!/bin/bash

find /etc -type d -links +1 | wc -l

* -links +1 finds directories with more than one link.

### **11. Links in /etc to files with etc in the path**

bash

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#!/bin/bash

find /etc -type l -path "\*etc\*" | wc -l

* -path "\*etc\*" searches for links with etc in their path.

### **12. Regular files in /etc with a dot in the name**

bash

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#!/bin/bash

find /etc -type f -name "\*.\*" | wc -l

* -name "\*.\*" finds regular files containing a dot in the name.

### **13. Files in /etc readable/executable by group but not executable by others**

bash

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#!/bin/bash

find /etc -type f -perm -040 -perm /004 ! -perm /001 | wc -l

* -perm -040 ensures group readability.
* -perm /004 allows group execution/search.
* ! -perm /001 excludes others from executing.

### **14. Files in /etc with dot or minus in name, owned by root**

bash

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#!/bin/bash

find /etc -type f \( -name "\*.\*" -o -name "\*-\*" \) -user root | wc -l

* \( -name "\*.\*" -o -name "\*-\*" \) finds files with dot or minus in their name.
* -user root limits results to files owned by root.

### **15. Non-directory files in /etc belonging to root group**

bash

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#!/bin/bash

find /etc -type f -group root | wc -l

* -group root restricts results to files in the root group.

### **16. Files in /etc with at least two dots in names**

bash

Copy code

#!/bin/bash

find /etc -type f -name "\*.\*.\*" | wc -l

* -name "\*.\*.\*" matches files with at least two dots in their name.

### **17. Directories in /etc with names of at least 6 characters**

bash

Copy code

#!/bin/bash

find /etc -type d -name "??????\*" | wc -l

* -name "??????\*" matches directory names with 6 or more characters.

### **18. Links in /etc accessible through .., modified in February**

bash

Copy code

#!/bin/bash

find /etc -type l -path "\*../\*" -newermt "2024-02-01" ! -newermt "2024-02-28" | wc -l