

# Autocompletion in nft

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# #1 attempt

```
diff --git a/files/nft-completion b/files/nft-completion
new file mode 100644
index 0000000..c138312
--- /dev/null
+++ b/files/nft-completion
@@ -0,0 +1,60 @@
+_nft()
+{
+    local cur prev
+    COMPREPLY=(
+    cur="${COMP_WORDS[COMP_CWORD]}"
+    prev="${COMP_WORDS[COMP_CWORD-1]}"
+
+    local families="ip ip6 arp bridge inet netdev"
+    local sets=$(nft list sets | grep -i "set" | awk '{print $2 }' | tr -d ' ')
+
+    if [ $COMP_CWORD -eq 1 ]; then
+        COMPREPLY=( $(compgen -W "add flush list" -- $cur) )
+    elif [ $COMP_CWORD -eq 2 ]; then
+        case "$prev" in
+            "add")
+                command="${prev}"
+                COMPREPLY=( $(compgen -W "element map table set" -- $cur) )
+                ;;
+            "list")
+                COMPREPLY=( $(compgen -W "chains ruleset set sets table tables" -- $cur) )
+                ;;
+            "flush")
+                COMPREPLY=( $(compgen -W "table" -- $cur) )
+                ;;
+            *)
+                ;;
+        esac
+    elif [ $COMP_CWORD -eq 3 ]; then
+        case "$prev" in
+            "table")
+                COMPREPLY=( $(compgen -W "${families}" -- $cur) )
+                ;;
+            "set"|"element"|"map")
+                local tables=$(nft list tables | awk '{print $3 }' | tr -d ' ')
+                COMPREPLY=( $(compgen -W "${tables}" -- $cur) )
+                ;;
+            *)
+                ;;
+        esac
+    elif [ $COMP_CWORD -eq 4 ]; then
+        local tables=$(nft list tables | awk '{print $3 }' | tr -d ' ')
+        if [[ "$families" == "$prev" ]]; then
+            local tables=$(nft list tables "${prev}" | awk '{print $3 }' | tr -d ' ')
+            COMPREPLY=( $(compgen -W "${tables}" -- $cur) )
+        fi
+
+        if [ "${COMP_WORDS[1]}" != "add" ] && [ "$tables" == "$prev" ]; then
+            COMPREPLY=( $(compgen -W "${sets}" -- $cur) )
+        fi
+
+        if [ "${COMP_WORDS[1]}" == "add" ] && [ "${COMP_WORDS[2]}" == "element" ] && [ "$tables" == "$prev" ]; then
```

# #1 attempt (2)

- Pros:
  - Easy to develop
- Cons:
  - Very huge script
  - Hard to maintain
  - Doesn't work in CLI mode
  - Sudo is an issue

## #2 attempt

Interact the parser and “look ahead” to build a tree that permit to complete the command.

## #2 attempt (2)

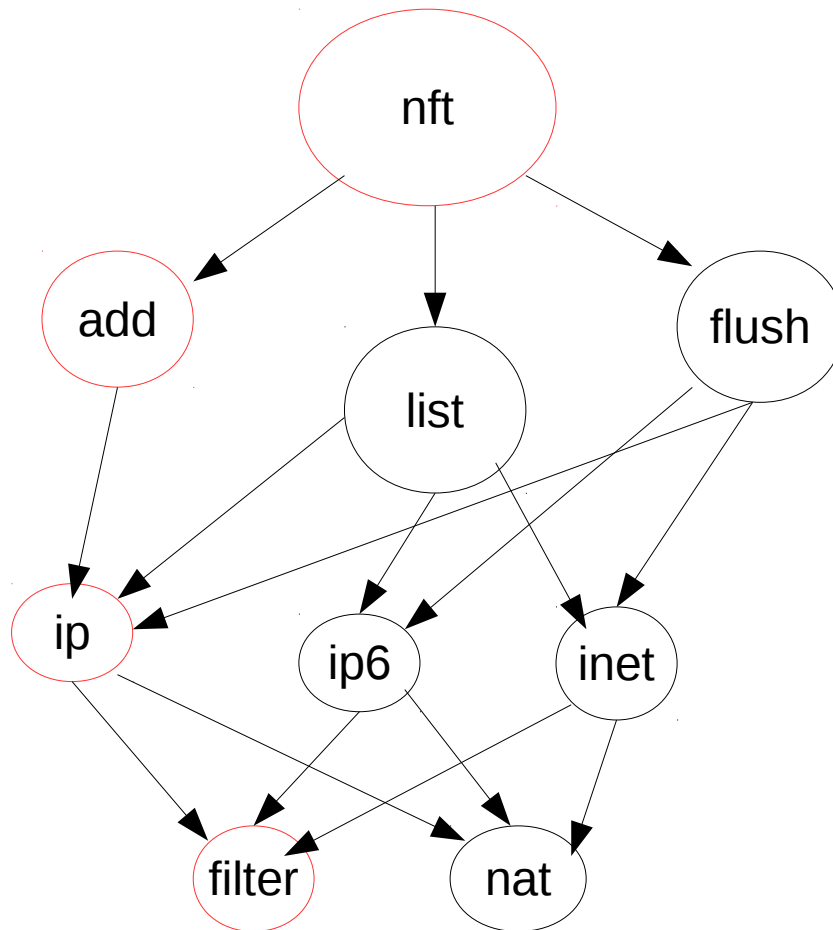
- Pros:
  - Code reused for bash and cli mode
  - No script needed
- Cons:
  - Hard to develop

# Look ahead?

- Nft?
  - Add
  - List
  - Flush
  - ...
- Nft add ?
  - Table
  - Chain
  - Set
  - ...

# Command tree

- nft add table ip filter



# Open questions

- Where do we stop doing completion?
  - Basic command?
    - nft list table ... , nft list table <family> ?
- Lookup object's name?
  - nft list table ip filter
- Which commands to complete?
  - Basic command, verdict, extensions?