

[02] 1ST TRY TO USE EPICS COMMANDS

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AVAILABLE PV NAMES

At the coordinator's IOC, there are following PVs.

At IOC - available PVs are:

- Bo/ KEK:DO:SLOT2:CH1 to CH2
PLC Dout-module (2 LED lamps)
- Bi/ KEK:DI:SLOT3:CH1 to CH4
PLC Din-module
- Ai/ KEK:aiExample
Increment 1 every second
- Ao/ KEK:SOFTAO:CH1 to CH10
Soft Ao (you can caput a value)
- Ai/ KEK:TEMP:SLOT4:CH1 and CH2
PLC Temperature sensors

LESSONS AT YOUR TEST-STAND

Open Terminals on your desktop. Ready ?

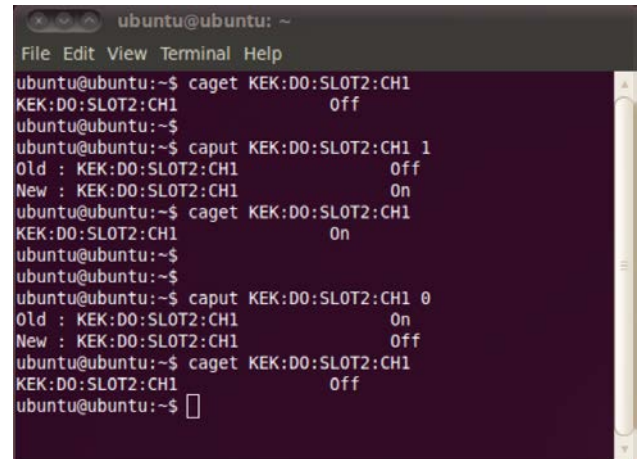
Please try:

- 1) "caget" any of PVs above.
- 2) Can you check a thermo sensor using caget ? Is it really working (or fake) ?
- 3) "camonitor" any of PVs. Type Ctrl-C to stop it.
- 4) "caput" to a bo-type PV. Then "caget" to the same PV. (Figure 1)
- 5) "caput" to a Soft-Ao-type PV. The SOFTAO PVs are configured to have Min-limit (=0) and Max-limit (=10).

For advanced participants, please try:

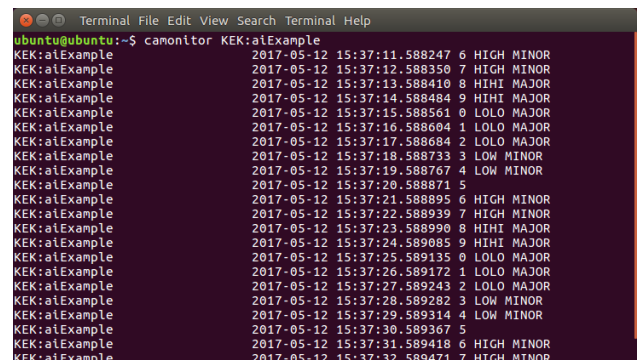
- 1) Confirm that you can't change Bi-type and Ai-type PV values using "caput".
- 2) Get a timestamp of PV. Try "caget" with "-a" option.
- 3) Get an attribute, for example, MAX-limit of SOFTAO. Try "caget <PVNAME>.HOPR".
- 4) Get an alarm levels of temperature PVs. Check alarm attributes (HIHI, HIGH, LOW, LOLO).
- 5) In fact, another command "cainfo" exists. Try it and check indicated information.

REF. SCREENSHOTS



```
ubuntu@ubuntu: ~  
File Edit View Terminal Help  
ubuntu@ubuntu:~$ caget KEK:DO:SLOT2:CH1  
KEK:DO:SLOT2:CH1 Off  
ubuntu@ubuntu:~$  
ubuntu@ubuntu:~$ caput KEK:DO:SLOT2:CH1 1  
Old : KEK:DO:SLOT2:CH1 Off  
New : KEK:DO:SLOT2:CH1 On  
ubuntu@ubuntu:~$ caget KEK:DO:SLOT2:CH1  
KEK:DO:SLOT2:CH1 On  
ubuntu@ubuntu:~$  
ubuntu@ubuntu:~$ caput KEK:DO:SLOT2:CH1 0  
Old : KEK:DO:SLOT2:CH1 On  
New : KEK:DO:SLOT2:CH1 Off  
ubuntu@ubuntu:~$ caget KEK:DO:SLOT2:CH1  
KEK:DO:SLOT2:CH1 Off  
ubuntu@ubuntu:~$
```

Figure 1: caget and caput examples



```
Terminal File Edit View Search Terminal Help  
ubuntu@ubuntu:~$ camonitor KEK:aiExample  
KEK:aiExample 2017-05-12 15:37:11.588247 6 HIGH MINOR  
KEK:aiExample 2017-05-12 15:37:12.588350 7 HIGH MINOR  
KEK:aiExample 2017-05-12 15:37:13.588410 8 HIHI MAJOR  
KEK:aiExample 2017-05-12 15:37:14.588484 9 HIHI MAJOR  
KEK:aiExample 2017-05-12 15:37:15.588561 0 LOLO MAJOR  
KEK:aiExample 2017-05-12 15:37:16.588604 1 LOLO MAJOR  
KEK:aiExample 2017-05-12 15:37:17.588684 2 LOLO MAJOR  
KEK:aiExample 2017-05-12 15:37:18.588733 3 LOW MINOR  
KEK:aiExample 2017-05-12 15:37:19.588767 4 LOW MINOR  
KEK:aiExample 2017-05-12 15:37:20.588871 5  
KEK:aiExample 2017-05-12 15:37:21.588895 6 HIGH MINOR  
KEK:aiExample 2017-05-12 15:37:22.588939 7 HIGH MINOR  
KEK:aiExample 2017-05-12 15:37:23.588990 8 HIHI MAJOR  
KEK:aiExample 2017-05-12 15:37:24.589085 9 HIHI MAJOR  
KEK:aiExample 2017-05-12 15:37:25.589135 0 LOLO MAJOR  
KEK:aiExample 2017-05-12 15:37:26.589172 1 LOLO MAJOR  
KEK:aiExample 2017-05-12 15:37:27.589243 2 LOLO MAJOR  
KEK:aiExample 2017-05-12 15:37:28.589282 3 LOW MINOR  
KEK:aiExample 2017-05-12 15:37:29.589314 4 LOW MINOR  
KEK:aiExample 2017-05-12 15:37:30.589367 5  
KEK:aiExample 2017-05-12 15:37:31.589418 6 HIGH MINOR  
KEK:aiExample 2017-05-12 15:37:32.589471 7 HIGH MINOR
```

Figure 2: camonitor example

REF: BASIC COMMANDS

Basic commands of EPICS are: (a) caget, (b) caput, and (c) camonitor.

(a) caget [options] <PV name>

- to get a value of PV
- "caget -a <PV>" shows all information
- "caget -n <PV>" shows internal ENUM
- see more info. by "caget -h"

(b) caput [options] <PV name> <PV Value>

- to set the specified value to PV

(c) camonitor [options] <PV name>

- to get changes of the PV value

For all three commands, option "-h" gives helpful information.