TASTE TP

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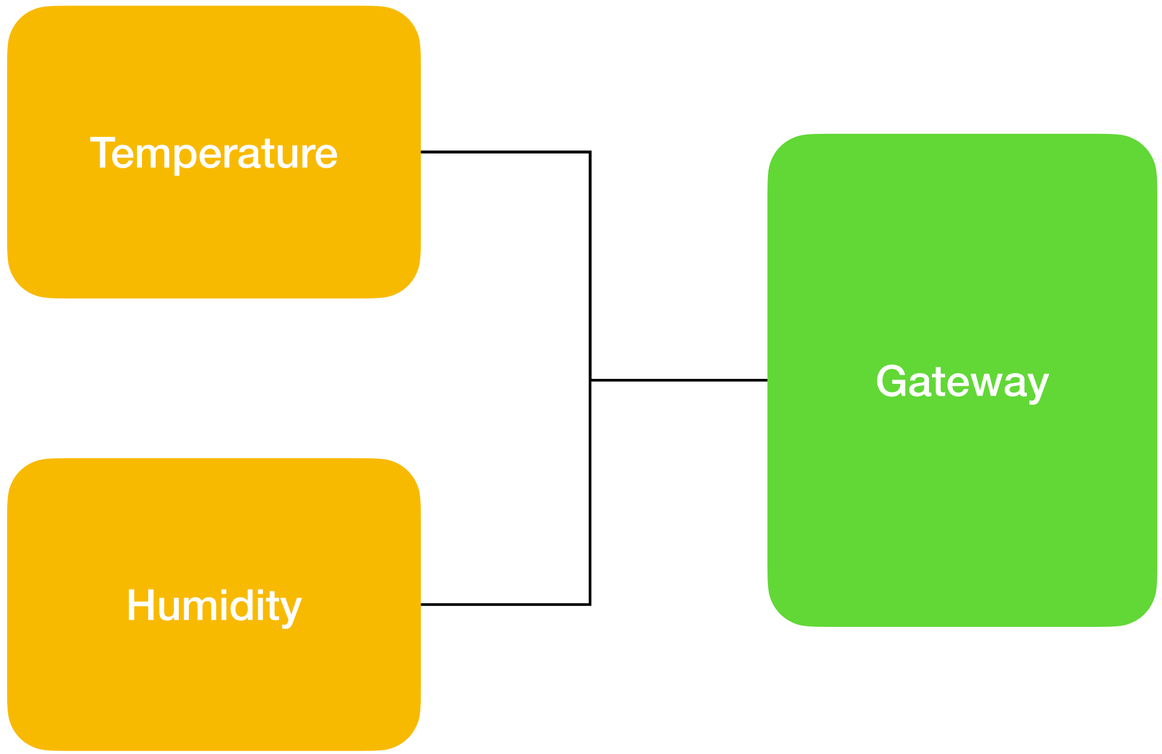
Ellidiss

https://www.ellidiss.fr/public/attachment/wiki/WikiStart/TASTE_TP.pdf

Objectif

Modéliser un système « domotique » simpliste avec TASTE

Capteurs et Passerelle



Trouver TASTE: https://taste.tools

- **La machine virtuelle**
  - https://download.tuxfamily.org/taste/TASTE-VM-10-64bit.ova
- **VirtualBox**
  - https://www.virtualbox.org/
- **Corriger le PATH**
  - Ouvrir le fichier de config: kate .bashrc.taste
  - Mettre en commentaire les chemins (line 10, 11 et 12):

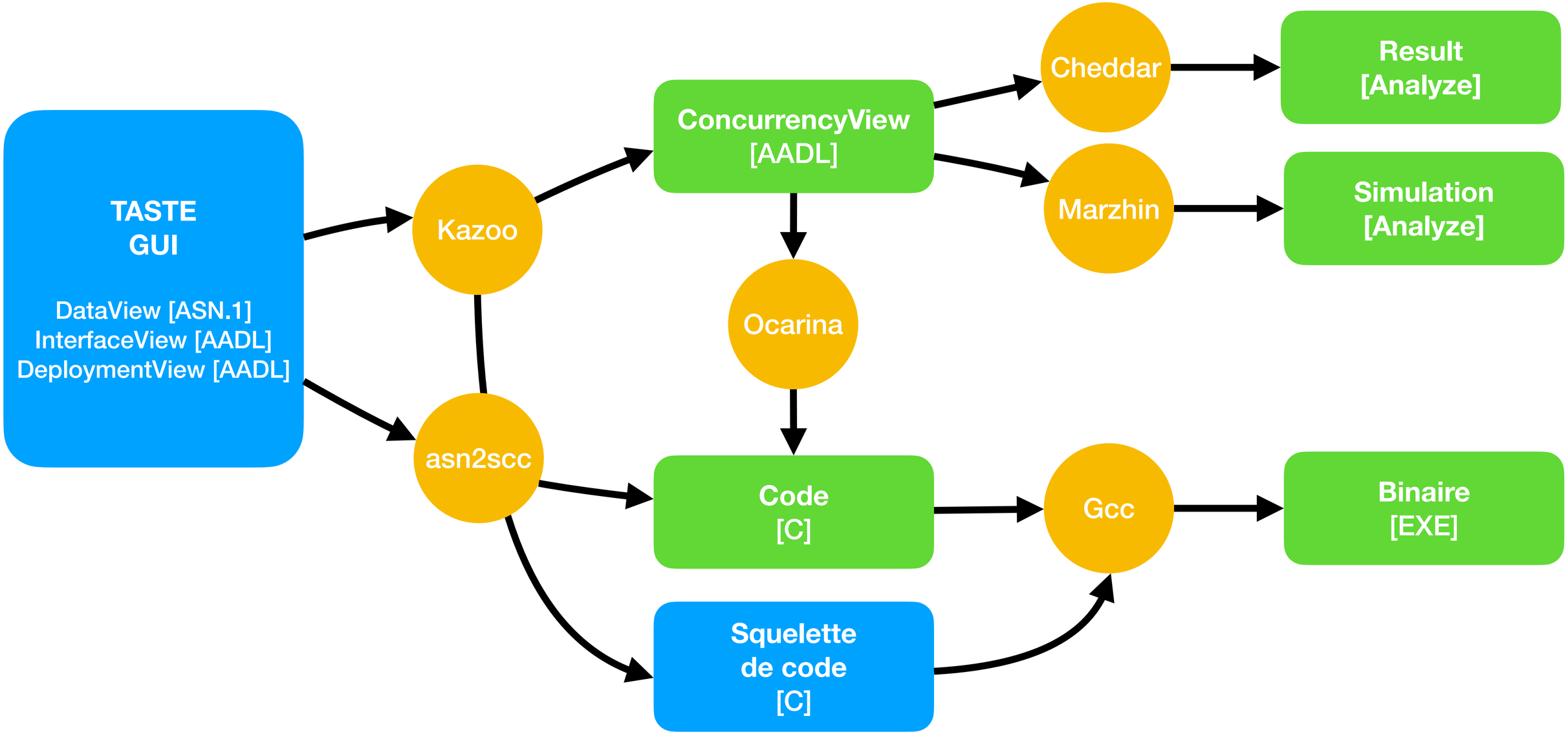
```
export PATH=$PATH: /home/taste/tool-src/ellidiss-GUI/TASTE-v1-linux/bin
export PATH=$PATH:/home/taste/tool-src/ellidiss-GUI/TASTE-v1-linux
export PATH=$PATH: /home/taste/tool-src/ellidiss-GUI/TASTE-linux/bin
```

  - Et ajouter les lignes:

```
export PATH=$PATH:/home/taste/tool-src/ellidiss-GUI/TASTE-linux64
export PATH=$PATH:/home/taste/tool-src/ellidiss-GUI/TASTE-linux64/bin
```

Image TASTE 10

Chaine TASTE (pour le TP)



Démarrer un projet et autre

- Créer le projet dans Documents

```
cd Documents
taste-create-project
```

- Ouvrir le projet

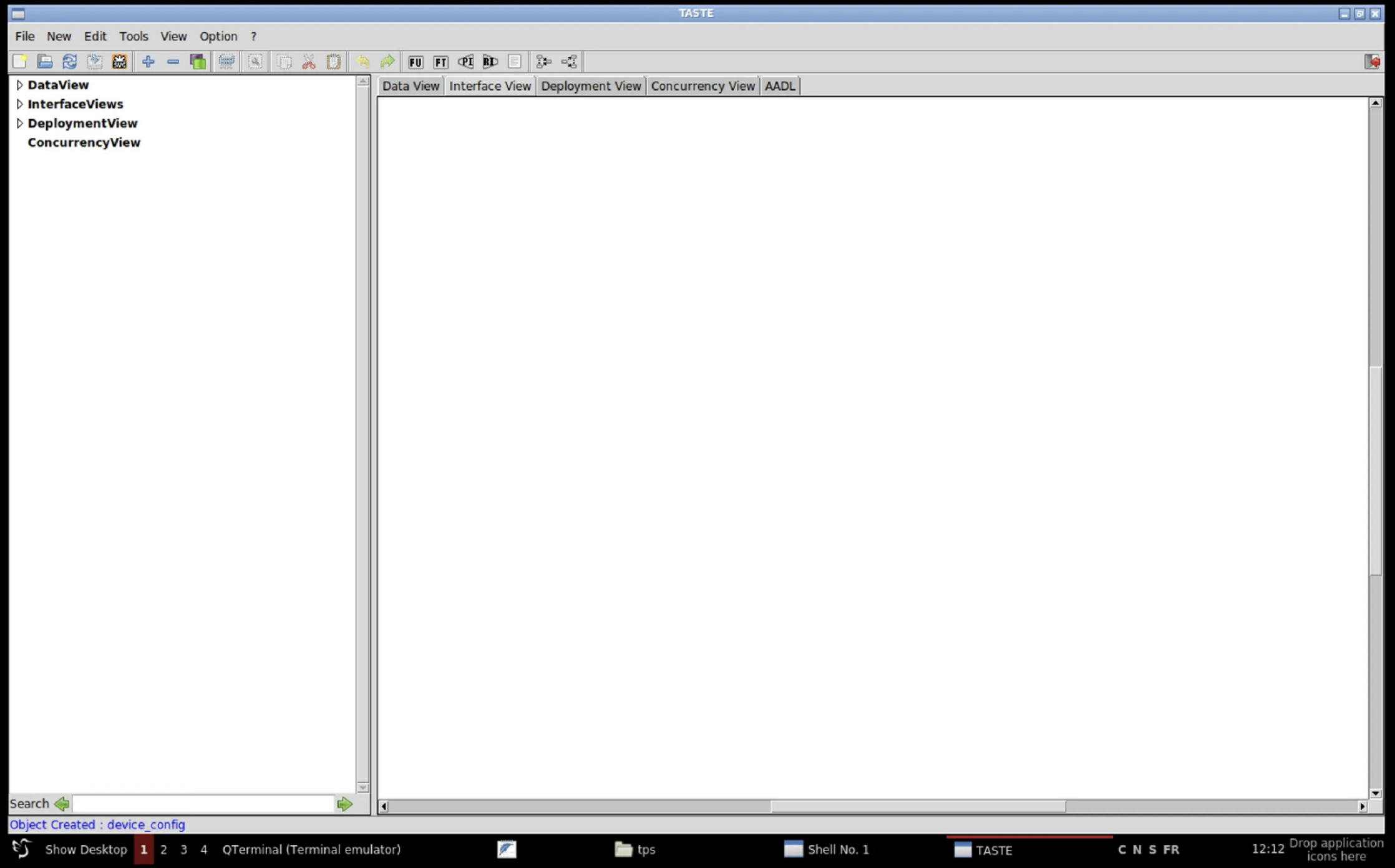
```
cd Documents/tp1
taste-edit-project
```

- Utilitaires

```
setxkbmap fr # Clavier en Français:
screensize.py # Changer la résolution
```

- Editeurs de textes

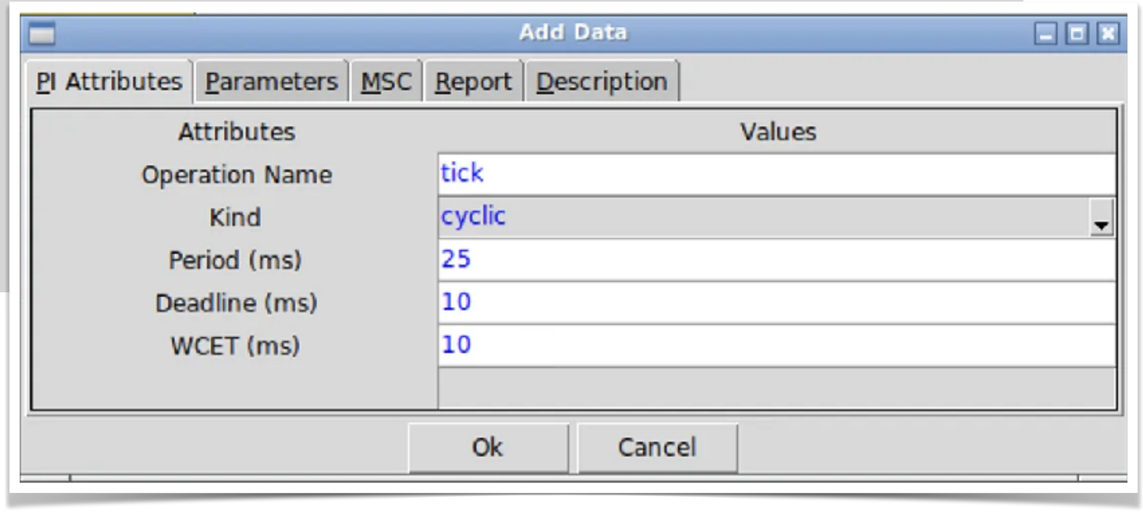
```
kate
…
```


TASTE
File New Edit Tools View Option ?
DataView
InterfaceViews
DeploymentView
ConcurrencyView
Data View
Interface View
Deployment View
Concurrency View
AADL
Search
Object Created : device_config
Show Desktop 1 2 3 4 QTerminal (Terminal emulator)
tps
Shell No. 1
TASTE
C N S FR
12:12
Drop application icons here

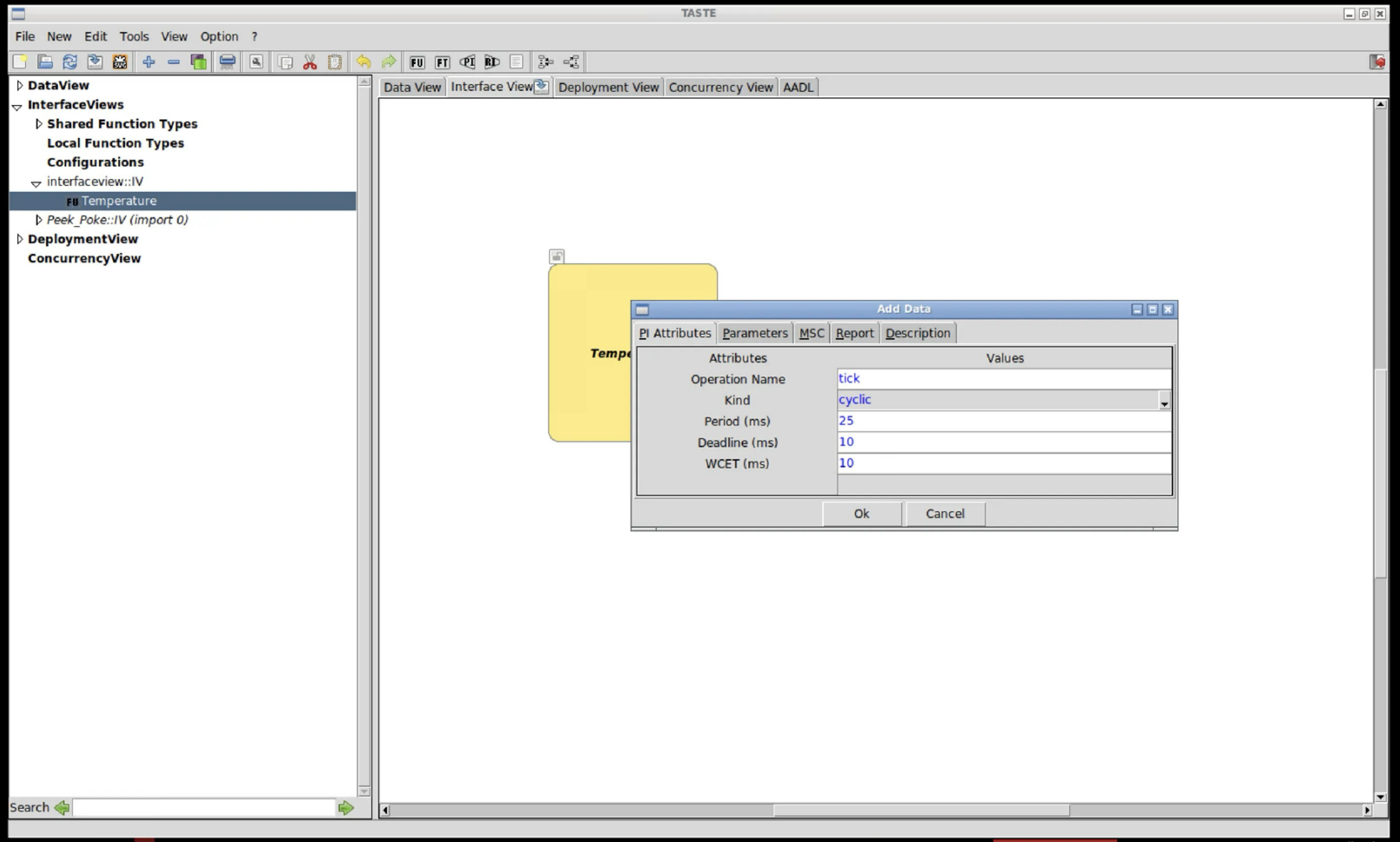
Interface View (IV)

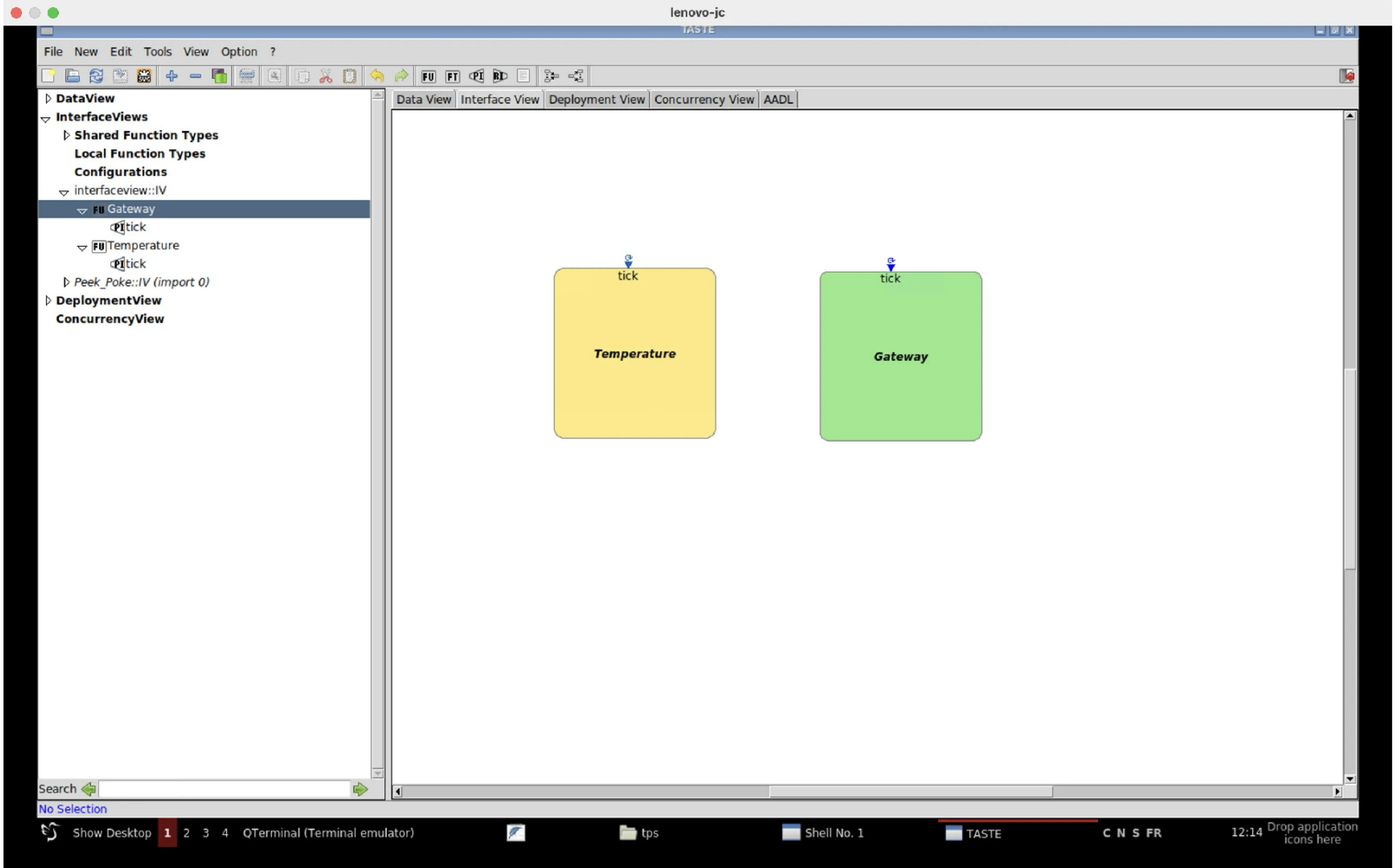
- Créer une Function « Temperature »
  - Ajouter une Provided Interface (PI) « tick »

```
Cyclic
Period 25 ms
Deadline 10 ms
WCET 10 ms
```



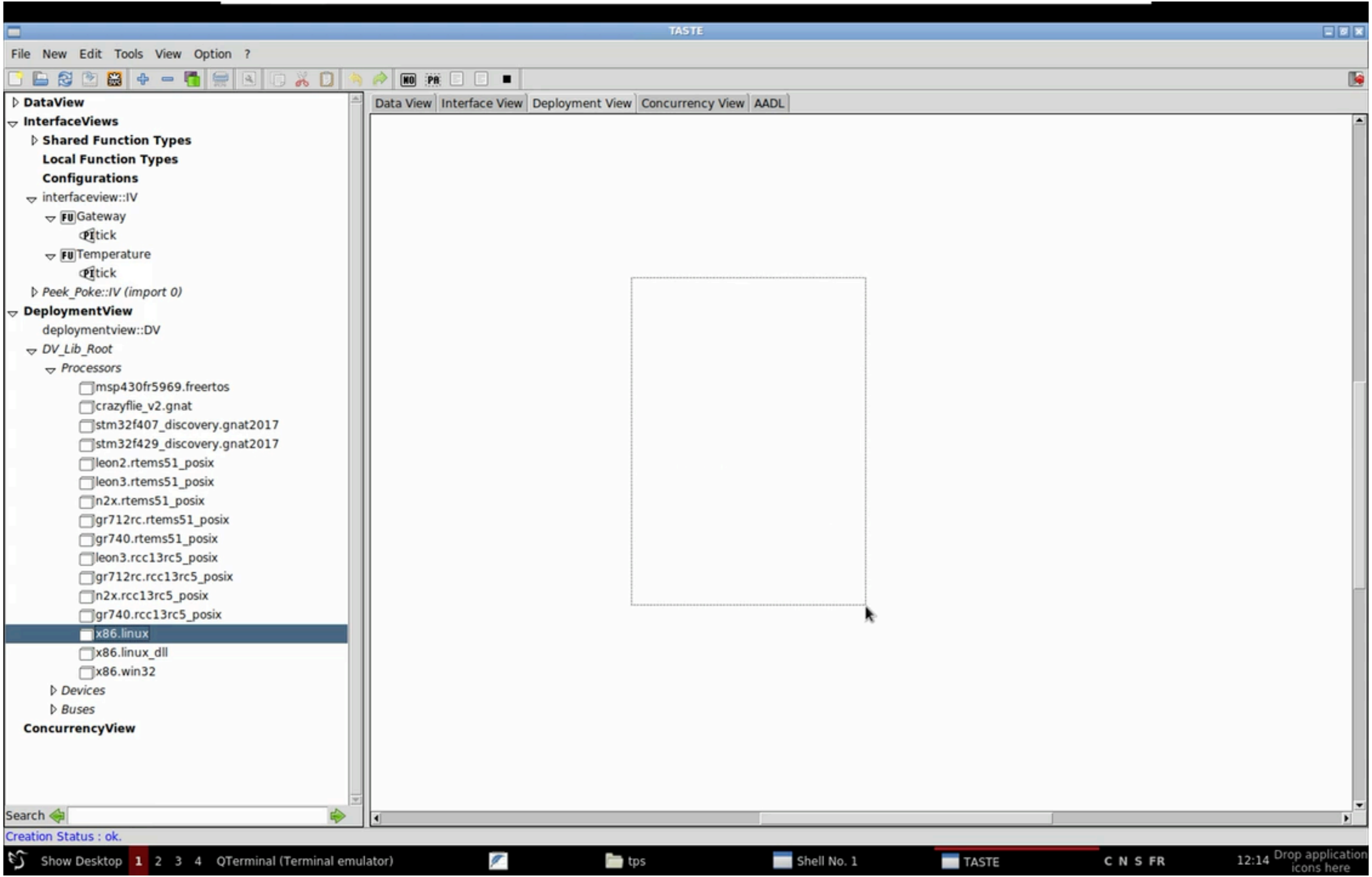
- Créer une Function « Gateway »
  - Ajouter un PI « tick » avec les mêmes paramètres
- Changer les couleurs (optionnel) pour plus de style 😁

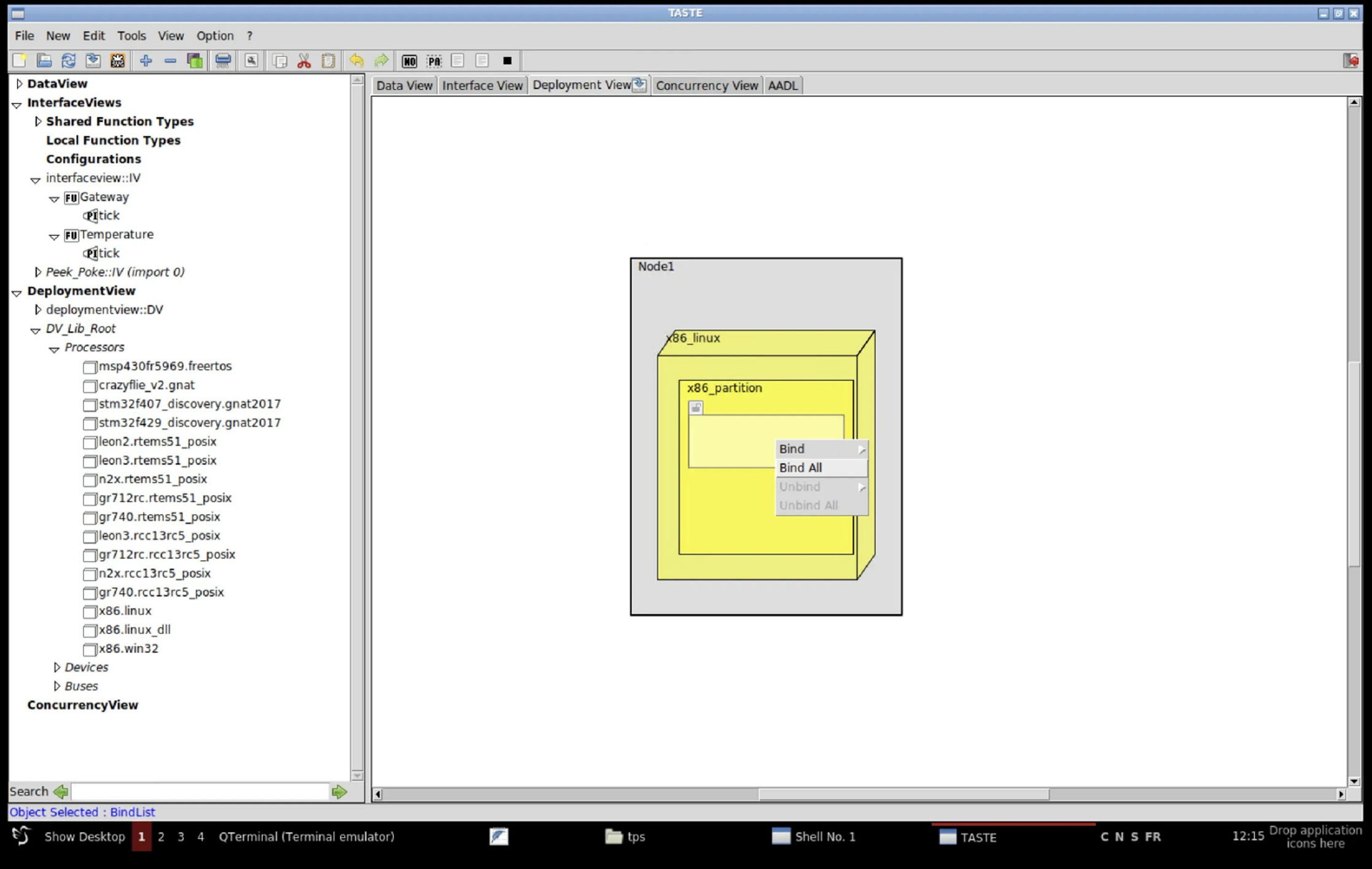

TASTE
File New Edit Tools View Option ?
DataView
InterfaceViews
Shared Function Types
Local Function Types
Configurations
interfaceview::IV
FU Temperature
Peek_Poke::IV (import 0)
DeploymentView
ConcurrencyView
Search
Data View
Interface View
Deployment View
Concurrency View
AADL
Add Data
PI Attributes
Parameters
MSC
Report
Description
Attributes
Values
Operation Name
tick
Kind
cyclic
Period (ms)
25
Deadline (ms)
10
WCET (ms)
10
Ok
Cancel
Show Desktop 1 2 3 4 QTerminal (Terminal emulator)
tps
Shell No. 1
TASTE
Add Data
C N S FR
12:13
Drop application icons here

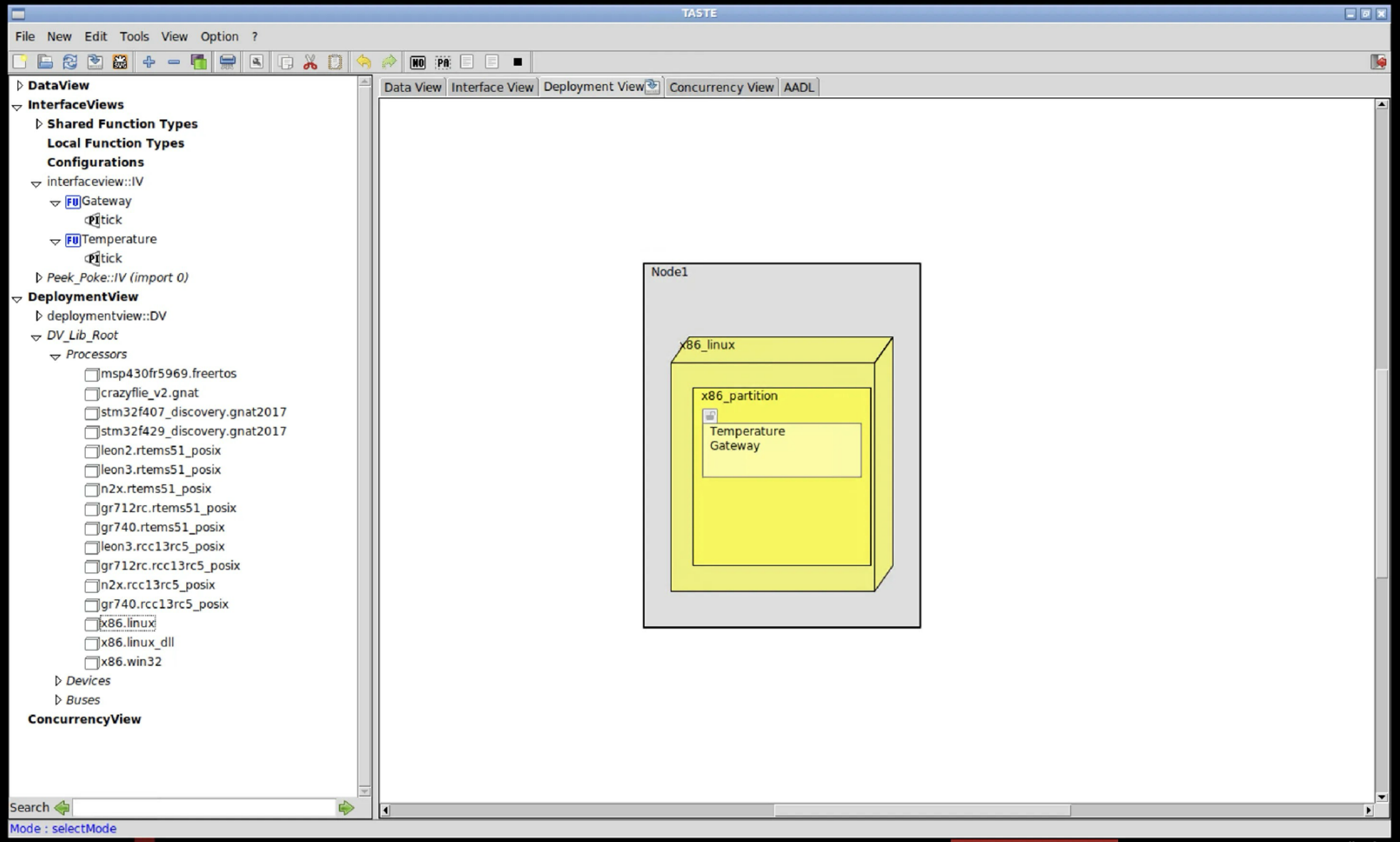

lenovo-jc
TASTE
File New Edit Tools View Option ?
DataView
InterfaceViews
Shared Function Types
Local Function Types
Configurations
interfaceview::IV
Gateway
tick
Temperature
tick
Peek_Poke::IV (import 0)
DeploymentView
ConcurrencyView
Data View
Interface View
Deployment View
Concurrency View
AADL
tick
Temperature
tick
Gateway
Search
No Selection
Show Desktop 1 2 3 4 QTerminal (Terminal emulator)
tps
Shell No. 1
TASTE
C N S FR
12:14
Drop application icons here

Deployment View (DV)

- Déplier l’arbre de projet
  - « Deployment View »
    - « DV_Lib_Root »
      - « Processors »
- Drag and drop le node « x86.linux » sur l’éditeur pour créer un noeud.
- Associer toutes les fonctions au noeud avec « Bind All ».

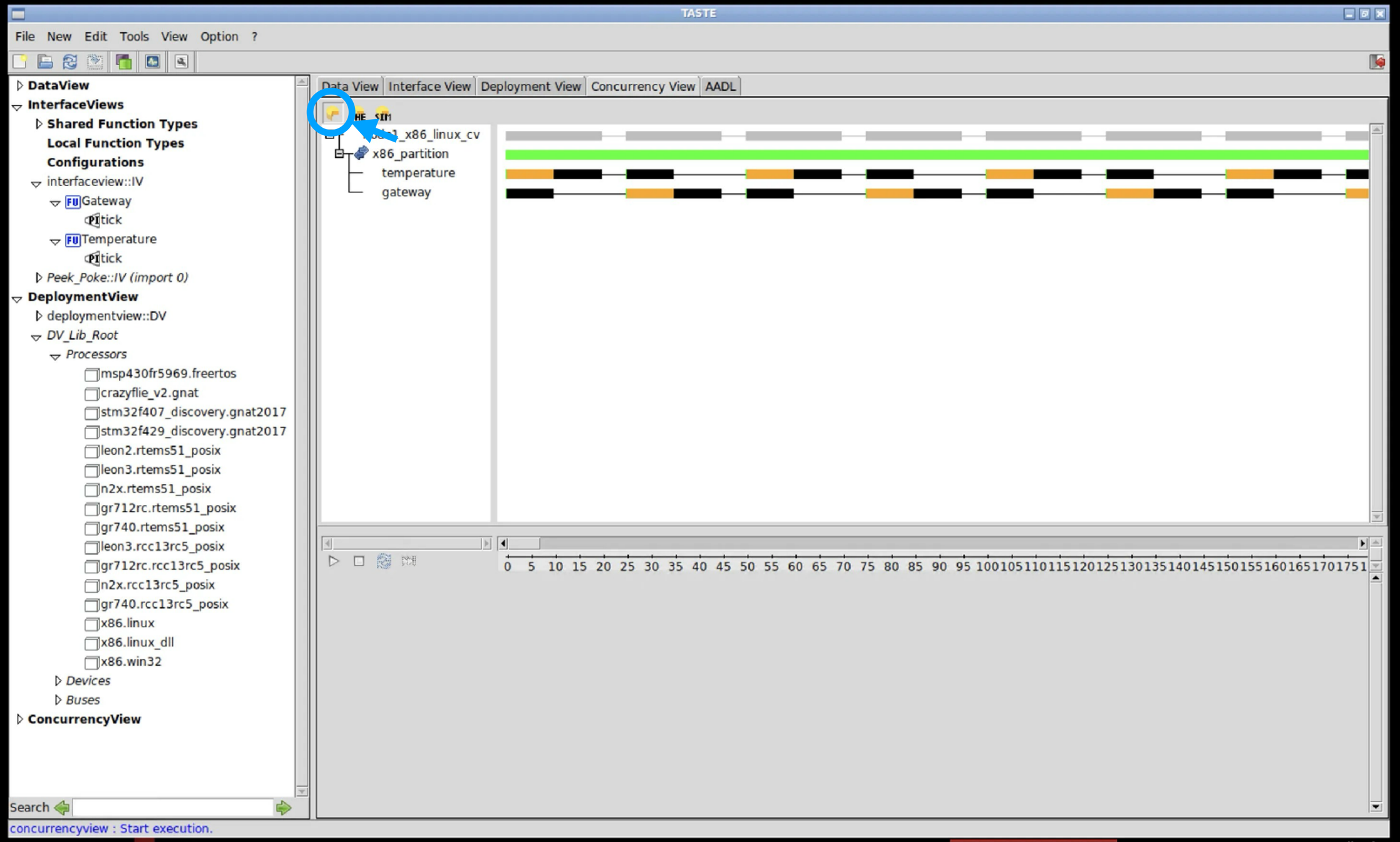

TASTE
File New Edit Tools View Option ?
DataView
InterfaceViews
Shared Function Types
Local Function Types
Configurations
interfaceview::IV
Gateway
PI tick
Temperature
PI tick
Peek_Poke::IV (import 0)
DeploymentView
deploymentview::DV
DV_Lib_Root
Processors
msp430fr5969.freertos
crazyflie_v2.gnat
stm32f407_discovery.gnat2017
stm32f429_discovery.gnat2017
leon2.rtems51_posix
leon3.rtems51_posix
n2x.rtems51_posix
gr712rc.rtems51_posix
gr740.rtems51_posix
leon3.rcc13rc5_posix
gr712rc.rcc13rc5_posix
n2x.rcc13rc5_posix
gr740.rcc13rc5_posix
x86.linux
x86.linux_dll
x86.win32
Devices
Buses
ConcurrencyView
Search
Data View
Interface View
Deployment View
Concurrency View
AADL
Creation Status : ok.
Show Desktop 1 2 3 4 QTerminal (Terminal emulator) tps Shell No. 1 TASTE C N S FR 12:14 Drop application icons here

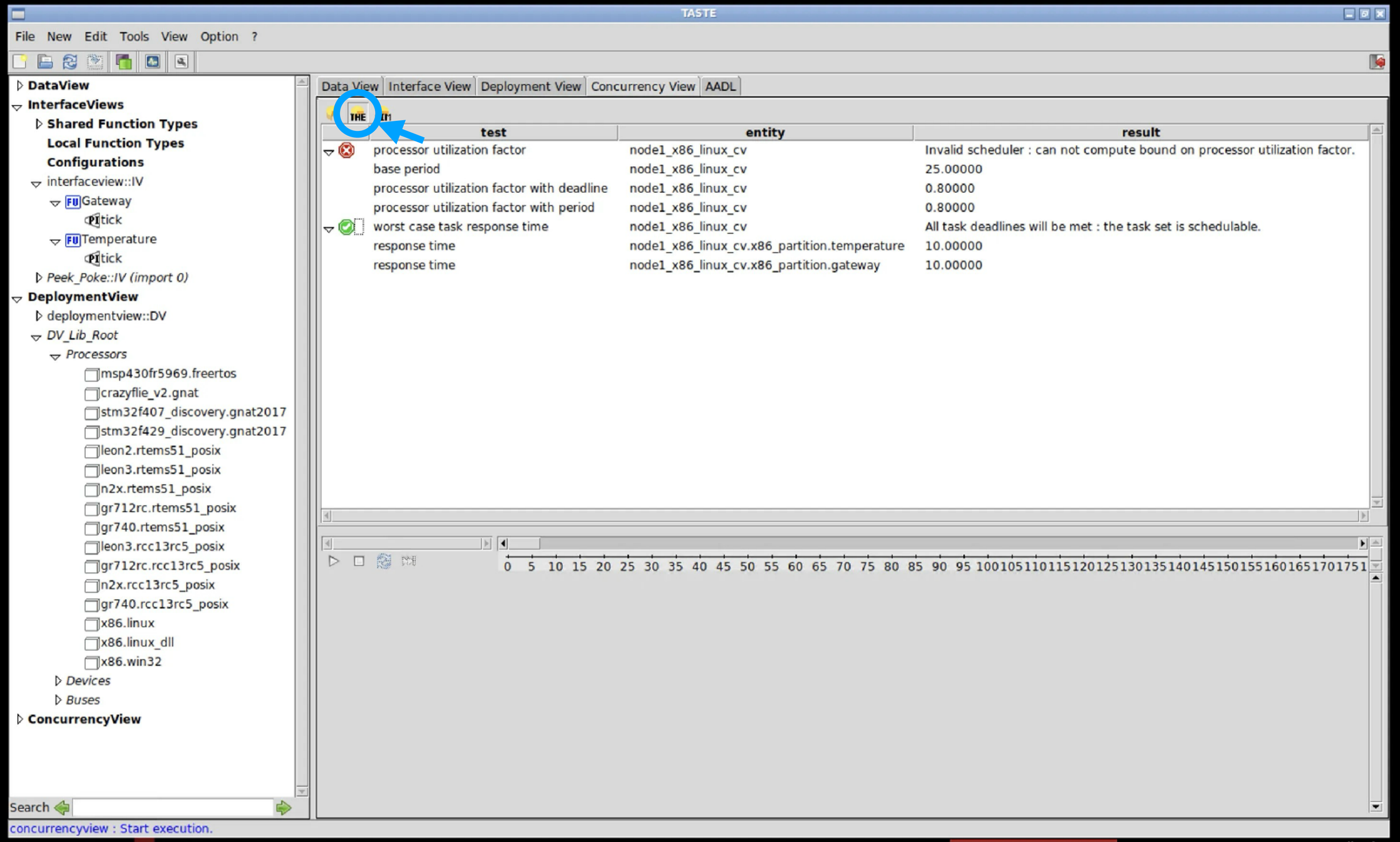

TASTE
File New Edit Tools View Option ?
DataView
InterfaceViews
Shared Function Types
Local Function Types
Configurations
interfaceview::IV
Gateway
tick
Temperature
tick
Peek_Poke::IV (import 0)
DeploymentView
deploymentview::DV
DV_Lib_Root
Processors
msp430fr5969.freertos
crazyflie_v2.gnat
stm32f407_discovery.gnat2017
stm32f429_discovery.gnat2017
leon2.rtems51_posix
leon3.rtems51_posix
n2x.rtems51_posix
gr712rc.rtems51_posix
gr740.rtems51_posix
leon3.rcc13rc5_posix
gr712rc.rcc13rc5_posix
n2x.rcc13rc5_posix
gr740.rcc13rc5_posix
x86.linux
x86.linux_dll
x86.win32
Devices
Buses
ConcurrencyView
Search
Data View
Interface View
Deployment View
Concurrency View
AADL
Node1
x86_linux
x86_partition
Bind
Bind All
Unbind
Unbind All
Object Selected : BindList
Show Desktop 1 2 3 4 QTerminal (Terminal emulator)
tps
Shell No. 1
TASTE
C N S FR
12:15
Drop application icons here


TASTE
File New Edit Tools View Option ?
DataView
InterfaceViews
Shared Function Types
Local Function Types
Configurations
interfaceview::IV
Gateway
tick
Temperature
tick
Peek_Poke::IV (import 0)
DeploymentView
deploymentview::DV
DV_Lib_Root
Processors
msp430fr5969.freertos
crazyflie_v2.gnat
stm32f407_discovery.gnat2017
stm32f429_discovery.gnat2017
leon2.rtems51_posix
leon3.rtems51_posix
n2x.rtems51_posix
gr712rc.rtems51_posix
gr740.rtems51_posix
leon3.rcc13rc5_posix
gr712rc.rcc13rc5_posix
n2x.rcc13rc5_posix
gr740.rcc13rc5_posix
x86.linux
x86.linux_dll
x86.win32
Devices
Buses
ConcurrencyView
Search
Data View
Interface View
Deployment View
Concurrency View
AADL
Node1
x86_linux
x86_partition
Temperature
Gateway
Mode : selectMode
Show Desktop 1 2 3 4 QTerminal (Terminal emulator)
tps
Shell No. 1
TASTE
C N S FR
12:15
Drop application icons here

Concurrency View (CV)

- La Concurrency View est générée à partir de l’Interface View et la Deployment View.
- Utilisation de Cheddar:
  -  Simulation théorique
  -  Analyse d’ordonnançabilité


TASTE
File New Edit Tools View Option ?
DataView
InterfaceViews
Shared Function Types
Local Function Types
Configurations
interfaceview::IV
Gateway
tick
Temperature
tick
Peek_Poke::IV (import 0)
DeploymentView
deploymentview::DV
DV_Lib_Root
Processors
msp430fr5969.freertos
crazyflie_v2.gnat
stm32f407_discovery.gnat2017
stm32f429_discovery.gnat2017
leon2.rtems51_posix
leon3.rtems51_posix
n2x.rtems51_posix
gr712rc.rtems51_posix
gr740.rtems51_posix
leon3.rcc13rc5_posix
gr712rc.rcc13rc5_posix
n2x.rcc13rc5_posix
gr740.rcc13rc5_posix
x86.linux
x86.linux_dll
x86.win32
Devices
Buses
ConcurrencyView
Search
Data View
Interface View
Deployment View
Concurrency View
AADL
x86_partition
temperature
gateway
0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115 120 125 130 135 140 145 150 155 160 165 170 175 1
concurrencyview : Start execution.
Show Desktop 1 2 3 4 QTerminal (Terminal emulator) tps Shell No. 1 TASTE C N S FR 12:15 Drop application icons here

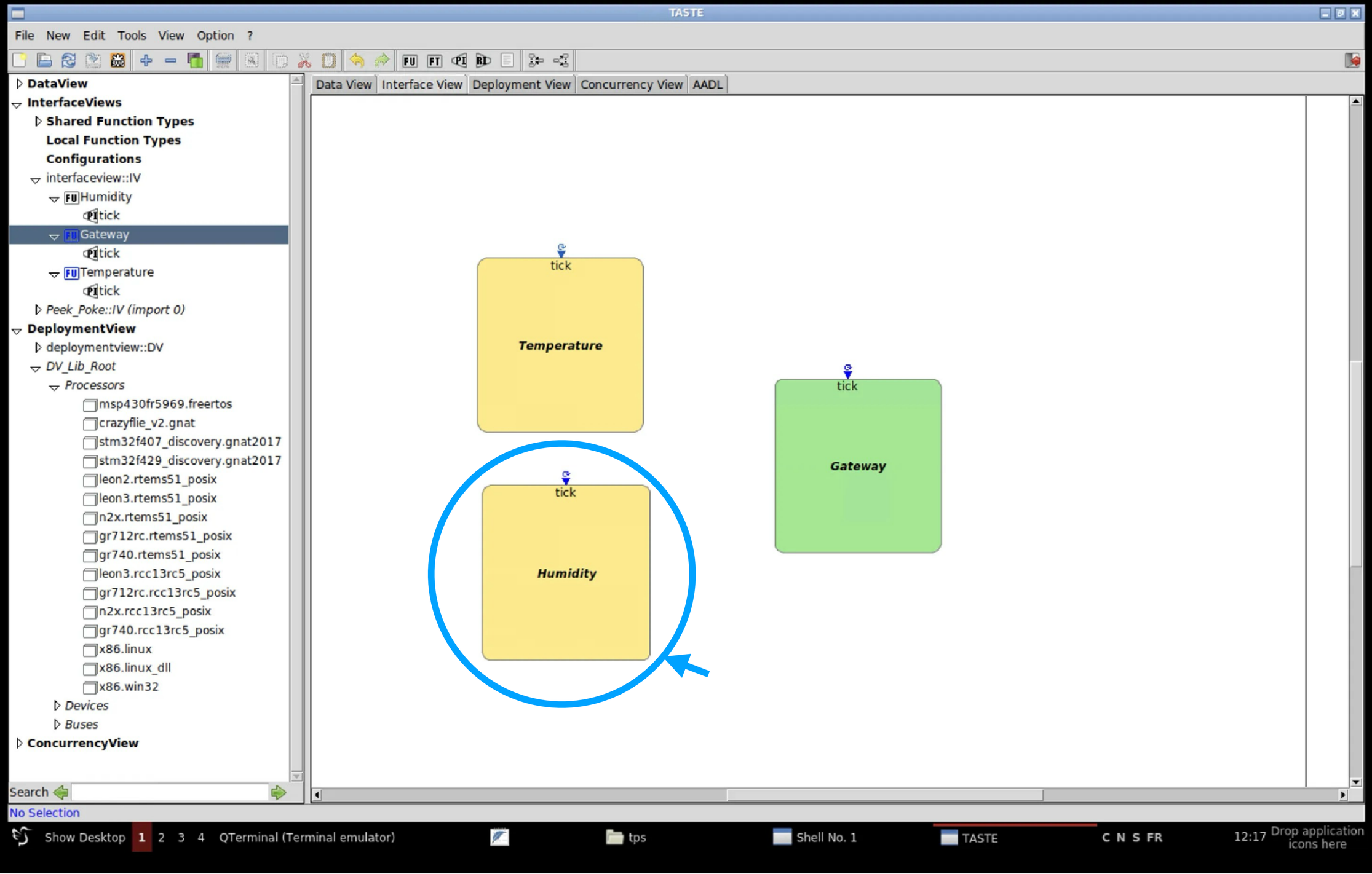

TASTE
File New Edit Tools View Option ?
DataView
InterfaceViews
Shared Function Types
Local Function Types
Configurations
interfaceview::IV
Gateway
tick
Temperature
tick
Peek_Poke::IV (import 0)
DeploymentView
deploymentview::DV
DV_Lib_Root
Processors
msp430fr5969.freertos
crazyflie_v2.gnat
stm32f407_discovery.gnat2017
stm32f429_discovery.gnat2017
leon2.rtems51_posix
leon3.rtems51_posix
n2x.rtems51_posix
gr712rc.rtems51_posix
gr740.rtems51_posix
leon3.rcc13rc5_posix
gr712rc.rcc13rc5_posix
n2x.rcc13rc5_posix
gr740.rcc13rc5_posix
x86.linux
x86.linux_dll
x86.win32
Devices
Buses
ConcurrencyView
Search
Data View
Interface View
Deployment View
Concurrency View
AADL
test
entity
result
processor utilization factor
node1_x86_linux_cv
Invalid scheduler : can not compute bound on processor utilization factor.
base period
node1_x86_linux_cv
25.00000
processor utilization factor with deadline
node1_x86_linux_cv
0.80000
processor utilization factor with period
node1_x86_linux_cv
0.80000
worst case task response time
node1_x86_linux_cv
All task deadlines will be met : the task set is schedulable.
response time
node1_x86_linux_cv.x86_partition.temperature
10.00000
response time
node1_x86_linux_cv.x86_partition.gateway
10.00000
0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115 120 125 130 135 140 145 150 155 160 165 170 175
concurrencyview : Start execution.
Show Desktop 1 2 3 4 QTerminal (Terminal emulator) tps Shell No. 1 TASTE C N S FR 12:16 Drop application icons here

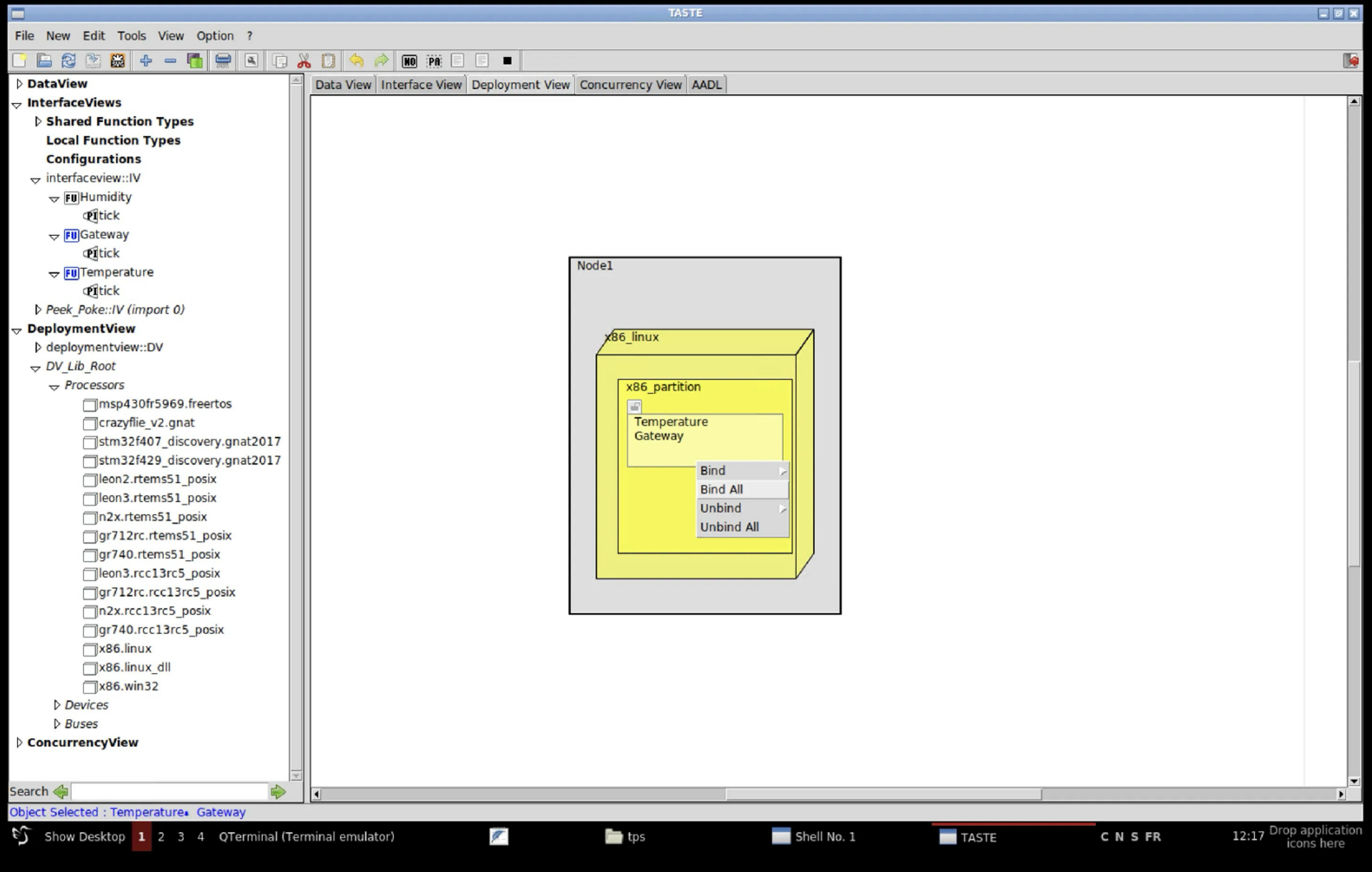
Ajout du dernier capteur

- Créer une Function « Humidity » dans l’Interface View
  - Ajouter un PI « tick »

```
Cyclic
Period 25 ms
Deadline 10 ms
WCET 10 ms
```

- « Bind » de la fonction dans la Deployment View


TASTE
File New Edit Tools View Option ?
DataView
InterfaceViews
Shared Function Types
Local Function Types
Configurations
interfaceview::IV
Humidity
tick
Gateway
tick
Temperature
tick
Peek_Poke::IV (import 0)
DeploymentView
deploymentview::DV
DV_Lib_Root
Processors
msp430fr5969.freertos
crazyflie_v2.gnat
stm32f407_discovery.gnat2017
stm32f429_discovery.gnat2017
leon2.rtems51_posix
leon3.rtems51_posix
n2x.rtems51_posix
gr712rc.rtems51_posix
gr740.rtems51_posix
leon3.rcc13rc5_posix
gr712rc.rcc13rc5_posix
n2x.rcc13rc5_posix
gr740.rcc13rc5_posix
x86.linux
x86.linux_dll
x86.win32
Devices
Buses
ConcurrencyView
Search
Data View
Interface View
Deployment View
Concurrency View
AADL
tick
Temperature
tick
Humidity
tick
Gateway
No Selection
Show Desktop 1 2 3 4 QTerminal (Terminal emulator)
tps
Shell No. 1
TASTE
C N S FR
12:17
Drop application icons here


TASTE
File New Edit Tools View Option ?
DataView
InterfaceViews
Shared Function Types
Local Function Types
Configurations
interfaceview::IV
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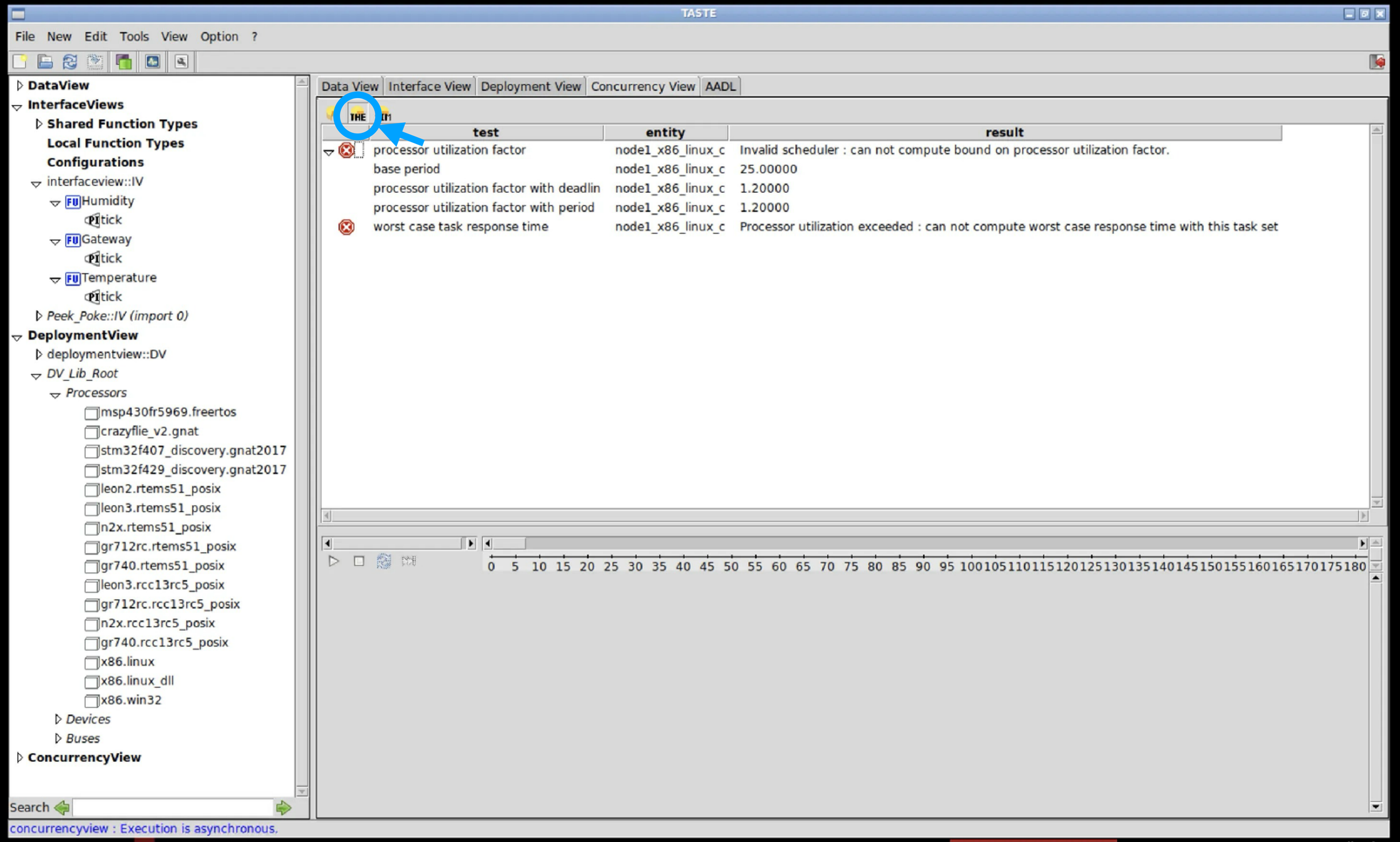
Gateway
tick
Temperature
tick
Peek_Poke::IV (import 0)
DeploymentView
deploymentview::DV
DV_Lib_Root
Processors
msp430fr5969.freertos
crazyflie_v2.gnat
stm32f407_discovery.gnat2017
stm32f429_discovery.gnat2017
leon2.rtems51_posix
leon3.rtems51_posix
n2x.rtems51_posix
gr712rc.rtems51_posix
gr740.rtems51_posix
leon3.rcc13rc5_posix
gr712rc.rcc13rc5_posix
n2x.rcc13rc5_posix
gr740.rcc13rc5_posix
x86.linux
x86.linux_dll
x86.win32
Devices
Buses
ConcurrencyView
Search
Data View
Interface View
Deployment View
Concurrency View
AADL
Node1
x86_linux
x86_partition
Temperature
Gateway
Bind
Bind All
Unbind
Unbind All
Object Selected : Temperature. Gateway
Show Desktop 1 2 3 4 QTerminal (Terminal emulator)
tps
Shell No. 1
TASTE
C N S FR
12:17
Drop application icons here

Analyze du modèle complet

- Utilisation de Cheddar:
  -  Simulation théorique
  -  Analyse d’ordonnançabilité


TASTE
File New Edit Tools View Option ?
DataView
InterfaceViews
Shared Function Types
Local Function Types
Configurations
interfaceview::IV
Humidity
tick
Gateway
tick
Temperature
tick
Peek_Poke::IV (import 0)
DeploymentView
deploymentview::DV
DV_Lib_Root
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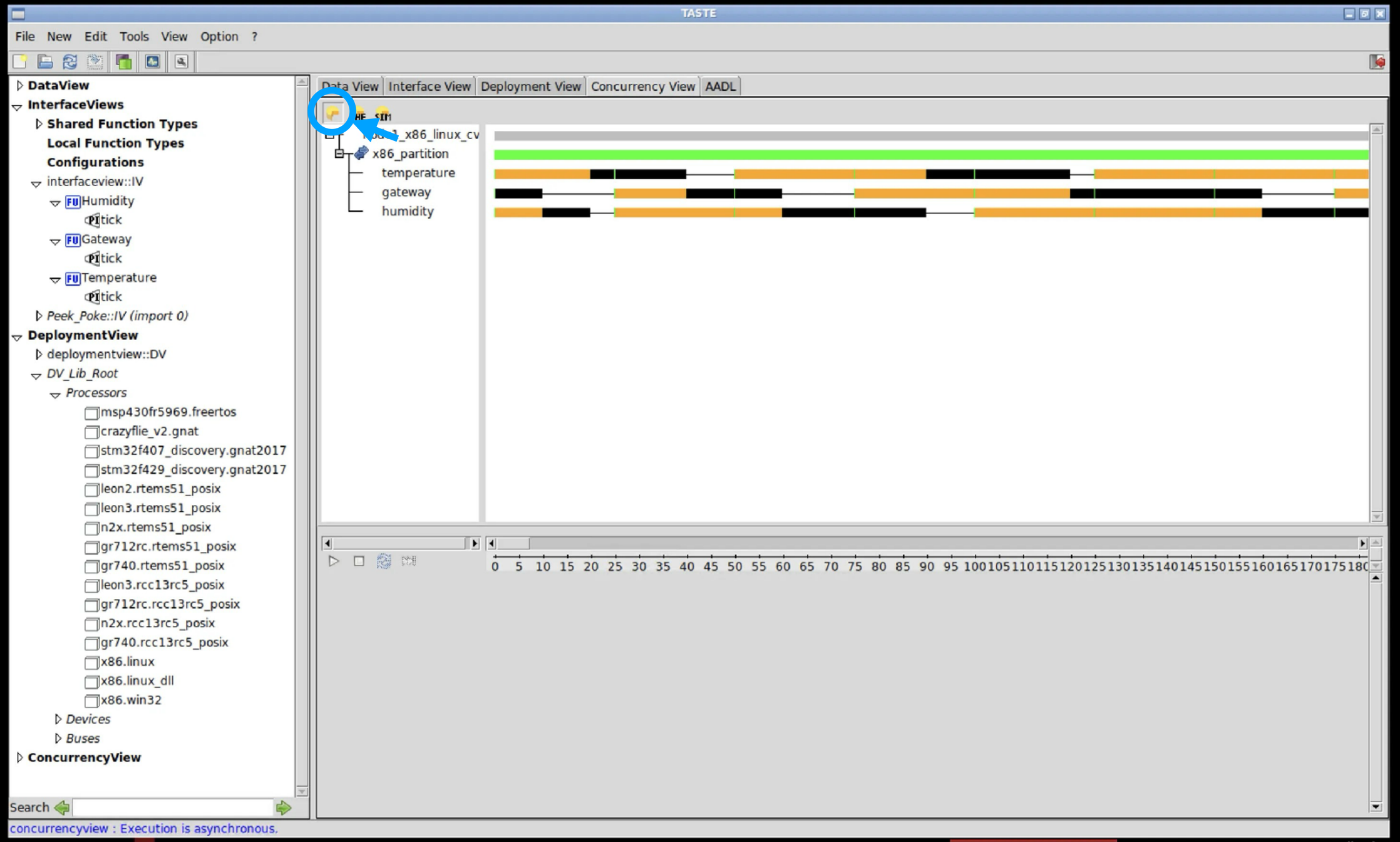
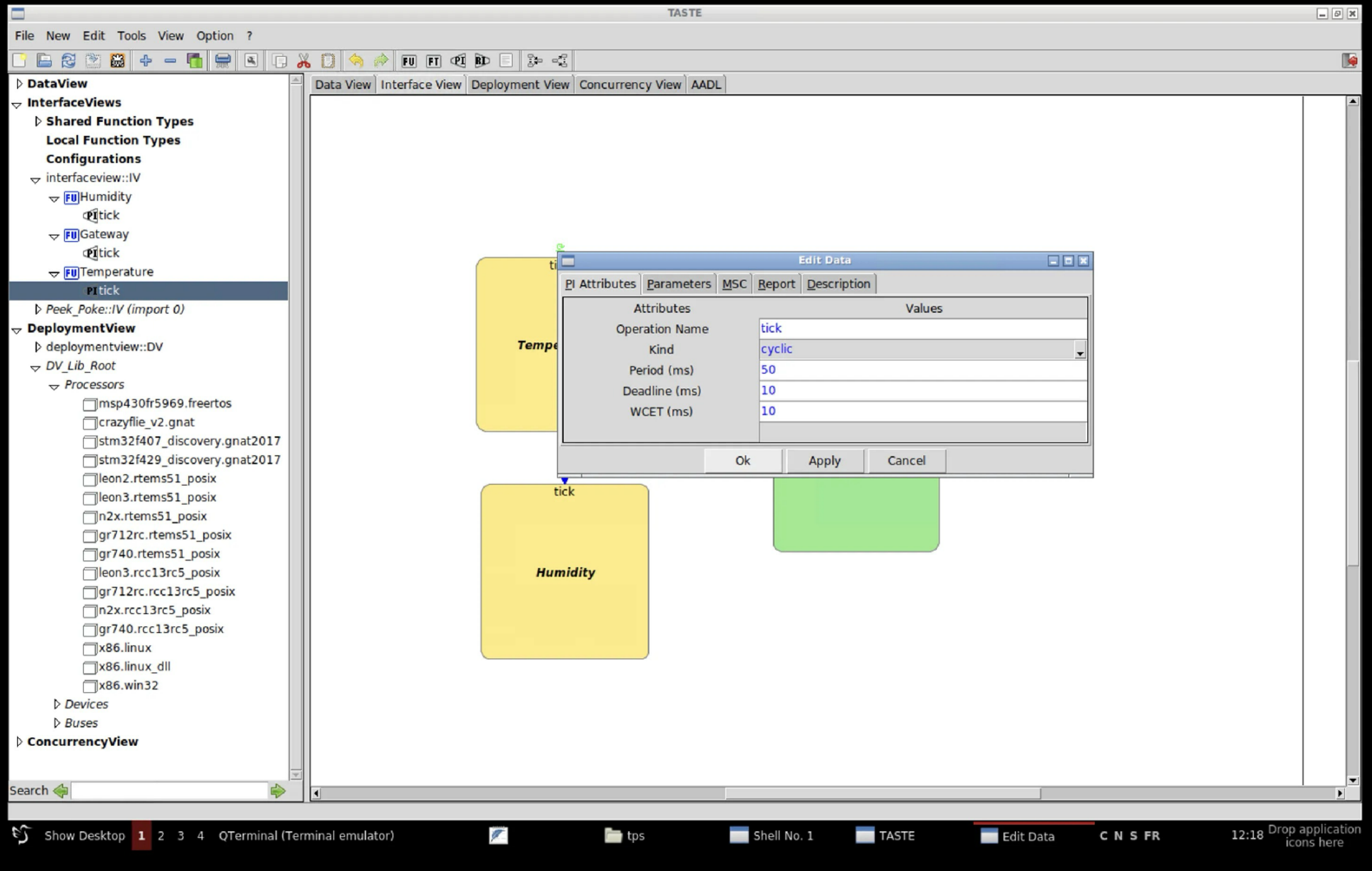
stm32f407_discovery.gnat2017
stm32f429_discovery.gnat2017
leon2.rtems51_posix
leon3.rtems51_posix
n2x.rtems51_posix
gr712rc.rtems51_posix
gr740.rtems51_posix
leon3.rcc13rc5_posix
gr712rc.rcc13rc5_posix
n2x.rcc13rc5_posix
gr740.rcc13rc5_posix
x86.linux
x86.linux_dll
x86.win32
Devices
Buses
ConcurrencyView
Search
Data View
Interface View
Deployment View
Concurrency View
AADL
test
entity
result
processor utilization factor
node1_x86_linux_c
Invalid scheduler : can not compute bound on processor utilization factor.
base period
node1_x86_linux_c
25.00000
processor utilization factor with deadlin
node1_x86_linux_c
1.20000
processor utilization factor with period
node1_x86_linux_c
1.20000
worst case task response time
node1_x86_linux_c
Processor utilization exceeded : can not compute worst case response time with this task set
0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115 120 125 130 135 140 145 150 155 160 165 170 175 180
concurrencyview : Execution is asynchronous.
Show Desktop 1 2 3 4 QTerminal (Terminal emulator)
tps
Shell No. 1
TASTE
C N S FR
12:17
Drop application icons here


TASTE
File New Edit Tools View Option ?
DataView
InterfaceViews
Shared Function Types
Local Function Types
Configurations
interfaceview::IV
Humidity
tick
Gateway
tick
Temperature
tick
Peek_Poke::IV (import 0)
DeploymentView
deploymentview::DV
DV_Lib_Root
Processors
msp430fr5969.freertos
crazyflie_v2.gnat
stm32f407_discovery.gnat2017
stm32f429_discovery.gnat2017
leon2.rtems51_posix
leon3.rtems51_posix
n2x.rtems51_posix
gr712rc.rtems51_posix
gr740.rtems51_posix
leon3.rcc13rc5_posix
gr712rc.rcc13rc5_posix
n2x.rcc13rc5_posix
gr740.rcc13rc5_posix
x86.linux
x86.linux_dll
x86.win32
Devices
Buses
ConcurrencyView
Search
Data View
Interface View
Deployment View
Concurrency View
AADL
x86_partition
temperature
gateway
humidity
0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115 120 125 130 135 140 145 150 155 160 165 170 175 180
concurrencyview : Execution is asynchronous.
Show Desktop 1 2 3 4 QTerminal (Terminal emulator) tps Shell No. 1 TASTE C N S FR 12:17 Drop application icons here

Corrections

- 25 ms est trop court, 50 ms est plus raisonnable
  -  Simulation théorique
  -  Analyse d’ordonnançabilité


TASTE
File New Edit Tools View Option ?
DataView
InterfaceViews
Shared Function Types
Local Function Types
Configurations
interfaceview::IV
Humidity
tick
Gateway
tick
Temperature
tick
Peek_Poke::IV (import 0)
DeploymentView
deploymentview::DV
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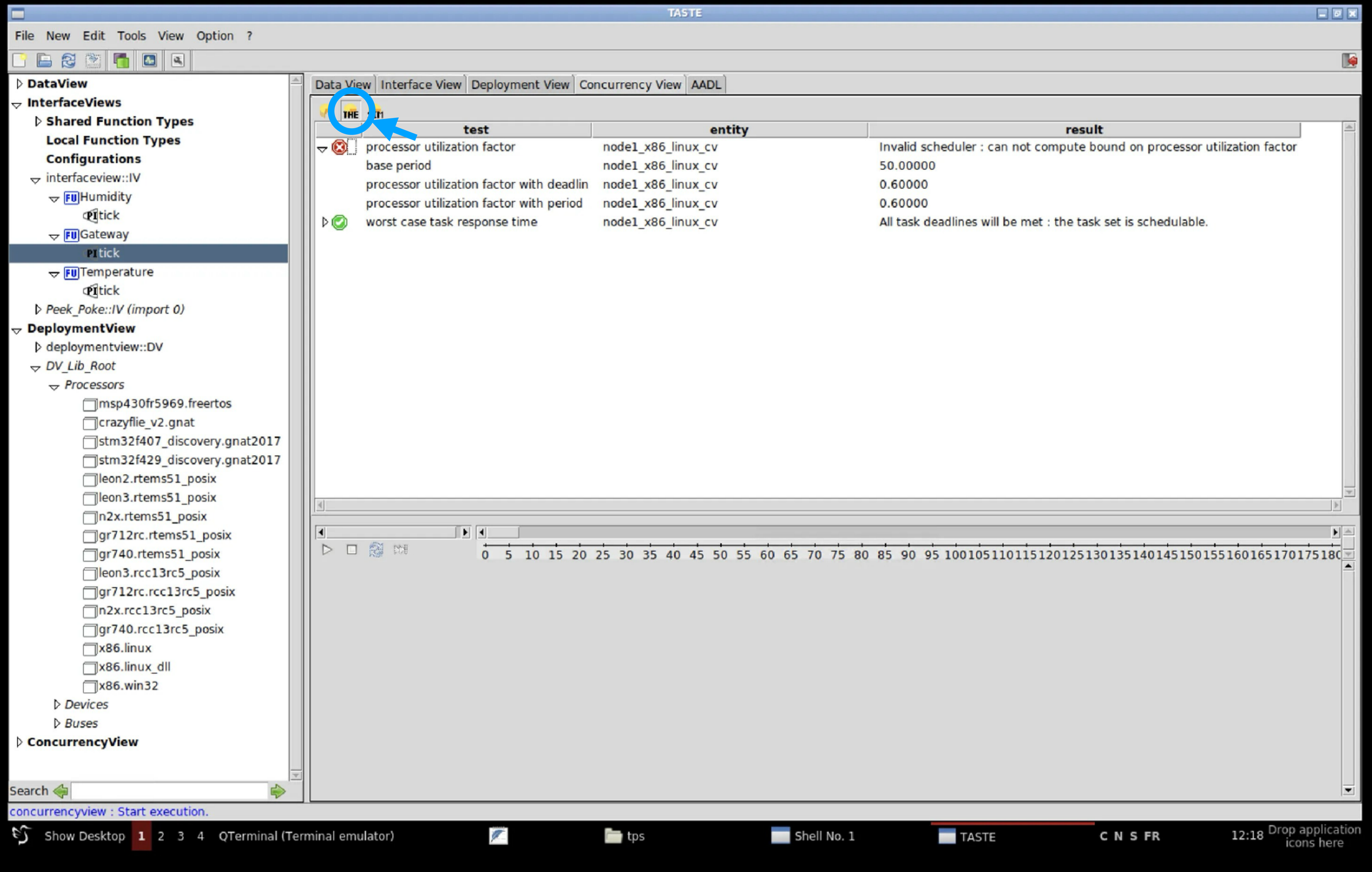
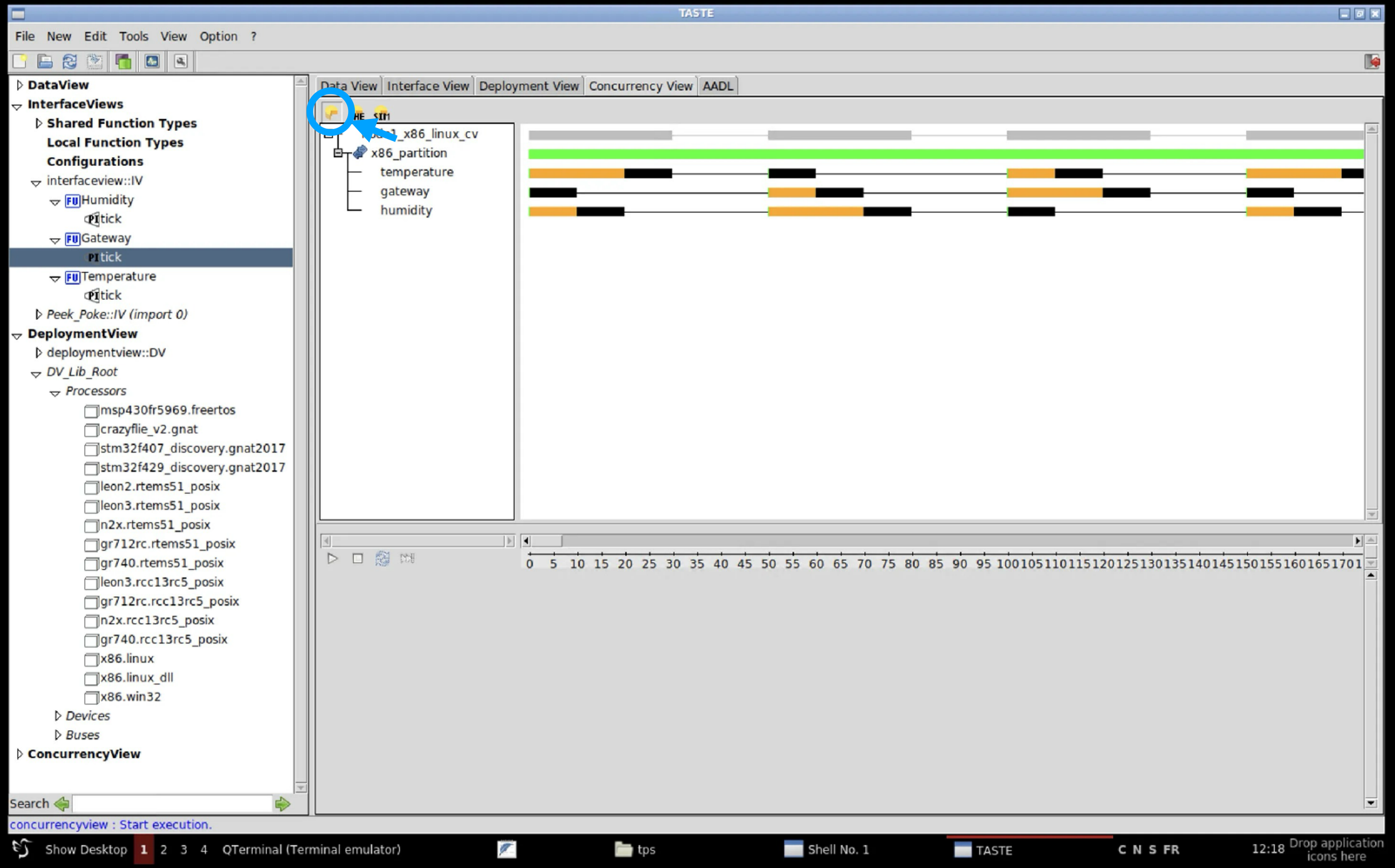
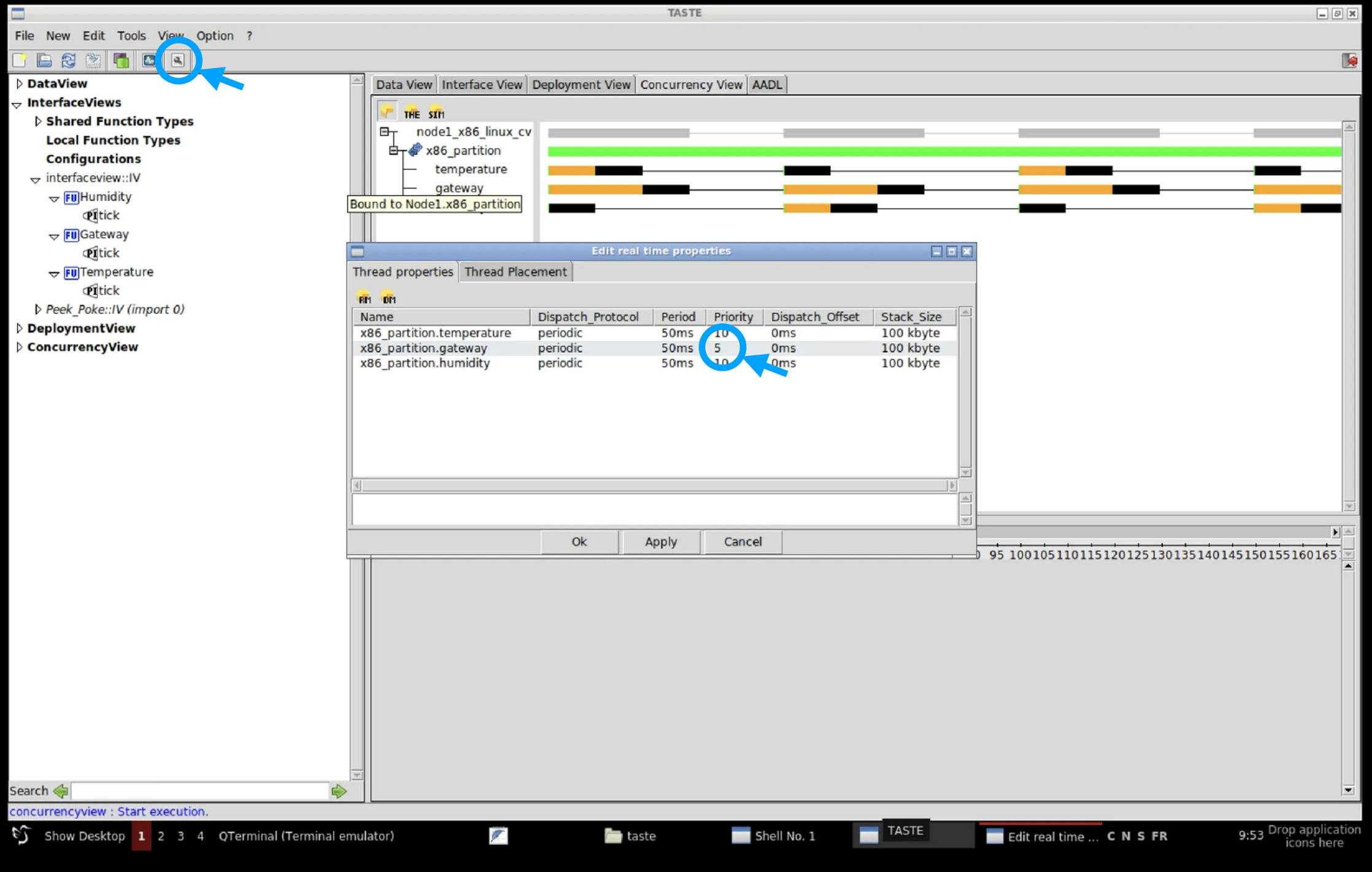
leon2.rtems51_posix
leon3.rtems51_posix
n2x.rtems51_posix
gr712rc.rtems51_posix
gr740.rtems51_posix
leon3.rcc13rc5_posix
gr712rc.rcc13rc5_posix
n2x.rcc13rc5_posix
gr740.rcc13rc5_posix
x86.linux
x86.linux_dll
x86.win32
Devices
Buses
ConcurrencyView
Search
Data View
Interface View
Deployment View
Concurrency View
AADL
Edit Data
PI Attributes
Parameters
MSC
Report
Description
Attributes
Values
Operation Name
tick
Kind
cyclic
Period (ms)
50
Deadline (ms)
10
WCET (ms)
10
Ok
Apply
Cancel
tick
Humidity
Show Desktop
1
2
3
4
QTerminal (Terminal emulator)
tps
Shell No. 1
TASTE
Edit Data
C N S FR
12:18
Drop application icons here


TASTE
File New Edit Tools View Option ?
DataView
InterfaceViews
Shared Function Types
Local Function Types
Configurations
interfaceview::IV
Humidity
tick
Gateway
tick
Temperature
tick
Peek_Poke::IV (import 0)
DeploymentView
deploymentview::DV
DV_Lib_Root
Processors
msp430fr5969.freertos
crazyflie_v2.gnat
stm32f407_discovery.gnat2017
stm32f429_discovery.gnat2017
leon2.rtems51_posix
leon3.rtems51_posix
n2x.rtems51_posix
gr712rc.rtems51_posix
gr740.rtems51_posix
leon3.rcc13rc5_posix
gr712rc.rcc13rc5_posix
n2x.rcc13rc5_posix
gr740.rcc13rc5_posix
x86.linux
x86.linux_dll
x86.win32
Devices
Buses
ConcurrencyView
Search
Data View
Interface View
Deployment View
Concurrency View
AADL
test
entity
result
processor utilization factor
node1_x86_linux_cv
Invalid scheduler : can not compute bound on processor utilization factor
base period
node1_x86_linux_cv
50.00000
processor utilization factor with deadlin
node1_x86_linux_cv
0.60000
processor utilization factor with period
node1_x86_linux_cv
0.60000
worst case task response time
node1_x86_linux_cv
All task deadlines will be met : the task set is schedulable.
0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115 120 125 130 135 140 145 150 155 160 165 170 175 180
concurrencyview : Start execution.
Show Desktop 1 2 3 4 QTerminal (Terminal emulator) tps Shell No. 1 TASTE C N S FR 12:18 Drop application icons here


TASTE
File New Edit Tools View Option ?
DataView
InterfaceViews
Shared Function Types
Local Function Types
Configurations
interfaceview::IV
Humidity
tick
Gateway
tick
Temperature
tick
Peek_Poke::IV (import 0)
DeploymentView
deploymentview::DV
DV_Lib_Root
Processors
msp430fr5969.freertos
crazyflie_v2.gnat
stm32f407_discovery.gnat2017
stm32f429_discovery.gnat2017
leon2.rtems51_posix
leon3.rtems51_posix
n2x.rtems51_posix
gr712rc.rtems51_posix
gr740.rtems51_posix
leon3.rcc13rc5_posix
gr712rc.rcc13rc5_posix
n2x.rcc13rc5_posix
gr740.rcc13rc5_posix
x86.linux
x86.linux_dll
x86.win32
Devices
Buses
ConcurrencyView
Search
Data View
Interface View
Deployment View
Concurrency View
AADL
x86_partition
temperature
gateway
humidity
0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115 120 125 130 135 140 145 150 155 160 165 170
concurrencyview : Start execution.
Show Desktop 1 2 3 4 QTerminal (Terminal emulator) tps Shell No. 1 TASTE C N S FR 12:18 Drop application icons here

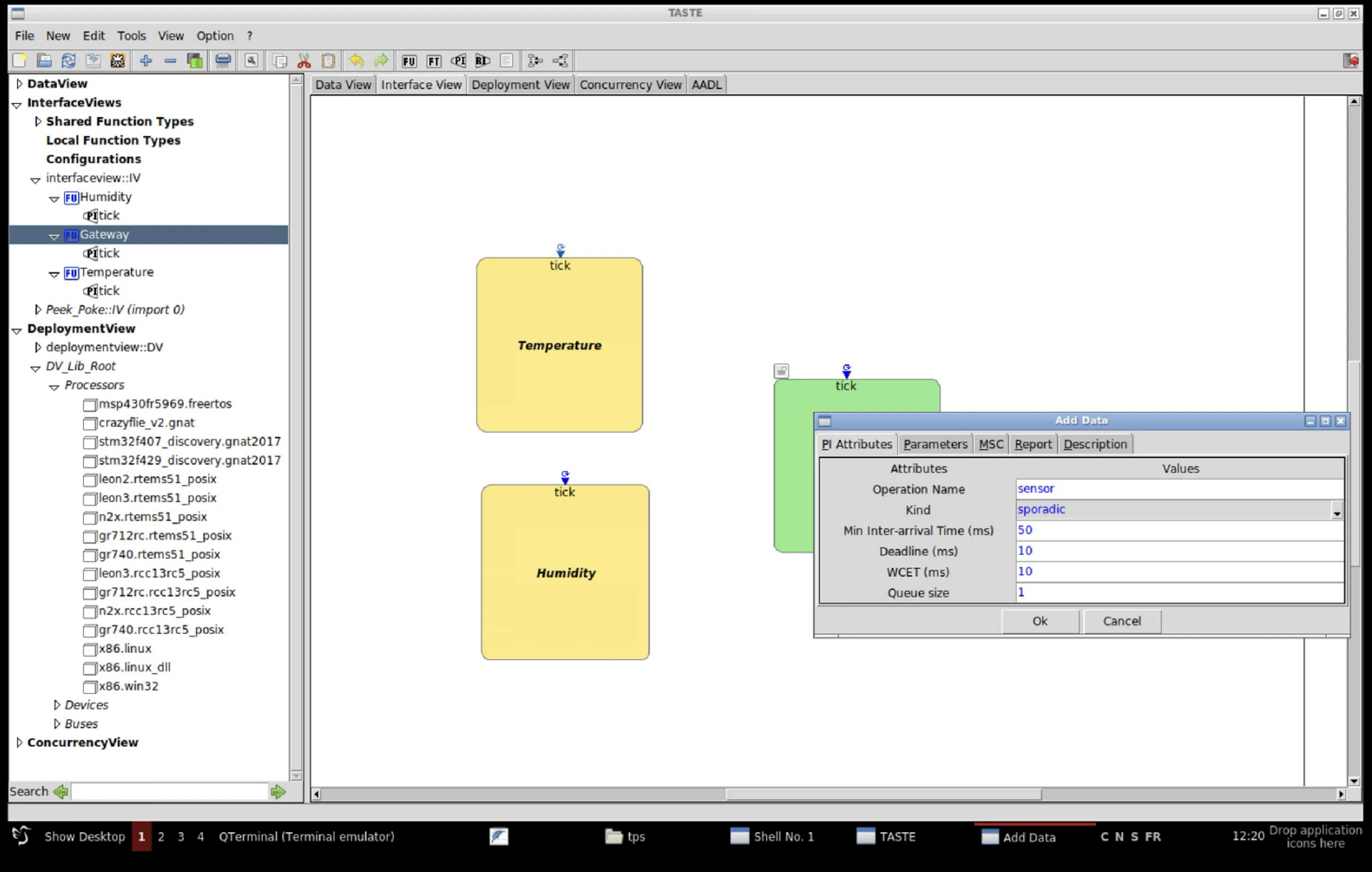
Priorities

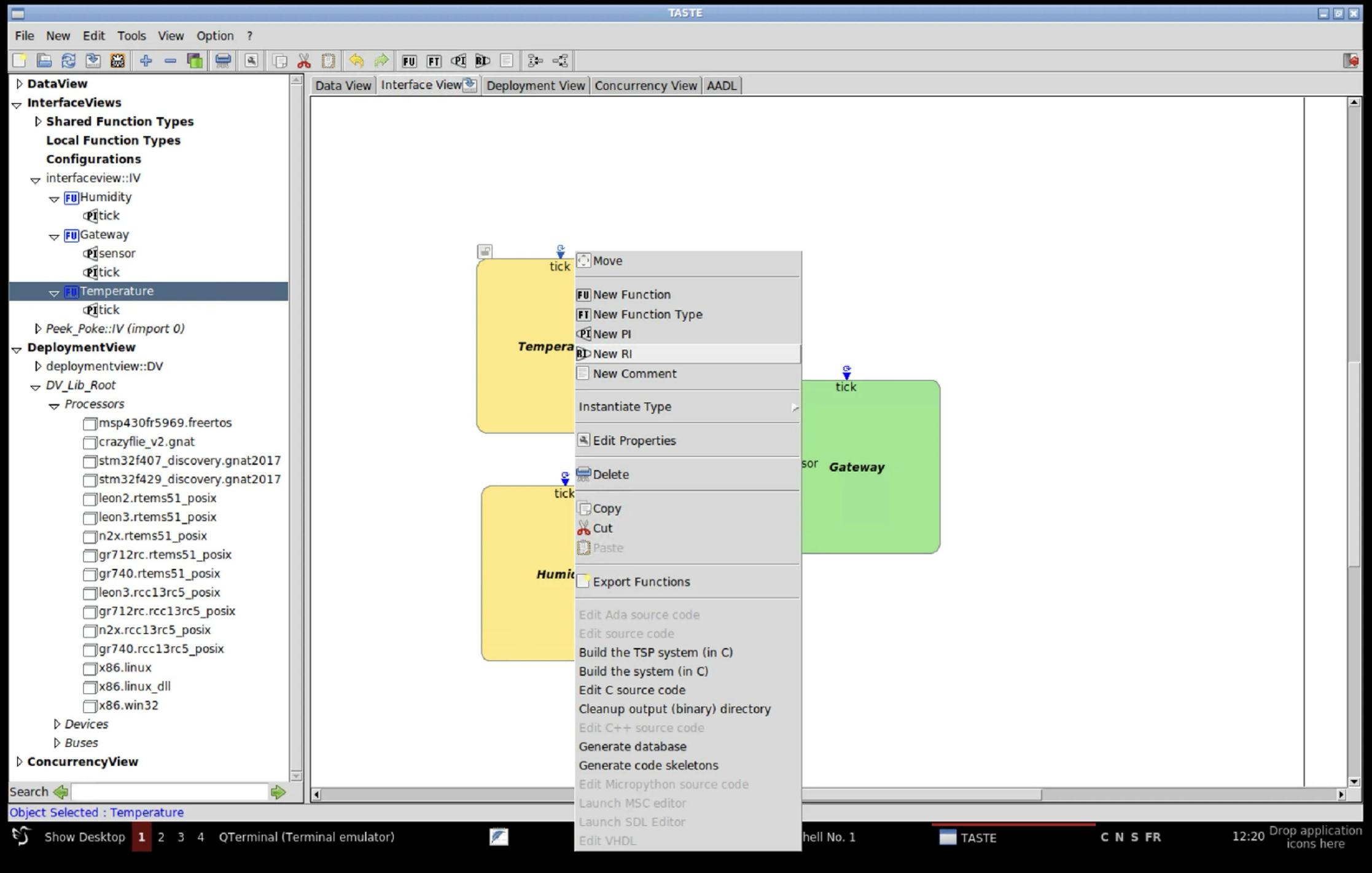
- **HPF** : Higher Priority First pour le noeud linux.
- Baisser la priorité de gateway à 5 pour qu’il soit dernier.

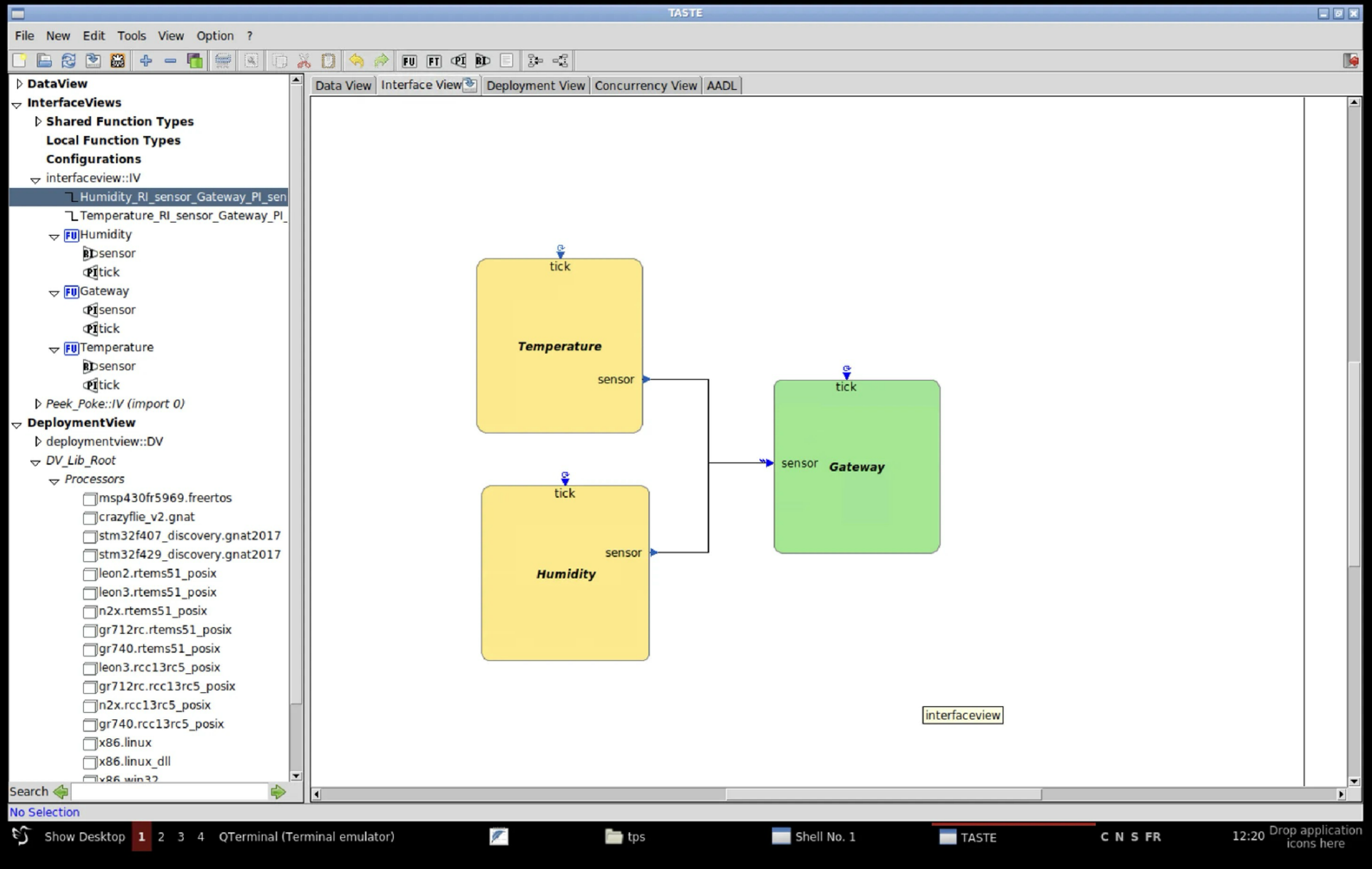

TASTE
File New Edit Tools View Option ?
DataView
InterfaceViews
Shared Function Types
Local Function Types
Configurations
interfaceview::IV
Humidity
tick
Gateway
tick
Temperature
tick
Peek_Poke::IV (import 0)
DeploymentView
ConcurrencyView
Data View
Interface View
Deployment View
Concurrency View
AADL
THE SIM
node1_x86_linux_cv
x86_partition
temperature
gateway
Bound to Node1.x86_partition
Edit real time properties
Thread properties
Thread Placement
RM DM
Name
Dispatch_Protocol
Period
Priority
Dispatch_Offset
Stack_Size
x86_partition.temperature
periodic
50ms
10
0ms
100 kbyte
x86_partition.gateway
periodic
50ms
5
0ms
100 kbyte
x86_partition.humidity
periodic
50ms
0ms
100 kbyte
Ok
Apply
Cancel
95 100105110115120125130135140145150155160165
Search
concurrencyview : Start execution.
Show Desktop 1 2 3 4 QTerminal (Terminal emulator)
taste
Shell No. 1
TASTE
Edit real time ...
C N S FR
9:53
Drop application icons here

Dépendance sur une PI

- Ajout de dépendances avec une seule PI sporadique

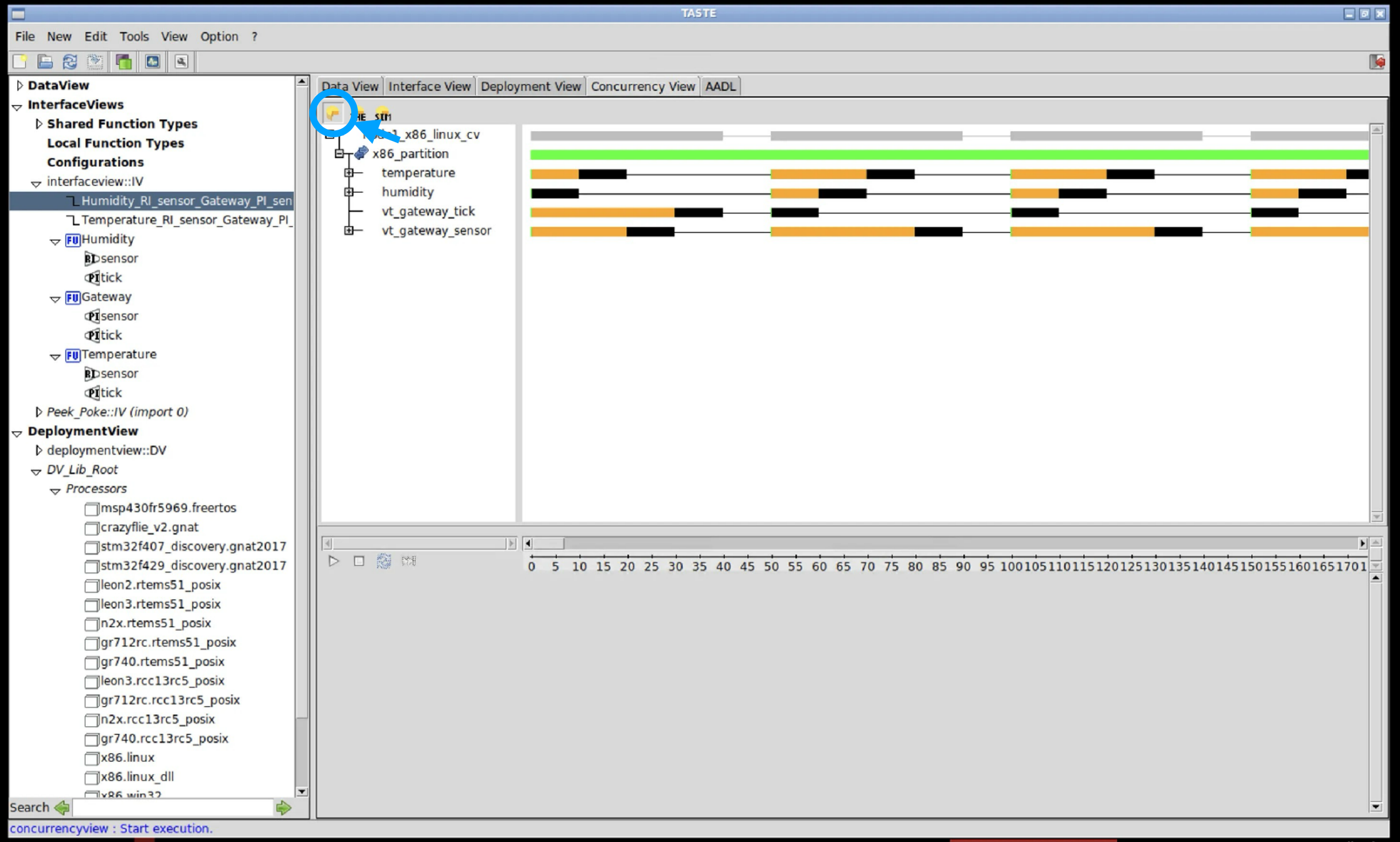

TASTE
File New Edit Tools View Option ?
DataView
InterfaceViews
Shared Function Types
Local Function Types
Configurations
interfaceview::IV
Humidity
tick
Gateway
tick
Temperature
tick
Peek_Poke::IV (import 0)
DeploymentView
deploymentview::DV
DV_Lib_Root
Processors
msp430fr5969.freertos
crazyflie_v2.gnat
stm32f407_discovery.gnat2017
stm32f429_discovery.gnat2017
leon2.rtems51_posix
leon3.rtems51_posix
n2x.rtems51_posix
gr712rc.rtems51_posix
gr740.rtems51_posix
leon3.rcc13rc5_posix
gr712rc.rcc13rc5_posix
n2x.rcc13rc5_posix
gr740.rcc13rc5_posix
x86.linux
x86.linux_dll
x86.win32
Devices
Buses
ConcurrencyView
Search
Data View
Interface View
Deployment View
Concurrency View
AADL
tick
Temperature
tick
Humidity
tick
Add Data
PI Attributes
Parameters
MSC
Report
Description
Attributes
Values
Operation Name
sensor
Kind
sporadic
Min Inter-arrival Time (ms)
50
Deadline (ms)
10
WCET (ms)
10
Queue size
1
Ok
Cancel
Show Desktop
1
2
3
4
QTerminal (Terminal emulator)
tps
Shell No. 1
TASTE
Add Data
C N S FR
12:20
Drop application icons here

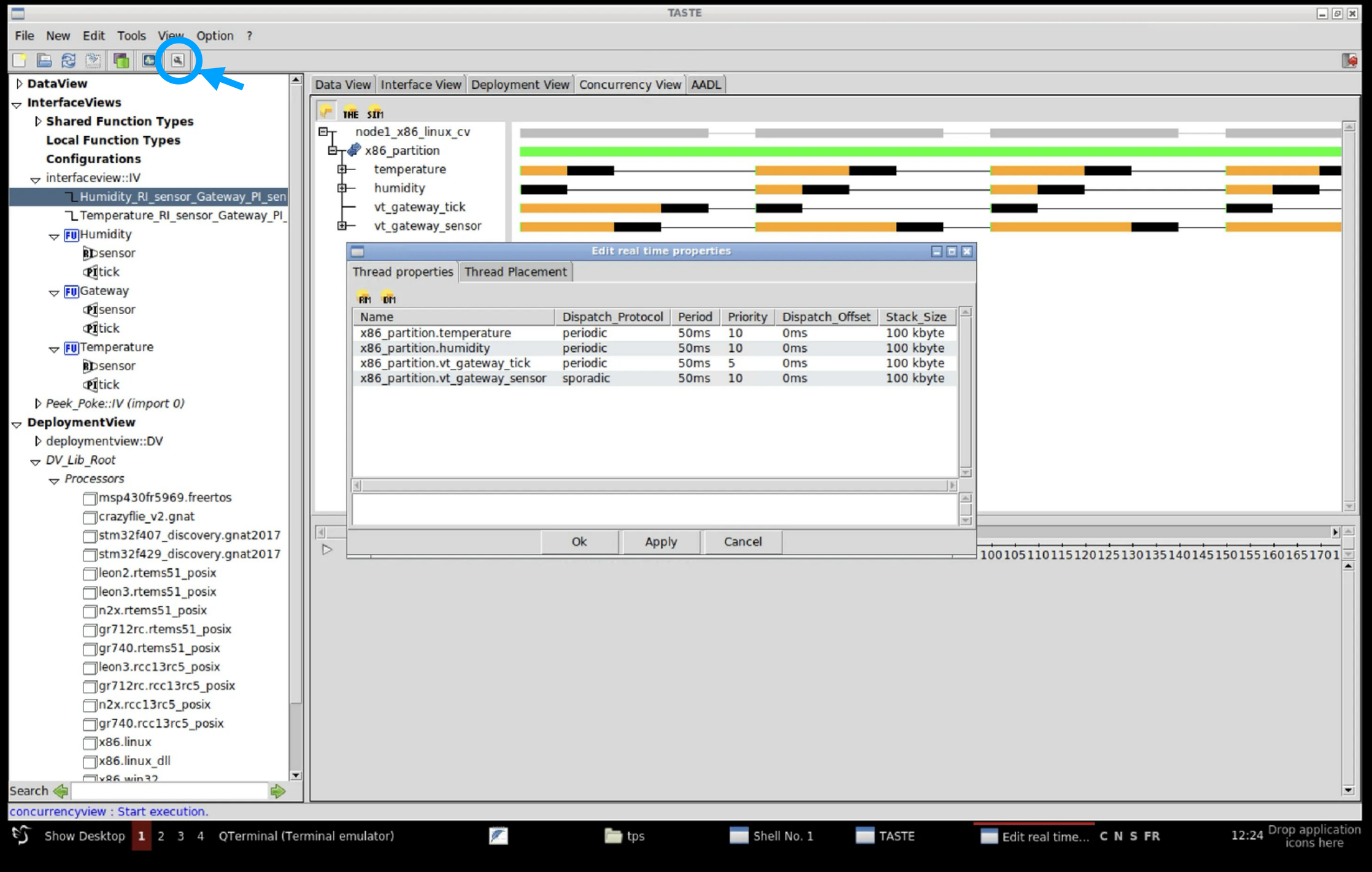

TASTE
File New Edit Tools View Option ?
DataView
InterfaceViews
Shared Function Types
Local Function Types
Configurations
interfaceview::IV
Humidity
tick
Gateway
sensor
tick
Temperature
tick
Peek_Poke::IV (import 0)
DeploymentView
deploymentview::DV
DV_Lib_Root
Processors
msp430fr5969.freertos
crazyflie_v2.gnat
stm32f407_discovery.gnat2017
stm32f429_discovery.gnat2017
leon2.rtems51_posix
leon3.rtems51_posix
n2x.rtems51_posix
gr712rc.rtems51_posix
gr740.rtems51_posix
leon3.rcc13rc5_posix
gr712rc.rcc13rc5_posix
n2x.rcc13rc5_posix
gr740.rcc13rc5_posix
x86.linux
x86.linux_dll
x86.win32
Devices
Buses
ConcurrencyView
Search
Data View
Interface View
Deployment View
Concurrency View
AADL
tick
Tempera
Move
New Function
New Function Type
New PI
New RI
New Comment
Instantiate Type
Edit Properties
Delete
Copy
Cut
Paste
Export Functions
Edit Ada source code
Edit source code
Build the TSP system (in C)
Build the system (in C)
Edit C source code
Cleanup output (binary) directory
Edit C++ source code
Generate database
Generate code skeletons
Edit Micropython source code
Launch MSC editor
Launch SDL Editor
Edit VHDL
tick
Humi
tick
sor
Gateway
Object Selected : Temperature
Show Desktop 1 2 3 4 QTerminal (Terminal emulator)
hell No. 1
TASTE
C N S FR
12:20
Drop application icons here

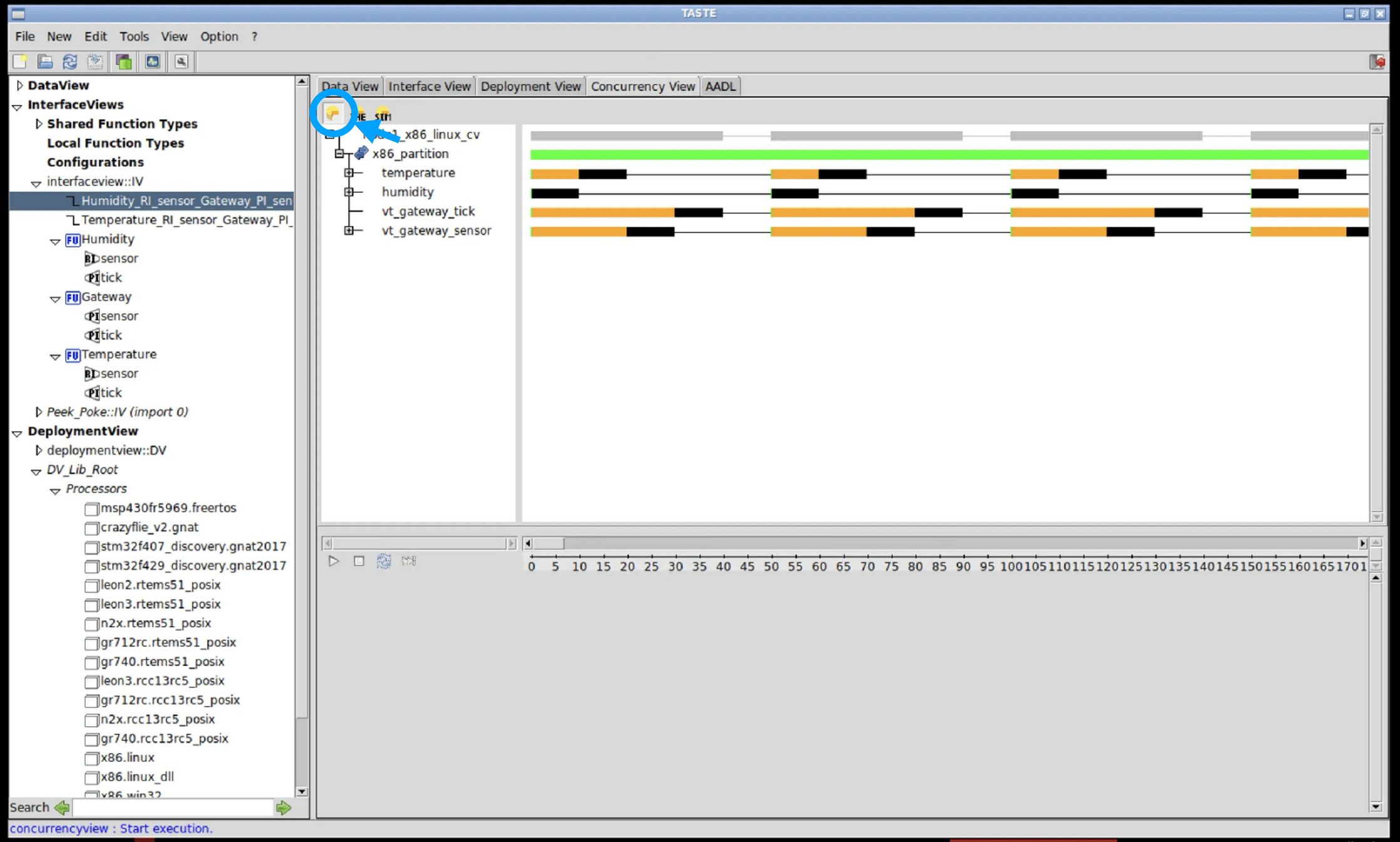

TASTE
File New Edit Tools View Option ?
DataView
InterfaceViews
Shared Function Types
Local Function Types
Configurations
interfaceview::IV
Humidity_RI_sensor_Gateway_PI_sen
Temperature_RI_sensor_Gateway_PI_
Humidity
sensor
tick
Gateway
sensor
tick
Temperature
sensor
tick
Peek_Poke::IV (import 0)
DeploymentView
deploymentview::DV
DV_Lib_Root
Processors
msp430fr5969.freertos
crazyflie_v2.gnat
stm32f407_discovery.gnat2017
stm32f429_discovery.gnat2017
leon2.rtems51_posix
leon3.rtems51_posix
n2x.rtems51_posix
gr712rc.rtems51_posix
gr740.rtems51_posix
leon3.rcc13rc5_posix
gr712rc.rcc13rc5_posix
n2x.rcc13rc5_posix
gr740.rcc13rc5_posix
x86.linux
x86.linux_dll
Search
Data View
Interface View
Deployment View
Concurrency View
AADL
tick
Temperature
sensor
tick
sensor
Gateway
tick
Humidity
sensor
interfaceview
No Selection
Show Desktop 1 2 3 4 QTerminal (Terminal emulator)
tps
Shell No. 1
TASTE
C N S FR
12:20
Drop application icons here

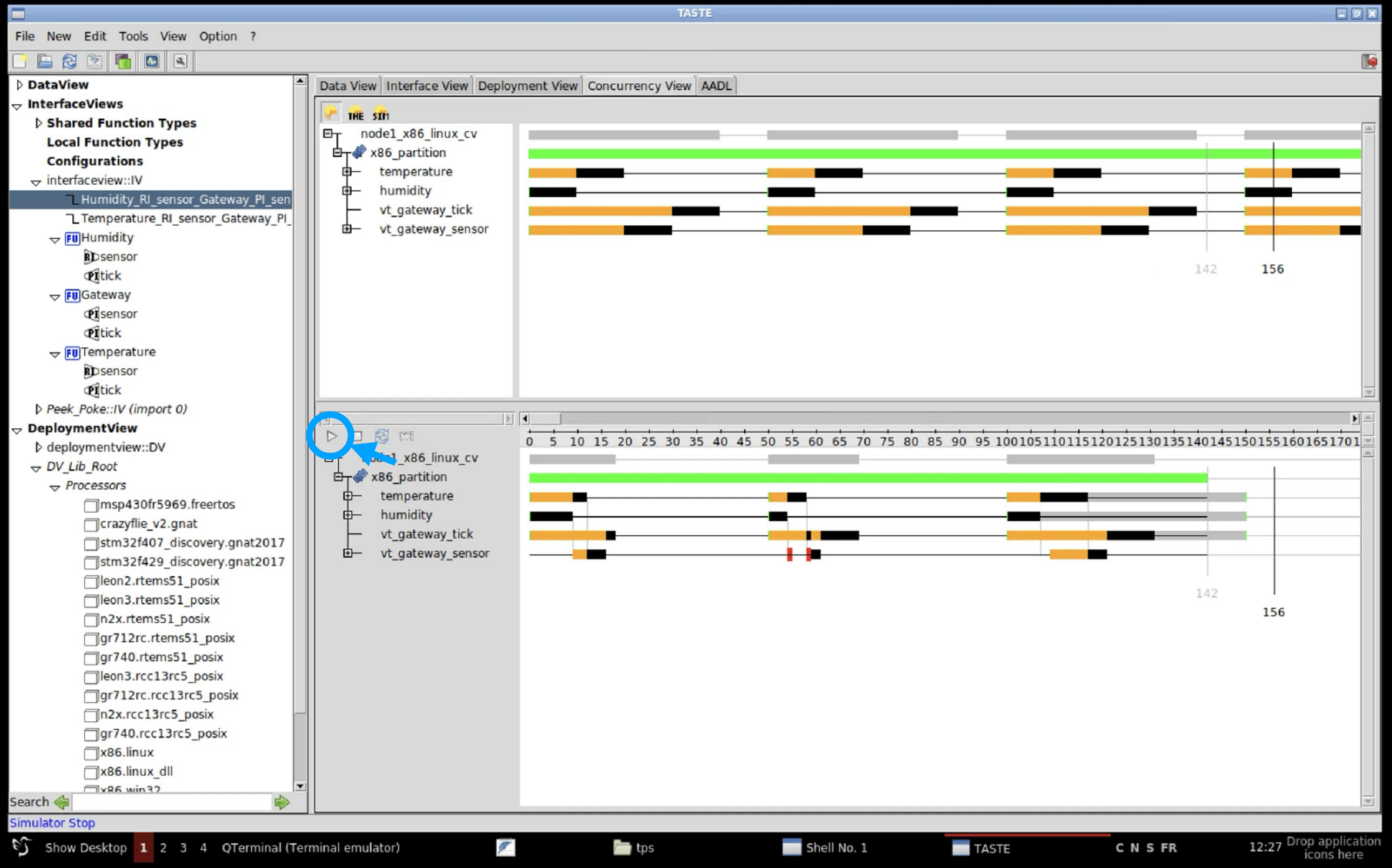
Après modifications

- Utilisation de Cheddar à nouveau pour voir les changements:
  -  Simulation théorique
  - Ajustement des priorités
- Simulation avec Marzhin
  - Problème de buffer overflow


TASTE
File New Edit Tools View Option ?
DataView
InterfaceViews
Shared Function Types
Local Function Types
Configurations
interfaceview::IV
Humidity_RI_sensor_Gateway_PI_sen
Temperature_RI_sensor_Gateway_PI_
Humidity
sensor
tick
Gateway
sensor
tick
Temperature
sensor
tick
Peek_Poke::IV (import 0)
DeploymentView
deploymentview::DV
DV_Lib_Root
Processors
msp430fr5969.freertos
crazyflie_v2.gnat
stm32f407_discovery.gnat2017
stm32f429_discovery.gnat2017
leon2.rtems51_posix
leon3.rtems51_posix
n2x.rtems51_posix
gr712rc.rtems51_posix
gr740.rtems51_posix
leon3.rcc13rc5_posix
gr712rc.rcc13rc5_posix
n2x.rcc13rc5_posix
gr740.rcc13rc5_posix
x86.linux
x86.linux_dll
Search
Data View
Interface View
Deployment View
Concurrency View
AADL
x86_linux_cv
x86_partition
temperature
humidity
vt_gateway_tick
vt_gateway_sensor
0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115 120 125 130 135 140 145 150 155 160 165 170
concurrencyview : Start execution.
Show Desktop 1 2 3 4 QTerminal (Terminal emulator) tps Shell No. 1 TASTE C N S FR 12:23 Drop application icons here

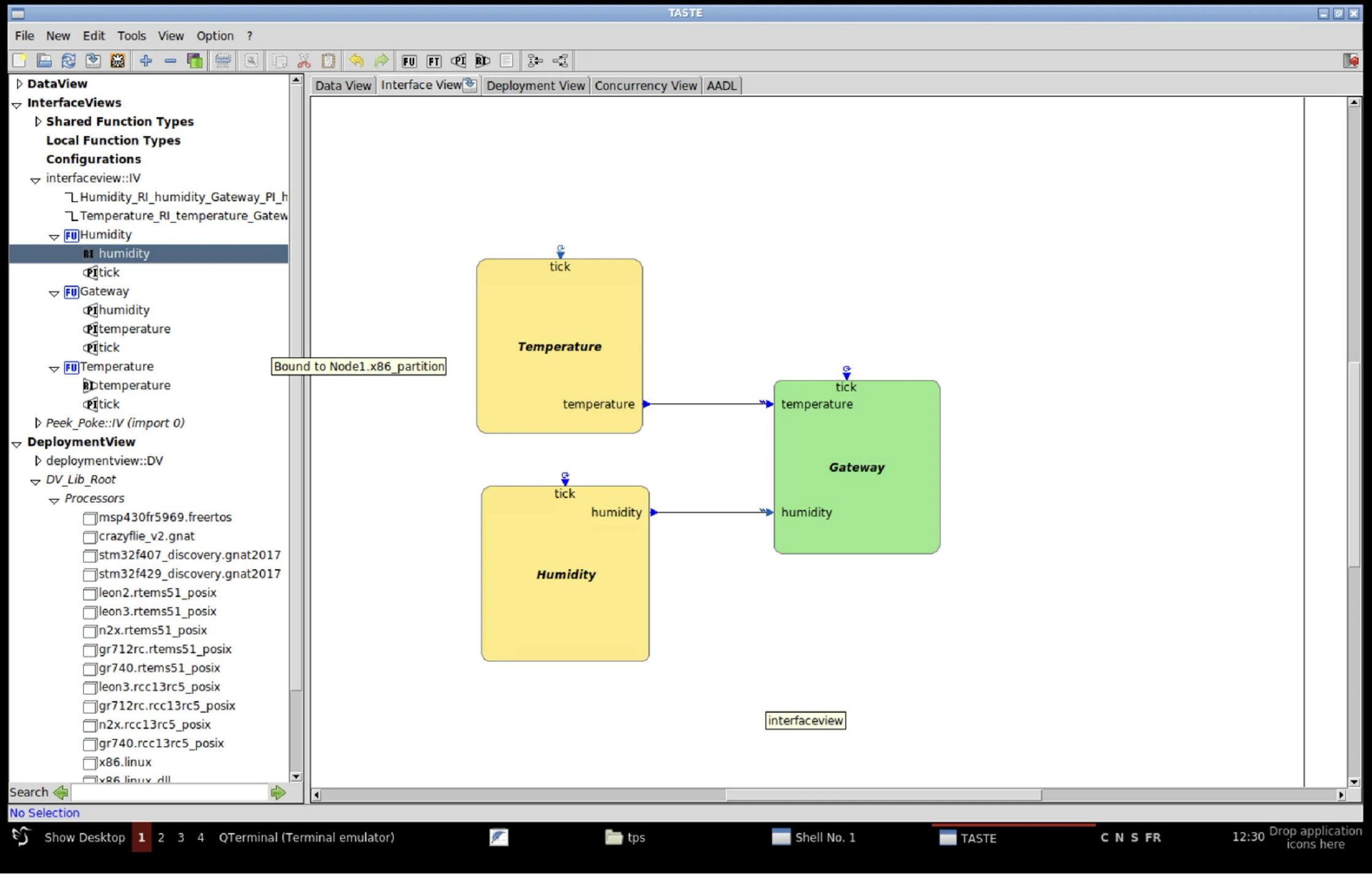

TASTE
File New Edit Tools View Option ?
DataView
InterfaceViews
Shared Function Types
Local Function Types
Configurations
interfaceview::IV
Humidity_RI_sensor_Gateway_PI_sen
Temperature_RI_sensor_Gateway_PI_
Humidity
sensor
tick
Gateway
sensor
tick
Temperature
sensor
tick
Peek_Poke::IV (import 0)
DeploymentView
deploymentview::DV
DV_Lib_Root
Processors
msp430fr5969.freertos
crazyflie_v2.gnat
stm32f407_discovery.gnat2017
stm32f429_discovery.gnat2017
leon2.rtems51_posix
leon3.rtems51_posix
n2x.rtems51_posix
gr712rc.rtems51_posix
gr740.rtems51_posix
leon3.rcc13rc5_posix
gr712rc.rcc13rc5_posix
n2x.rcc13rc5_posix
gr740.rcc13rc5_posix
x86.linux
x86.linux_dll
Search
Data View
Interface View
Deployment View
Concurrency View
AADL
node1_x86_linux_cv
x86_partition
temperature
humidity
vt_gateway_tick
vt_gateway_sensor
Edit real time properties
Thread properties
Thread Placement
RM DM
Name
Dispatch_Protocol
Period
Priority
Dispatch_Offset
Stack_Size
x86_partition.temperature periodic 50ms 10 0ms 100 kbyte
x86_partition.humidity periodic 50ms 10 0ms 100 kbyte
x86_partition.vt_gateway_tick periodic 50ms 5 0ms 100 kbyte
x86_partition.vt_gateway_sensor sporadic 50ms 10 0ms 100 kbyte
Ok
Apply
Cancel
100 105 110 115 120 125 130 135 140 145 150 155 160 165 1701
concurrencyview : Start execution.
Show Desktop 1 2 3 4 QTerminal (Terminal emulator) tps Shell No. 1 TASTE Edit real time... C N S FR 12:24 Drop application icons here

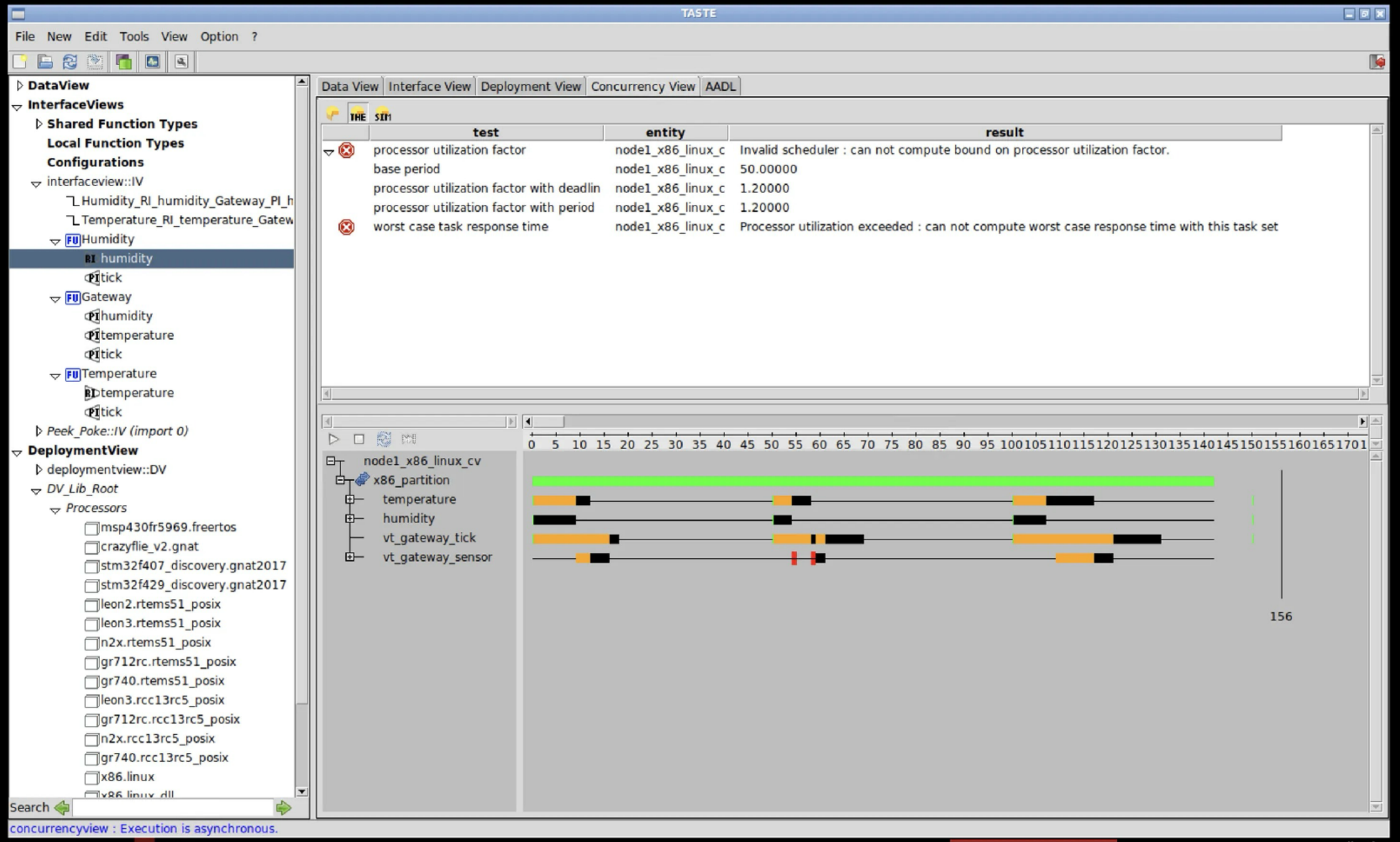

TASTE
File New Edit Tools View Option ?
DataView
InterfaceViews
Shared Function Types
Local Function Types
Configurations
interfaceview::IV
Humidity_RI_sensor_Gateway_PI_sen
Temperature_RI_sensor_Gateway_PI_
Humidity
sensor
tick
Gateway
sensor
tick
Temperature
sensor
tick
Peek_Poke::IV (import 0)
DeploymentView
deploymentview::DV
DV_Lib_Root
Processors
msp430fr5969.freertos
crazyflie_v2.gnat
stm32f407_discovery.gnat2017
stm32f429_discovery.gnat2017
leon2.rtems51_posix
leon3.rtems51_posix
n2x.rtems51_posix
gr712rc.rtems51_posix
gr740.rtems51_posix
leon3.rcc13rc5_posix
gr712rc.rcc13rc5_posix
n2x.rcc13rc5_posix
gr740.rcc13rc5_posix
x86.linux
x86.linux_dll
Search
Data View
Interface View
Deployment View
Concurrency View
AADL
x86_partition
temperature
humidity
vt_gateway_tick
vt_gateway_sensor
0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115 120 125 130 135 140 145 150 155 160 165 170
concurrencyview : Start execution.
Show Desktop 1 2 3 4 QTerminal (Terminal emulator) tps Shell No. 1 TASTE C N S FR 12:24 Drop application icons here

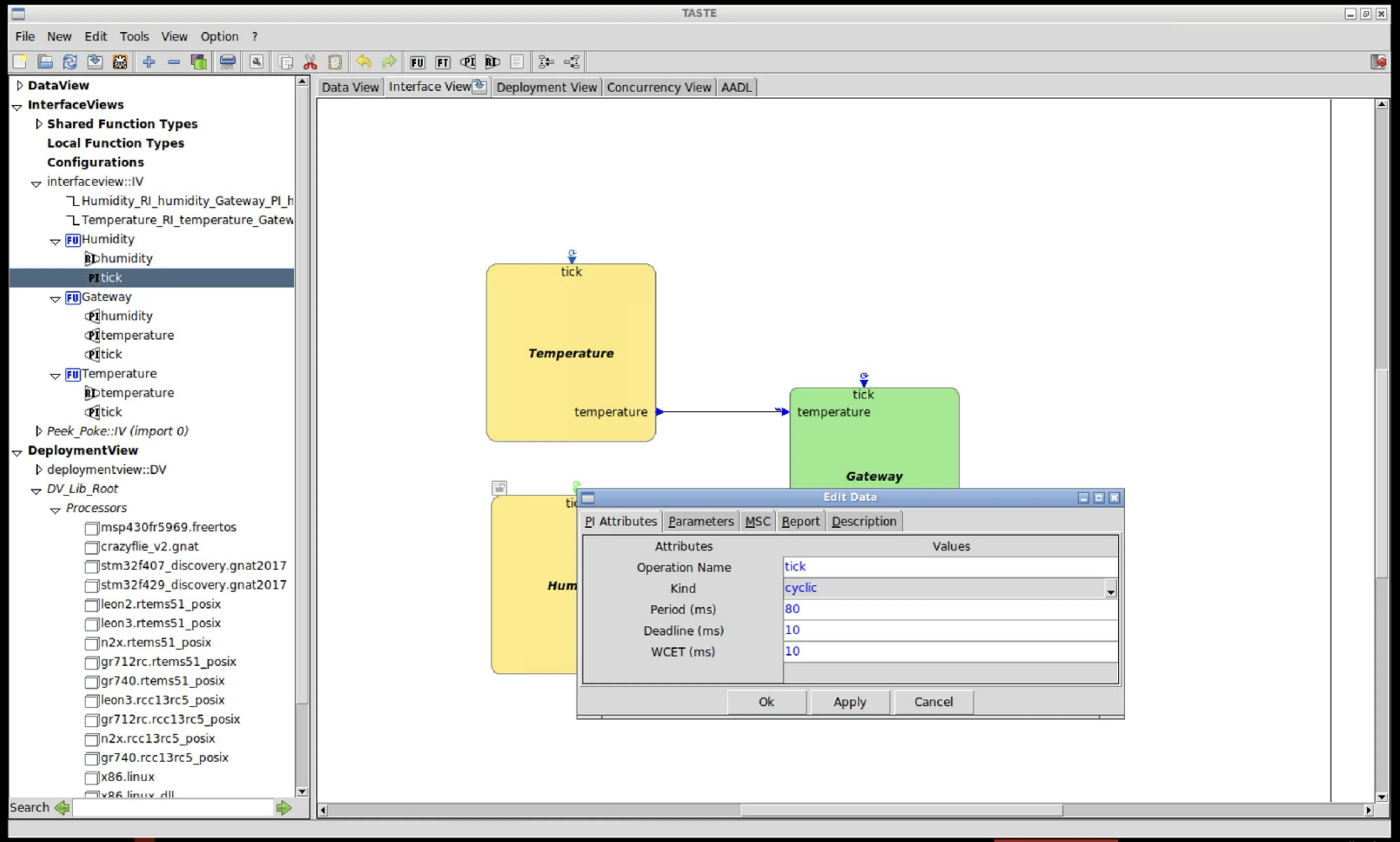

TASTE
File New Edit Tools View Option ?
DataView
InterfaceViews
Shared Function Types
Local Function Types
Configurations
interfaceview::IV
Humidity_RI_sensor_Gateway_PI_sen
Temperature_RI_sensor_Gateway_PI_
Humidity
sensor
tick
Gateway
sensor
tick
Temperature
sensor
tick
Peek_Poke::IV (import 0)
DeploymentView
deploymentview::DV
DV_Lib_Root
Processors
msp430fr5969.freertos
crazyflie_v2.gnat
stm32f407_discovery.gnat2017
stm32f429_discovery.gnat2017
leon2.rtems51_posix
leon3.rtems51_posix
n2x.rtems51_posix
gr712rc.rtems51_posix
gr740.rtems51_posix
leon3.rcc13rc5_posix
gr712rc.rcc13rc5_posix
n2x.rcc13rc5_posix
gr740.rcc13rc5_posix
x86.linux
x86.linux_dll
Search
Data View
Interface View
Deployment View
Concurrency View
AADL
node1_x86_linux_cv
x86_partition
temperature
humidity
vt_gateway_tick
vt_gateway_sensor
142
156
0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115 120 125 130 135 140 145 150 155 160 165 170
Simulator Stop
Show Desktop 1 2 3 4 QTerminal (Terminal emulator)
tps
Shell No. 1
TASTE
C N S FR
12:27
Drop application icons here

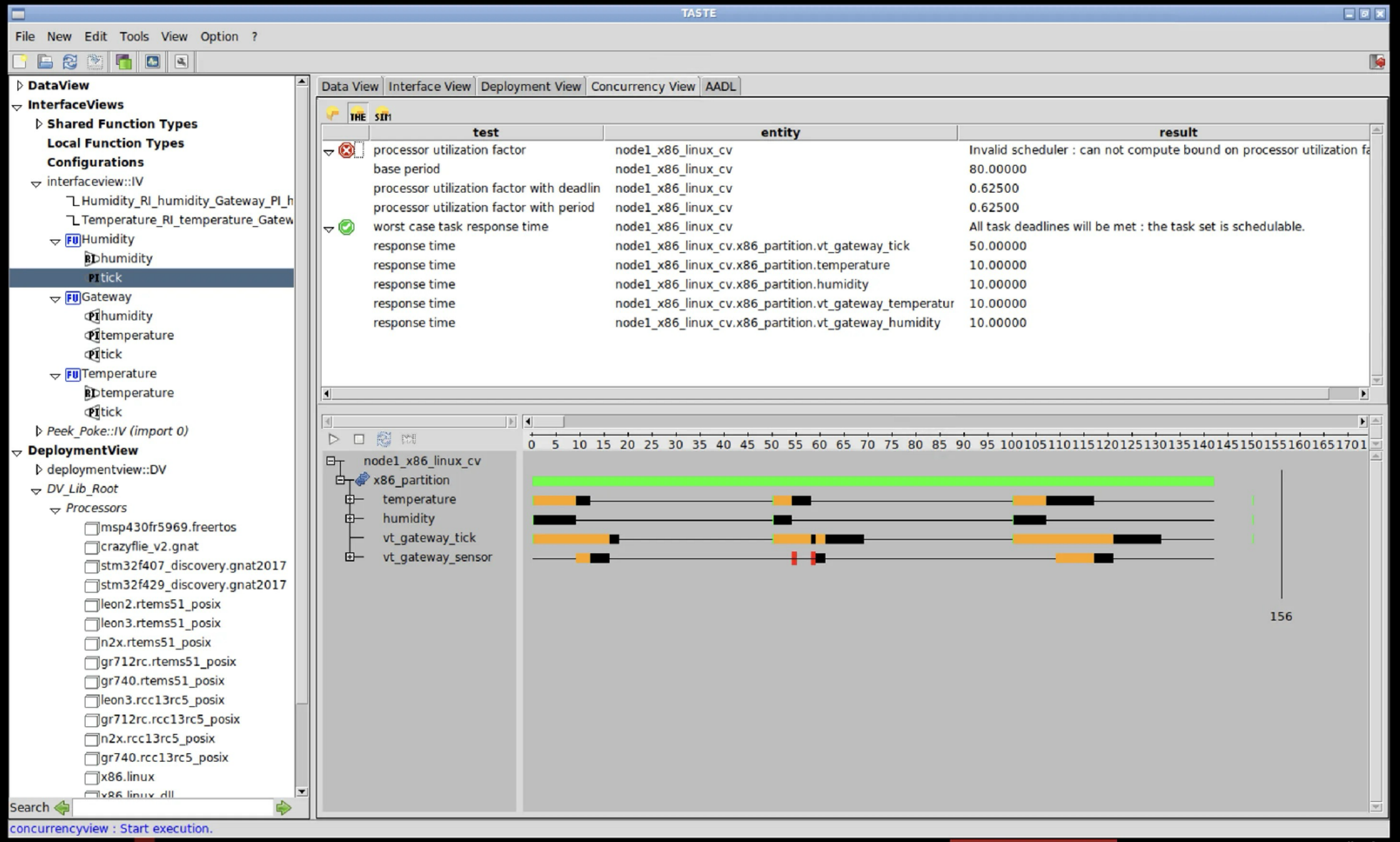
Dépendance sur deux PI

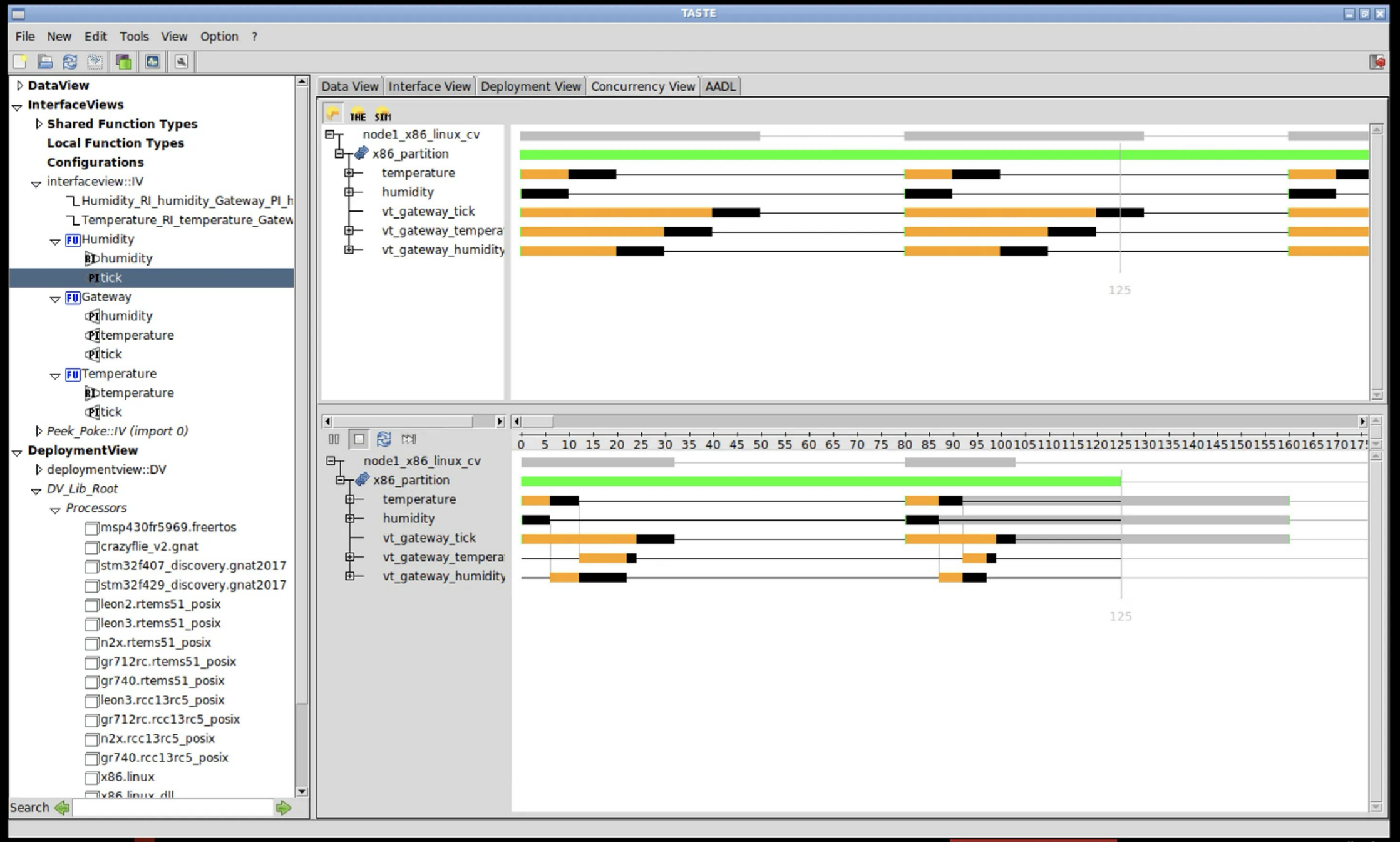
- Le problème de buffer overflow:
  - Changer la fréquence de gateway
  - Utiliser une PI par capteur


TASTE
File New Edit Tools View Option ?
DataView
InterfaceViews
Shared Function Types
Local Function Types
Configurations
interfaceview::IV
Humidity_RI_humidity_Gateway_PI_h
Temperature_RI_temperature_Gatew
Humidity
humidity
tick
Gateway
humidity
temperature
tick
Temperature
temperature
tick
Peek_Poke::IV (import 0)
DeploymentView
deploymentview::DV
DV_Lib_Root
Processors
msp430fr5969.freertos
crazyflie_v2.gnat
stm32f407_discovery.gnat2017
stm32f429_discovery.gnat2017
leon2.rtems51_posix
leon3.rtems51_posix
n2x.rtems51_posix
gr712rc.rtems51_posix
gr740.rtems51_posix
leon3.rcc13rc5_posix
gr712rc.rcc13rc5_posix
n2x.rcc13rc5_posix
gr740.rcc13rc5_posix
x86.linux
Search
Data View
Interface View
Deployment View
Concurrency View
AADL
Bound to Node1.x86_partition
tick
Temperature
temperature
tick
temperature
Gateway
humidity
tick
humidity
Humidity
interfaceview
No Selection
Show Desktop 1 2 3 4 QTerminal (Terminal emulator)
tps
Shell No. 1
TASTE
C N S FR
12:30
Drop application icons here


TASTE
File New Edit Tools View Option ?
DataView
InterfaceViews
Shared Function Types
Local Function Types
Configurations
interfaceview::IV
Humidity_RI_humidity_Gateway_PI_h
Temperature_RI_temperature_Gatew
Humidity
humidity
tick
Gateway
humidity
temperature
tick
Temperature
temperature
tick
Peek_Poke::IV (import 0)
DeploymentView
deploymentview::DV
DV_Lib_Root
Processors
msp430fr5969.freertos
crazyflie_v2.gnat
stm32f407_discovery.gnat2017
stm32f429_discovery.gnat2017
leon2.rtems51_posix
leon3.rtems51_posix
n2x.rtems51_posix
gr712rc.rtems51_posix
gr740.rtems51_posix
leon3.rcc13rc5_posix
gr712rc.rcc13rc5_posix
n2x.rcc13rc5_posix
gr740.rcc13rc5_posix
x86.linux
Search
Data View
Interface View
Deployment View
Concurrency View
AADL
THE
SIM
test
entity
result
processor utilization factor
node1_x86_linux_c
Invalid scheduler : can not compute bound on processor utilization factor.
base period
node1_x86_linux_c
50.00000
processor utilization factor with deadlin
node1_x86_linux_c
1.20000
processor utilization factor with period
node1_x86_linux_c
1.20000
worst case task response time
node1_x86_linux_c
Processor utilization exceeded : can not compute worst case response time with this task set
0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115 120 125 130 135 140 145 150 155 160 165 170
node1_x86_linux_cv
x86_partition
temperature
humidity
vt_gateway_tick
vt_gateway_sensor
156
concurrencyview : Execution is asynchronous.
Show Desktop 1 2 3 4 QTerminal (Terminal emulator)
tps
Shell No. 1
TASTE
C N S FR
12:30
Drop application icons here


TASTE
File New Edit Tools View Option ?
DataView
InterfaceViews
Shared Function Types
Local Function Types
Configurations
interfaceview::IV
Humidity_RI_humidity_Gateway_PI_h
Temperature_RI_temperature_Gatew
Humidity
humidity
tick
Gateway
humidity
temperature
tick
Temperature
temperature
tick
Peek_Poke::IV (import 0)
DeploymentView
deploymentview::DV
DV_Lib_Root
Processors
msp430fr5969.freertos
crazyflie_v2.gnat
stm32f407_discovery.gnat2017
stm32f429_discovery.gnat2017
leon2.rtems51_posix
leon3.rtems51_posix
n2x.rtems51_posix
gr712rc.rtems51_posix
gr740.rtems51_posix
leon3.rcc13rc5_posix
gr712rc.rcc13rc5_posix
n2x.rcc13rc5_posix
gr740.rcc13rc5_posix
x86.linux
Search
Data View
Interface View
Deployment View
Concurrency View
AADL
tick
Temperature
temperature
tick
temperature
Gateway
Edit Data
PI Attributes
Parameters
MSC
Report
Description
Attributes
Values
Operation Name
tick
Kind
cyclic
Period (ms)
80
Deadline (ms)
10
WCET (ms)
10
Ok
Apply
Cancel
Show Desktop
1 2 3 4
QTerminal (Terminal emulator)
tps
Shell No. 1
TASTE
Edit Data
C N S FR
12:31
Drop application icons here


TASTE
File New Edit Tools View Option ?
DataView
InterfaceViews
Shared Function Types
Local Function Types
Configurations
interfaceview::IV
Humidity_RI_humidity_Gateway_PI_h
Temperature_RI_temperature_Gatew
Humidity
humidity
tick
Gateway
humidity
temperature
tick
Temperature
temperature
tick
Peek_Poke::IV (import 0)
DeploymentView
deploymentview::DV
DV_Lib_Root
Processors
msp430fr5969.freertos
crazyflie_v2.gnat
stm32f407_discovery.gnat2017
stm32f429_discovery.gnat2017
leon2.rtems51_posix
leon3.rtems51_posix
n2x.rtems51_posix
gr712rc.rtems51_posix
gr740.rtems51_posix
leon3.rcc13rc5_posix
gr712rc.rcc13rc5_posix
n2x.rcc13rc5_posix
gr740.rcc13rc5_posix
x86.linux
Search
Data View
Interface View
Deployment View
Concurrency View
AADL
THE
SIM
test
entity
result
processor utilization factor
node1_x86_linux_cv
Invalid scheduler : can not compute bound on processor utilization fa
base period
node1_x86_linux_cv
80.00000
processor utilization factor with deadlin
node1_x86_linux_cv
0.62500
processor utilization factor with period
node1_x86_linux_cv
0.62500
worst case task response time
node1_x86_linux_cv
All task deadlines will be met : the task set is schedulable.
response time
node1_x86_linux_cv.x86_partition.vt_gateway_tick
50.00000
response time
node1_x86_linux_cv.x86_partition.temperature
10.00000
response time
node1_x86_linux_cv.x86_partition.humidity
10.00000
response time
node1_x86_linux_cv.x86_partition.vt_gateway_temperatur
10.00000
response time
node1_x86_linux_cv.x86_partition.vt_gateway_humidity
10.00000
0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100105110115120125130135140145150155160165170
node1_x86_linux_cv
x86_partition
temperature
humidity
vt_gateway_tick
vt_gateway_sensor
156
concurrencyview : Start execution.
Show Desktop 1 2 3 4 QTerminal (Terminal emulator)
tps
Shell No. 1
TASTE
C N S FR
12:31
Drop application icons here

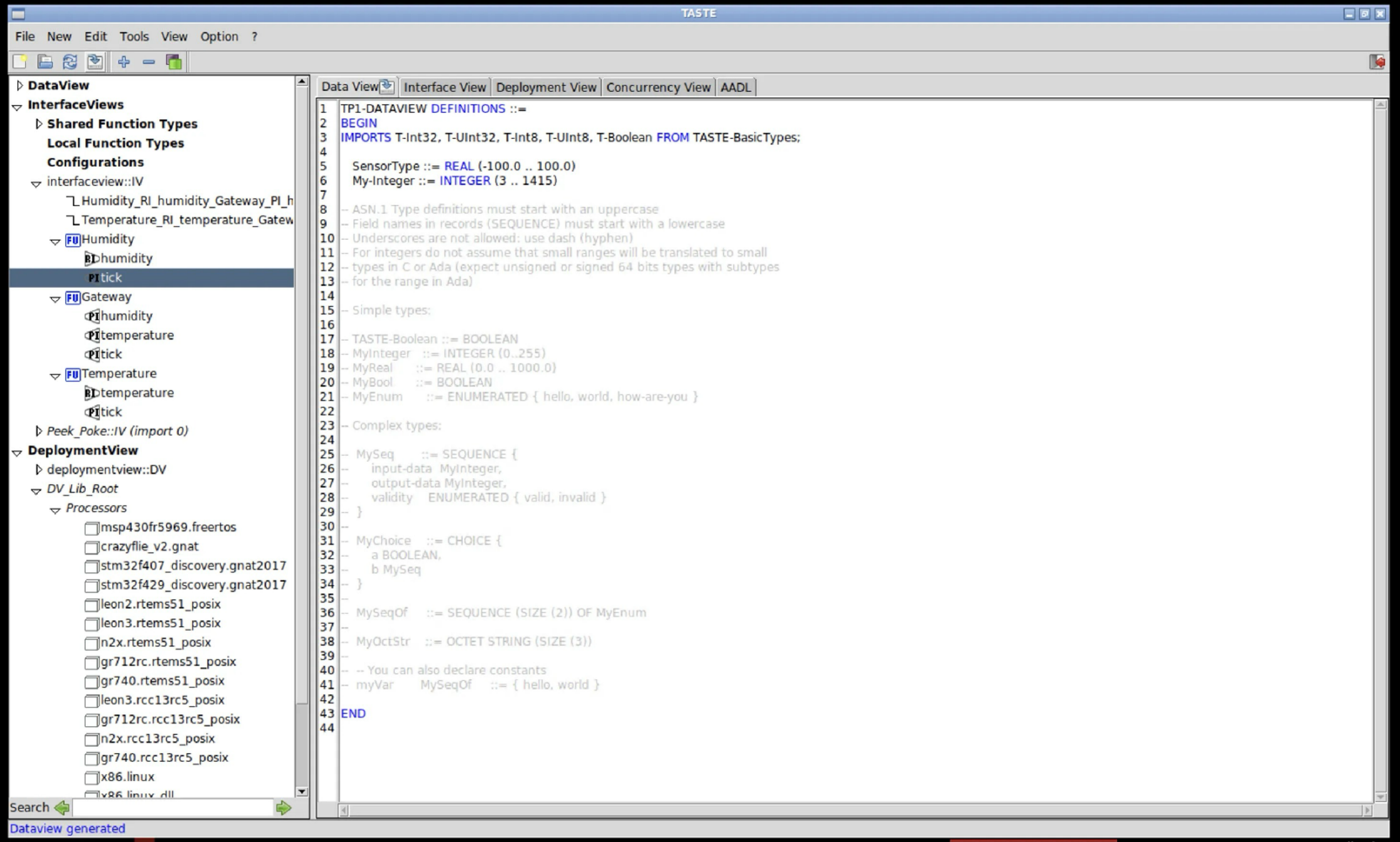

TASTE
File New Edit Tools View Option ?
DataView
InterfaceViews
Shared Function Types
Local Function Types
Configurations
interfaceview::IV
Humidity_RI_humidity_Gateway_PI_h
Temperature_RI_temperature_Gatew
Humidity
humidity
tick
Gateway
humidity
temperature
tick
Temperature
temperature
tick
Peek_Poke::IV (import 0)
DeploymentView
deploymentview::DV
DV_Lib_Root
Processors
msp430fr5969.freertos
crazyflie_v2.gnat
stm32f407_discovery.gnat2017
stm32f429_discovery.gnat2017
leon2.rtems51_posix
leon3.rtems51_posix
n2x.rtems51_posix
gr712rc.rtems51_posix
gr740.rtems51_posix
leon3.rcc13rc5_posix
gr712rc.rcc13rc5_posix
n2x.rcc13rc5_posix
gr740.rcc13rc5_posix
x86.linux
Search
Data View
Interface View
Deployment View
Concurrency View
AADL
node1_x86_linux_cv
x86_partition
temperature
humidity
vt_gateway_tick
vt_gateway_tempera
vt_gateway_humidity
125
0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115 120 125 130 135 140 145 150 155 160 165 170
Show Desktop 1 2 3 4 QTerminal (Terminal emulator) tps Shell No. 1 TASTE C N S FR 12:33 Drop application icons here

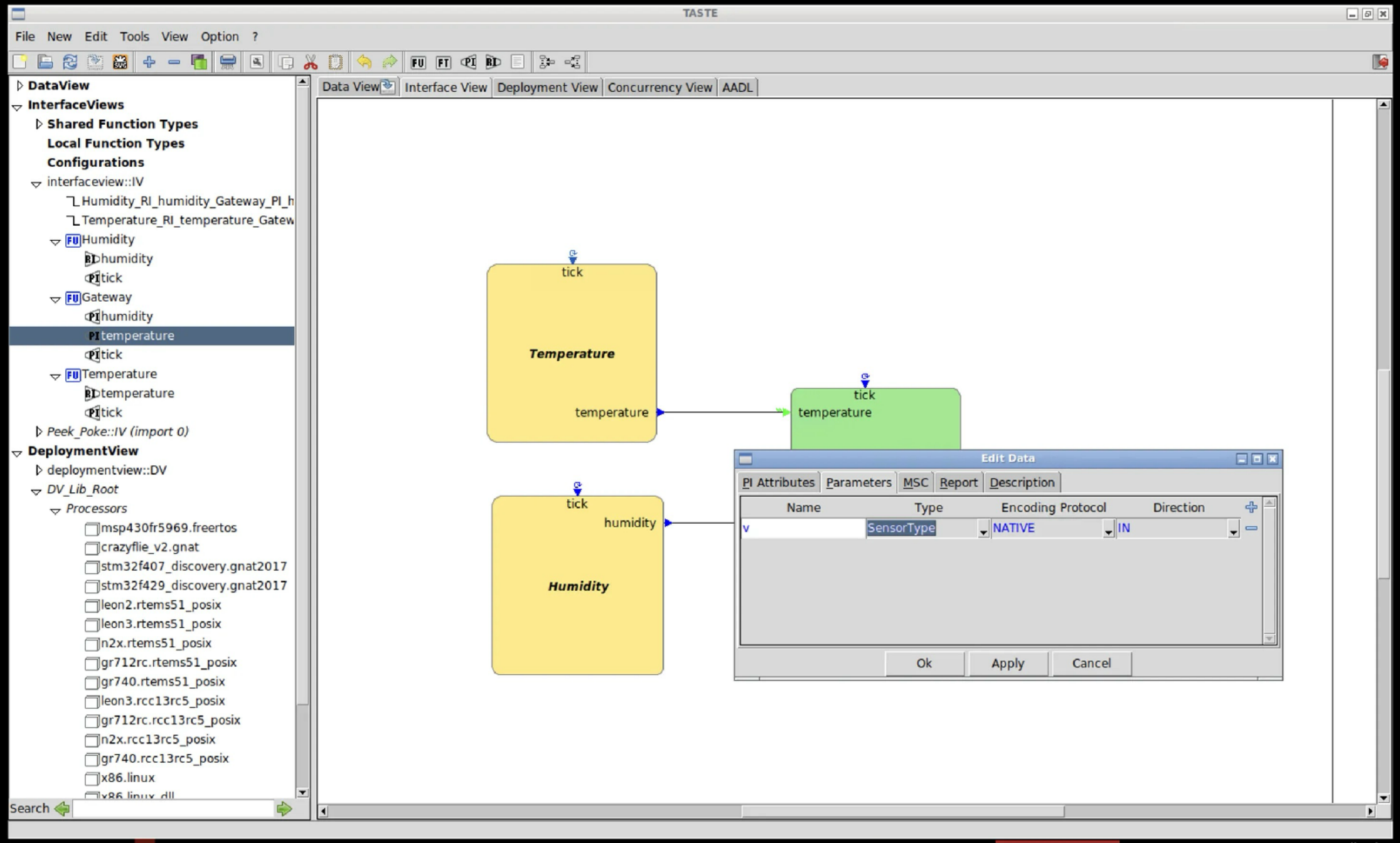
Paramètres

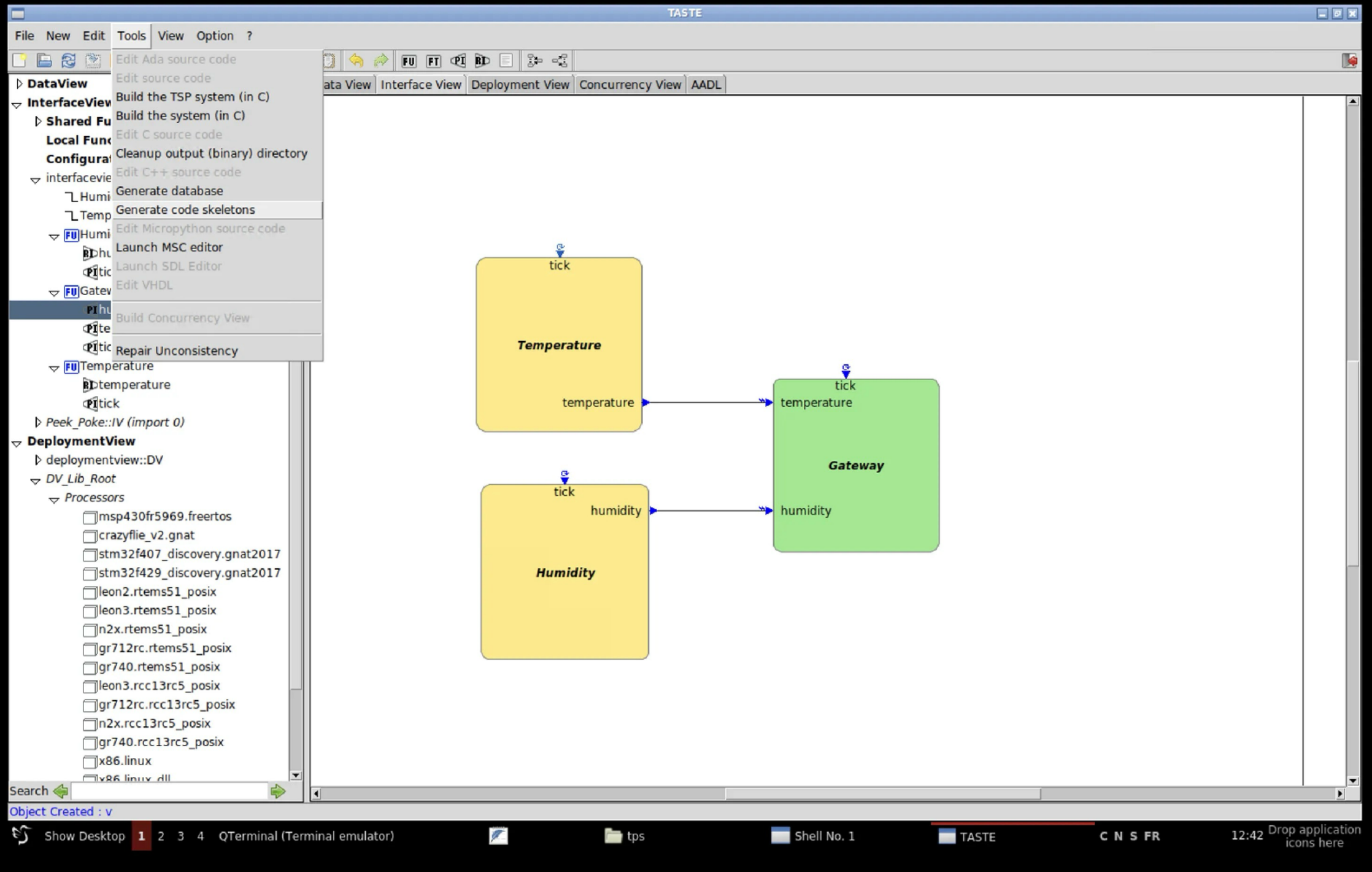
- Définition d’un type pour les valeurs de capteurs
- Dans la Data View (DV) ajouter un définition:

```
SensorType ::= REAL (-100.0 .. 100.0)
```

- Ajouter un paramètre dans les PI temperature et humidity.


TASTE
File New Edit Tools View Option ?
DataView
InterfaceViews
Shared Function Types
Local Function Types
Configurations
interfaceview::IV
Humidity_RI_humidity_Gateway_PI_h
Temperature_RI_temperature_Gatew
Humidity
humidity
tick
Gateway
humidity
temperature
tick
Temperature
temperature
tick
Peek_Poke::IV (import 0)
DeploymentView
deploymentview::DV
DV_Lib_Root
Processors
msp430fr5969.freertos
crazyflie_v2.gnat
stm32f407_discovery.gnat2017
stm32f429_discovery.gnat2017
leon2.rtems51_posix
leon3.rtems51_posix
n2x.rtems51_posix
gr712rc.rtems51_posix
gr740.rtems51_posix
leon3.rcc13rc5_posix
gr712rc.rcc13rc5_posix
n2x.rcc13rc5_posix
gr740.rcc13rc5_posix
x86.linux
Search
Data View
Interface View
Deployment View
Concurrency View
AADL
1 TP1-DATAVIEW DEFINITIONS ::=
2 BEGIN
3 IMPORTS T-Int32, T-UInt32, T-Int8, T-UInt8, T-Boolean FROM TASTE-BasicTypes;
4
5 SensorType ::= REAL (-100.0 .. 100.0)
6 My-Integer ::= INTEGER (3 .. 1415)
7
8 -- ASN.1 Type definitions must start with an uppercase
9 -- Field names in records (SEQUENCE) must start with a lowercase
10 -- Underscores are not allowed: use dash (hyphen)
11 -- For integers do not assume that small ranges will be translated to small
12 -- types in C or Ada (expect unsigned or signed 64 bits types with subtypes
13 -- for the range in Ada)
14
15 -- Simple types:
16
17 -- TASTE-Boolean ::= BOOLEAN
18 -- MyInteger ::= INTEGER (0..255)
19 -- MyReal ::= REAL (0.0 .. 1000.0)
20 -- MyBool ::= BOOLEAN
21 -- MyEnum ::= ENUMERATED { hello, world, how-are-you }
22
23 -- Complex types:
24
25 -- MySeq ::= SEQUENCE {
26 -- input-data MyInteger,
27 -- output-data MyInteger,
28 -- validity ENUMERATED { valid, invalid }
29 -- }
30 --
31 -- MyChoice ::= CHOICE {
32 -- a BOOLEAN,
33 -- b MySeq
34 -- }
35 --
36 -- MySeqOf ::= SEQUENCE (SIZE (2)) OF MyEnum
37 --
38 -- MyOctStr ::= OCTET STRING (SIZE (3))
39 --
40 -- -- You can also declare constants
41 -- myVar MySeqOf ::= { hello, world }
42
43 END
44
Dataview generated
Show Desktop 1 2 3 4 QTerminal (Terminal emulator)
tps
Shell No. 1
TASTE
C N S FR
12:39
Drop application icons here


TASTE
File New Edit Tools View Option ?
DataView
InterfaceViews
Shared Function Types
Local Function Types
Configurations
interfaceview::IV
Humidity_RI_humidity_Gateway_PI_h
Temperature_RI_temperature_Gatew
Humidity
humidity
tick
Gateway
humidity
temperature
tick
Temperature
temperature
tick
Peek_Poke::IV (import 0)
DeploymentView
deploymentview::DV
DV_Lib_Root
Processors
msp430fr5969.freertos
crazyflie_v2.gnat
stm32f407_discovery.gnat2017
stm32f429_discovery.gnat2017
leon2.rtems51_posix
leon3.rtems51_posix
n2x.rtems51_posix
gr712rc.rtems51_posix
gr740.rtems51_posix
leon3.rcc13rc5_posix
gr712rc.rcc13rc5_posix
n2x.rcc13rc5_posix
gr740.rcc13rc5_posix
x86.linux
Search
Data View
Interface View
Deployment View
Concurrency View
AADL
tick
Temperature
temperature
tick
temperature
tick
humidity
Humidity
Edit Data
PI Attributes
Parameters
MSC
Report
Description
Name
Type
Encoding Protocol
Direction
v
SensorType
NATIVE
IN
Ok
Apply
Cancel
Show Desktop 1 2 3 4 QTerminal (Terminal emulator)
tps
Shell No. 1
TASTE
Edit Data
C N S FR
12:39
Drop application icons here


TASTE
File New Edit Tools View Option ?
Edit Ada source code
Edit source code
Build the TSP system (in C)
Build the system (in C)
Edit C source code
Cleanup output (binary) directory
Edit C++ source code
Generate database
Generate code skeletons
Edit Micropython source code
Launch MSC editor
Launch SDL Editor
Edit VHDL
Build Concurrency View
Repair Unconsistency
DataView
InterfaceView
Shared Fu
Local Func
Configura
interfacevie
Humi
Temp
Humi
Gatev
Temperature
temperature
tick
Peek_Poke::IV (import 0)
DeploymentView
deploymentview::DV
DV_Lib_Root
Processors
msp430fr5969.freertos
crazyflie_v2.gnat
stm32f407_discovery.gnat2017
stm32f429_discovery.gnat2017
leon2.rtems51_posix
leon3.rtems51_posix
n2x.rtems51_posix
gr712rc.rtems51_posix
gr740.rtems51_posix
leon3.rcc13rc5_posix
gr712rc.rcc13rc5_posix
n2x.rcc13rc5_posix
gr740.rcc13rc5_posix
x86.linux
Search
ata View
Interface View
Deployment View
Concurrency View
AADL
tick
Temperature
temperature
tick
temperature
Gateway
tick
humidity
humidity
Humidity
Object Created : v
Show Desktop 1 2 3 4 QTerminal (Terminal emulator)
tps
Shell No. 1
TASTE
C N S FR
12:42
Drop application icons here

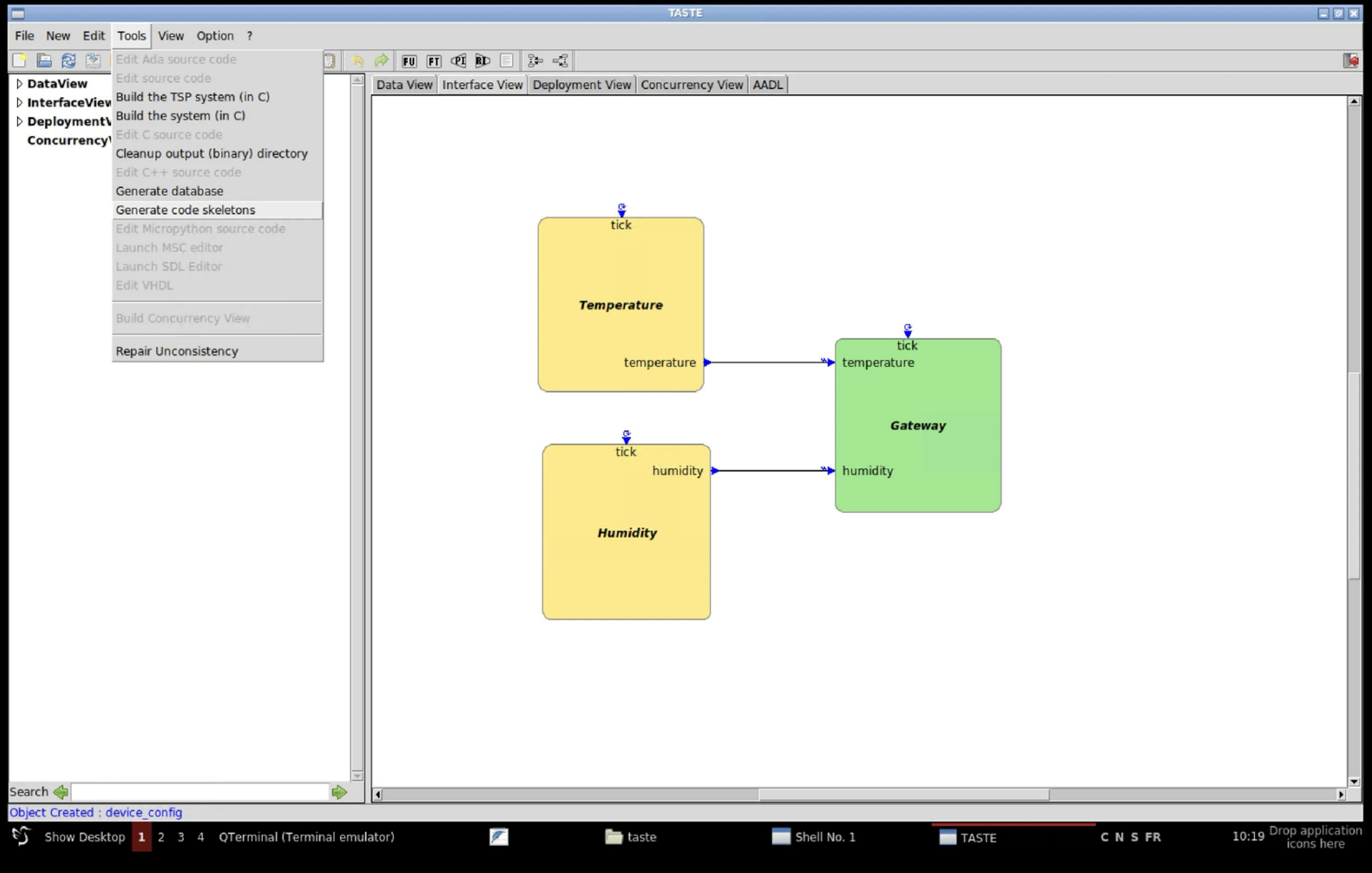
Génération de code

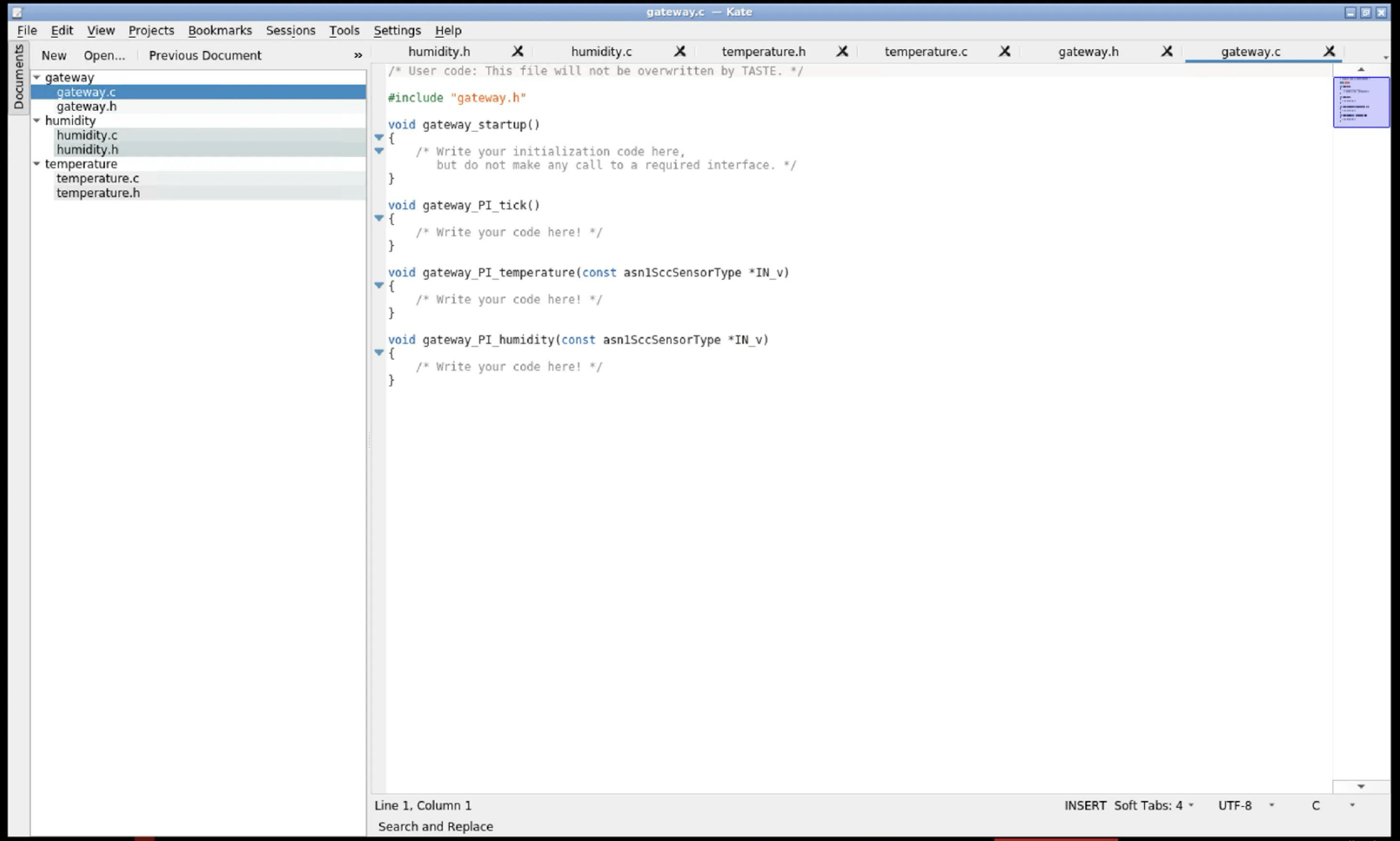
- Générer les squelettes de code
- Ajouter le code fonctionnel
- Compiler

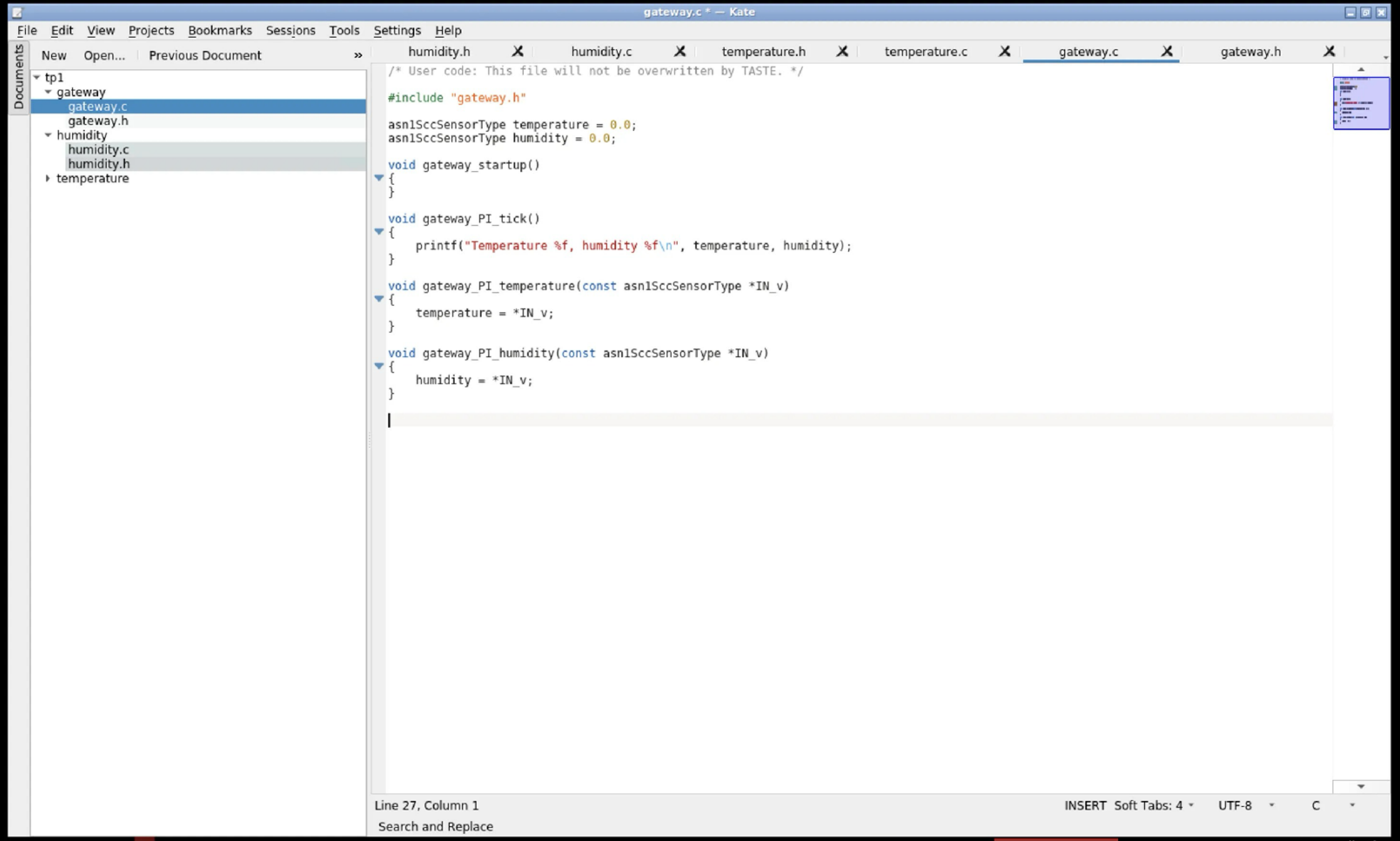
```
./build-script.sh
```

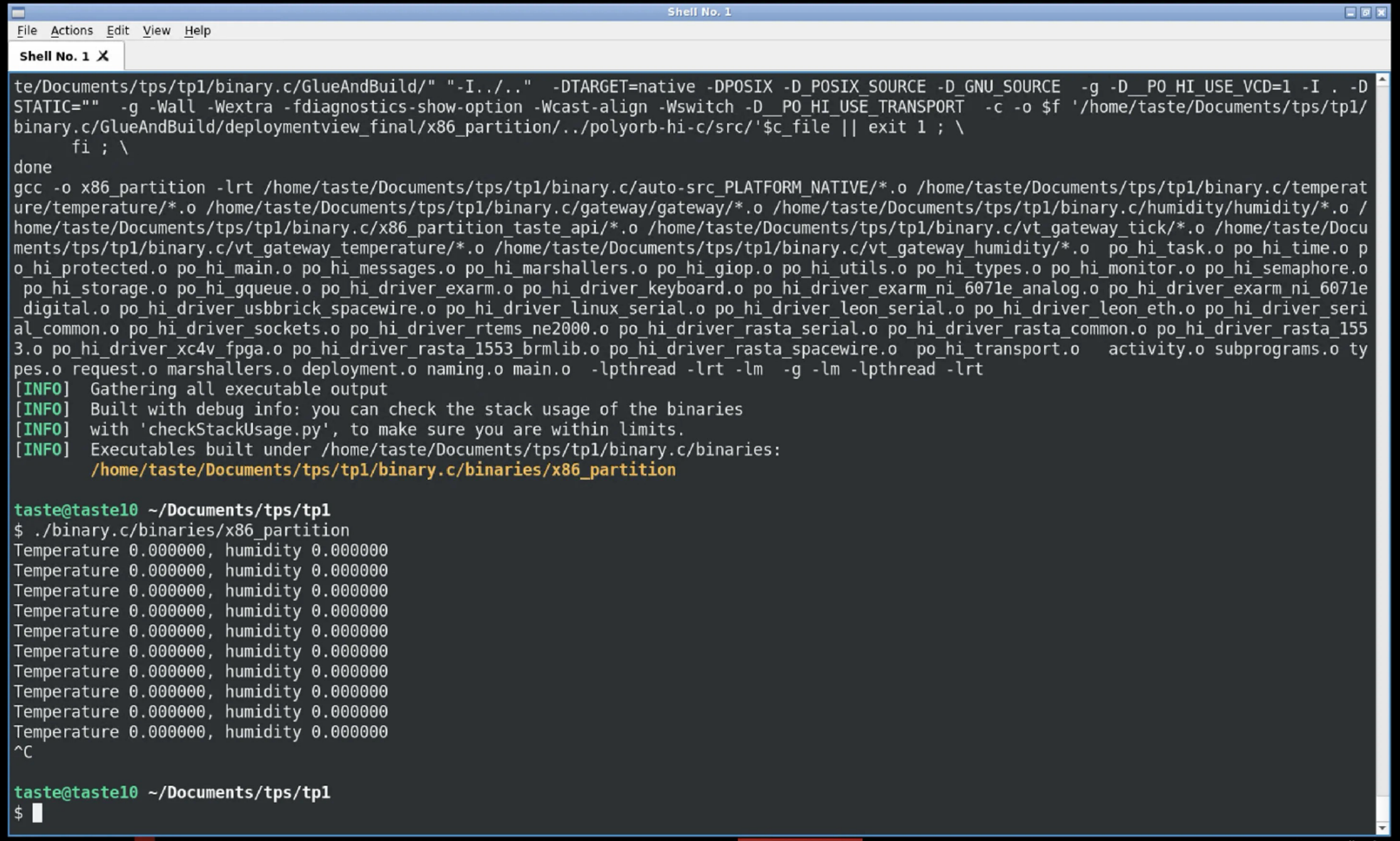
- Simuler (et refaire 😁)

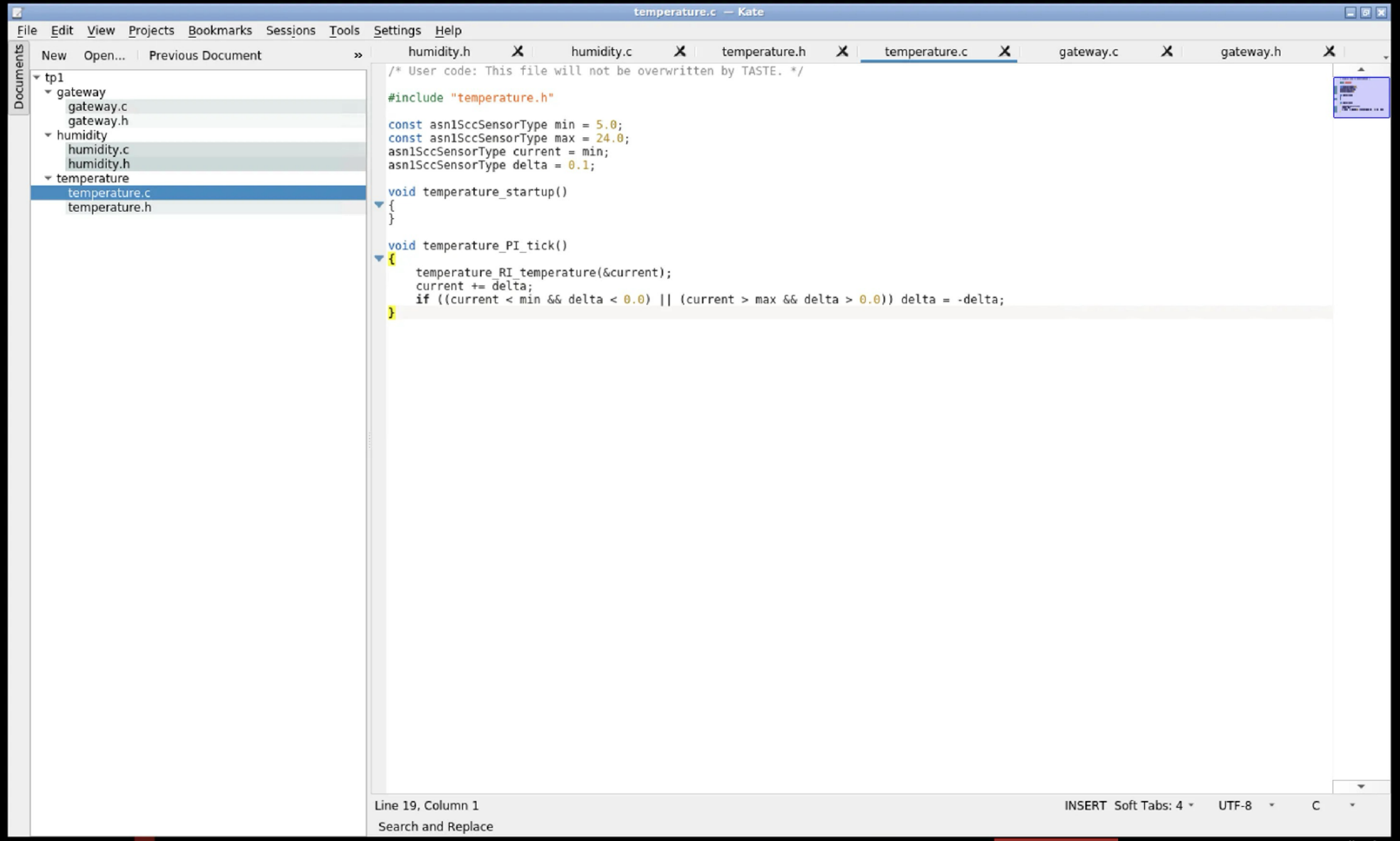
```
./binary.c/binaries/x86_partition
```


TASTE
File New Edit Tools View Option ?
Edit Ada source code
Edit source code
Build the TSP system (in C)
Build the system (in C)
Edit C source code
Cleanup output (binary) directory
Edit C++ source code
Generate database
Generate code skeletons
Edit Micropython source code
Launch MSC editor
Launch SDL Editor
Edit VHDL
Build Concurrency View
Repair Unconsistency
DataView
InterfaceView
DeploymentV
ConcurrencyV
Data View
Interface View
Deployment View
Concurrency View
AADL
tick
Temperature
temperature
tick
temperature
Gateway
tick
humidity
humidity
Humidity
Search
Object Created : device_config
Show Desktop 1 2 3 4 QTerminal (Terminal emulator)
taste
Shell No. 1
TASTE
C N S FR
10:19
Drop application icons here


gateway.c — Kate
File Edit View Projects Bookmarks Sessions Tools Settings Help
Documents
New Open... Previous Document
gateway
gateway.c
gateway.h
humidity
humidity.c
humidity.h
temperature
temperature.c
temperature.h
humidity.h
humidity.c
temperature.h
temperature.c
gateway.h
gateway.c
/* User code: This file will not be overwritten by TASTE. */
#include "gateway.h"
void gateway_startup()
{
/* Write your initialization code here,
but do not make any call to a required interface. */
}
void gateway_PI_tick()
{
/* Write your code here! */
}
void gateway_PI_temperature(const asn1SccSensorType *IN_v)
{
/* Write your code here! */
}
void gateway_PI_humidity(const asn1SccSensorType *IN_v)
{
/* Write your code here! */
}
Line 1, Column 1
INSERT Soft Tabs: 4
UTF-8
C
Search and Replace
Show Desktop 1 2 3 4 QTerminal (Terminal emulator)
tp1
Shell No. 1
TASTE
gateway.c —...
C N S FR
12:45
Drop application icons here


gateway.c * — Kate
File Edit View Projects Bookmarks Sessions Tools Settings Help
Documents
New Open... Previous Document
tp1
gateway
gateway.c
gateway.h
humidity
humidity.c
humidity.h
temperature
humidity.h
humidity.c
temperature.h
temperature.c
gateway.c
gateway.h
/* User code: This file will not be overwritten by TASTE. */
#include "gateway.h"
asn1SccSensorType temperature = 0.0;
asn1SccSensorType humidity = 0.0;
void gateway_startup()
{
}
void gateway_PI_tick()
{
printf("Temperature %f, humidity %f\n", temperature, humidity);
}
void gateway_PI_temperature(const asn1SccSensorType *IN_v)
{
temperature = *IN_v;
}
void gateway_PI_humidity(const asn1SccSensorType *IN_v)
{
humidity = *IN_v;
}
Line 27, Column 1
INSERT Soft Tabs: 4
UTF-8
C
Search and Replace
Show Desktop 1 2 3 4 QTerminal (Terminal emulator)
tp1
Shell No. 1
TASTE
gateway.c * ...
C N S FR
12:49
Drop application icons here


Shell No. 1
File Actions Edit View Help
Shell No. 1
te/Documents/tps/tp1/binary.c/GlueAndBuild/" "-I../.." -DTARGET=native -DPOSIX -D_POSIX_SOURCE -D_GNU_SOURCE -g -D__PO_HI_USE_VCD=1 -I . -D
STATIC="" -g -Wall -Wextra -fdiagnostics-show-option -Wcast-align -Wswitch -D__PO_HI_USE_TRANSPORT -c -o $f '/home/taste/Documents/tps/tp1/
binary.c/GlueAndBuild/deploymentview_final/x86_partition/../polyorb-hi-c/src/'$c_file || exit 1 ; \
fi ; \
done
gcc -o x86_partition -lrt /home/taste/Documents/tps/tp1/binary.c/auto-src_PLATFORM_NATIVE/*.o /home/taste/Documents/tps/tp1/binary.c/temperat
ure/temperature/*.o /home/taste/Documents/tps/tp1/binary.c/gateway/gateway/*.o /home/taste/Documents/tps/tp1/binary.c/humidity/humidity/*.o /
home/taste/Documents/tps/tp1/binary.c/x86_partition_taste_api/*.o /home/taste/Documents/tps/tp1/binary.c/vt_gateway_tick/*.o /home/taste/Docu
ments/tps/tp1/binary.c/vt_gateway_temperature/*.o /home/taste/Documents/tps/tp1/binary.c/vt_gateway_humidity/*.o po_hi_task.o po_hi_time.o p
o_hi_protected.o po_hi_main.o po_hi_messages.o po_hi_marshallers.o po_hi_giop.o po_hi_utils.o po_hi_types.o po_hi_monitor.o po_hi_semaphore.o
po_hi_storage.o po_hi_gqueue.o po_hi_driver_exarm.o po_hi_driver_keyboard.o po_hi_driver_exarm_ni_6071e_analog.o po_hi_driver_exarm_ni_6071e
_digital.o po_hi_driver_usbbrick_spacewire.o po_hi_driver_linux_serial.o po_hi_driver_leon_serial.o po_hi_driver_leon_eth.o po_hi_driver_seri
al_common.o po_hi_driver_sockets.o po_hi_driver_rtems_ne2000.o po_hi_driver_rasta_serial.o po_hi_driver_rasta_common.o po_hi_driver_rasta_155
3.o po_hi_driver_xc4v_fpga.o po_hi_driver_rasta_1553_brmlib.o po_hi_driver_rasta_spacewire.o po_hi_transport.o activity.o subprograms.o ty
pes.o request.o marshallers.o deployment.o naming.o main.o -lpthread -lrt -lm -g -lm -lpthread -lrt
[INFO] Gathering all executable output
[INFO] Built with debug info: you can check the stack usage of the binaries
[INFO] with 'checkStackUsage.py', to make sure you are within limits.
[INFO] Executables built under /home/taste/Documents/tps/tp1/binary.c/binaries:
/home/taste/Documents/tps/tp1/binary.c/binaries/x86_partition
taste@taste10 ~/Documents/tps/tp1
$ ./binary.c/binaries/x86_partition
Temperature 0.000000, humidity 0.000000
Temperature 0.000000, humidity 0.000000
Temperature 0.000000, humidity 0.000000
Temperature 0.000000, humidity 0.000000
Temperature 0.000000, humidity 0.000000
Temperature 0.000000, humidity 0.000000
Temperature 0.000000, humidity 0.000000
Temperature 0.000000, humidity 0.000000
Temperature 0.000000, humidity 0.000000
Temperature 0.000000, humidity 0.000000
^C
taste@taste10 ~/Documents/tps/tp1
$
Show Desktop 1 2 3 4 QTerminal (Terminal emulator) tp1 Shell No. 1 TASTE gateway.c ... C N S FR 12:51 Drop application icons here


temperature.c — Kate
File Edit View Projects Bookmarks Sessions Tools Settings Help
Documents
New Open... Previous Document
tp1
gateway
gateway.c
gateway.h
humidity
humidity.c
humidity.h
temperature
temperature.c
temperature.h
humidity.h
humidity.c
temperature.h
temperature.c
gateway.c
gateway.h
/* User code: This file will not be overwritten by TASTE. */
#include "temperature.h"
const asn1SccSensorType min = 5.0;
const asn1SccSensorType max = 24.0;
asn1SccSensorType current = min;
asn1SccSensorType delta = 0.1;
void temperature_startup()
{
}
void temperature_PI_tick()
{
temperature_RI_temperature(&current);
current += delta;
if ((current < min && delta < 0.0) || (current > max && delta > 0.0)) delta = -delta;
}
Line 19, Column 1
INSERT Soft Tabs: 4
UTF-8
C
Search and Replace
Show Desktop 1 2 3 4 QTerminal (Terminal emulator)
temperature
Shell No. 1
TASTE
temperature....
C N S FR
12:53
Drop application icons here

Shell No. 1

File Actions Edit View Help

Shell No. 1

```
taste@taste10 ~/Documents/tps/tp1
$ ./binary.c/binaries/x86_partition
Temperature 0.000000, humidity 0.000000
Temperature 5.000000, humidity 70.000000
Temperature 5.100000, humidity 69.900000
Temperature 5.200000, humidity 69.800000
Temperature 5.300000, humidity 69.700000
Temperature 5.400000, humidity 69.600000
Temperature 5.500000, humidity 69.500000
Temperature 5.600000, humidity 69.400000
Temperature 5.700000, humidity 69.300000
Temperature 5.800000, humidity 69.200000
Temperature 5.900000, humidity 69.100000
Temperature 6.000000, humidity 69.000000
Temperature 6.100000, humidity 68.900000
Temperature 6.200000, humidity 68.800000
Temperature 6.300000, humidity 68.700000
Temperature 6.400000, humidity 68.600000
Temperature 6.500000, humidity 68.500000
Temperature 6.600000, humidity 68.400000
Temperature 6.700000, humidity 68.300000
Temperature 6.800000, humidity 68.200000
Temperature 6.900000, humidity 68.100000
Temperature 7.000000, humidity 68.000000
Temperature 7.100000, humidity 67.900000
Temperature 7.200000, humidity 67.800000
Temperature 7.300000, humidity 67.700000
Temperature 7.400000, humidity 67.600000
Temperature 7.500000, humidity 67.500000
Temperature 7.600000, humidity 67.400000
Temperature 7.700000, humidity 67.300000
Temperature 7.800000, humidity 67.200000
^C

taste@taste10 ~/Documents/tps/tp1
$
```

Show Desktop 1 2 3 4 QTerminal (Terminal emulator) temperature Shell No. 1 TASTE temperature.... C N S FR 12:53 Drop application icons here

Problème Ocarina

- Le compilateur Ocarina transforme AADL en C
- L’erreur suivante survient si une property AADL est associée à un objet qui n’existe pas

```
process.aadl:57:03: Priority (property association) points to gateway (identifier) that is not a valid subcomponent
Cannot analyze AADL specifications
Failed while executing:
ocarina -x main.aadl
From this directory:
/home/taste/Documents/tps/tp1/binary.c/GlueAndBuild

Press ENTER to retry...
```

- Si vous avez cette erreur, c’est la priorité mise au début du TP
- Il suffit de l’enlever dans « ConcurrencyView_Properties.aadl »

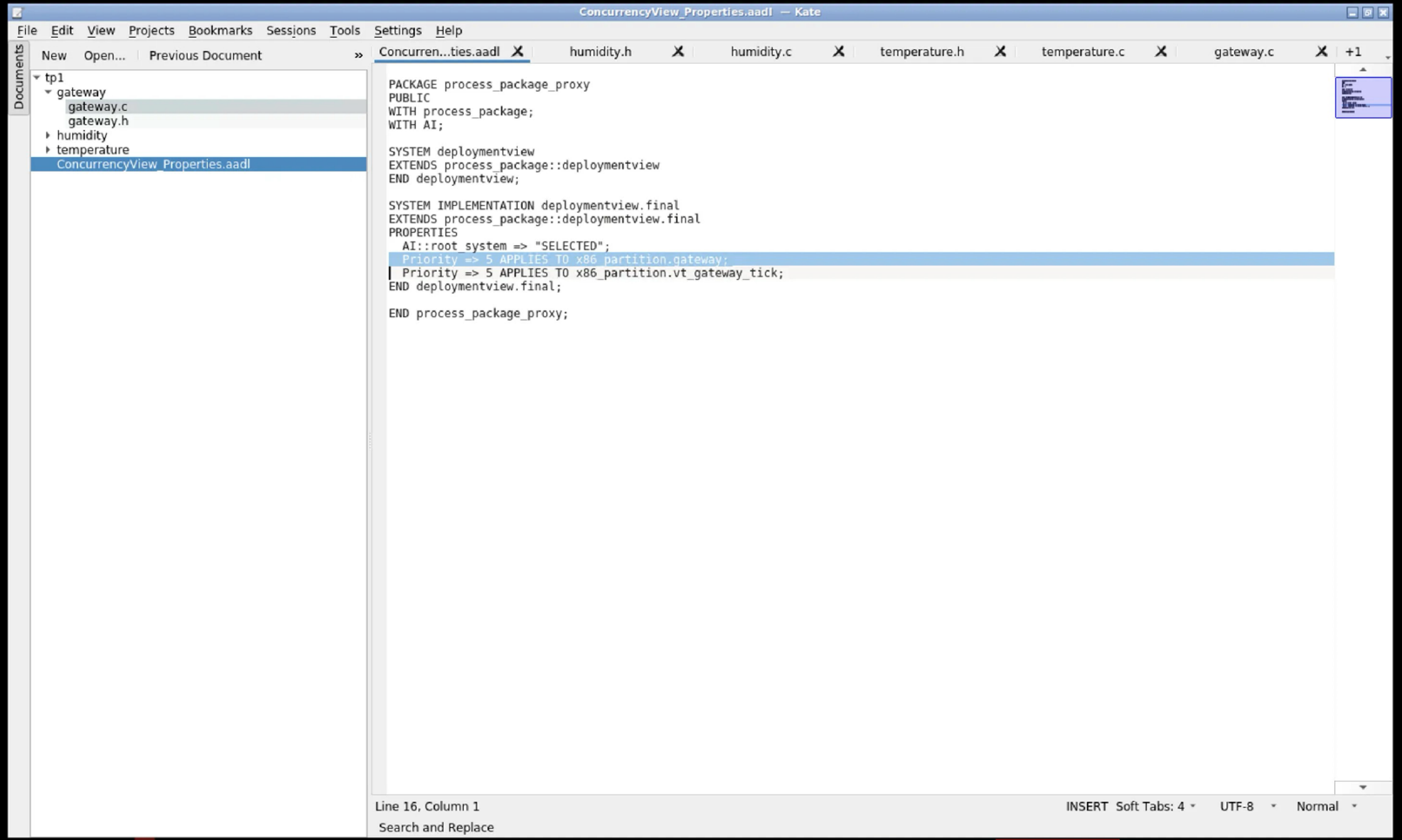
Shell No. 1

File Actions Edit View Help

Shell No. 1

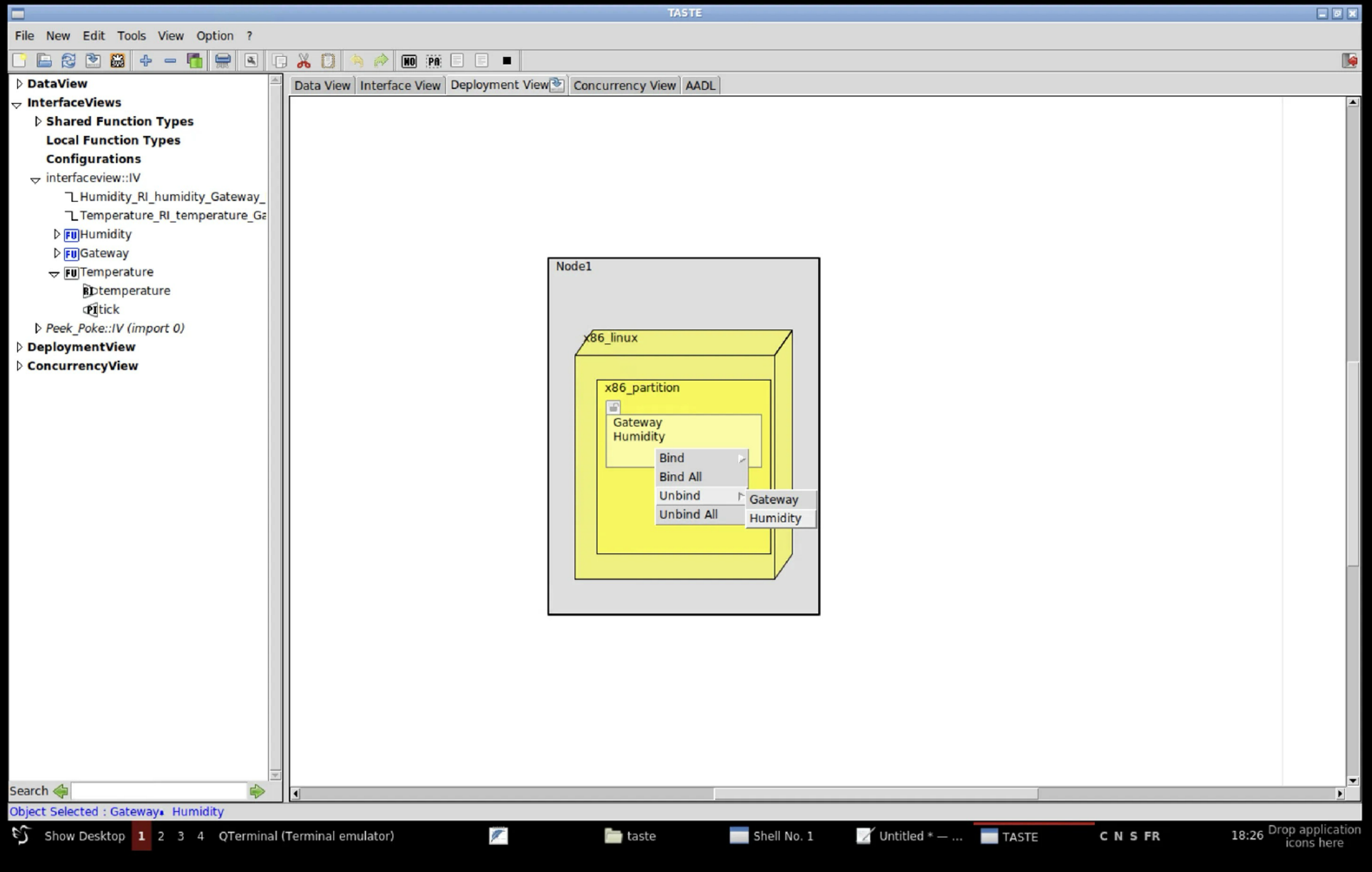
```
[INFO] Creating humidity/invoke_ri.c
[INFO] Creating humidity/humidity_polyorb_interface.c
[INFO] Creating humidity/humidity_polyorb_interface.h
[INFO] Creating ConcurrencyView/humidity_CV_Thread.aadl
[INFO] Creating x86_partition_taste_api/mini_cv.aadl
[INFO] Creating x86_partition_taste_api/x86_partition_taste_api_vm_if.h
[INFO] Creating x86_partition_taste_api/x86_partition_taste_api_vm_if.c
[INFO] Creating x86_partition_taste_api/x86_partition_taste_api_polyorb_interface.c
[INFO] Creating x86_partition_taste_api/x86_partition_taste_api_polyorb_interface.h
[INFO] Creating vt_gateway_tick/mini_cv.aadl
[INFO] Creating vt_gateway_tick/vt_gateway_tick_polyorb_interface.c
[INFO] Creating vt_gateway_tick/vt_gateway_tick_polyorb_interface.h
[INFO] Creating ConcurrencyView/vt_gateway_tick_CV_Thread.aadl
[INFO] Creating vt_gateway_temperature/mini_cv.aadl
[INFO] Creating vt_gateway_temperature/vt_gateway_temperature_polyorb_interface.c
[INFO] Creating vt_gateway_temperature/vt_gateway_temperature_polyorb_interface.h
[INFO] Creating ConcurrencyView/vt_gateway_temperature_CV_Thread.aadl
[INFO] Creating vt_gateway_humidity/mini_cv.aadl
[INFO] Creating vt_gateway_humidity/vt_gateway_humidity_polyorb_interface.c
[INFO] Creating vt_gateway_humidity/vt_gateway_humidity_polyorb_interface.h
[INFO] Creating ConcurrencyView/vt_gateway_humidity_CV_Thread.aadl
[INFO] Creating ConcurrencyView/nodes
[INFO] Creating ConcurrencyView/process.aadl
[INFO] Creating ./Concurrency-View.aadl
[INFO] Creating ./system_config.h
[INFO]  Updating thread priorities, stack sizes, and phases using ConcurrencyView_Properties.aadl as input
[INFO]  Finding Wrappers
[INFO]  Invoking Ocarina
Rebuilding because of /home/taste/Documents/tps/tp1/__dv_1_3.aadl
process.aadl:57:03: Priority (property association) points to gateway (identifier) that is not a valid subcomponent
Cannot analyze AADL specifications
Failed while executing:
ocarina -x main.aadl
From this directory:
/home/taste/Documents/tps/tp1/binary.c/GlueAndBuild

Press ENTER to retry...
```

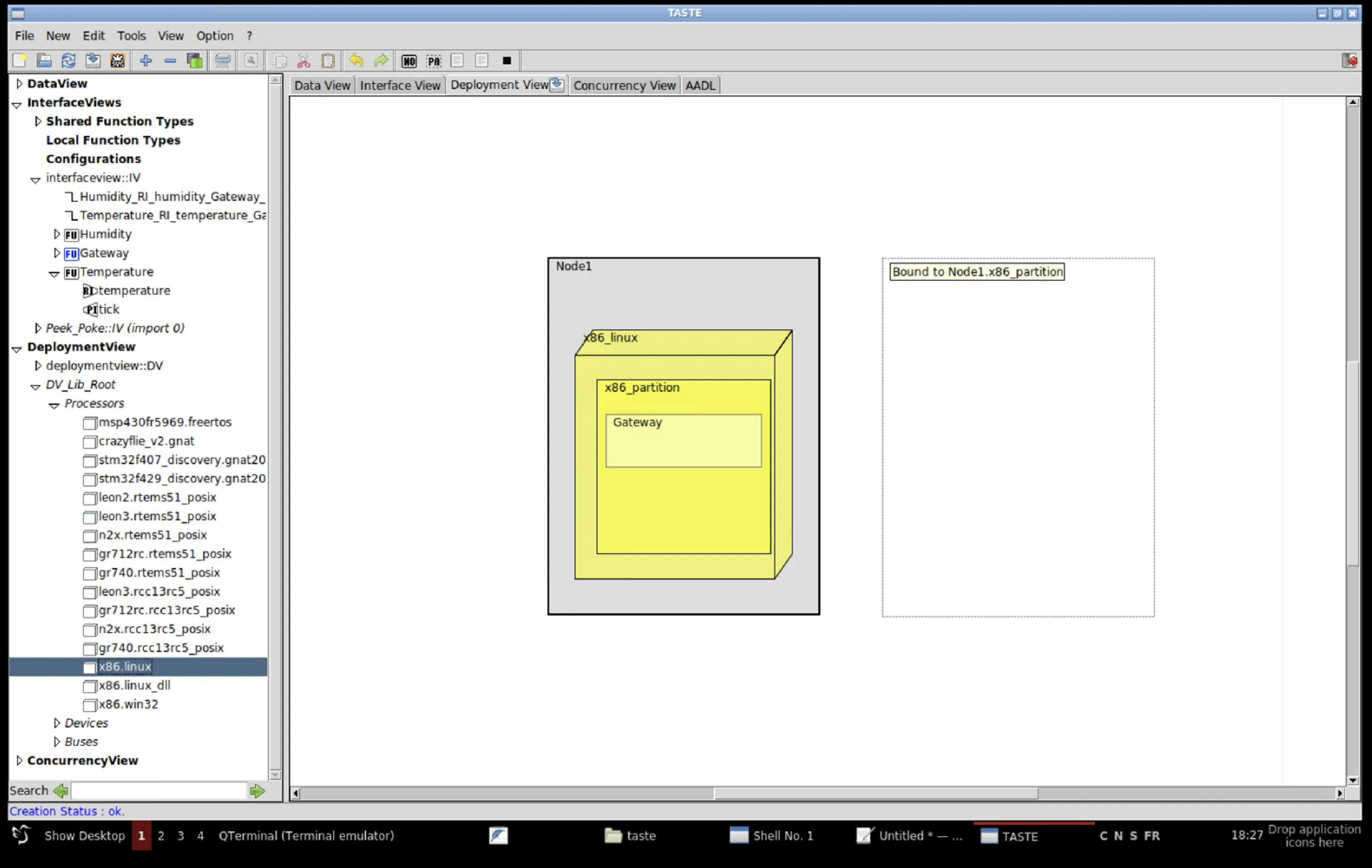
Show Desktop 1 2 3 4 QTerminal (Terminal emulator) tp1 Shell No. 1 TASTE gateway.c ... C N S FR 12:48 Drop application icons here

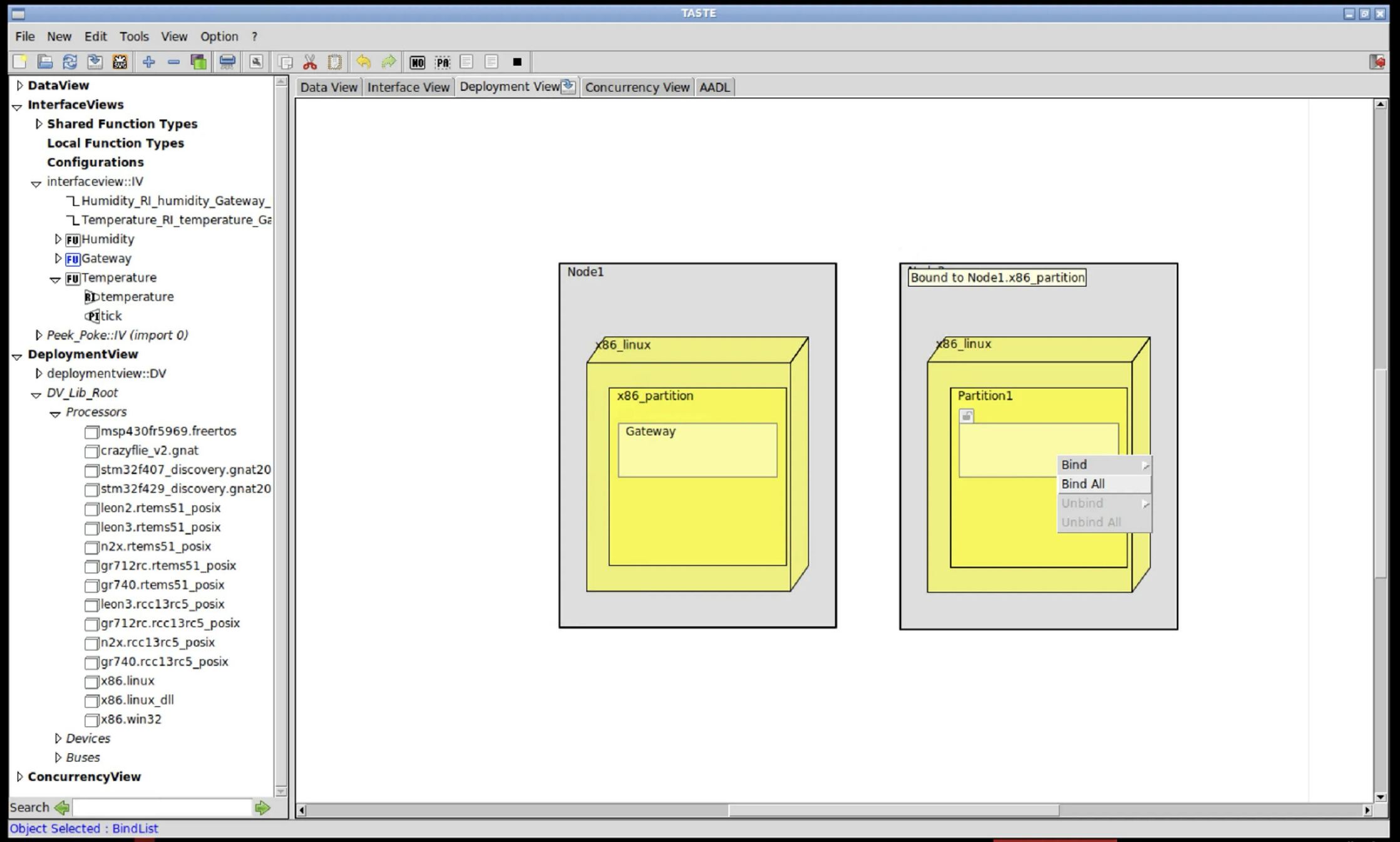

ConcurrencyView_Properties.aadl — Kate
File Edit View Projects Bookmarks Sessions Tools Settings Help
Documents
New Open... Previous Document
tp1
gateway
gateway.c
gateway.h
humidity
temperature
ConcurrencyView_Properties.aadl
Concurren...ties.aadl
humidity.h
humidity.c
temperature.h
temperature.c
gateway.c
+1
PACKAGE process_package_proxy
PUBLIC
WITH process_package;
WITH AI;
SYSTEM deploymentview
EXTENDS process_package::deploymentview
END deploymentview;
SYSTEM IMPLEMENTATION deploymentview.final
EXTENDS process_package::deploymentview.final
PROPERTIES
AI::root_system => "SELECTED";
Priority => 5 APPLIES TO x86_partition.gateway;
Priority => 5 APPLIES TO x86_partition.vt_gateway_tick;
END deploymentview.final;
END process_package_proxy;
Line 16, Column 1
INSERT Soft Tabs: 4
UTF-8
Normal
Search and Replace
Show Desktop 1 2 3 4 QTerminal (Terminal emulator)
tp1
Shell No. 1
TASTE
Concurrency...
C N S FR
12:48
Drop application icons here

Déployer sur deux noeuds

- Dans le Deployment View
  - « Unbind » temperature et humidity de « x86_partition ».
  - Créer un second noeud « x86.linux ».
  - Associer temperature et humidity au nouveau noeud avec « Bind All ».

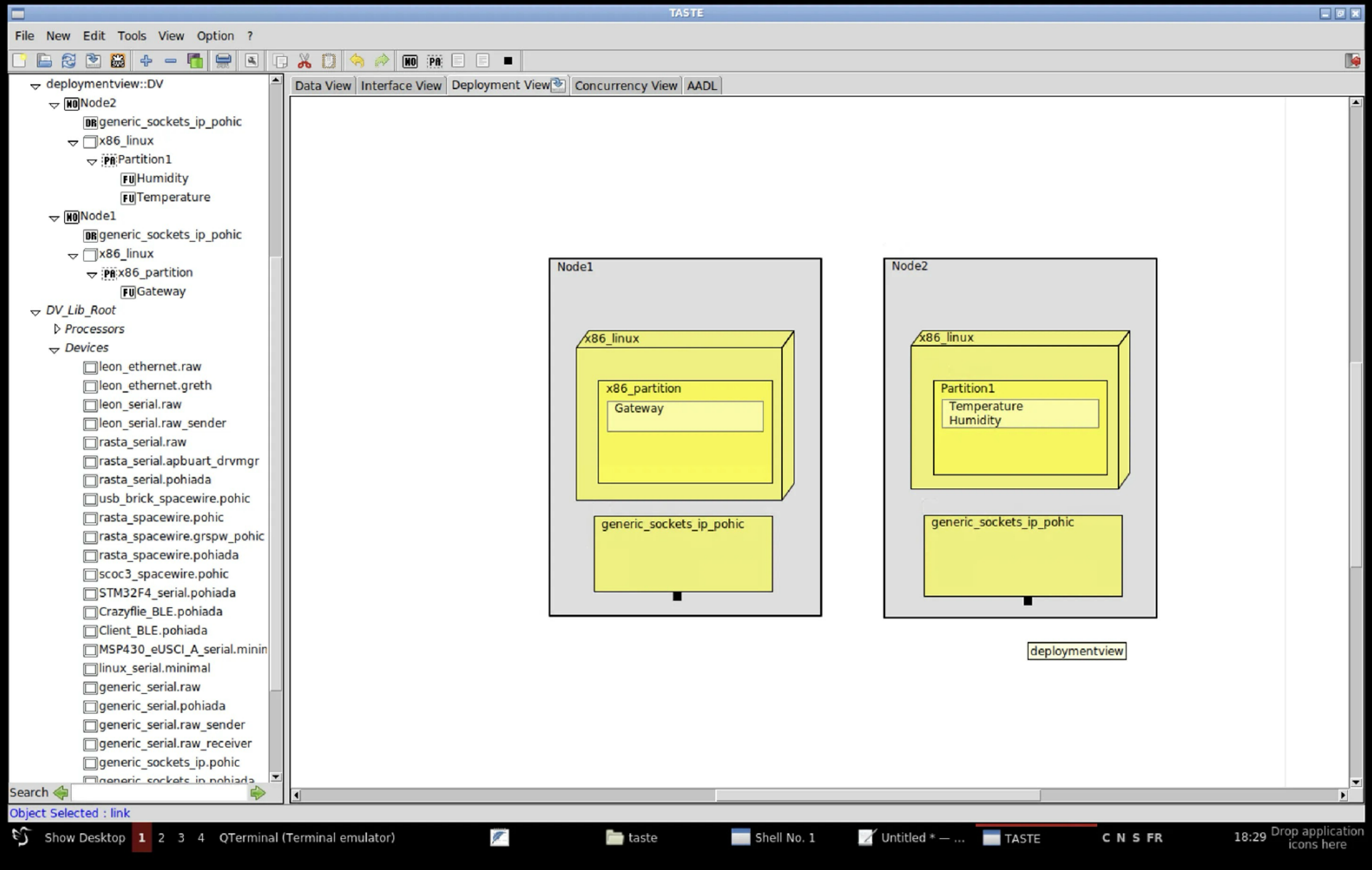

TASTE
File New Edit Tools View Option ?
DataView
InterfaceViews
Shared Function Types
Local Function Types
Configurations
interfaceview::IV
Humidity_RI_humidity_Gateway_
Temperature_RI_temperature_Ga
Humidity
Gateway
Temperature
temperature
tick
Peek_Poke::IV (import 0)
DeploymentView
ConcurrencyView
Search
Data View
Interface View
Deployment View
Concurrency View
AADL
Node1
x86_linux
x86_partition
Gateway
Humidity
Bind
Bind All
Unbind
Unbind All
Gateway
Humidity
Object Selected : Gateway Humidity
Show Desktop 1 2 3 4 QTerminal (Terminal emulator)
taste
Shell No. 1
Untitled * — ...
TASTE
C N S FR
18:26
Drop application icons here

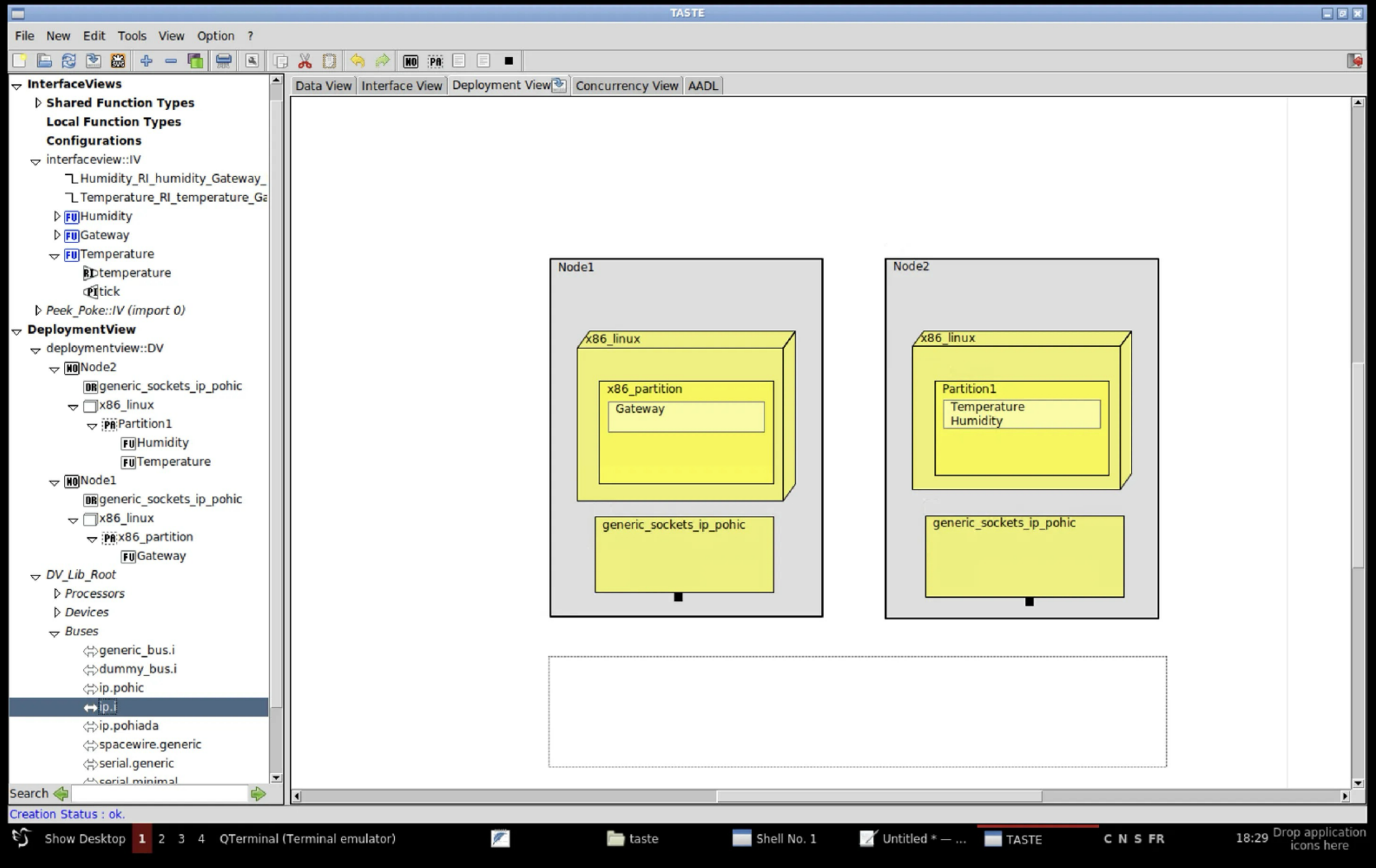

TASTE
File New Edit Tools View Option ?
DataView
InterfaceViews
Shared Function Types
Local Function Types
Configurations
interfaceview::IV
Humidity_RI_humidity_Gateway_
Temperature_RI_temperature_Ga
Humidity
Gateway
Temperature
temperature
tick
Peek_Poke::IV (import 0)
DeploymentView
deploymentview::DV
DV_Lib_Root
Processors
msp430fr5969.freertos
crazyflie_v2.gnat
stm32f407_discovery.gnat20
stm32f429_discovery.gnat20
leon2.rtems51_posix
leon3.rtems51_posix
n2x.rtems51_posix
gr712rc.rtems51_posix
gr740.rtems51_posix
leon3.rcc13rc5_posix
gr712rc.rcc13rc5_posix
n2x.rcc13rc5_posix
gr740.rcc13rc5_posix
x86.linux
x86.linux_dll
x86.win32
Devices
Buses
ConcurrencyView
Search
Creation Status : ok.
Data View
Interface View
Deployment View
Concurrency View
AADL
Node1
x86_linux
x86_partition
Gateway
Bound to Node1.x86_partition
Show Desktop 1 2 3 4 QTerminal (Terminal emulator)
taste
Shell No. 1
Untitled * — ...
TASTE
C N S FR
18:27
Drop application icons here

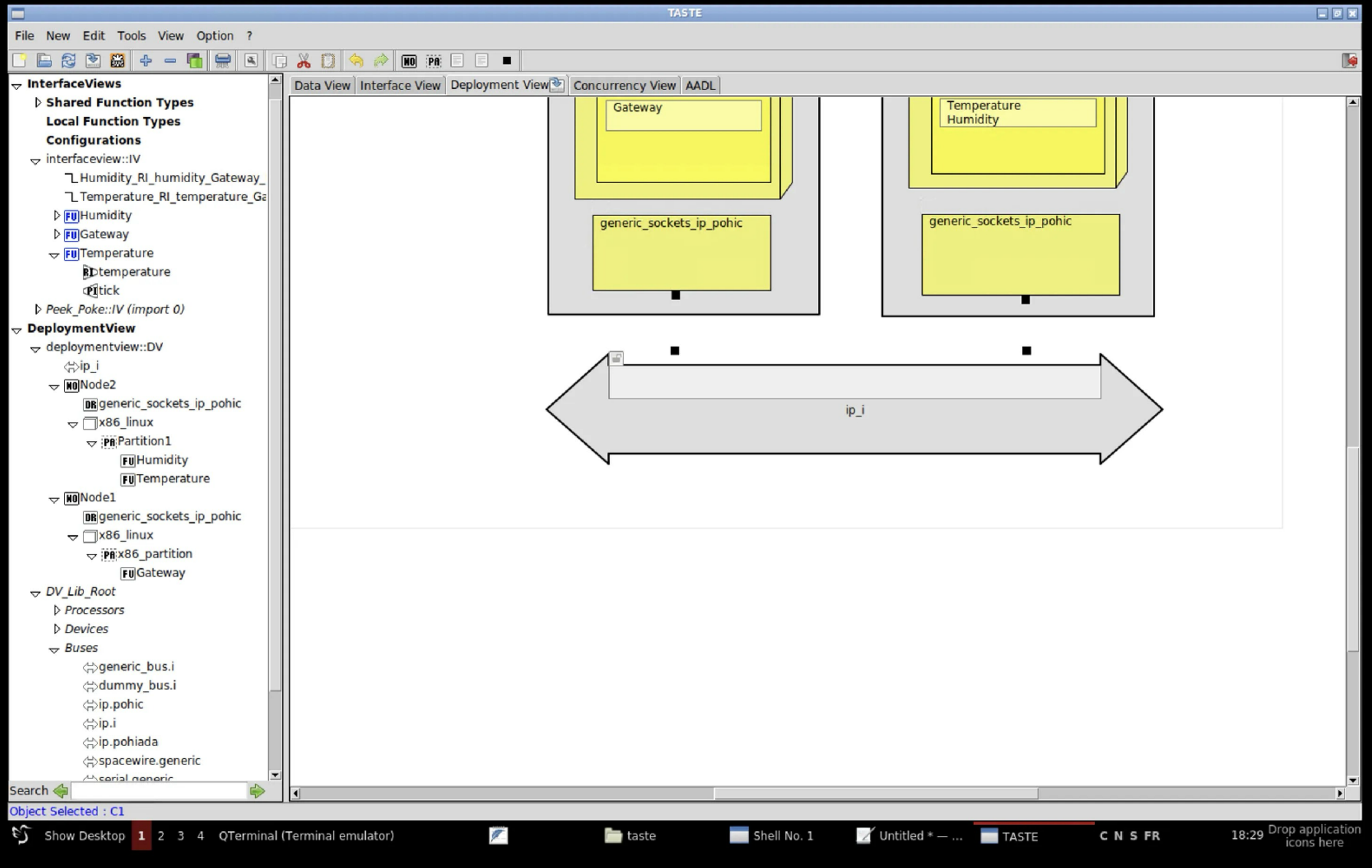

TASTE
File New Edit Tools View Option ?
DataView
InterfaceViews
Shared Function Types
Local Function Types
Configurations
interfaceview::IV
Humidity_RI_humidity_Gateway_
Temperature_RI_temperature_Ga
Humidity
Gateway
Temperature
temperature
tick
Peek_Poke::IV (import 0)
DeploymentView
deploymentview::DV
DV_Lib_Root
Processors
msp430fr5969.freertos
crazyflie_v2.gnat
stm32f407_discovery.gnat20
stm32f429_discovery.gnat20
leon2.rtems51_posix
leon3.rtems51_posix
n2x.rtems51_posix
gr712rc.rtems51_posix
gr740.rtems51_posix
leon3.rcc13rc5_posix
gr712rc.rcc13rc5_posix
n2x.rcc13rc5_posix
gr740.rcc13rc5_posix
x86.linux
x86.linux_dll
x86.win32
Devices
Buses
ConcurrencyView
Search
Data View
Interface View
Deployment View
Concurrency View
AADL
Node1
x86_linux
x86_partition
Gateway
Bound to Node1.x86_partition
x86_linux
Partition1
Bind
Bind All
Unbind
Unbind All
Object Selected : BindList
Show Desktop 1 2 3 4 QTerminal (Terminal emulator)
taste
Shell No. 1
Untitled * — ...
TASTE
C N S FR
18:27
Drop application icons here

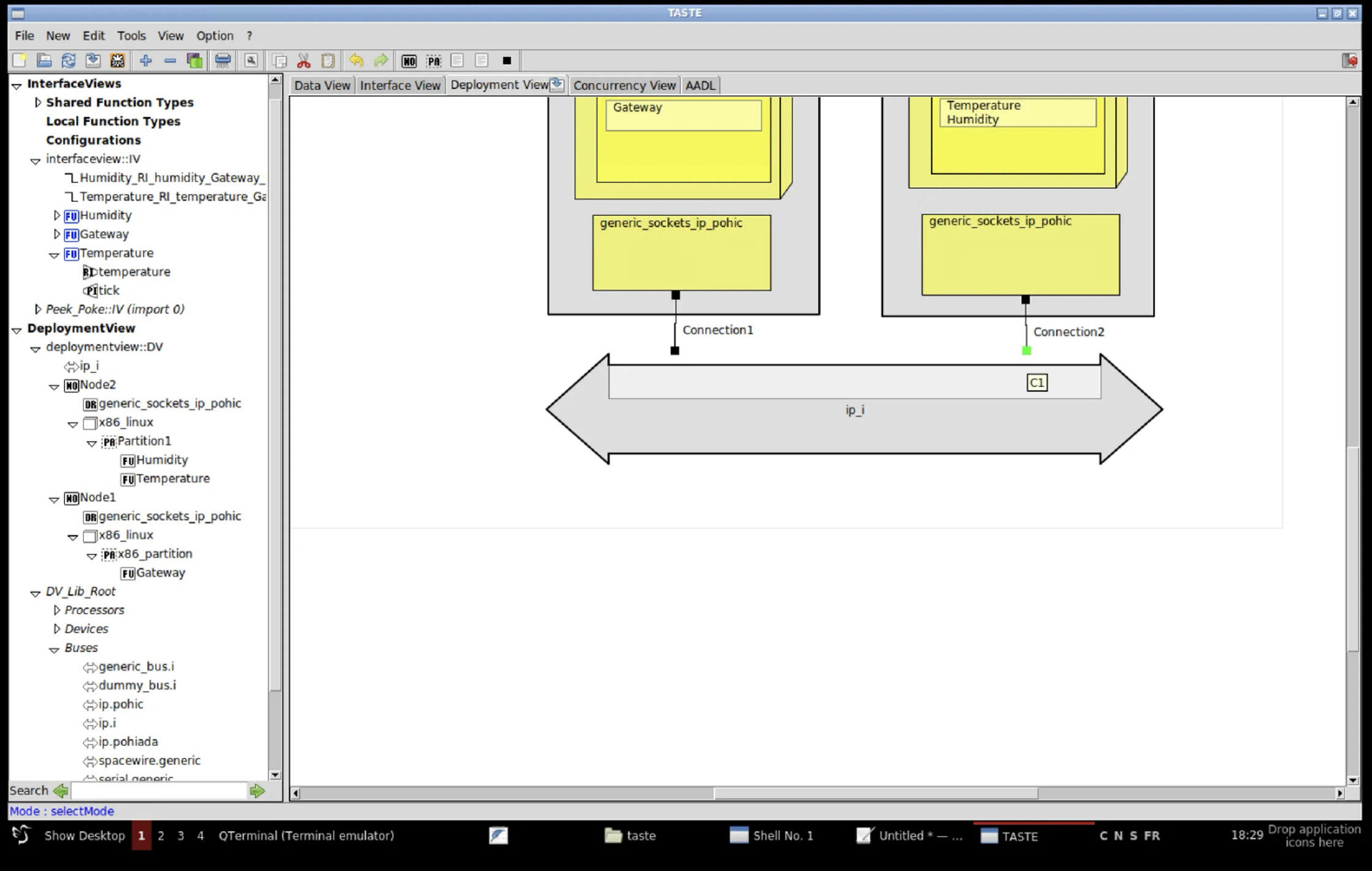
Ajouter un bus

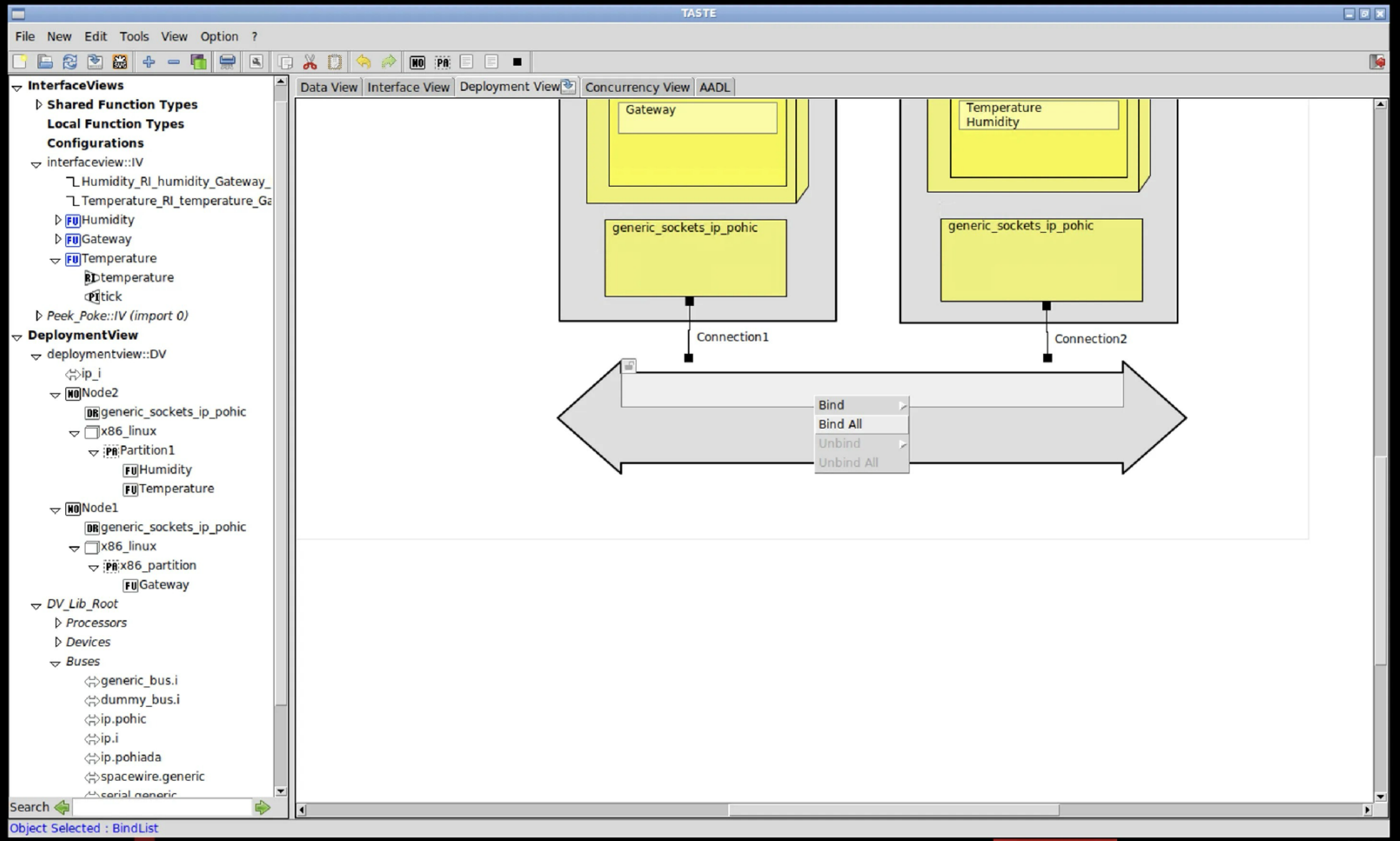
- Dans le Deployment View
  - Faire de place dans chaque noeud pour un device de communication.
  - Ajouter dans les deux noeuds un device « generic_sockets_ip.pohic »
  - Ajouter un bus « ip.i »
  - Connecter chacun des points du bus à l’un des devices des noeuds.
  - Ajouter tous les messages sur le bus avec « Bind All »

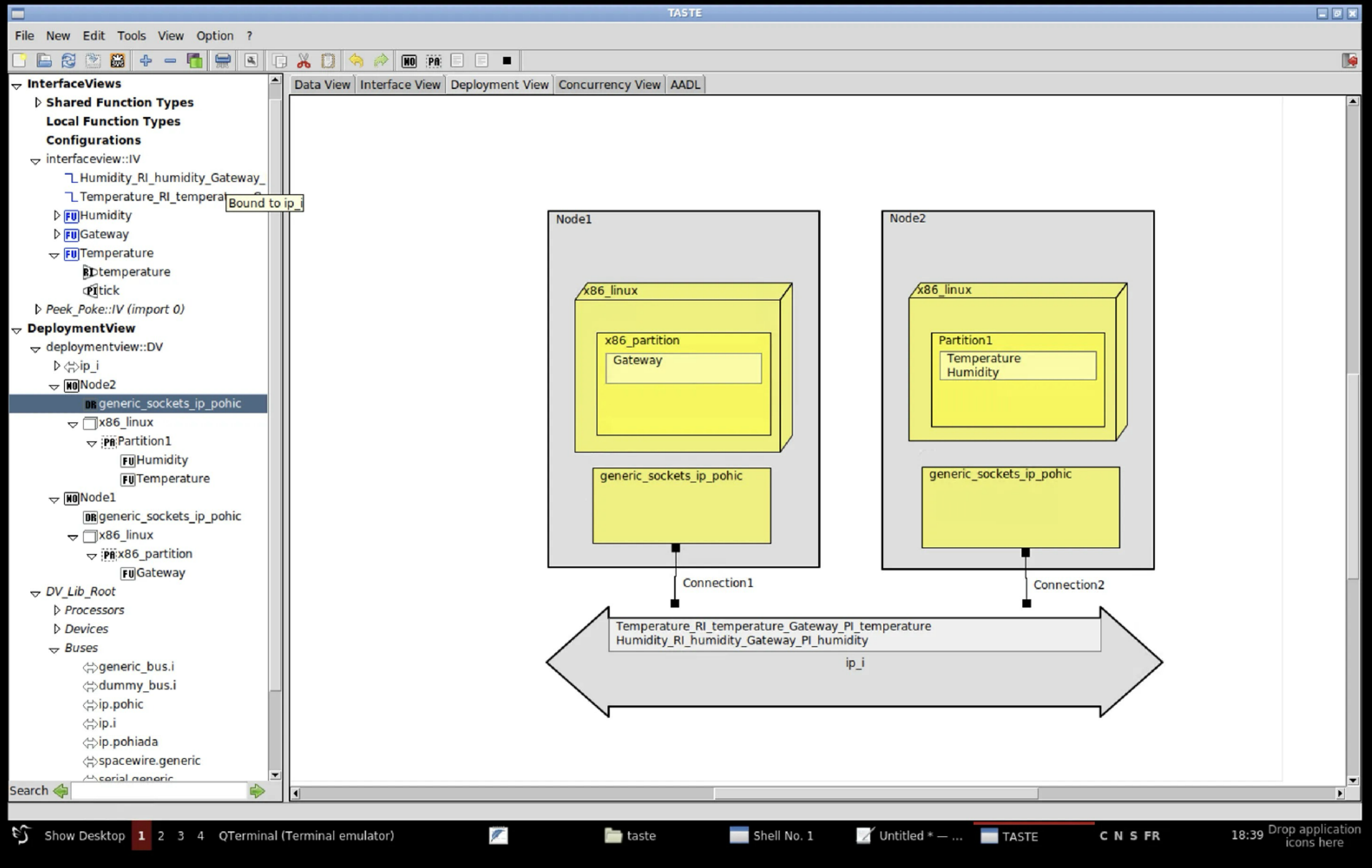

TASTE
File New Edit Tools View Option ?
deploymentview::DV
Node2
generic_sockets_ip_pohic
x86_linux
Partition1
Humidity
Temperature
Node1
generic_sockets_ip_pohic
x86_linux
x86_partition
Gateway
DV_Lib_Root
Processors
Devices
leon_ethernet.raw
leon_ethernet.greth
leon_serial.raw
leon_serial.raw_sender
rasta_serial.raw
rasta_serial.apbuart_drvmgr
rasta_serial.pohiada
usb_brick_spacewire.pohic
rasta_spacewire.pohic
rasta_spacewire.grspw_pohic
rasta_spacewire.pohiada
scoc3_spacewire.pohic
STM32F4_serial.pohiada
Crazyflie_BLE.pohiada
Client_BLE.pohiada
MSP430_eUSCI_A_serial.minin
linux_serial.minimal
generic_serial.raw
generic_serial.pohiada
generic_serial.raw_sender
generic_serial.raw_receiver
generic_sockets_ip.pohic
Search
Data View
Interface View
Deployment View
Concurrency View
AADL
Node1
x86_linux
x86_partition
Gateway
generic_sockets_ip_pohic
Node2
x86_linux
Partition1
Temperature
Humidity
generic_sockets_ip_pohic
deploymentview
Object Selected : link
Show Desktop 1 2 3 4 QTerminal (Terminal emulator)
taste
Shell No. 1
Untitled * — ...
TASTE
C N S FR
18:29
Drop application icons here


TASTE
File New Edit Tools View Option ?
InterfaceViews
Shared Function Types
Local Function Types
Configurations
interfaceview::IV
Humidity_RI_humidity_Gateway_
Temperature_RI_temperature_Ga
Humidity
Gateway
Temperature
temperature
tick
Peek_Poke::IV (import 0)
DeploymentView
deploymentview::DV
Node2
generic_sockets_ip_pohic
x86_linux
Partition1
Humidity
Temperature
Node1
generic_sockets_ip_pohic
x86_linux
x86_partition
Gateway
DV_Lib_Root
Processors
Devices
Buses
generic_bus.i
dummy_bus.i
ip.pohic
ip.i
ip.pohiada
spacewire.generic
serial.generic
Search
Data View
Interface View
Deployment View
Concurrency View
AADL
Node1
x86_linux
x86_partition
Gateway
generic_sockets_ip_pohic
Node2
x86_linux
Partition1
Temperature
Humidity
generic_sockets_ip_pohic
Creation Status : ok.
Show Desktop 1 2 3 4 QTerminal (Terminal emulator)
taste
Shell No. 1
Untitled * — ...
TASTE
C N S FR
18:29
Drop application icons here


TASTE
File New Edit Tools View Option ?
InterfaceViews
Shared Function Types
Local Function Types
Configurations
interfaceview::IV
Humidity_RI_humidity_Gateway_
Temperature_RI_temperature_Ga
Humidity
Gateway
Temperature
temperature
tick
Peek_Poke::IV (import 0)
DeploymentView
deploymentview::DV
ip_i
Node2
generic_sockets_ip_pohic
x86_linux
Partition1
Humidity
Temperature
Node1
generic_sockets_ip_pohic
x86_linux
x86_partition
Gateway
DV_Lib_Root
Processors
Devices
Buses
generic_bus.i
dummy_bus.i
ip.pohic
ip.i
ip.pohiada
spacewire.generic
Search
Data View
Interface View
Deployment View
Concurrency View
AADL
Gateway
generic_sockets_ip_pohic
Temperature
Humidity
generic_sockets_ip_pohic
ip_i
Object Selected : C1
Show Desktop 1 2 3 4 QTerminal (Terminal emulator)
taste
Shell No. 1
Untitled * — ...
TASTE
C N S FR
18:29
Drop application icons here


TASTE
File New Edit Tools View Option ?
InterfaceViews
Shared Function Types
Local Function Types
Configurations
interfaceview::IV
Humidity_RI_humidity_Gateway_
Temperature_RI_temperature_Ga
Humidity
Gateway
Temperature
temperature
tick
Peek_Poke::IV (import 0)
DeploymentView
deploymentview::DV
ip_i
Node2
generic_sockets_ip_pohic
x86_linux
Partition1
Humidity
Temperature
Node1
generic_sockets_ip_pohic
x86_linux
x86_partition
Gateway
DV_Lib_Root
Processors
Devices
Buses
generic_bus.i
dummy_bus.i
ip.pohic
ip.i
ip.pohiada
spacewire.generic
Search
Mode : selectMode
Data View
Interface View
Deployment View
Concurrency View
AADL
Gateway
generic_sockets_ip_pohic
Temperature
Humidity
generic_sockets_ip_pohic
Connection1
Connection2
C1
ip_i
Show Desktop 1 2 3 4 QTerminal (Terminal emulator)
taste
Shell No. 1
Untitled * — ...
TASTE
C N S FR
18:29
Drop application icons here


TASTE
File New Edit Tools View Option ?
InterfaceViews
Shared Function Types
Local Function Types
Configurations
interfaceview::IV
Humidity_RI_humidity_Gateway_
Temperature_RI_temperature_Ga
Humidity
Gateway
Temperature
temperature
tick
Peek_Poke::IV (import 0)
DeploymentView
deploymentview::DV
ip_i
Node2
generic_sockets_ip_pohic
x86_linux
Partition1
Humidity
Temperature
Node1
generic_sockets_ip_pohic
x86_linux
x86_partition
Gateway
DV_Lib_Root
Processors
Devices
Buses
generic_bus.i
dummy_bus.i
ip.pohic
ip.i
ip.pohiada
spacewire.generic
Search
Data View
Interface View
Deployment View
Concurrency View
AADL
Gateway
generic_sockets_ip_pohic
Temperature
Humidity
generic_sockets_ip_pohic
Connection1
Connection2
Bind
Bind All
Unbind
Unbind All
Object Selected : BindList
Show Desktop 1 2 3 4 QTerminal (Terminal emulator)
taste
Shell No. 1
Untitled * — ...
TASTE
C N S FR
18:30
Drop application icons here


TASTE
File New Edit Tools View Option ?
InterfaceViews
Shared Function Types
Local Function Types
Configurations
interfaceview::IV
Humidity_RI_humidity_Gateway_
Temperature_RI_temperat
Bound to ip_i
Humidity
Gateway
Temperature
temperature
tick
Peek_Poke::IV (import 0)
DeploymentView
deploymentview::DV
ip_i
Node2
generic_sockets_ip_pohic
x86_linux
Partition1
Humidity
Temperature
Node1
generic_sockets_ip_pohic
x86_linux
x86_partition
Gateway
DV_Lib_Root
Processors
Devices
Buses
generic_bus.i
dummy_bus.i
ip.pohic
ip.i
ip.pohiada
spacewire.generic
Search
Data View
Interface View
Deployment View
Concurrency View
AADL
Node1
x86_linux
x86_partition
Gateway
generic_sockets_ip_pohic
Node2
x86_linux
Partition1
Temperature
Humidity
generic_sockets_ip_pohic
Connection1
Connection2
Temperature_RI_temperature_Gateway_PI_temperature
Humidity_RI_humidity_Gateway_PI_humidity
ip_i
Show Desktop 1 2 3 4 QTerminal (Terminal emulator)
taste
Shell No. 1
Untitled * — ...
TASTE
C N S FR
18:39
Drop application icons here

Configurer les devices

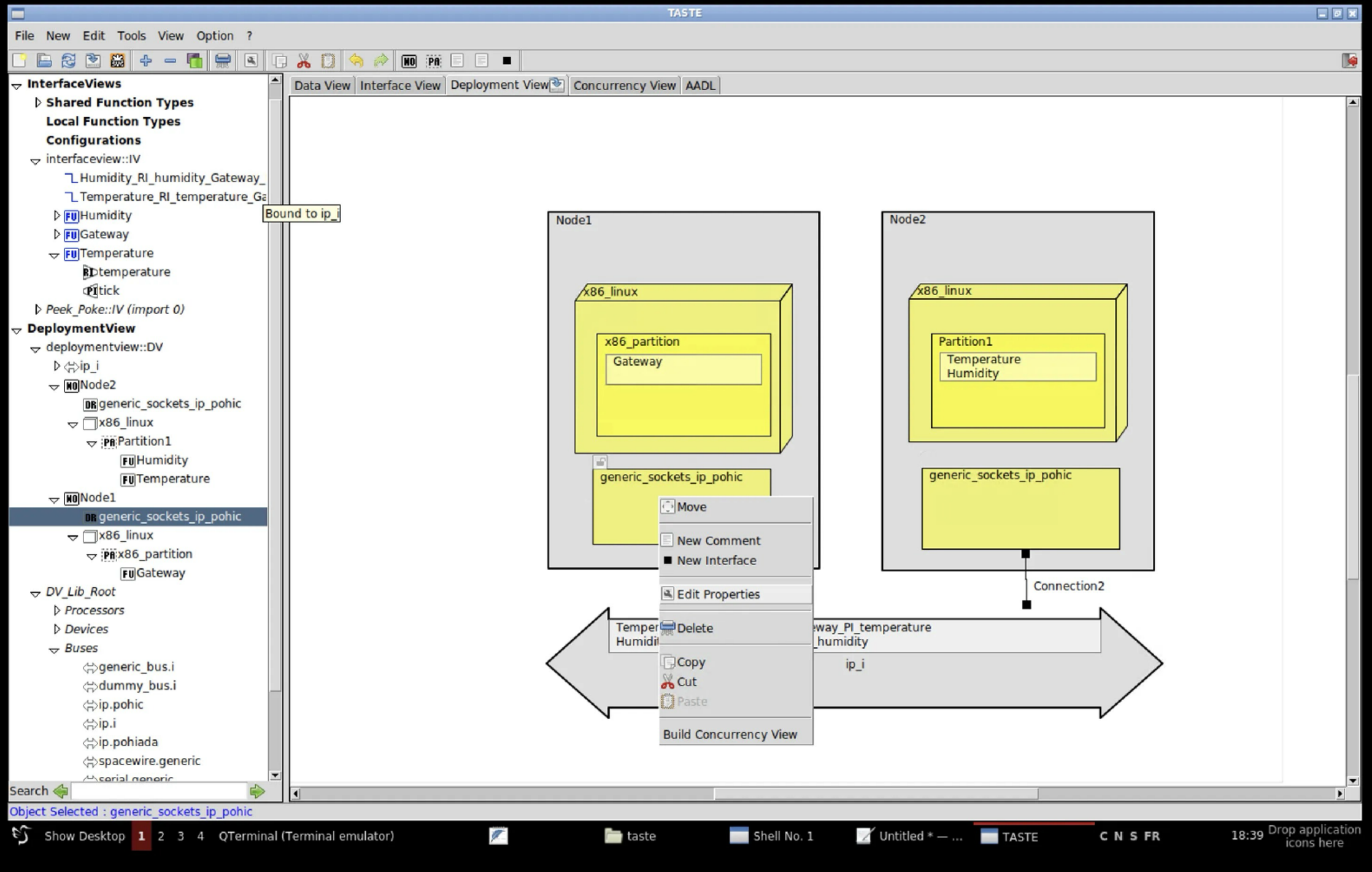
- Dans les propriétés de chacun des devices IP, ajouter la configuration nécessaire dans « Config »:
  - Pour « x86_partition »:

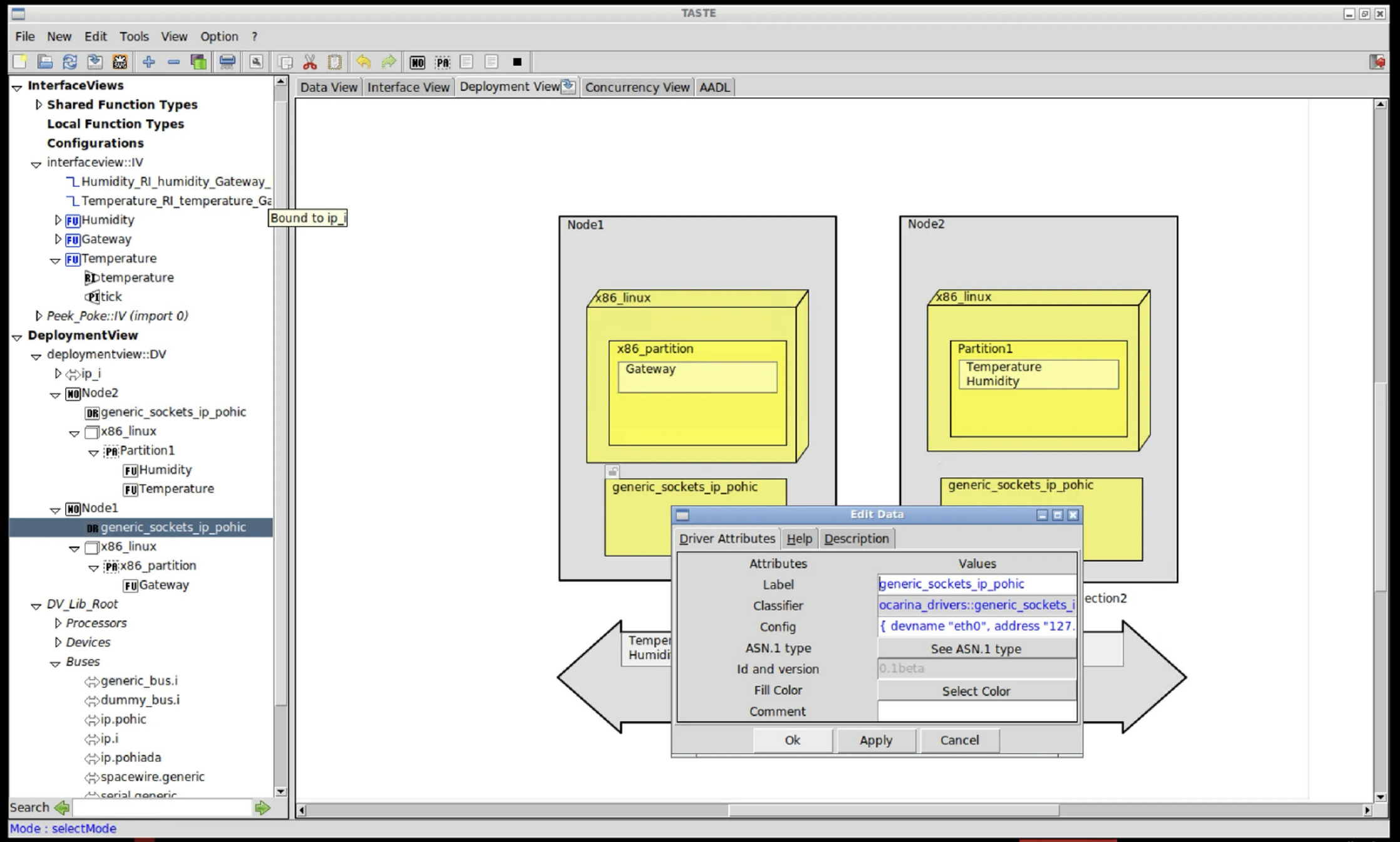
```
{ devname « eth0", address "127.0.0.1", port 5481 }
```

  - Pour « Partition1 »:

```
{ devname « eth0", address "127.0.0.1", port 5482 }
```

La seule différence est le numéro de port.


TASTE
File New Edit Tools View Option ?
InterfaceViews
Shared Function Types
Local Function Types
Configurations
interfaceview::IV
Humidity_RI_humidity_Gateway_
Temperature_RI_temperature_Ga
Humidity
Gateway
Temperature
temperature
tick
Peek_Poke::IV (import 0)
DeploymentView
deploymentview::DV
ip_i
Node2
generic_sockets_ip_pohic
x86_linux
Partition1
Humidity
Temperature
Node1
generic_sockets_ip_pohic
x86_linux
x86_partition
Gateway
DV_Lib_Root
Processors
Devices
Buses
generic_bus.i
dummy_bus.i
ip.pohic
ip.i
ip.pohiada
spacewire.generic
Search
Bound to ip_i
Data View
Interface View
Deployment View
Concurrency View
AADL
Node1
x86_linux
x86_partition
Gateway
generic_sockets_ip_pohic
Node2
x86_linux
Partition1
Temperature
Humidity
generic_sockets_ip_pohic
Connection2
Move
New Comment
New Interface
Edit Properties
Delete
Copy
Cut
Paste
Build Concurrency View
ip_i
Object Selected : generic_sockets_ip_pohic
Show Desktop 1 2 3 4 QTerminal (Terminal emulator)
taste
Shell No. 1
Untitled * — ...
TASTE
C N S FR
18:39
Drop application icons here


TASTE
File New Edit Tools View Option ?
InterfaceViews
Shared Function Types
Local Function Types
Configurations
interfaceview::IV
Humidity_RI_humidity_Gateway_
Temperature_RI_temperature_Ga
Humidity
Gateway
Temperature
temperature
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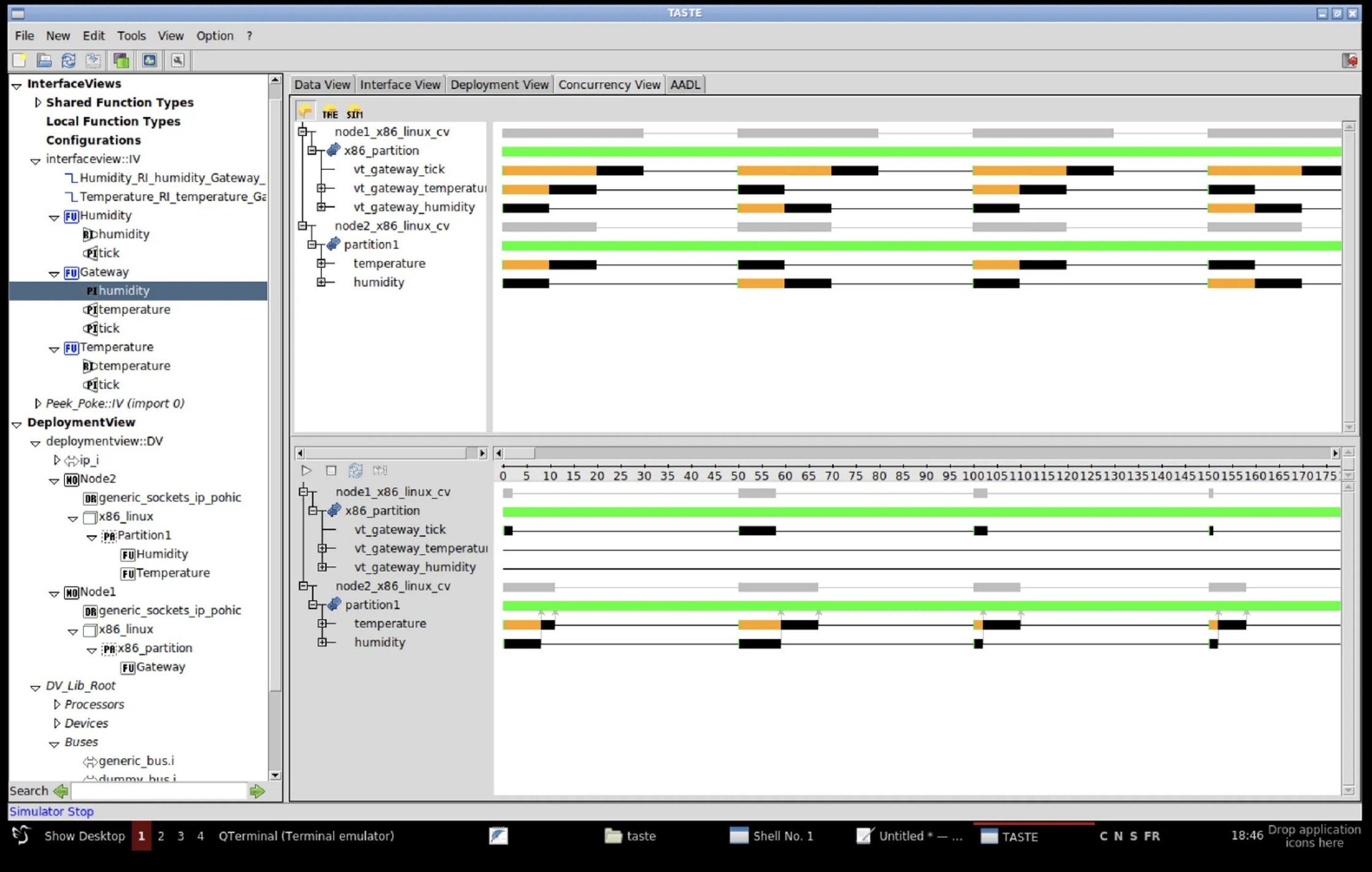
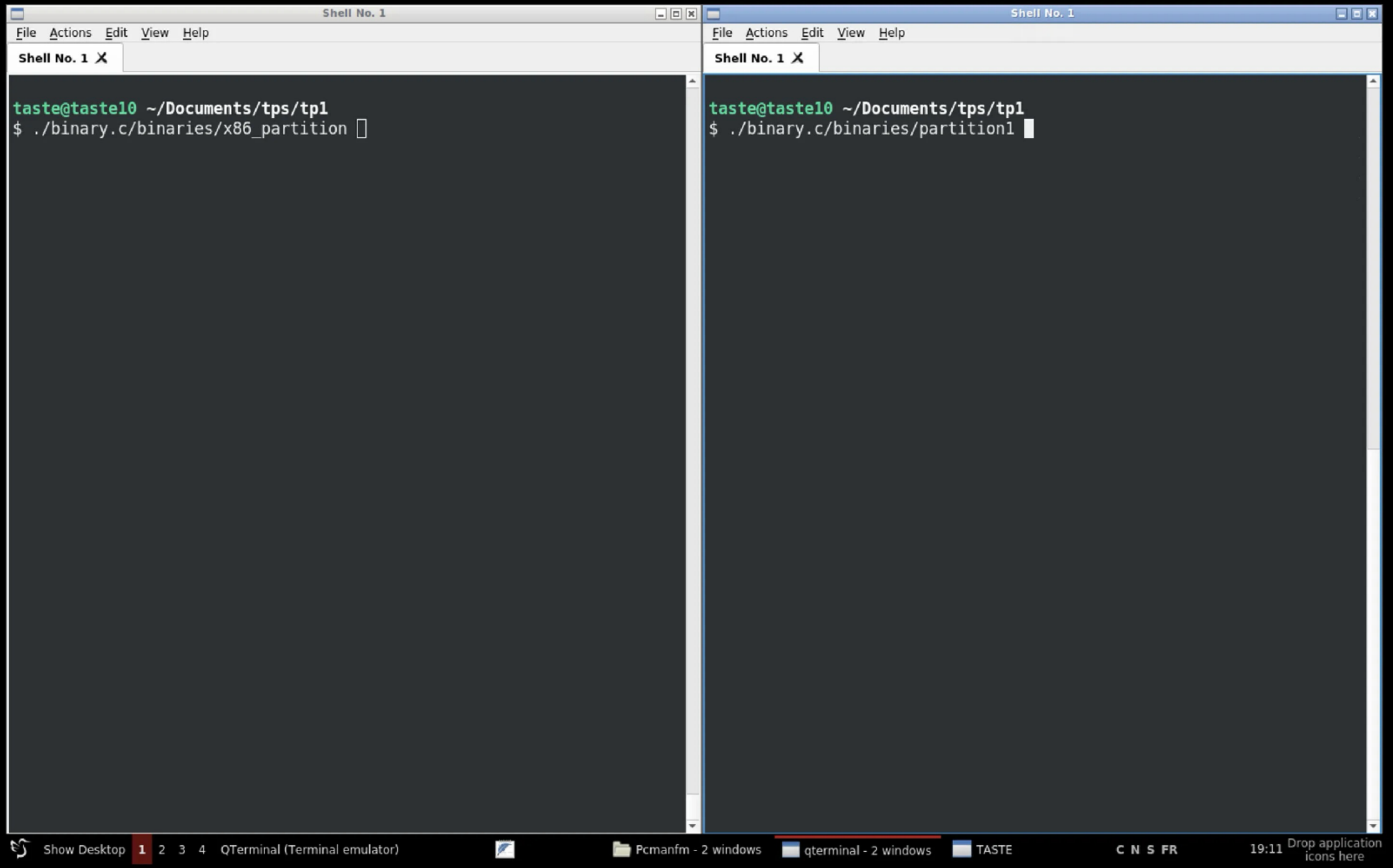
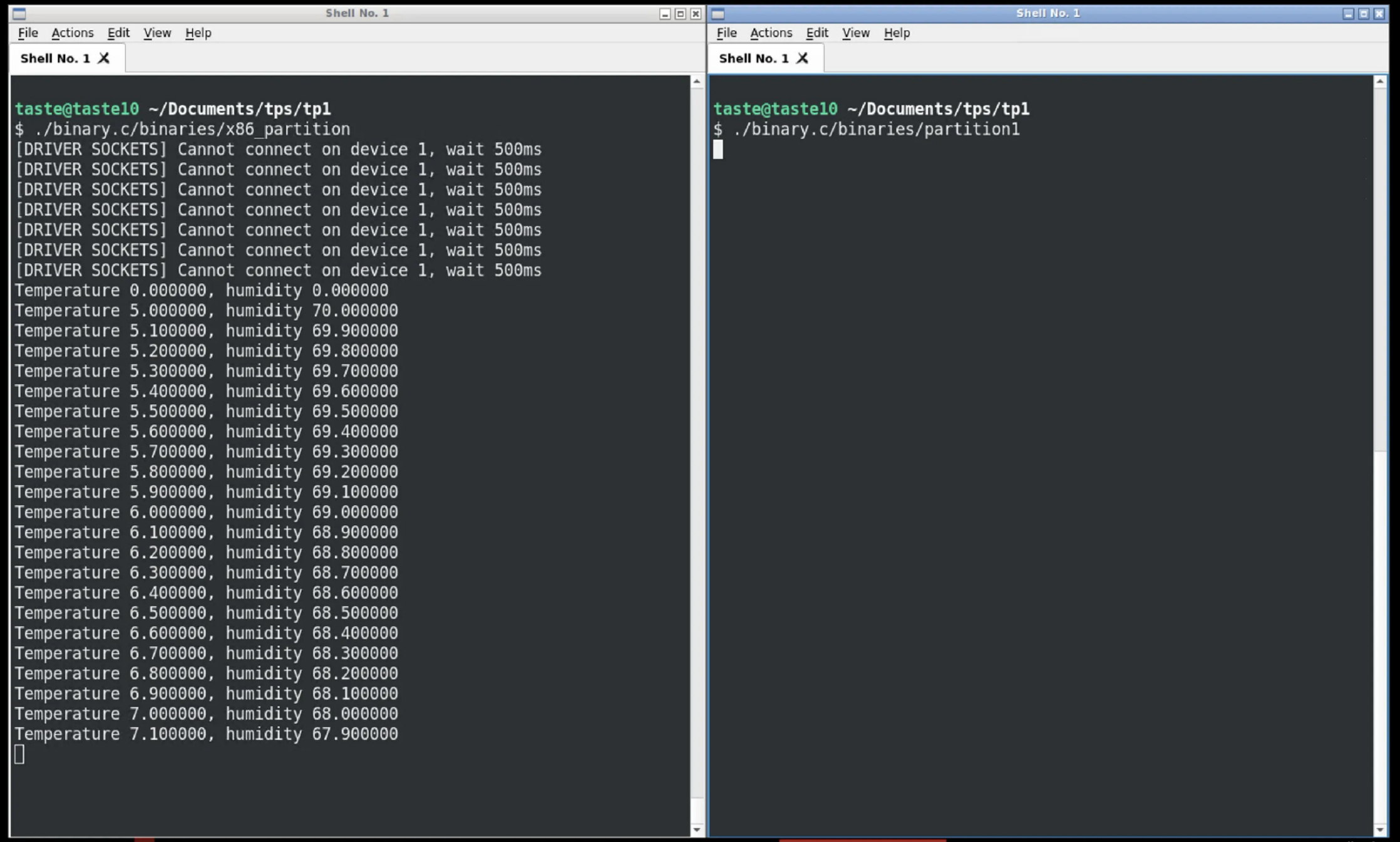
Peek_Poke::IV (import 0)
DeploymentView
deploymentview::DV
ip_i
Node2
generic_sockets_ip_pohic
x86_linux
Partition1
Humidity
Temperature
Node1
generic_sockets_ip_pohic
x86_linux
x86_partition
Gateway
DV_Lib_Root
Processors
Devices
Buses
generic_bus.i
dummy_bus.i
ip.pohic
ip.i
ip.pohiada
spacewire.generic
Search
Bound to ip_i
Data View
Interface View
Deployment View
Concurrency View
AADL
Node1
x86_linux
x86_partition
Gateway
generic_sockets_ip_pohic
Node2
x86_linux
Partition1
Temperature
Humidity
generic_sockets_ip_pohic
ection2
Edit Data
Driver Attributes
Help
Description
Attributes
Values
Label
generic_sockets_ip_pohic
Classifier
ocarina_drivers::generic_sockets_i
Config
{ devname "eth0", address "127.
ASN.1 type
See ASN.1 type
Id and version
0.1beta
Fill Color
Select Color
Comment
Ok
Apply
Cancel
Mode : selectMode
Show Desktop 1 2 3 4 QTerminal (Terminal emulator)
taste
Shell No. 1
Untitled ...
TASTE
Edit Data
C N S FR
18:39
Drop application icons here

Simulations

-  Simulation avec Cheddar.
- Simulation Marzhin.
- Simulation de la version compilée.


TASTE
File New Edit Tools View Option ?
InterfaceViews
Shared Function Types
Local Function Types
Configurations
interfaceview::IV
Humidity_RI_humidity_Gateway_
Temperature_RI_temperature_Ga
Humidity
humidity
tick
Gateway
humidity
temperature
tick
Temperature
temperature
tick
Peek_Poke::IV (import 0)
DeploymentView
deploymentview::DV
ip_i
Node2
generic_sockets_ip_pohic
x86_linux
Partition1
Humidity
Temperature
Node1
generic_sockets_ip_pohic
x86_linux
x86_partition
Gateway
DV_Lib_Root
Processors
Devices
Buses
generic_bus.i
Search
Data View
Interface View
Deployment View
Concurrency View
AADL
node1_x86_linux_cv
x86_partition
vt_gateway_tick
vt_gateway_temperatu
vt_gateway_humidity
node2_x86_linux_cv
partition1
temperature
humidity
0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115 120 125 130 135 140 145 150 155 160 165 170 175
Simulator Stop
Show Desktop 1 2 3 4 QTerminal (Terminal emulator)
taste
Shell No. 1
Untitled * — ...
TASTE
C N S FR
18:46
Drop application icons here


Shell No. 1
File Actions Edit View Help
Shell No. 1
taste@taste10 ~/Documents/tps/tp1
$ ./binary.c/binaries/x86_partition
Shell No. 1
File Actions Edit View Help
Shell No. 1
taste@taste10 ~/Documents/tps/tp1
$ ./binary.c/binaries/partition1
Show Desktop 1 2 3 4 QTerminal (Terminal emulator)
Pcmanfm - 2 windows
qterminal - 2 windows
TASTE
C N S FR
19:11
Drop application icons here


Shell No. 1
File Actions Edit View Help
Shell No. 1
taste@taste10 ~/Documents/tps/tp1
$ ./binary.c/binaries/x86_partition
[DRIVER SOCKETS] Cannot connect on device 1, wait 500ms
[DRIVER SOCKETS] Cannot connect on device 1, wait 500ms
[DRIVER SOCKETS] Cannot connect on device 1, wait 500ms
[DRIVER SOCKETS] Cannot connect on device 1, wait 500ms
[DRIVER SOCKETS] Cannot connect on device 1, wait 500ms
[DRIVER SOCKETS] Cannot connect on device 1, wait 500ms
[DRIVER SOCKETS] Cannot connect on device 1, wait 500ms
Temperature 0.000000, humidity 0.000000
Temperature 5.000000, humidity 70.000000
Temperature 5.100000, humidity 69.900000
Temperature 5.200000, humidity 69.800000
Temperature 5.300000, humidity 69.700000
Temperature 5.400000, humidity 69.600000
Temperature 5.500000, humidity 69.500000
Temperature 5.600000, humidity 69.400000
Temperature 5.700000, humidity 69.300000
Temperature 5.800000, humidity 69.200000
Temperature 5.900000, humidity 69.100000
Temperature 6.000000, humidity 69.000000
Temperature 6.100000, humidity 68.900000
Temperature 6.200000, humidity 68.800000
Temperature 6.300000, humidity 68.700000
Temperature 6.400000, humidity 68.600000
Temperature 6.500000, humidity 68.500000
Temperature 6.600000, humidity 68.400000
Temperature 6.700000, humidity 68.300000
Temperature 6.800000, humidity 68.200000
Temperature 6.900000, humidity 68.100000
Temperature 7.000000, humidity 68.000000
Temperature 7.100000, humidity 67.900000
Shell No. 1
File Actions Edit View Help
Shell No. 1
taste@taste10 ~/Documents/tps/tp1
$ ./binary.c/binaries/partition1
Show Desktop 1 2 3 4 QTerminal (Terminal emulator)
Pcmanfm - 2 windows
qterminal - 2 windows
TASTE
C N S FR
19:11
Drop application icons here

Capteur vidéo

- Ajouter un capteur vidéo et une fonction de catégorisation
  - Le capteur prend une photo 10 fois par seconde
  - L’algorithme de catégorisation a besoin de 150 ms pour une image
  - Le capteur envoie un tableau d’octets (TODO doc ASN.1)
  - La fonction de catégorisation renvoie un entier (0 pour rien, 1 présent)
- A faire
  - Est-il possible de le faire sur l’architecture actuelle ?
  - Faire tourner la simulation du résultat final.