

Report Week 3

Achievements:

- Got 3GB of extra storage space from IT services
- Writing data to SDRAM partition INPUT_DATA (id=1) works
- Cores reading data from SDRAM partition INPUT_DATA works
- Cores recording data back to SDRAM partition OUTPUT_DATA(id=2) works
- Host retrieving data back from SDRAM partition OUTPUT_DATA works

In a nutshell, loading data onto the SpiNNaker and retrieving it works seamlessly.

This is quite a milestone, since I can focus more on the development of algorithms and data processing within the C code now (or vertices for that matter) as opposed to spending a lot of time with configuration and data flow issues.

I also included two screenshots on page 2 to prove this point.

Goals for next week:

- Perfect the data transfer so that more data can be handled than currently possible
- Once this is solved (e.g. by establishing a data transfer protocol), start the implementation of basic queries
- Investigate the possible use of spikes for performing queries (e.g. for sum operations)

Those queries will be something like searching for a specific data item (or instances of data items) across the data base or returning a histogram of data items

Package Explorer

spinn_common [spinn_common master]

spinnaker_graph_front_end [Number_Crunch master]

examples

Conways

final_year_project

application_generated_data_files

build

reports

2017-10-11-18-45-25-723240

run_1

json_files

provenance_data

iobuf_for_chip_0_0_processor_id_10.txt

iobuf_for_chip_0_0_processor_id_2.txt

iobuf_for_chip_0_0_processor_id_3.txt

iobuf_for_chip_0_0_processor_id_4.txt

iobuf_for_chip_0_0_processor_id_5.txt

iobuf_for_chip_0_0_processor_id_6.txt

iobuf_for_chip_0_0_processor_id_7.txt

iobuf_for_chip_0_0_processor_id_8.txt

iobuf_for_chip_0_0_processor_id_9.txt

pacman.xml

router_provenance.xml

network_specification.rpt

tags.rpt

virtual_key_space_information_report.rpt

finished

time_stamp

__init__.py

__init__.pyc

parser

pacman.xml

iobuf_for_chip_0_0_processor_id_10.txt

main

machine_vertex

resource_contai

constants

simulation_util

```

1 [INFO] (vertex.c: 191): starting vertex test
2
3 [INFO] (vertex.c: 156): Initialise: started
4
5 [INFO] (src/data_specification.c: 38): SDRAM data begins at address: 60240228
6 [INFO] (src/data_specification.c: 67): magic = ad130ad6, version = 1.0
7 [INFO] (src/data_specification.c: 38): SDRAM data begins at address: 60240228
8 [INFO] (src/recording.c: 566): Recording 1 regions, using output tag 1, size before trigger 128, time between triggers
9 [INFO] (src/recording.c: 678): Recording channel 0 configured to use 128 byte memory block starting at 0x60240c98
10 [INFO] (vertex.c: 98): Recording flags = 0x00000001
11 [INFO] (vertex.c: 208): setting timer to execute every 1000 microseconds
12 [INFO] (vertex.c: 216): Starting
13
14 [INFO] (src/simulation.c: 140): Setting the runtime of this model to 2
15 [INFO] (src/simulation.c: 142): Setting the flag of infinite run for this model to 0
16 [INFO] (src/simulation.c: 153): Resuming
17 [INFO] (vertex.c: 121): on tick 0 of 2
18 [INFO] (vertex.c: 147): recording flags is 1
19 [INFO] (vertex.c: 149): doing timer tick update
20
21 [INFO] (vertex.c: 151): done timer tick update
22
23 [INFO] (vertex.c: 121): on tick 1 of 2
24 [INFO] (vertex.c: 55): Recording data...
25 [INFO] (vertex.c: 61): Issuing 'Vertex' for chip 0, core 2
26 [INFO] (src/data_specification.c: 38): SDRAM data begins at address: 60240228
27 [INFO] (vertex.c: 77): Data read is: Data Point 1
28 [INFO] (vertex.c: 84): Vertex data recorded successfully!
29 [INFO] (vertex.c: 147): recording flags is 1
30 [INFO] (vertex.c: 149): doing timer tick update
31
32 [INFO] (vertex.c: 151): done timer tick update
33
34 [INFO] (vertex.c: 121): on tick 2 of 2
35 [INFO] (vertex.c: 126): Simulation complete.
36
37 [INFO] (vertex.c: 129): updating recording regions
38 [INFO] (src/recording.c: 509): Finalising channel 0 - state info stored in SDRAM
39 [INFO] (src/recording.c: 514): closed channel 0.

```

Data reached core 0,0,2 successfully from SDRAM Partition INPUT_DATA (id=1)

Data recorded back from to SDRAM partition OUTPUT_DATA (id=2) successfully

Problems Javadoc Declaration Console Synchronize PyUnit

```

<terminated> /home/mfbx3ard/git/Number_Crunch/examples/final_year_project/main.py
2017-10-11 18:47:45 INFO: Time 0:00:12.608843 taken by UnipObutExtractor
Getting provenance data
|0% 50% 100%|
=====
2017-10-11 18:47:45 INFO: Time 0:00:00.004454 taken by PlacementsProvenanceGatherer
Getting Router Provenance
|0% 50% 100%|
=====
2017-10-11 18:47:45 INFO: Time 0:00:00.359724 taken by RouterProvenanceGatherer
Getting profile data
|0% 50% 100%|
=====
2017-10-11 18:47:45 INFO: Time 0:00:00.014871 taken by ProfileDataGatherer
2017-10-11 18:47:45 INFO: 0, 0, 2 > Data Point 1
2017-10-11 18:47:45 INFO: 0, 0, 3 > UK
2017-10-11 18:47:45 INFO: 0, 0, 4 > UK
2017-10-11 18:47:45 INFO: 0, 0, 5 > Germany
2017-10-11 18:47:45 INFO: 0, 0, 6 > France

```

Data output from SDRAM Partition OUTPUT_DATA (id=2) back to host successful

Each vertex responds with a (16 bit) data entry that was assigned to it:

spinnaker_graph_front_end [Number_Crunch master]

examples

Conways

final_year_project

application_generated_data_files

build

reports

__init__.py

__init__.pyc

main.py

Makefile

parser.py

parser.pyc

utilities.py

utilities.pyc

vertex.aplx

vertex.c

vertex.py

vertex.pyc

heat_demo

hello_world

template

__init__.py

__init__.pyc

resources

utilities

weekly reports

__init__.py

Problems Javadoc Declaration Console Synchronize PyUnit

```

<terminated> /home/mfbx3ard/git/Number_Crunch/examples/final_year_project/main.py
|0% 50% 100%|
=====
2017-10-11 18:47:45 INFO: Time 0:00:00.014871 taken by ProfileDataGatherer
2017-10-11 18:47:45 INFO: 0, 0, 2 > Data Point 1
2017-10-11 18:47:45 INFO: 0, 0, 3 > UK
2017-10-11 18:47:45 INFO: 0, 0, 4 > UK
2017-10-11 18:47:45 INFO: 0, 0, 5 > Germany
2017-10-11 18:47:45 INFO: 0, 0, 6 > France
2017-10-11 18:47:45 INFO: 0, 0, 7 > Spain
2017-10-11 18:47:45 INFO: 0, 0, 8 > Germany
2017-10-11 18:47:45 INFO: 0, 0, 9 > Germany
2017-10-11 18:47:45 INFO: 0, 0, 10 > Germany
2017-10-11 18:47:45 INFO: 0, 0, 11 > France
2017-10-11 18:47:45 INFO: 0, 0, 12 > UK
2017-10-11 18:47:45 INFO: 0, 0, 13 > UK
2017-10-11 18:47:45 INFO: 0, 0, 14 > Spain
2017-10-11 18:47:45 INFO: 0, 0, 15 > France
2017-10-11 18:47:45 INFO: 0, 0, 16 > Belgium
2017-10-11 18:47:45 INFO: 0, 0, 17 > Poland
2017-10-11 18:47:45 INFO: 0, 2, 2 > France
2017-10-11 18:47:45 INFO: 0, 2, 3 > UK
2017-10-11 18:47:45 INFO: 0, 2, 4 > UK
2017-10-11 18:47:45 INFO: 0, 2, 5 > Spain
2017-10-11 18:47:45 INFO: 0, 2, 6 > France
2017-10-11 18:47:45 INFO: 0, 2, 7 > Belgium
2017-10-11 18:47:45 INFO: 0, 2, 8 > Poland
2017-10-11 18:47:45 INFO: 0, 2, 9 > Poland
2017-10-11 18:47:45 INFO: 0, 2, 10 > Belgium
2017-10-11 18:47:45 INFO: 0, 2, 11 > Germany
2017-10-11 18:47:46 INFO: 0, 2, 12 > Spain
2017-10-11 18:47:46 INFO: 0, 2, 13 > UK
2017-10-11 18:47:46 INFO: 0, 2, 14 > UK
2017-10-11 18:47:46 INFO: 0, 2, 15 > Germany
2017-10-11 18:47:46 INFO: 0, 2, 16 > France
2017-10-11 18:47:46 INFO: 0, 2, 17 > Spain
2017-10-11 18:47:46 INFO: 0, 3, 2 > Poland
2017-10-11 18:47:46 INFO: 0, 3, 3 > Poland
2017-10-11 18:47:46 INFO: 0, 3, 4 > Belgium
2017-10-11 18:47:46 INFO: 0, 3, 5 > Germany
2017-10-11 18:47:46 INFO: 0, 3, 6 > Spain
2017-10-11 18:47:46 INFO: 0, 3, 7 > Spain
2017-10-11 18:47:46 INFO: 0, 3, 8 > UK
2017-10-11 18:47:46 INFO: 0, 3, 9 > UK
2017-10-11 18:47:46 INFO: 0, 3, 10 > Germany
2017-10-11 18:47:46 INFO: 0, 3, 11 > France
2017-10-11 18:47:46 INFO: 0, 3, 12 > Spain
2017-10-11 18:47:46 INFO: 0, 3, 13 > Germany
2017-10-11 18:47:46 INFO: 0, 3, 14 > Germany
2017-10-11 18:47:46 INFO: 0, 3, 15 > Germany
2017-10-11 18:47:46 INFO: 0, 3, 16 > France
2017-10-11 18:47:46 INFO: 0, 3, 17 > UK
2017-10-11 18:47:46 INFO: 1, 0, 2 > Poland
2017-10-11 18:47:46 INFO: 1, 0, 3 > Belgium

```