CC Feature in NocStudio

**Version 0.1**

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# Components:

## New bridges and hosts:

CC NocStudio has following additional bridges: ACEM, ACES, ACEML as new bridges. These bridges already exist in NocStudio; need to review props, widths and packetization.

CC NocStudio has following additional hosts: CCC, NCB, DVM as special hosts, each with two bridges. These should be standard host types in NocStudio, can be added using templates may be.

Need to allow multiple bridges at the same position in NocStudio, with one constraint that each bridge must connect to independent set of layers. Thus each bridge can operate independently from each other even if they are the same position.

Bridges need to be indexed with bridge id; bridge id needs to be assigned at construction time.

Bridges NoC port are connected to all router layer ports; need to have a function to reconnect bridge ports to only selected router layer ports.

Disable overlap checks for bridges (only need for host).

GUI Json file generation for bridges need to change GUI does not change.

In Host, have a default implementation to process incoming messages on the bridge of the host which will be same as what bridges do. Bridges should call this function upon receiving a message. Then have a CCC class inheriting the Host class, and we can override the receiving packet processing function of host in the CCC class.

## New traffic:

Here is the CC traffic.

m1 -> CC -> m1 -> CC

m1 -> CC -> m2 -> CC -> m1 -> CC

m1 -> CC -> **m2 m3 …** -> CC -> m1 -> CC (requires concurrency, multiple active chains for m2, m3, etc.)

m1 -> CC -> mem -> CC -> m1 -> CC

m1 -> CC -> **m2** **mem** -> CC -> m1 -> CC (requires concurrency, multiple active chains for m2, mem, etc.)

Need to support alias names in chain with same alias appearing multiple time, but second instance of the alias not treated as the response.

## New simulator capability:

To allow multiple concurrent chains

## Bridge id assignment:

0

n-1

n+m-1

Agents with full ACE and

snoop filter support

Agents with full ACE but

no snoop filter support

Agents with ACE-lite but

DVM snoop support

n+m+*l*-1

Remaining agents

## Bridge props: