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# NS Fundamentals (contd..)

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## Outline

- Ns fundamentals – Part I (by Chen)
- NS fundamentals –Part II
  - NS Internals

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## Ns Internals

- Tcl commands translates into
  - series of object creation
  - plumbing of these objects
- Step-by-step review of how each network component gets set up in ns

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## Network Topology: Node

Unicast Node

Multicast Node

```

set n0 [ns_node]
Set ns_ [new Simulator --multicast on]
Set n1 [ns_node]
  
```

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## Node Addressing

- Two basic address styles available: flat and hierarchical
- Default flat address: 32 bits each for node and port id
- Default hier address:
  - 3 levels of hierarchy
  - 10 11 11 or 1 9 11 11 if mcast specified
- Different bit allocation possible for specific hier addresses

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## Hierarchical Node

Node entry

Address classifier

To Port demux

Level 1

Level 2

Level 3

ns\_node-config --addressing hier

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