

# Introduction to nam

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# Getting started with nam

- Turn on nam tracing in your Tcl script

- As easy as turning on normal tracing

```
$ns namtrace $file
```

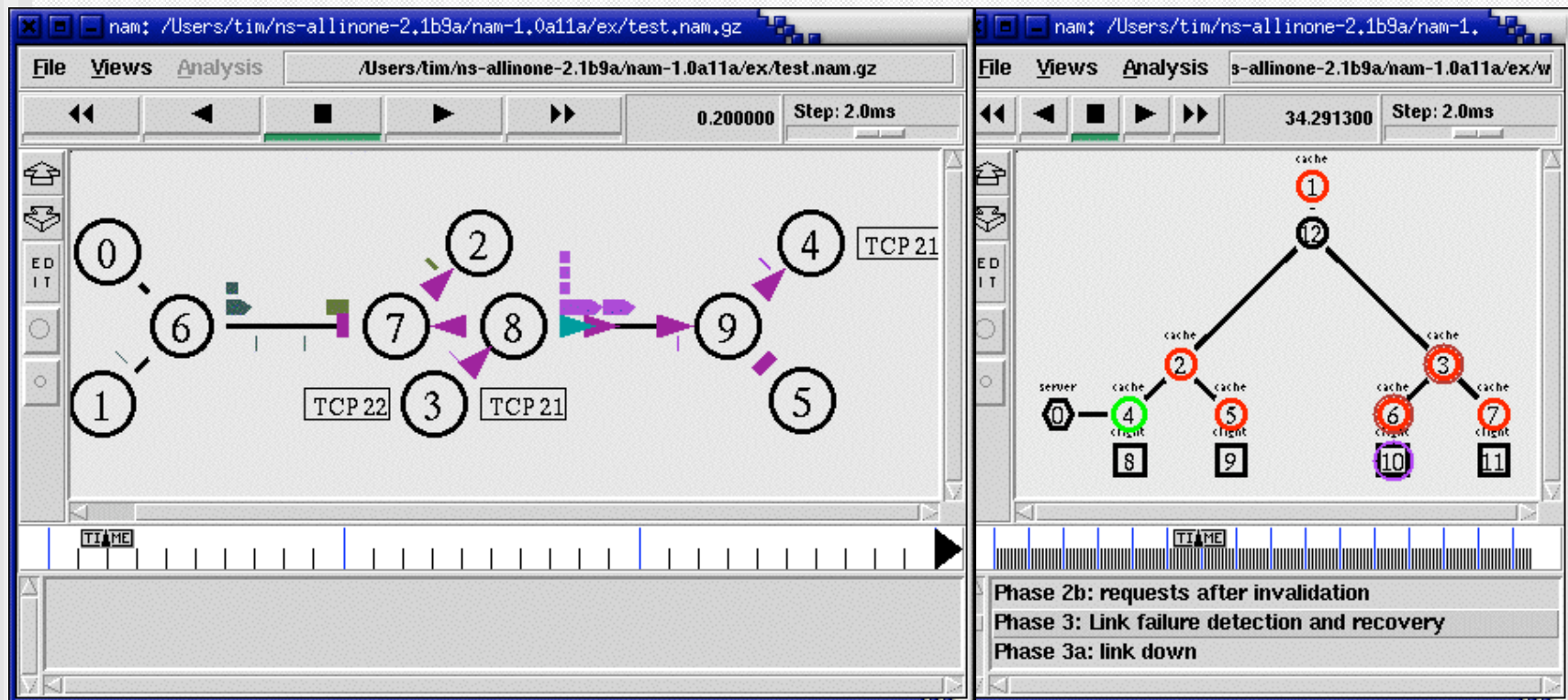
- Specify link orientation (or node position for wireless)

```
$ns duplex-link-op $node1 $node2 orient left
```

- Execute nam

```
exec nam $filename
```

# The nam user interface



# Advanced nam capabilities

## ■ Node options — color, shape, label

```
$node color red  
$node shape hexagon  
$node label "my text"  
$node label-color blue  
$node label-at up
```

## ■ Link options

```
$ns duplex-link-op $n1 $n2 color green  
$ns duplex-link-op queuePos right  
$ns duplex-link-op $n1 $n2 label "my text"  
$ns duplex-link-op $n1 $n2 label-color blue  
$ns duplex-link-op $n1 $n2 label-at down
```

# Advanced nam capabilities

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## ■ Packet colors

```
$ns color $n blue  
$agent set fid_ $n
```

## ■ Annotation

```
$ns at $time "$ns trace-annotate $text"
```

## ■ Control playback

```
$ns set-animation-rate 3ms
```

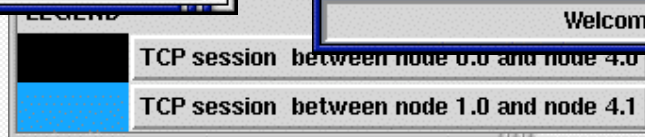
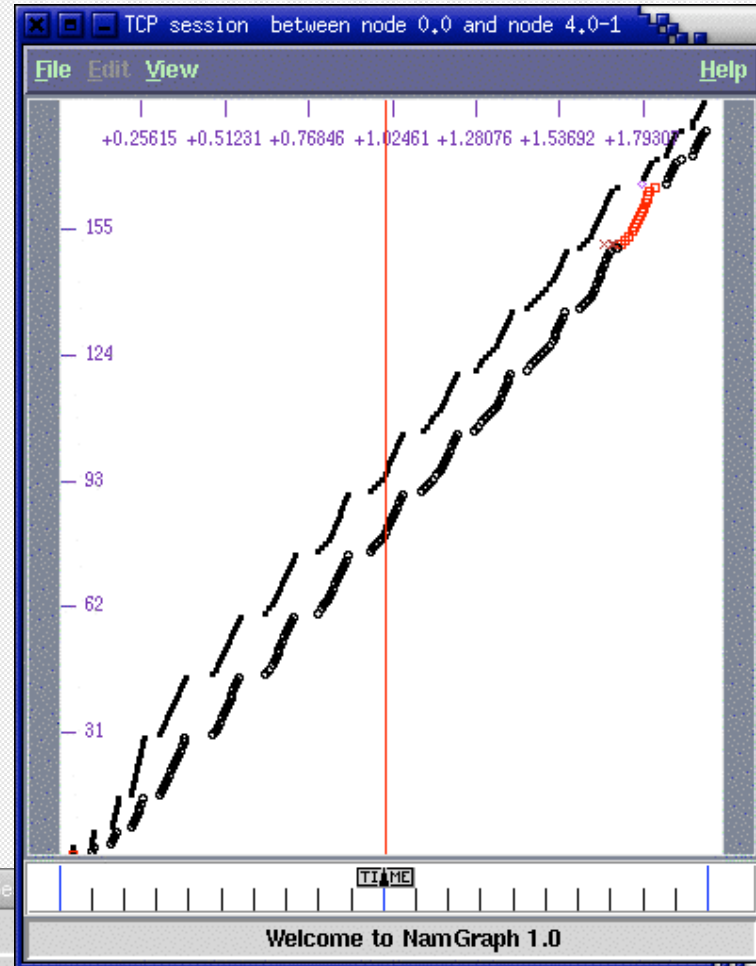
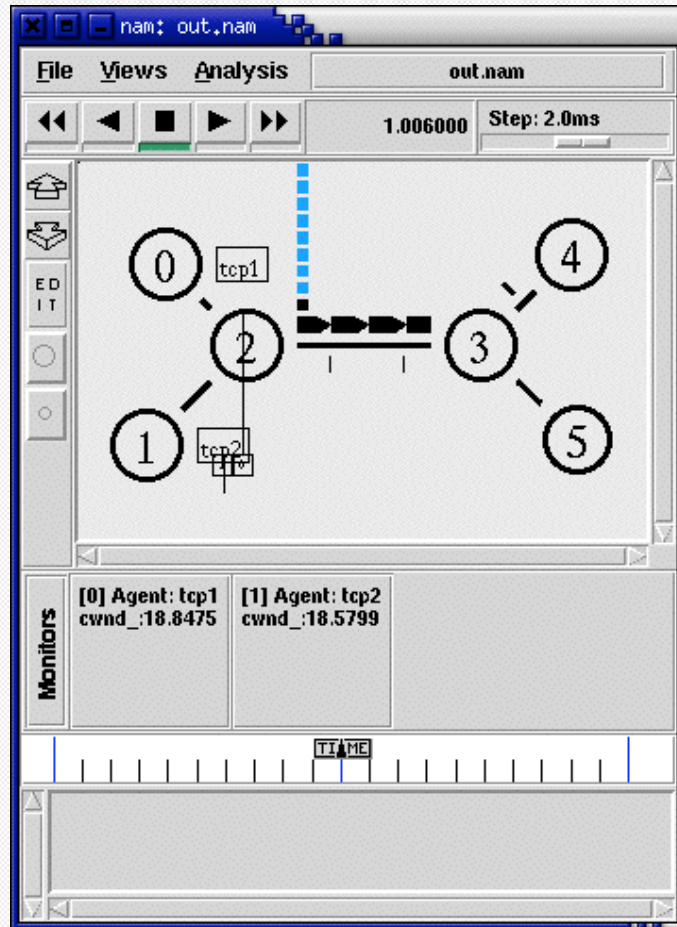
# namgraph

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- Display a graph showing when packets are received/dropped.
- Enabling namgraph
  - Run the namfilter script on your nam trace file:

```
exec tclsh /path/to/namfilter.tcl out.nam
```

# namgraph





# The nam editor

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- Create simple scenarios graphically
- Good for those who don't want to learn Tcl, but only a limited subset of ns is available



# The nam editor

