

How to enable ASCII support in ns-3?

```
AsciiTraceHelper ascii;  
pointToPoint.EnableAsciiAll (ascii.CreateFileStream ("abc1.tr"));
```

How to use TraceMetrics?

<http://mohittahiliani.blogspot.com/2014/08/ns-3-tracemetrics-trace-file-analyzer.html>

How to use Valgrind to detect memory leaks?

`./waf --valgrind --run first` (or any file from the scratch is being used then `./waf --valgrind --run scratch/first`)

Failure to call simulator will create memory leaks in this.

How to use gdb?

```
./waf --command-template="gdb %s" --run program_name  
This opens a gdb terminal to debug the program.
```

How can ipv6 support be enabled in ns-3?

```
change Ipv4 accordingly:  
Ipv6AddressHelper address;  
address.SetBase (Ipv6Address ("2001:db8::"), Ipv6Prefix (64));  
Ipv6InterfaceContainer interfaces = address.Assign (devices);
```

Flow monitor and how to use it?

```
writing all these statements after NS_LOG_INFO ("Run Simulation.");  
Ptr<FlowMonitor> flowMonitor;  
FlowMonitorHelper flowHelper;  
flowMonitor = flowHelper.InstallAll();
```

```
and then this after simulator destroy  
flowMonitor->SerializeToXmlFile("NameOfFile.xml", true, true);
```

To create pcap and cwndfile follow the sixth.cc

link to plot gnu for fifth.cc :- [https://www.nsnam.org/docs/release/3.9/tutorial/tutorial\\_31.html](https://www.nsnam.org/docs/release/3.9/tutorial/tutorial_31.html)

pcap enabling link:-<https://www.youtube.com/watch?v=xeJlZqhFpyY>

netanim link:- <https://www.youtube.com/watch?v=HRAjKRrvgh4&list=PLRAV69dS1uWQEbcHnKbLldvzrjdOcOIdY&index=5>

how to use netanim?

```
#include "ns3/netanim-module.h"  
then before simulator run  
add  
AnimationInterface anim("anim1.xml");  
anim.SetConstantPosition(nodes.Get(0), 1.0,2.0);  
anim.SetConstantPosition(nodes.Get(1), 2.0,3.0);
```

go to netanim folder ./NetAnim open the anim1.xml file created

link:-<http://personal.ee.surrey.ac.uk/Personal/K.Katsaros/media/ns3lab-sol/lab-1-solved.cc>

<https://www.projectguideline.com/using-ns-3-topology-generator/>