



Network Systems Monitoring

UPROUSE with LEARN Workshop – September 2021

Lanka Education and Research Network

Overview



What is Monitoring:

Check the status of a network



What to Monitor:

Infrastructure – Routers,
Switches, Servers, Environment,
Physical Connections, etc

Services – DNS, HTTP, SMTP etc



Why to Monitor:

Check their Reachability,
Availability

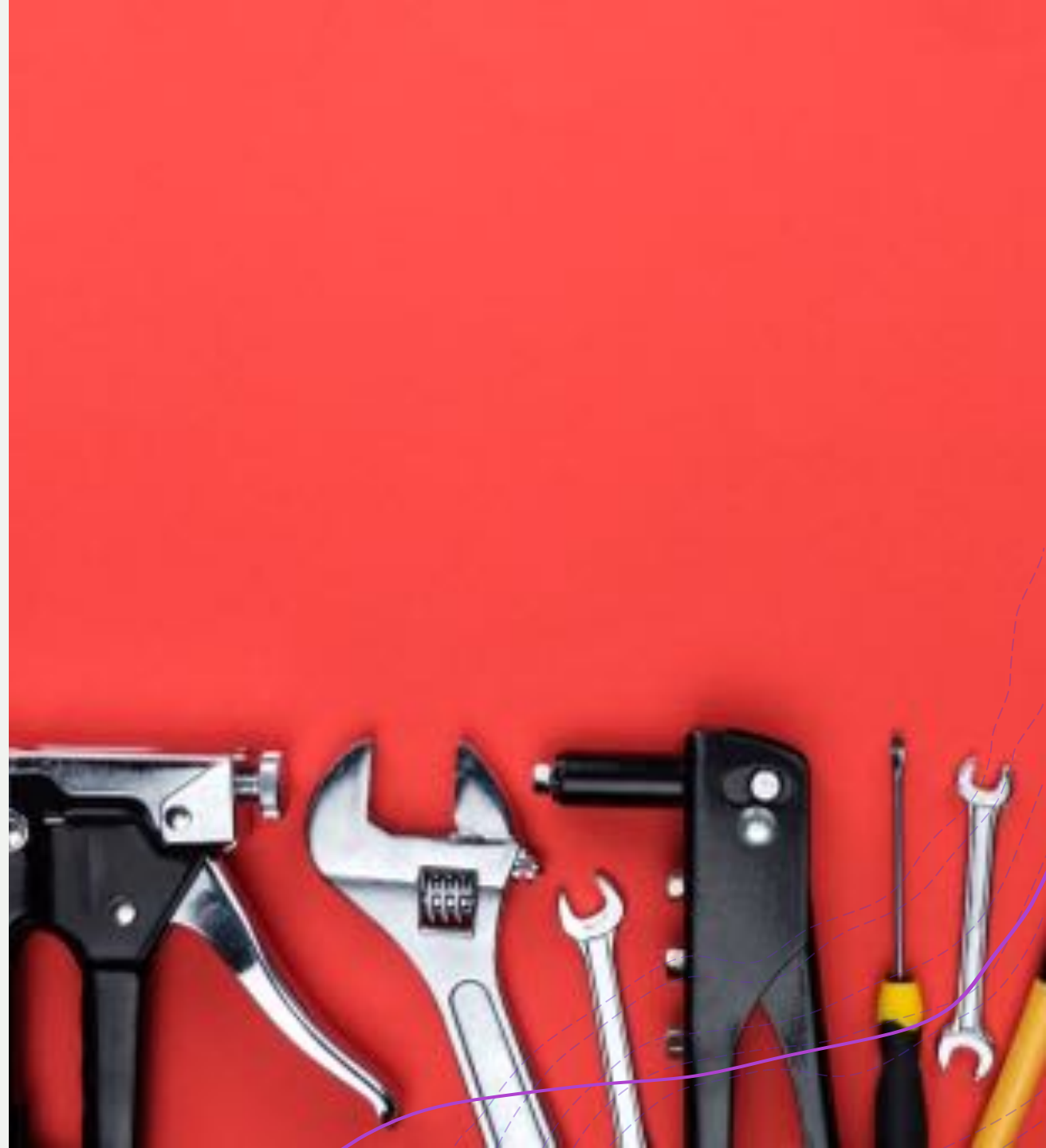
Check their Utilization?

What's their Performance

Figure out their Faults and
Outages

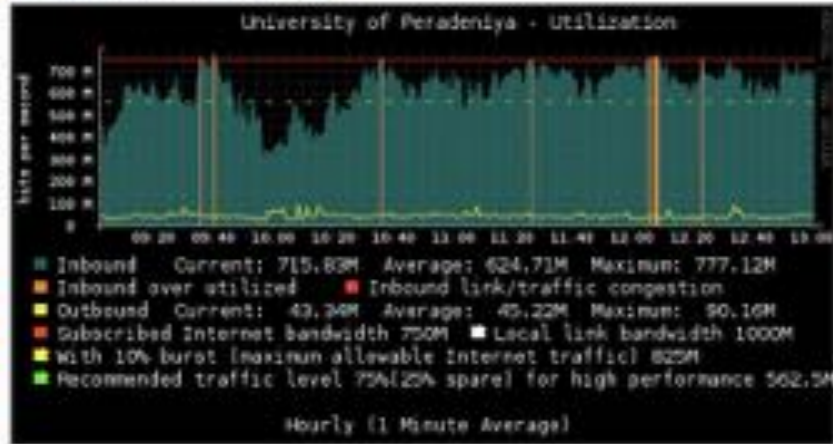
Monitoring

- + Tools we Use:
 - + Cacti
 - + Nagios
 - + Icinga2
 - + LibreNMS
 - + NFSens
 - + Nmon
 - + Htop
 - + Munin

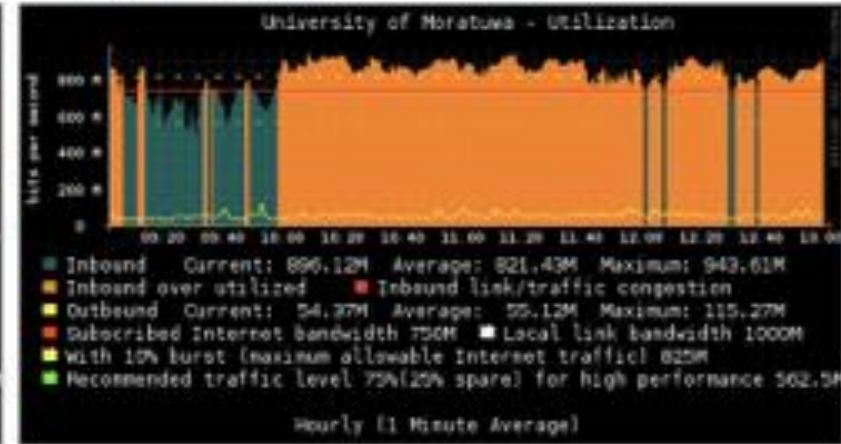


Monitoring

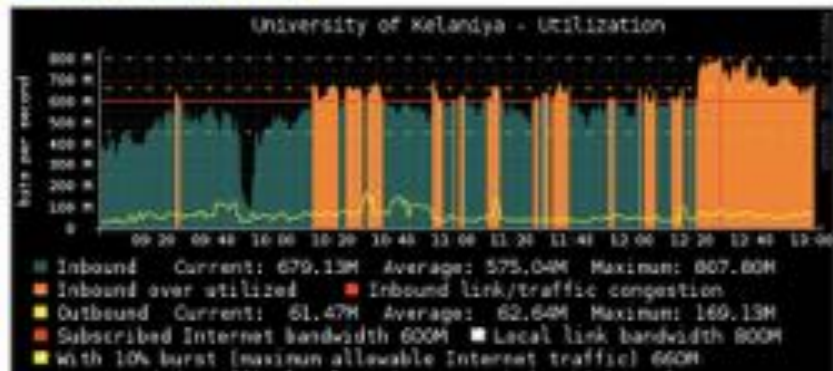
University of Peradeniya (D61429)



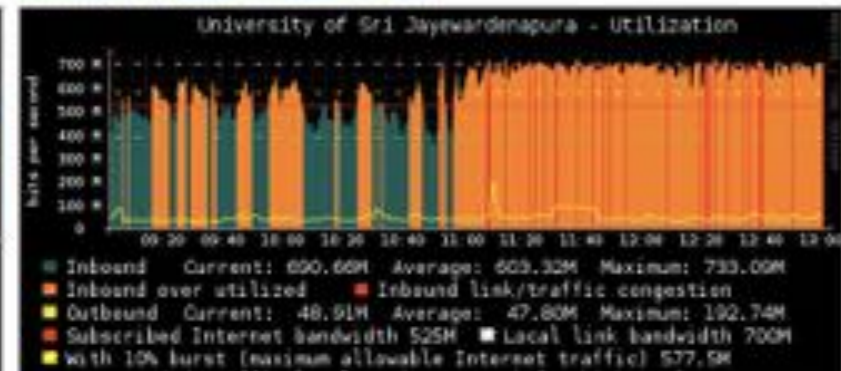
University of Moratuwa (D61427)



University of Kelaniya (D61428)



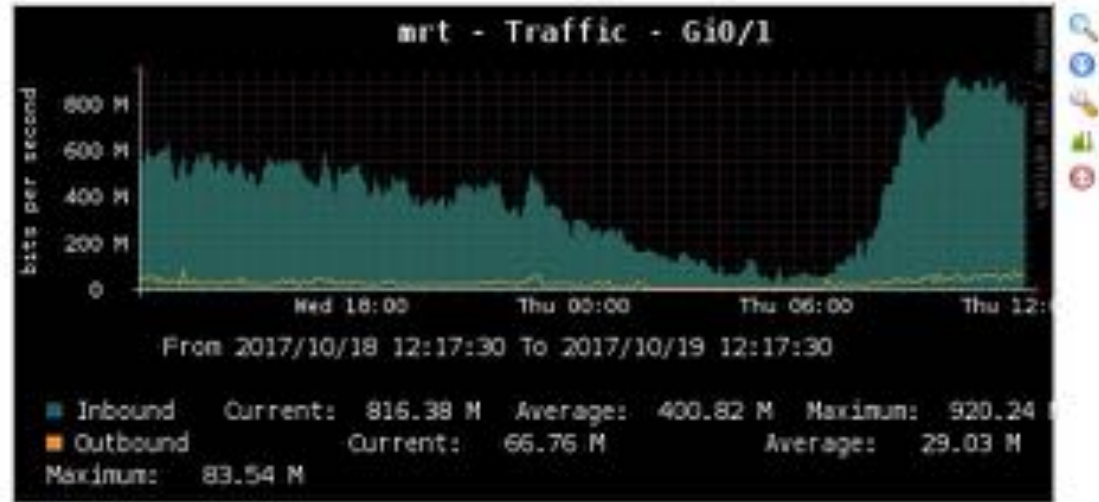
University of Sri Jayewardenapura (D61380)



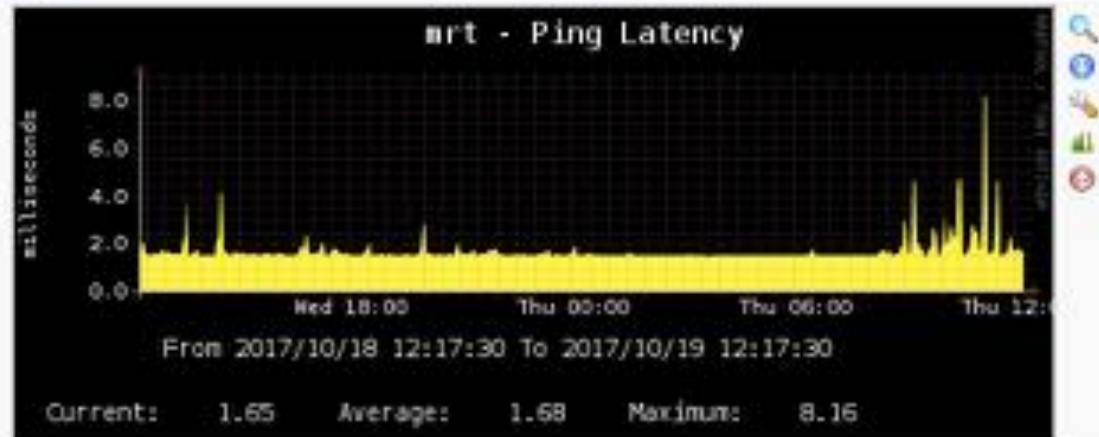
Monitoring



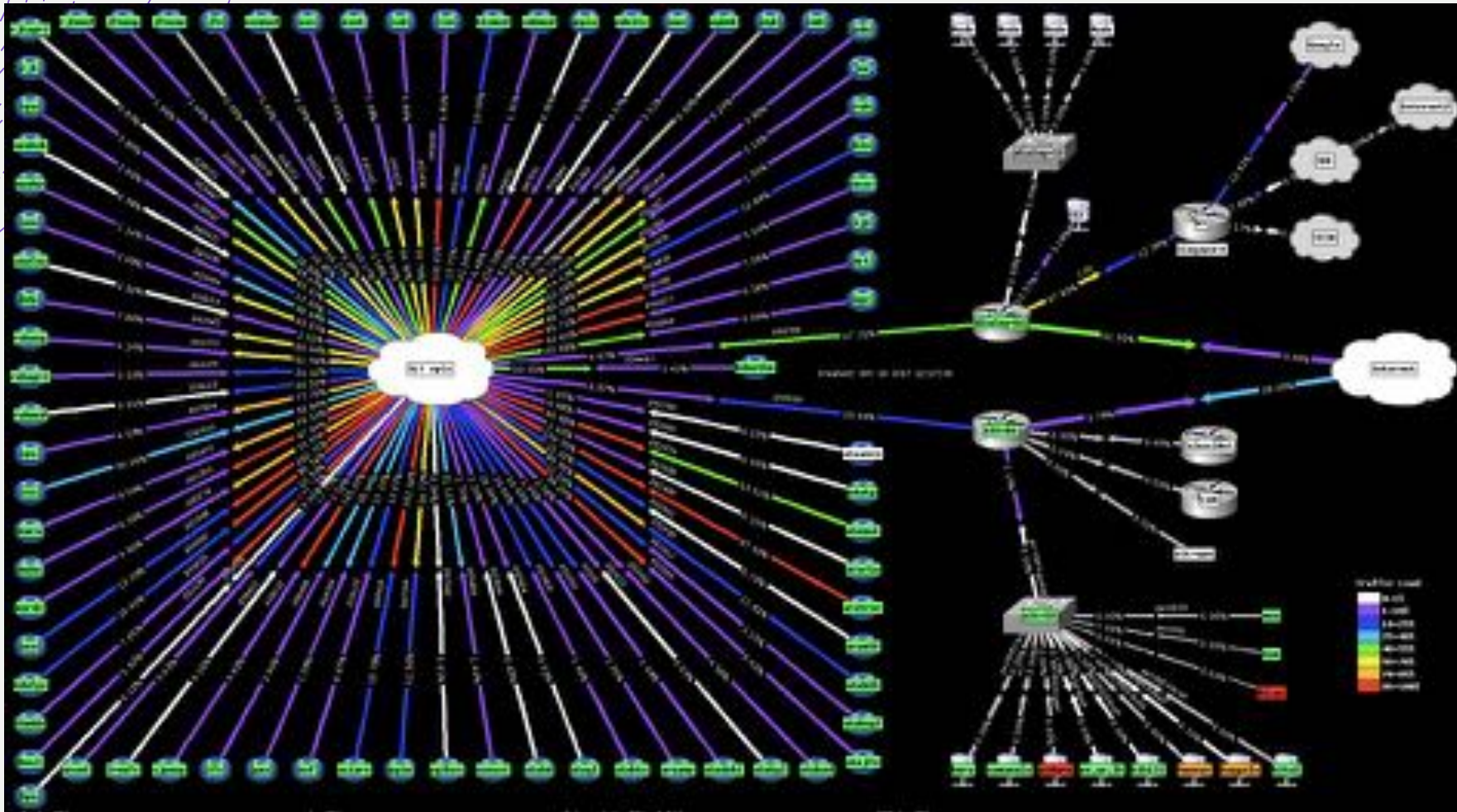
Monitoring



Graph Template: Unix - Ping Latency



Monitoring



Monitoring



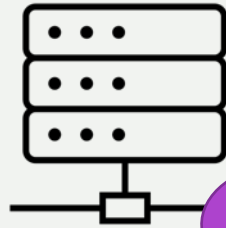
NOC

(Network Operations Center)



Monitoring Topology

Monitoring Server/s



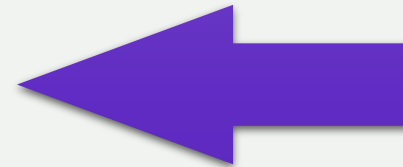
Management
VLAN



Monitoring Devices



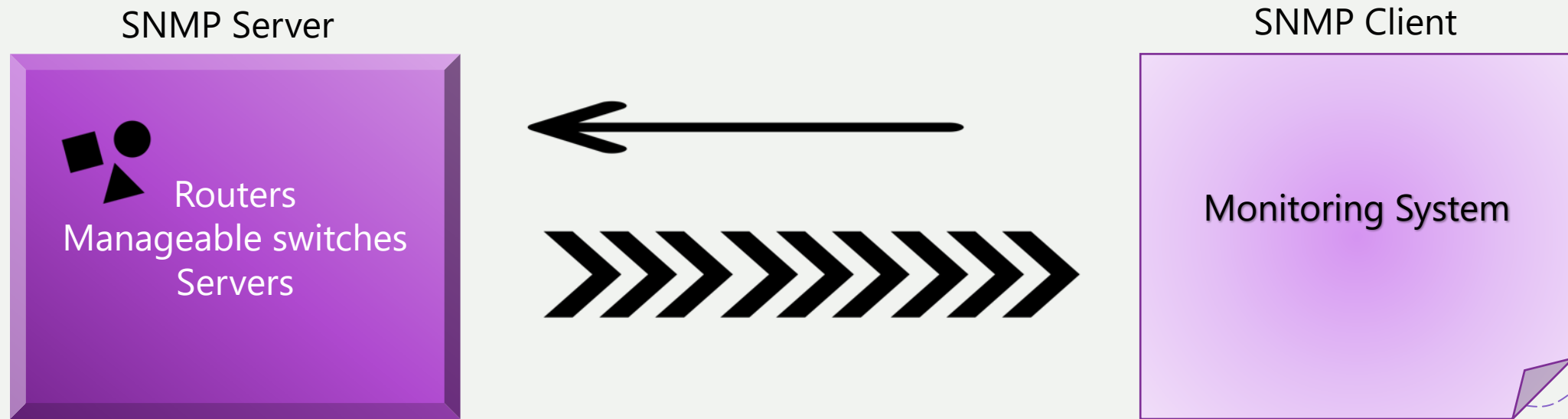
Routers
Switches (manageable)
Servers
Services
APPs
Sensors
IoT
CCTV
End user devices
etc



How to MONITOR

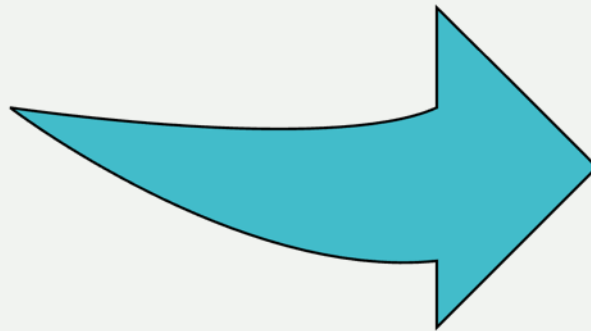
- +Monitoring systems use various methods in monitoring
- +It can be SNMP
- +It can be some agent based (agent installed on monitoring device)
- +It can be ICMP (just to check availability)
- +Or many different ways...

SNMP based Monitoring



Agent based Monitoring

Agent pre-installed



Monitoring System

