

SIMPLICA Traffic Analysis Service

Introduction

Protecting the performance of critical applications is a matter of precisely allocating bandwidth according to business requirements and the needs of applications themselves. It is critically important to identify data traffic based on applications and protocols, and enable control of all traffic types: steady rates for voice and video streams, immediate pass for delay-sensitive traffic and a balance of consistent access and bandwidth limit for bandwidth-hungry applications.

Traffic Analysis Service will provide detailed analysis and evaluation of network applications and behavior. Under the Traffic Analysis Service SIMPLICA will track levels, detects network trends, measure response times and calculate Network efficiency.

After collecting all necessary traffic information SIMPLICA will analyse the traffic information and create report with recommendations on traffic classification and differentiation in order to protect mission critical applications.

Reports offers proof that applications continue to perform as desired, even during Network growth.

Traffic monitoring and information collection device

In order to conduct Network Traffic analysis it is required to monitor and collect for further analysis the Network Traffic information.

This can be achieved by temporarily deploying the Network Traffic collection device.

Network Traffic collection device is a Multiservice platform that is topology neutral, standards compliant and low in bandwidth management consumption. The Network Traffic collection device will reside between the IP WAN CPE and LAN or can be deployed on SPAN port inside the LAN (parallel to WAN devices).

SIMPLICA uses BlueCoat PacketShapers for Network Traffic collection and analysis.

Network Traffic Analysis

Network Traffic Analysis is conducted based on collected traffic information via generating different type of statistical reports.

In general SIMPLICA works with historical and statistical reports generated by Network Traffic collection device. In addition SIMPLICA would be required to conduct real-time traffic monitoring in order to discover specific applications/protocols/ports and Network real-time trends.

WAN & IP Network Link Utilisation

IP Network link utilisation allows detection of the bottlenecks in data transmission and identifies the congestion periods. The IP Network link report will displays the line utilisation of IP Network for both inbound and outbound traffic.

The following tasks will be conducted during monitoring and analysis periods:

- ✓ Detect the bottlenecks in data transmission and identification of the congestion periods
- ✓ Report the utilisation of a specific link
- ✓ Detect the burst of traffic activity and distribution of the utilisation
- ✓ IP Network link performance analysis
- ✓ IP Network link Performance and Bursts trends analysis
- ✓ Response Time measurements

Through identification of congestion or near congestion during a given period decision can be made as to the requirement for traffic shaping to avoid this congestion. Action should be taken to avoid the resulting poor critical application performance and such QoS policies can be instituted on a per circuit basis.

Protocol Distribution

Protocol Distribution report will provide visibility to protocols and applications running on IP WAN Network.

The following tasks will be conducted during monitoring and analysis periods:

- ✓ Identify applications and protocol traffic behavior
- ✓ Identify undefined Ports
- ✓ Bandwidth allocation and usage
- ✓ Applications, Network and Transport Protocols distribution and trends analysis

This report may be used to understand how the applications are utilising the IP Network and helps identifying protocols showing the highest mean line utilisation.

Also this information may be used to determine which services or protocols need to be shaped for optimal network performance.

Other elements that SIMPLICA believes are extremely important

During Traffic analysis SIMPLICA will collect and analyse the following important information:

- TCP Health analysis
 - TCP Aborts
 - TCP Retransmissions
 - TCP Refusals
- Top 10 Reports for
 - Delay (Network, Servers)
 - Incoming and Outgoing
 - TCP Health

Only by looking deeply into the TCP transactions and understanding your applications you can discover the behavior of your applications and make a decision on which behavior is expected and which traffic is scavenger

SIMPLICA Traffic Analysis Service Procedure

Service	Traffic Analysis Service
QoS strategy	To be decided based on conducted traffic study
Traffic analysis	Traffic Analysis Service
Criteria	Evaluation of IP WAN network applications and behaviour Track levels Detects network trends Measure response times Calculate Network efficiency
SIMPLICA Services	Conduct Traffic Study Analyse collected information Recommend QoS strategy Provide one-off report Network performance information collection
Actions summary	Traffic study Applications and traffic analysis QoS strategy recommendation