

Project Title : Network Data Monitoring Application

Organizations today rely heavily on internet and tools available through them, be it ecommerce or cloud, work comes to a standstill without connectivity. This also brings with it issues related to bandwidth, usage and security related to network infrastructure. One of the tool required to identify different security, vulnerability and other monitoring related issue over internet is a network data monitoring Application ,that identifies, captures and filters data that is getting in and out of network

Problem Description

1. To monitor data traffic over the network
2. Identify source and destination of data
3. Filter the data based on domain
4. Identify and Issue warnings for sites that are not supposed to be accessed as per business rule

Expectation

The proposed system, should be able to monitor the data that is coming into the network and going out of network . Information like from which machine on local network has the request originated and to which domain is it forwarded. Also the incoming and outgoing data should be filtered on the basis of domain. A system to generate warning to network administrator should be created for all those domains , that are not required for organization's business process. Network administrator should be able to create the list of domains to be filtered ,edit this list and also remove a domain from that list

Solution:-

User Stories

1. The application should have option to login to the system
2. There should be a module to register machines that will come under monitoring
3. A page should be available to view the network traffic that is coming in and out of network in form of line graph
4. A page should be available that lists all the machine registered over application. The page should display status of machine online or offline.
5. When user clicks on a machine name ,he/she should be taken to a page that shows individual traffic generating from that machine
6. A list of domains being accessed by individual machine should be visible with warning sign for domain that is not part of business process
7. A page should be made to allow user to create list of domains that are allowed over the network. This list should be editable

8. A report should be generated for each machine individually that can be printed .The report should contain list of domains accessed ,that were beyond business process
9. A page to send a message to a machine for which warning has been generated should be available
10. The machine that is receiving warning signs can be blocked over the network
11. A module can be created to generate and send an email to the person , who is in charge of machine
12. A module can be created to change settings of application like user name ,password, registering more users, registering machines .Changing location of log files
13. A module can be created to check the upload and download speed over internet
14. A module can be created to monitor internal network traffic ,that displays following information
 - Network speed
 - Data transfer between two machines
 - Information of machine like ip address and other network details
- 15 .A module should be created to display a report that shows network usage by different machines on daily ,weekly or monthly basis in bar graph form
- 16 A list of all machines and their in charge should be generated who have received warning
- 17.A machine that has received multiple warning should be put on a red list and blocked over the network using the tool
- 18 Separate log should be generated for all the traffic data that is produced using the tool and should be displayed in application itself

