UserData
WebCache, PackMIME
Adios
2007/12/20
Why?

why needs user-level data transfer?
Application

HTTP header, Session .. etc
This report gives details on hosts that were tested and issues that were found. Please follow the recommended steps and procedures to eradicate these threats.

<table>
<thead>
<tr>
<th>Scan Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hosts which were alive and responding during test</td>
</tr>
<tr>
<td>Number of security holes found</td>
</tr>
<tr>
<td>Number of security warnings found</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Host List</th>
</tr>
</thead>
<tbody>
<tr>
<td>Host(s)</td>
</tr>
<tr>
<td>140.123.66.1</td>
</tr>
<tr>
<td>140.123.66.2</td>
</tr>
<tr>
<td>140.123.66.3</td>
</tr>
<tr>
<td>140.123.66.4</td>
</tr>
<tr>
<td>140.123.66.5</td>
</tr>
<tr>
<td>140.123.66.6</td>
</tr>
<tr>
<td>140.123.66.7</td>
</tr>
<tr>
<td>140.123.66.17</td>
</tr>
<tr>
<td>140.123.66.20</td>
</tr>
<tr>
<td>140.123.66.22</td>
</tr>
<tr>
<td>140.123.66.29</td>
</tr>
<tr>
<td>140.123.66.31</td>
</tr>
<tr>
<td>140.123.66.32</td>
</tr>
<tr>
<td>140.123.66.43</td>
</tr>
<tr>
<td>140.123.66.52</td>
</tr>
<tr>
<td>140.123.66.53</td>
</tr>
<tr>
<td>140.123.66.56</td>
</tr>
<tr>
<td>140.123.66.58</td>
</tr>
<tr>
<td>140.123.66.59</td>
</tr>
<tr>
<td>140.123.66.61</td>
</tr>
<tr>
<td>140.123.66.71</td>
</tr>
</tbody>
</table>
Why needs?

Why NS2 needs other ways to achieve it?
NS2 simulates size.

Simulating data being transferred.
How?

How data being transferred in NS2?
Dev ur agent

Develop your own agent.
send(), recv()
Application (HttpApp, ...)

send_data(ADU) \rightarrow \text{process\_data}(ADU)

Agent Wrapper (TcpApp, ...)

send(bytes) \rightarrow \text{recv}(bytes)

Agent (TCP, ...)

\downarrow \text{packets}

Application (HttpApp, ...)

send_data(ADU) \rightarrow \text{process\_data}(ADU)

Agents supporting user data (HttpInvalAgent, ...)

\downarrow \text{packets}
Agent Wrapper

TcpApp
FIFO Queue
Callback

Mostly implemented via callback.
For example,

01_userdata_by_wrapper.tcl
Any application?

Is there any app based on TcpApp?
HTTP bases on it.

HTTP/Client, HTTP/Server communicate by TcpApp callback.
Web cache in NS2.

4 : page, cache, client, server
Page
id, size, ClientPage, ServerPage...
Page Pool

Math, Proxy Trace, Client
For example,

02_http_arch_in_ns2.tcl
404
not found
Lack ?

There is something missing...
Large traffic?

*something like backbone routers.
PackMIME

*simulate traffic generated on a link.
client cloud (ns node)

client Applications and Agents

server cloud (ns node)

server Applications and Agents
For example,

*03_simple_pm.tcl
Therefore...
TcpApp callback.

TcpApp sends user data via callback.
Web Cache

pool
PackMIME

http traffic simulation
Ur own algorithm.

by Callback or...