AddPac Technology
Gatekeeper Performance

AddPac Technology

R & D Center

Contents

- Gkburst – GateKeeper burstness test.
- Gkgen – GateKeeper periodic load test.
- Discussion

Performance Tool - Gkburst.

- This program can measures the burstness of the gatekeeper call handling ability.
- This program reports the number of RRQ messages per seconds by sending a lot of RRQ messages to gatekeeper within very short time.
- This program reports the number of ARQ messages per seconds by sending a lot of ARQ messages to gatekeeper within very short time.

Gkburst - Usage

- % gkburst –gk 172.16.1.10 –n 1000

✓Above command shows that gatekeeper address is 172.16.1.10 and the iteration number of RRQs, ARQs call load generation messages is one thousand(1000)

✓In Pentium III 800 MHz Linux based PC environment (minimum requirement) , 1000 RRQ messages can send to Embedded Gatekeeper within 1 second from PC.

✓RCF messages from Gatekeeper is measured.

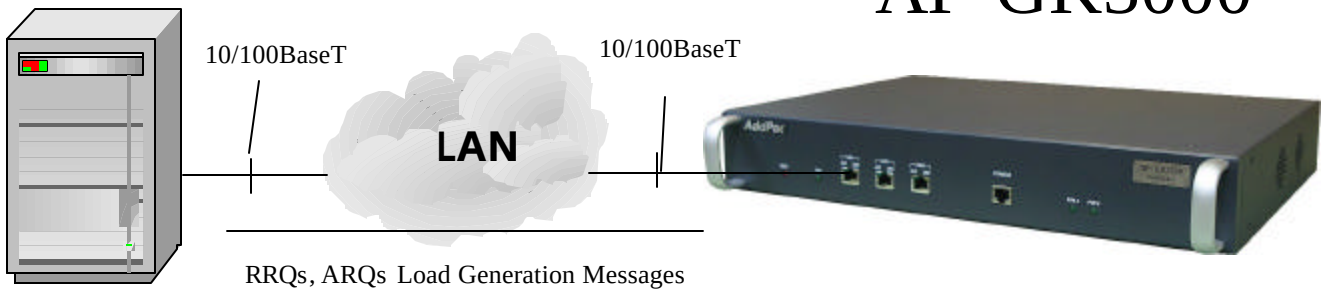
✓Next, 1000 ARQ messages are sent to Gatekeeper within 1 second.

✓ACF messages from Gatekeeper is measured.

Gkburst – Test Environment

AP-GK1000
AP-GK2000
AP-GK3000

Linux PC



Gkburst – Test Scenario

LAN

Gkburst Program On Linux PC

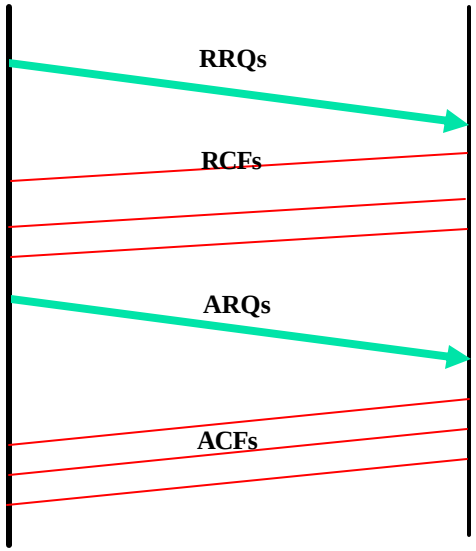
AddPac Embedded GateKeeper

Send multiple RRQs with burst.

Receives RCFs with delay.

Send multiple ARQs with burst.

Receives ACFs with delay.



Gkburst – Test Result

- GK1000
  - ✓ Send 200 RRQs and 200 ARQs
  - ✓ 10 RRQ/sec
  - ✓ 10 ARQ/sec
- GK2000
  - ✓ Send 1000 RRQs and 1000 ARQs
  - ✓ 83 RRQ/sec
  - ✓ 83 ARQ/sec
- GK3000
  - ✓ Send 1000 RRQs and 1000 ARQs
  - ✓ 166 RRQ/sec
  - ✓ 166 ARQ/sec

Performance Tool - Gkgen.

- This program measures maximum number of endpoints and maximum concurrent calls which can be supported by a gatekeeper.
- Single Gkgen process can register 1000 endpoints with 2000 aliases.
- After register endpoints, single Gkgen process generate 1000 ARQs and DRQs periodically.
- To measure more than 1000 endpoints performance, multiple Gkgen process can be running on a Linux station or multiple Linux stations.

Gkgen - Usage

- % gkgen –gk 172.16.1.10 –n 1000 –b 1000 –arq- 2 –ttl 120
  - ✓ -gk : gatekeeper IP address
  - ✓ -n : number of endpoints and calls to generate
  - ✓ -b : base number for distinguishing multiple Gkgen processes
  - ✓ -ttl : Time to live timer value.
  - ✓ -arq- : number of TTL period per one call

Gkgen – Test Scenario

Gkgen Program On Linux PC

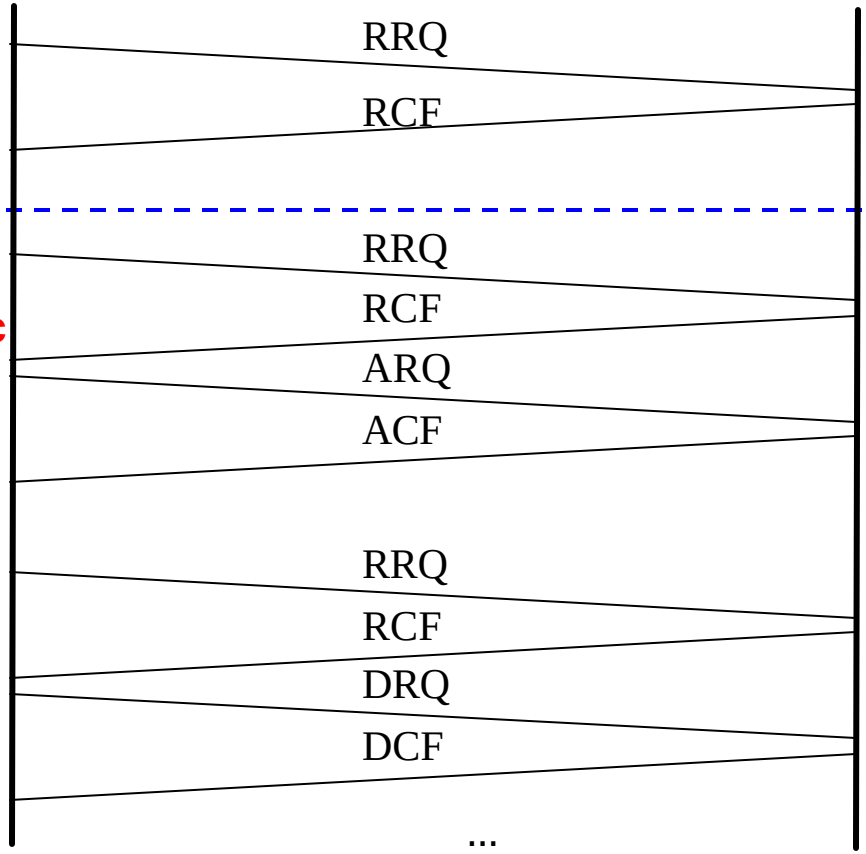
AddPac Embedded GateKeeper

Phase 1 : Registration phase

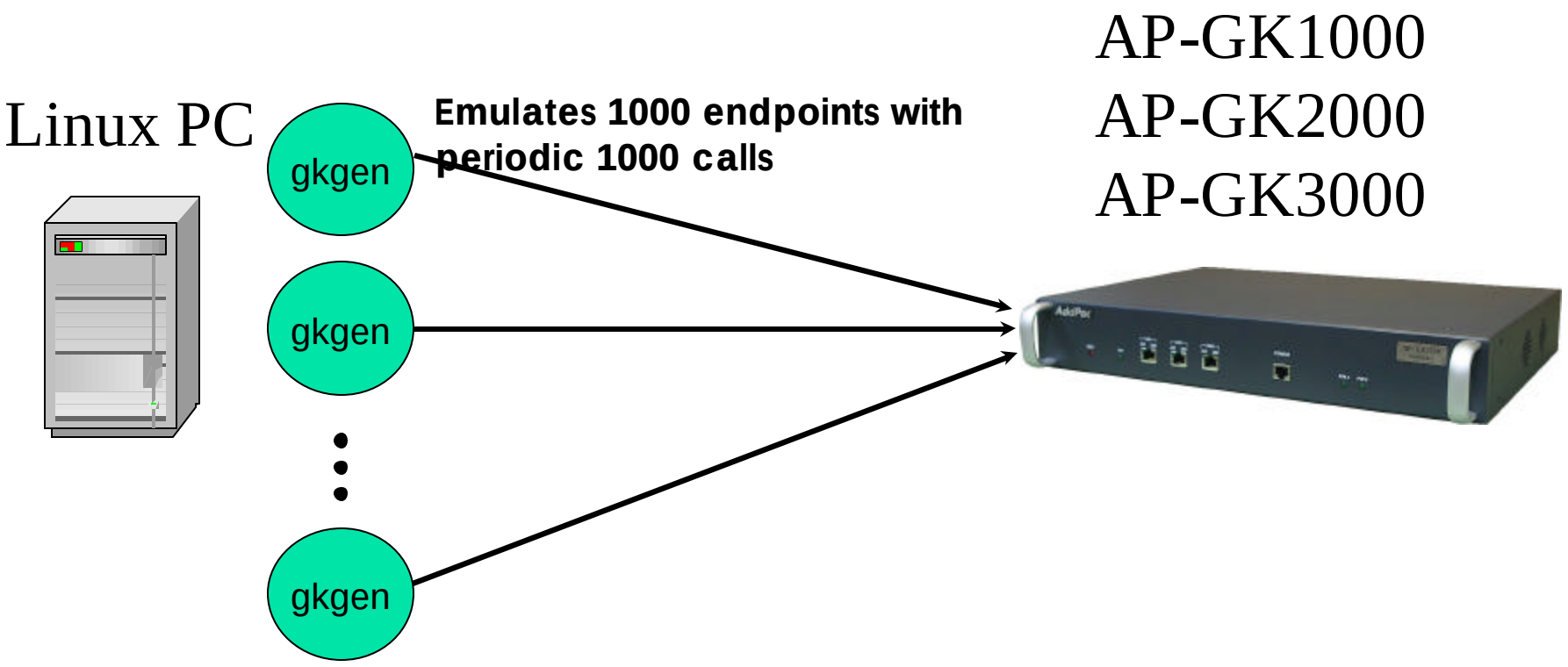
Sends N RRQs and receives N RCFs.

Phase 2 : Call generation periodically with periodic TTL registration.

Sends N ARQs and DRQs with RRQs.



Gkgen – Test Configuration



Gkgen – Test Result

- Condition : TTL = 60 sec, Call period is 120 sec
- GK1000
  - GK CPU load : Max 80%
  - 200 endpoints, 400 aliases, 200 concurrent calls
- GK2000
  - GK CPU load : Max 80%
  - 1500 endpoints, 3000 aliases, 1500 concurrent calls
- GK3000
  - GK CPU load : Max 100%
  - 5000 endpoints, 10000 aliases, 5000 concurrent calls

Discussion