VoIP Registration Storms

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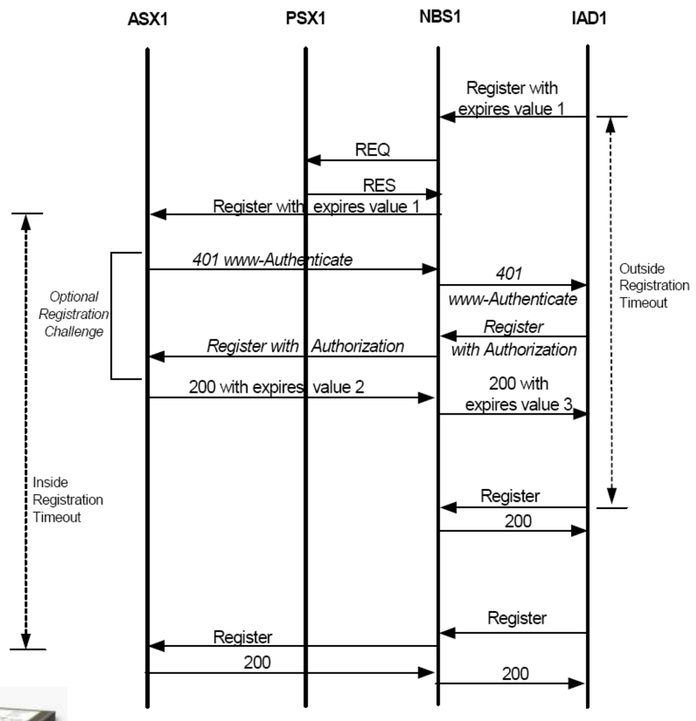
Project Goals:

- Design and a setup and voice over IP network
- Obtain comparisons of network reactions to varying stress levels placed by registration storms
- Determine the limitations of the Sonus networks equipment in a lab based environment under these conditions

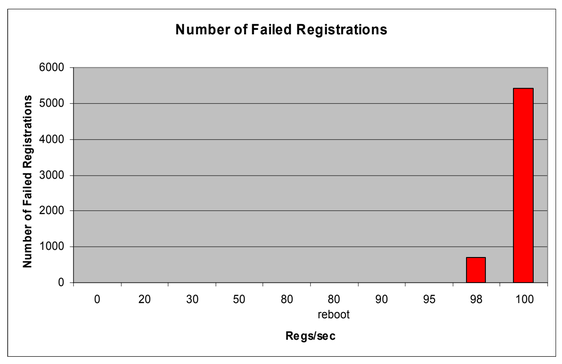
Project Overview:

- Use lab equipment provided by Sonus Networks
- Configure the VoIP network to process SIP registrations and calls
- Simulate registration storm by sending 8000 registrations in a short period of time
- Very the intensity of the registration storm in order to analyze the reaction of the network to different conditions

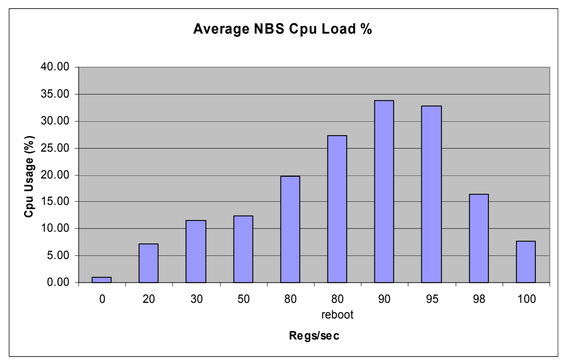


Project Results:

- As the number of registrations per second increases, DEX approaches a threshold (~ 98 regs/sec) and begins to fail registrations.
  - These failed registrations have nothing to do with the NBS.
  - They are due to the DEX's registration sending capacity limitations



- DEX was used to generate registrations.
  - As the number of registrations per second increases, the cpu load on the NBS increases as well.
  - Note that between "80" and "80 reboot" the NBS was rebooted. The reason that "80" has lower cpu usage than "80 reboot" is because of a NBS feature which recognizes recently registered numbers and sends them on the "fast-track" so to speak.



Project Conclusions/Outcomes:

- The average NBS cpu usage before breaching the DEX sending capacity was just under 35%.
- This leaves plenty of room to increase the number of registrations per second before the NBS+ASX start to fail.

- Special thanks to Sonus Networks, Networks Services teams

Sonus NETWORKS