Edgewater Certified Solutions Professional - Technical Training Course

Challenge

A new restaurant in town, "***Joe's Crab Shack***" is opening this month and requires phone service. They are planning to utilize an Internet based IP PBX service from your client, "***Josh's Hacked Together Asterisk Company***", an internet based VoIP service company. This is the first of what may become hundreds of locations.

Joe's crab shack is worried about the quality of service they will receive from Josh's and ask about the following options:

1. Traffic Shaping options that can ensure VoIP traffic is prioritized on their 1.5 Mbs Internet "WAN" connection
2. The ability to support Three onsite phones and a fail over option should the internet connection be lost.
3. How will you secure their data traffic on their LAN from Internet hackers?
4. ***Joe's brother, Louis***, occasionally stops by the restaurant, demanding free food and the ability to connect directly to his preferred VoIP service provider, "***Jim's Crackle & Pop Phone Company***".
5. Owing to a childhood trauma involving the cookie monster, Joe has an irrational hatred of the letter "A" and demands that no phone in his restaurant be able to communicate using the G.711 A-Law (PCMA) codec.

Josh is new to VoIP and worried he cannot meet the requirements of his first customer. He asks you to help design his infrastructure so that:

1. He can meet Joe's requirements.
2. He can deploy a simple, easy to implement solution at the customer premise that will provide a clear "demarc" between the client LAN and the Internet
3. Ani ability to monitor client call quality.
4. Access the edge device so he can backup and restore configuration files
6. Provide a redundant IP PBX service for "survivability"
7. An onsite PSTN gateway with a single POTs line that will act as a backup for the three phones to make calls in the event Internet service is completely lost.

Plan, design and implement a solution for Joe's Crab Shack. Discuss options for Josh to provide centralized provisioning of all client onsite phones.

Questions

1. How can Josh build his infrastructure so that client phones access the central provisioning server?
2. What are you going to do about Joe's brother, Louis?
3. Should Josh consider a VPN service between his infrastructure and Joe's network edge?
4. How can you design the network so that Joe's phones are cut over to a redundant Asterisk Server in the event the primary server fails?
5. How can you design the network so that Joe's phones can switch to a local PSTN gateway in the event WAN internet connectivity to Josh's Asterisk Servers is lost – *Hint, use SIP ALG configuration* and its associated "Rules".

6. Design your network so that Josh will receive email notification whenever call quality on Joe's network drops below a MOS of 2.9.
7. Ensure Joe's demarc infrastructure can be backed up in the cloud as part of the service Josh offers.