ASCOT HOTEL BUYUKADA, ISTANBUL

CASE STUDY   **ASTERISK**

Büyükada is the largest of Turkey's picturesque Princes Islands located on the Sea of Marmara. Former home to Ottoman princes and during the 1920s and 1930s, Leon Trotsky, a Turkish development company owned by the Ferard family from the UK bought an empty historic building near the island's seafront. Renovated into the romantic 22-en¬suite Ascot Hotel, just a short ferry trip from Istanbul, the structure lacked any existing infrastructure for Internet connectivity or telephony. The Ferards, who have expanded their property development enterprises into Turkey and Bulgaria, decided to wire the building with Internet network connectivity and to implement an Asterisk-based VoIP telecom system. Asterisk, sponsored by Digium, is an adaptable computer telephony integration (CTI) solution renowned for its ability to turn an everyday computer into a telecommunications server.

Asterisk Answers the Call for a Low-Cost, User-Friendly Solution for Ascot Hotel Buyukada, Istanbul

According to Dominic Ferard, Asterisk is not commonly used in Turkey, but they had used a PC-based VoIP PBX system at other locations throughout Europe over the past 10 years, so he was familiar with Asterisk's reputation. With his predilection for open source software, he was keen to try Asterisk. "Our local management had some special requirements with Ascot Hotel, and with our other property located in Sultanahmet on the mainland," Ferard says. "I felt Asterisk would be more flexible and save money, due to open source's ongoing input from the technical community, and because of Asterisk's reputation for easy integration with component systems, making it less expensive than proprietary solutions."

Ferard also explains the mechanics of purchasing specialized technological services in Turkey. "There is little choice in telecommunications services and equipment," he says, "but although prices are relatively low when quoting for a bespoke solution, resellers tend to pick a number for price, and multiply it by three or four." Since Asterisk is free software, they decided to implement it for use in an integrated Positron IP PBX built in Canada, shipped via the UK, and then brought to the hotel in Turkey. He says the process, roundabout as it may seem, was cheaper than buying an appliance locally.

"With proprietary (big box) telecom systems, it is often difficult to customize those solutions if you want them to perform outside the mainstream," Ferard explains. "We wanted IP phones in every room at Ascot Hotel, but for Ascot House (holiday rentals in Sultanahmet, the central tourist area of Istanbul), we have only a cleaning crew onsite. Rather than put a phone with an open line in every rental, we wanted a phone in the lobby that would ring through like a phone extension to the receptionist's desk in Büyükada, so that guests with questions in Ascot House could access the reception service of Ascot Hotel. Our Asterisk solution let us program this special application through a web GUI."

Ferard even found that he could use his mobile phone with SIP capability to log in as an extension to Ascot Hotel — from another continent." He says there was some resistance from Turkish colleagues to what they saw as an untested and even bizarre configuration, but it was a way to solve the problem economically. "I wouldn't call what we did cutting edge, but it more than meets our requirements, and for a tenth of the price we would pay for a proprietary solution."

Another issue they faced in Turkey was the lack of and unreliability of SIP trunking, telephony technology that normally offers significant cost-savings for enterprises by eliminating the need for local PSTN gateways, costly ISDN Basic Rate Interfaces (BRIs), or Primary Rate Interfaces (PRIs). Currently, because SIP is not an economical, across-the-board solution, the Ascot uses a low cost SIP service from a vendor in Switzerland for outgoing calls only, while they use four POTS lines for incoming calls. Reservations are outsourced to a call center on the mainland to save money.

"Incoming calls are simple," Ferard says. "The auto attendant lets the caller press zero for the front desk, or two for reservations, which routes them to the outsource center or to the manager's mobile phone without the caller knowing any differently." Outgoing calls are more complex and use SIP trunking. "We are seeing more hotel guests using their own mobile services and Skype for outgoing calls, but we felt having free worldwide phone service in the rooms was a nice perk for our hotel guests. We installed very economical GrandStreams and Yealink IP phones in the rooms." Ferard says they have had very little abuse of this offering, the cost to the hotel is trivial, and they have only had to block a few extremely obscure call destinations like Antarctica.

They also found that they needed a workaround brought about by Turk Telekom's call termination process. Unrecognized by either Asterisk that controls the call, or the Positron, through which the termination signal may not be reaching Asterisk, terminated calls sporadically remain open, keeping the line busy with no way to know it is doing so. Unable yet, to discover a solution to the problem, Ferard wrote a Linux script (program) that uses Asterisk's built-in scripting language to watch for these instances and break hung calls if it finds them.

"If that program helps others with similar problems, whether in Turkey or elsewhere, that is great," he says. "Overall, after two years in operation, I am happy to confirm that Asterisk is working well, it was easy to implement, and inexpensive to execute with no costly maintenance contracts."