

## **Overview**

CDSO (Costa del Sol Online) is a provider of Telephony Services in Spain, Southern Europe. Through its brand Bamboo Telecom it promotes wireless broadband and IP Telephony services to residences and businesses that for reasons of remote location are often unable to obtain service or with poor service from the incumbent provider Telefonica.

CDSO was already using an Open Source platform, Asterisk, with some 400 users and growing fast it was clear that the existing infrastructure would not be sufficient to allow the business to expand correctly. The need was clear on all fronts: a turnkey solution that would simplify and automate user, admin and technician experience.

## Challenge

CDSO had already the basic infrastructure for providing an ITSP platform. A dual core xeon blade server of P4 and a Sangoma E1 interface. Choosing the popular Grandstream ATAs deployment was already quite simple in some respects. The ATA could be pre-programmed before leaving to the customer's location and allowed the customers to use an existing analogue handsets.

Engineers installing the wifi equipment at location would often however be approached by nearby neighbours to add their house to the service. To complete a sale & delivery at that moment the engineer would need to call by cell phone to the office and ask for an account and IP telephone line to be set up by command line. In effect this was too cumbersome.

As expansion was planned the need to put in place effective redundancy was also high on the list. More business users were coming online and service outage was no longer an option.

The real bottleneck for the business however was in the administering of the billing. Manual Calculation of CDRs was incredibly tiresome and prone to error. Third-Party Billing softwares were of course an option. However these often proved expensive and needed integration through to the calling on credit card.

The local region was multi-lingual and so the checking of details by customers such as voicemail and other services needed to be accessible to all customers thereby greatly reducing support time.

## **Solution**

Alain Duzant at CDSO had already been using PBXware and was struck by the organised logic of the software as well as a very feature rich set of tools for user and admin alike. Taking time to work with his Account Manager at Bicom Systems they planned together in July 2006 how to move Bamboo Telecom to the next step. A proposal was made for a Turnkey Phone Company on a single server with a controller to provide a mirror and failover.

By combining Bicom Systems' SWITCHware product with additional Accounts and Invoicing modules in the TELCOWare suite, CDSO would be able to have a turnkey ITSP delivered quickly and efficiently. With the same feature set as PBXware this would offer highly advanced possibilities to residential users and the possibility of IP PBXs to small businesses.

The TELCOWare suite would be deployed on the SERVERware application platform. This permitted great flexibility and combined with a Controller a mirrored failover.

## **Implementation**

August 2006 the Bicom Systems team set to work and within the same day the server application platform was set up on both servers and SWITCHware installed with its other applications on the Host.

In conjunction with Bicom Systems own origination/termination services overseas DIDs were added to the offering.

Some painstaking work on the database of the existing clients was undertaken to port them to the MySQL over the week following. In the mean time the existing rate card was uploaded and test calls begun. Engineers were trained in the operation to set up accounts.

For 1st September 2006 the new service was running, calls passing CDRs producing and CDSO able to compile simply their monthly run of statements and credit card calls.

## **Results**

Engineers now can complete sales and deployments on the ground without needing to refer to the office. The increase in sales and efficiencies is dramatic. Customer have live access to their accounts and bills can now be produced in a few minutes where before days were needed.

More households in Spain that previously could not have access to the Telephone are now connected with Broadband.

Given many of the permanent expatriate communities being able to have non-Spanish DID's coming into their homes and offices has greatly enhanced families' abilities to stay connected with loved ones at home and speak for free.