

ASP security explained ... Objective : 100% peace of mind

DAVID MORGAN
Chief Technology Officer :: i-conX solutions

Before placing their faith in an out-sourced ASP service, telcos require the utmost assurances on data security and connectivity.

This is a frequent and understandable concern, where i-conX is always happy to reassure potential customers!

In the past, many of our largest customers have visited our data centre in person, conducting end to end audits to obtain the satisfaction they need. So, what did they find when they got there?

Our ASP is hosted at at one of Europe's largest data centre facilities - Dublin-based DEG (Data Electronics Group). This facility is run by a specialist team with more than thirty years expertise in network and facilities management.

Connectivity

Our service is connected to the Internet with multiple levels of redundancy to ensure that there is no single point of failure. The multi-homed architecture guarantees 100% uptime and optimised path selection. In fact, i-conX ASP is connected to five ISPs at any one time ensuring 100% Network Availability.

Co-location in the same facility as the Internet Neutral EXchange (INEX), peering point for all Irish ISPs, ensures reliable and direct connectivity to the backbone of the internet at all times.

Data & Physical Systems Security

Cisco Firewalls protect i-conX ASP. Implementations of SSL, SSH2 and IPSec ensure the privacy and integrity of all transmissions across the Internet to and from i-conX ASP Service.

All i-conX ASP service activities and transmissions are monitored, logged and audited.

We benefit from a 24x7x365 high-

level secure data centre facility that is fully monitored and managed by a leading security company. In addition the centre uses Hand Geometry Technology for enforcement of security access to nominate persons and the centre has over 100 motion sensitive CCTV cameras. All systems benefit from full fire protection and are housed in locked and unmarked racks.

Host Hardware Configuration

HP and Dell server technologies fulfil our data processing requirements. Fully redundant Hitachi SANs host our customers' data. These systems offer the performance, scalability and advanced functionality we need to manage our customers' information.

Archiving

Switch and Mediated CDR data (Pre-processed) is held online for one month and offline for five years.

Rated CDR data takes advantage of i-conX Archive & Restore functionality. This allows customers access to their current and historical CDRs for re-rate and reporting purposes but without the costly overhead of storing all rated CDRs in the database.

We would usually retain rated CDRs online in database for three months; and thereafter in flat files for one year. (These files are available to the user for restore 24/7). Offline Rated CDRs are stored in Archive media for five years. All archive periods can be tailored to suit a customer's individual requirements so just let us know your specific needs.

Disaster recovery

Disaster recovery is catered for in a preventative and contingency manner. The i-conX ASP service is co-located in a facility that adheres to the highest industry standards for co-location and hosting services. Within that facility we house and monitor industry leading communications and server systems with built in redundancy and fail-over. Our customers' data is backed-up on a daily basis and removed for off-site storage. However, in the event of a true disaster, our off-site backups will be restored to stand-by production servers and brought on-line within 48 hours at our stand-by hosting facility.

Investing : in customer peace of mind

i-conX is proud to be considered the market leader in ASP-based interconnect billing solutions. Our customers - some of whom have been using the ASP service since our launch in 2001 - have shown complete faith in the service. This faith could not have been won without the most stringent controls available to ensure security and connectivity.

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Summer/Autumn 07

AFRICAN TELECOMS BILLING & REVENUE MANAGEMENT 2007

Venue Cape Town Int'l Convention Centre
Date 3 - 7 Sept 2007

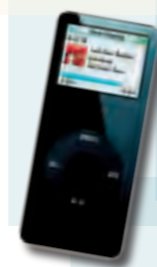
Visit IIR's 'Billing Africa' event to hear the latest developments for the continent.

CEO MARTIN BROWNE will host a workshop (5 September): "Developing an Interconnect Billing & Settlement Strategy"



AHMED WINS IPOD!!

Congratulations to AHMED RIAD from Kuwait operator group WATANIYA INTERNATIONAL, who correctly answered all questions in our last issue. He wins a brand new i-Pod Nano with matching leather case.

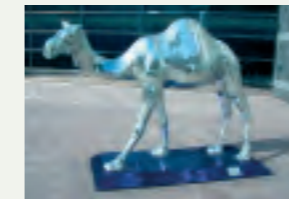


To enter this issue's Quiz, please consider the 3 photographs (opposite) of well-known landmarks in the Middle East. How many can you identify?

Send your answers by e-mail to : info@iconxsolutions.com



Q.1 - Which airport?



Q.2 - Which hotel/conference centre?



Q.3 - Which Mosque?

i-conXpress

The international newsletter for Interconnect Billing

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Summer 2007

The international newsletter for Interconnect Billing



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FREE Quiz - win an i-Pod!

< PLUS

The postman always rings twice Interconnect : how it all began ...

MARTIN BROWNE
CEO :: i-conX solutions

Watching old black and white movies about office life I was always impressed that the big boss had four or five telephones on his desk, usually all ringing at the same time.

Little did I realise that each instrument was connected to a different telephone company and that these phone companies had no way of passing calls to each other. Far from the large number of telephones being a status symbol, what I was seeing was the inability of phone companies to interconnect with each other. However, interconnect, at the international level, has been around much longer than the movies.

International interconnect

Established in 1865 following the first International Telegraph Convention in Paris, the International Telecommunication Union (ITU) is the body that coordinates global telecom networks and services, and was set up. The ITU devised a settlement mechanism, called the Accounting Rate System, in the 1860s, to account for the transfer of telegrams from one country to another. It was then extended to handling international phone calls between national operators.

The Accounting Rate System was set up in much the same way as the international postal services, which is not surprising since the same organisation invariably managed postal, telephone and telegraph services - hence the term PTT to describe the national operator in a country.

Interconnect and the postal services

With the postal services - say between Ireland and Australia - the number of items from Ireland delivered by postmen in the Australian 'outback' is added up and compared, on a quarterly basis, with the number of items from Australia delivered by Irish postmen. If the numbers are equal then no payment is made by either party. However, if the people in one country prove to be less literate or too busy to reply to the letters they receive, then the post office that has delivered more items is compensated by the number of excess



items multiplied by the agreed price per item.

The Accounting Rate System works in much the same way. The Accounting Rate itself is the rate agreed for each minute of traffic between the operator that initiates a call and the other operators involved in delivering the call. The Accounting Rate is set using a major currency e.g. US dollars, Euros or SDRs (Special Drawing Rights, a currency made up from a basket of major currencies).

A Declaration

Settlement statements are 'declared' by the operator that originates the traffic, in other words, each operator tells the other operators how much traffic it has sent. Many operators do not itemise their international calls but simply keep a count of the calls and minutes sent to each destination. Even if calls are itemised, the originating number is often lost as the call moves from one operator to another so it is not always possible to identify the originating operator. The statement received is 'netted off' against the statement sent and if there is an imbalance, one party pays the other the difference.

Arbitrage

Logically, the traffic between any two operators should be fairly equal in both directions. However, this is rarely the case because of Arbitrage and other mechanisms, like the use of Call-back and Calling Cards, that reverse the direction of the call and cause an imbalance in traffic flows.

Arbitrage is the mechanism of using price differentials between different markets or operators to generate additional revenue for one or more parties in a call chain normally at the expense of other parties within the call chain.

Arbitrage example

In this example (R) Operator A pays a higher Accounting Rate to Operator B than Operator C does. Operator A sends traffic to Operator C, who sends it back to Operator A labelled as originating from Operator C. Operator A then forwards the traffic to Operator B who is paid the lower Accounting Rate.

Although many Accounting Rate agreements have been replaced by bi-lateral agreements where operators agree to send each other committed levels of traffic, the Accounting Rate still handles much of the world's international traffic particularly to countries that have yet to deregulate their international telephony services.



Market developments : Explosive growth in MENA and beyond

GAVIN STEWART
Vice President Marketing :: i-conX solutions

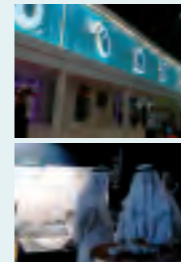
From Mauritania to Oman, the MENA (Middle East North Africa) region covers a huge geographical area - and 2006-07 market data suggests its commercial ambitions are similarly wide ranging.

Overall subscriber growth is expected to march upwards (from 62% to anticipated 90% in 2009), and this growth is backed by widespread market deregulation creating increased competition and, therefore, increased interconnection between operators.

The MENA mobile sector is enjoying particularly dramatic growth, with subscriber density increasing by 72% p.a. since 2003. Competition for licences is fierce, with MTC paying \$6bn USD for the 3rd mobile licence in Saudi Arabia (April 2007), and the 2nd mobile licence in Qatar already attracting 20 bidders to the process (May 2007).

The fixed sector, whilst inevitably lagging a little in terms of pure growth, is still a hot ticket, with the advent of newer alternative operators and

the steady march of VoIP taking hold. In Saudi Arabia, for instance, STC has been recently joined by 3 new competitors, all simultaneously awarded fixed licences, and an ambitious Kingdom-wide fibre-optic network is under construction to enable such startling growth.



Q-Tel's recent purchase of Kuwaiti telco Wataniya International introduced a major new group player to the market. Now other MENA groups including MTC of Kuwait and UAE-based Etisalat are expanding their ambitions beyond the region, chiefly into Africa, where both have controlling stakes in over 20 operator licences.

Coupled to a regulatory framework in the 'firm but fair' category, the overall market conditions bode well for the consumer on every front.

Event round-up 2007 : i-conX team in action worldwide



Arabcom 2007 (Dubai)

Lebanese Minister of Communications Marwan Hamade greets i-conX marketing VP Gavin Stewart at Arabcom, held in April.



MECOM 2007 (Abu Dhabi)

UAE Project Manager Sue Ward networking with delegates at MECOM 2007, held in April.



Interconnection 2007 (Budapest)

CEO Martin Browne presents observations on the future for interconnect in an 'NGN and FMC world', held January 2007.



Optimising Interconnect Billing 2007 (Prague)

CEO Martin Browne leads a panel session to discuss rating models for content in Prague, March 2007.

Managing i/c Partners effectively : i-conX "Credit Management" introduced

GER RYAN
Senior Business Analyst :: i-conX solutions

Customers have long wished for the ability to control credit and produce financial reports from their interconnect billing system. Now, with the forthcoming release of our i-conX Credit Management module, this is at last set to become reality.

Until now, interconnect billing systems have tended to produce reports and simple summaries of what has been billed to and from each carrier. Going beyond this, has been within the scope of dedicated financial systems or packages commonly found within most such businesses. But these systems are rarely if ever equipped to handle the complexity of interconnect credit control and disputes, and may even struggle to interface with the correct data.

Achieving this is the challenge our developers set themselves for i-conX Credit Management.

System Interface

As ever the interface is seamless from the main i-conX system. In fact, Credit has now been awarded its own dedicated tab in the menu structure.

From here, you would access core functions such as Credit and Finance Setup, Payments, Reconciliations, and any Disputes and Adjustments.

You also directly access a fifth heading - Reports - allowing the generation of live Credit Reports run from up-to-the-minute data sourced straight from the interconnect system.

Reports

A wide range of pre-defined reports are offered for immediate use, including :

- * Overall Credit Position
- * Carrier Credit Position
- * Overall Money Outstanding
- * Unbilled
- * Carriers Exceeding Warning Limit
- * - and many more

As an alternative, from the same menu you can also access the power of i-conX Reporting Services, giving you added levels of

user-control and creation

Example Report : Overall Credit Position

Taking a look at the first report on this list - the "Overall Credit Position" - this report gathers together - on one page - all the most important credit data at a business level, and presents it in an intuitive & accessible way.

For instance, Unbilled Traffic and Aged Balances are both shown with a neat combination of at-a-glance graphs and specific figures. Totals are also displayed for Reconciliation and Money Outstanding. And more totals will tell you exactly how many carriers are exceeding both their credit terms and their credit limits - and by how much.

Visual Healthchecks - and Drilldown ...

Now we observe two other really interesting additions to this particular report. Firstly, a simple set of warning signs gives an immediate 'visual health-check' against each section on the layout. So if you see a red cross next to something, it needs immediate attention - but green means OK (and amber in-between).

The drilldown facility is massively powerful. If (for instance) the report tells you that a total of one carrier is exceeding their credit limit, then by clicking on that heading you drill down to the individual carrier in question for a closer look. In fact, it drills down for every section of the report.

By clicking through you can now run a new report, similar to the "overall credit position" report, but just displaying the data for this one carrier. ("Carrier Credit Position").

Scheduling

Report scheduling functionality allows you to receive any and all reports automatically to your own preferred schedule, or publish to colleagues. For example - account managers could receive an overview of their accounts, or a CFO could receive a report of any carriers exceeding limits every morning at 08.30. The system is designed to keep you and your colleagues in control!

More information

This article is intended as a very brief introduction to our Credit Management module. Only by seeing it in action yourself will you appreciate its impact. We will be happy to arrange a demonstration on request. Please email info@iconxsolutions.com to start the ball rolling.

