



success story

Smart Communications migrates billing to hp Superdome



Smart Communications is the Philippines' No. 1 cellular operator with a rapidly growing subscriber base which accounts for over half of the country's total cellular market.

During 2001 Smart doubled its GSM switching capacity and increased by three-fold its text messaging capacity, in line with its target to increase its subscriber capacity to 10 million in 2002. By end-December 2001, SMART's network capacity had risen to eight million subscribers from four million at year-end 2000 and 240 million text messages daily from 92 million text messages daily for the same period. Total subscribers using SMART's GSM network as of end-September 2001 already numbered 5.4 million.



As SMART's business grew rapidly, it was running out of capacity on the Compaq servers which ran its core Pre-Paid Billing application. In upgrading the billing platform, Smart wanted to take advantage of the greater performance available with Unix based servers, such as the HP Superdome.

proof of concept

SMART's IT organisation began by constructing a Proof of Concept (PoC) benchmark that could simulate the load placed on its billing application by varying numbers of subscribers, and varying call and SMS message rates.

After running the PoC on servers from several suppliers, a team from Smart brought its benchmark to the HP Capacity Planning Centre in Sydney. When initial runs of the benchmark did not show the desired performance gains, HP brought in HP-UX and Oracle performance specialists who devised changes to structure of SMART's database that allowed its billing application to take advantage of the full power of the HP Superdome server, producing results that were significantly faster than any other server that Smart had tested. However, Smart recognised that scaling its billing application to meet the needs of its fast growing business required more than just larger servers.

Superdome for a growing business

While Smart knew they would need significant additional capacity over the next few years, they didn't need it all at once; and from a business perspective it was preferable to pay only as capacity was needed. However, as

**Asia Pacific
first in use of hp iCOD
temporary capacity**

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Wilma Cruz
CIO, Smart Communications

demand can change rapidly, Smart did not want lengthy delays to order and install upgrades. To meet SMART's business needs, HP proposed a Superdome, which in addition to capacity to meet SMART's current requirements, also contained additional iCOD CPUs. iCOD provided Smart with instant Capacity on Demand, which could be enabled rapidly as its business grew. In addition, Smart is one of the first HP customers in the world to use iCOD Temporary Capacity, to provide additional capacity to meet short term peaks in demand, without the need to purchase capacity that would then remain mostly idle.

migration

Because a significant part of SMART's business comes from pre-paid subscribers, its billing system needs to operate in real time. Consequently it was not acceptable to have the system down for more than a few hours while the system, including an Oracle database of about a terabyte in size, was moved from the current Compaq server to the new HP Superdome. Smart again turned to HP to lead the migration project.

To plan the migration, HP consultants worked with SMART's IT organisation to understand the structure and use of the database, and understand what had been learned in previous migrations of the database. Based on this, HP consultants developed a plan for the migration that was presented to Smart senior management, and subsequently accepted.

HP Consulting was engaged by Smart to perform the

migration, and a team was assembled that included a project manager, project lead, Oracle database specialists, and HP-UX and OpenVMS operating system specialists.

During the migration planning it had become clear that additional capacity would be required to keep the existing systems running during the migration. Fortunately this challenge was easily solved, with iCOD capacity in the new Superdome being used to offload applications from systems that were needed to perform the migration.

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iCOD Temporary Capacity is a cost effective solution for these types of situations.” said Wilma Cruz, CIO of Smart Communications.

Working around the clock, teams from HP and Smart worked to re-run the PoC benchmark on the newly installed Superdome server to validate its performance in the Smart environment with the new production database structure, and then test the migration process. Initial testing focused on finding the fastest way to transfer the database, while later testing focused on ensuring the whole process could be rapidly and reliably repeated. Testing culminated in a dry run of the migration.

Because of the potential impact on SMART’s business that

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Wilma Cruz
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could arise from problems that arose during the migration process, a process was also developed and tested to return to the existing OpenVMS server; should this be necessary.

results

Early one Sunday morning, when there were few customers using the Smart network, the production database was migrated to the new HP Superdome, just slightly ahead of schedule; placing into production the first HP Superdome in the Philippines.

Following cutover of production to the first Superdome, while teams from Smart and HP provided around the clock support for the production system, a second Superdome was installed at a second data centre to provide continuity of operations of SMART’s billing application in the event of a disaster at the main data centre.

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challenge

- scale billing system to support rapidly growing business

hp solution

- HP Superdome
- HP iCOD Temporary Capacity
- HP consulting and services
- subcontractor management
 - SQL*Wizard for Oracle development
 - Ixora for Oracle performance consulting
- HP Capacity Planning Centre (Sydney)
- HP / Oracle alliance - technology optimisation

results

- higher billing capacity, faster call connection, and balances more real-time
- lower total cost of ownership

why hp?

- scalable performance of HP Superdome
- HP capability to migrate mission critical billing system

for more information,
please contact your
local HP representative,
or visit us at
<http://www.hp.com>



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