



## Telco Industry: Mobile Phone Company

### The Company

Since 1997 when it first launched its PCS business, the company has grown into a leading player in the mobile communications industry in the region, setting new records. The company launched the downloadable icon-based multimedia service, the first in the world and commercialized the high-speed 1xEV-DO service available through mobile phones, also the first in the world.

The company set a record by securing more than 9 million subscribers within three years of commencing services, and ranked first among mobile communications companies in Business Week's top 100 global IT companies. The company currently serves more than 13 million subscribers.

### Challenges

Serving over 13 million cell phone subscribers, by itself, is a challenge for the IT staffs. The services offered to the subscribers include not only the wireless communication but also any information downloadable to the wireless phones. The CRM for the clients and the ERP for the internal users have been implemented. The mentioned above is the short list of the jobs required at the IT department. The dependency on the computing resources is tremendous, if not major, for the success of the company business. The efficiency and the effectiveness of the IT department directly impact the company operation.

The IT department manages a large number of servers and a number of services. The 183 servers are heterogeneous and geographically distributed as shown below.

- 85 Unix servers from IBM, HP, and Sun Microsystems
- 5 Linux server
- 93 Windows servers
- 46 Oracle servers

The IT staffs are responsible for Wireless connection for the subscribers, Internet and Freenet services, EDW (Enterprise Data Warehouse), CRM (Customer Resource Management), ERP support, Disaster Recovery among other things.

### Solution – Easy Integration

The IT staffs were convinced that one solution can not satisfy the requirement for their entire IT environment. Their need for the system management system was the ease of use and the ability to accommodate as much as third party items. The staffs especially wanted to monitor the UPS, the Humidifier, and the Water System in the computer room. They also wanted to see the events from different management module on one screen.

Sycros was selected over the competitors for the ease of use and its capability for efficient integration.



Sycros provided the API to the vendors of the auxiliary equipments, and worked closely together for the integration. Those equipments trigger the problem event when any alert state comes up. In addition, the Network Monitoring System used the Sycros CLI for the integrating with the Sycros problem management. The specific usage of the system management software is to intensively monitor the system parameters and the system log messages for preventive management and also for the timely resolution. Sycros also monitors the Oracle servers to make sure that the database servers run properly all the time. The below two tables summary what are monitored with Sycros.

Table 1. *Performance, Log, Process Monitoring*

# of server	# by OS	DB	Monitoring Log	Monitoring Service
183	Windows : 93 Solaris : 41 Linux : 5 HP-UX : 34 AIX : 10	Oracle : 46	Unix Sys Log	Oracle listener

Table 2. *Searching Text in Log Messages for Alert*

Log monitoring pattern
AFT link fault offline shutdown panic overflow Down Cluster emcp:  vxvm: vxfs: gab l t Link Fault OFFLINE down file system full VxVM  VxFS swap space limit exceeded CRITICAL SERIOUS emcp: cmcl d: file system full power table full

### **Benefit**

The IT staffs were satisfied for being able to monitor not only the servers but also the auxiliary equipments. In addition, the staffs were able to view the entire IT infrastructure status at the central location with the Sycros console as a result of the integration of the NMS. Those integrations provided convenience to the IT staffs. The specific benefits are:

- ❖ Convenience for viewing the integrated event messages at the central location.
- ❖ Reducing the uncertainty level of the server status.
- ❖ Improved utilization of the system resources.
- ❖ Utilizing the IT staffs time by focusing on the strategic issues instead of spending on managing the IT resources.
- ❖ Keeping the advanced system management knowledge within the organization.
- ❖ The cost savings on initial product purchase and on TCO

The system resources are smoothly monitored, and the preventive actions are taken from the information from Sycros. Learning curve of the staffs became minimal, and the management knowledge is built into the Sycros system management software. The quote from the IT manager is,

"Sycros is a good simple solution to manage the large number of systems with excellent integration capability."

Diagram. Customer System Configuration

