

## Customer Background

Mariano Marcos Memorial Hospital and Medical Center (MMMHC & MC) is the biggest public hospital in Ilocos Norte province, city Laoag, which was founded in 1972. MMMHC & MC is the only level-3 hospital (the highest level) in the region that offers CT. In the year of 2012, MMMHC & MC started digital transformation, with iHomis (Hospital Information System) & MedSys that were supported by DOH (Department of Health). With more and more systems being digitalized and patient quantity increasing in recent years, the IT infrastructure has become a critical challenge.

## Challenges

### ◆ Performance Issues

- How IT infrastructure has become a drag on the efficiency
  - a) It takes 5-10 minutes for billing department to export detail billing report for patients, who are very unsatisfied to wait for that long.
  - b) Due to hardware limitation, Pharmacy Department complains that there is no response from server while printing monthly pharmacy reports. And Medical Social Service Classification Department complains about no response from MSSC module of the server. These two departments can only export data from server with the assistance of IT staff.
  - c) The discharge procedure takes about 3+ minutes per patient, the hospitalization procedure takes about 5+ minutes per patient, because Cashier Department needs to wait for the system to feedback invoice information. This means an average of 3,000 minutes have been wasted everyday due to low server performance.

## Customer Success Story

### Executive Summary

- Customer: Mariano Marcos Memorial Hospital and Medical Center
- Industry: Healthcare
- Location: Philippines



### Challenges

- Poor Performance
- High Risk of Failure Risk without High Availability Design
- Legacy System's Influences on IT Department's Workload



### Sangfor Solutions

- Sangfor aCloud

# Customer Success Story

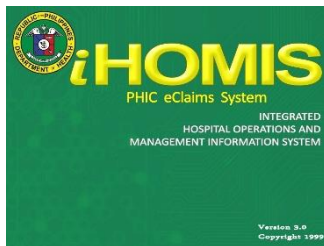
## Challenges

### ◆ High Risk of Failure Risk without High Availability Design

- The physical server is designed without any redundancy, meaning server failure would bring down the entire hospital's operation.
- High risk of losing data, as there is no automatic, high frequency backup solution for critical applications.

### ◆ Legacy System's Influences on IT Department's Workload

- Most of the IT department's resources are occupied by dealing with performance issues due to legacy system.
- Hospital service would stop for 3-4 hours if corresponding system was in planned maintenance, for there is no redundancy design. And this happens every month.



## Sangfor Solution

Sangfor consolidated all outdated servers into only 3 hyper-converged infrastructure appliances to support all hospital IT applications.

## Solution Values

### ◆ Improved Efficiency

- With Sangfor SSD caching technology, striping, large-page mechanism that accelerate database performance dramatically, Pharmacy and MSS departments can now export their reports in seconds, without going to IT department for help.
- The waiting time of finishing the discharge procedure has been greatly shortened, as now it only takes a few seconds for billing & cashier department to generate invoice.

# Customer Success Story

## Solution Values

### ◆ Data Protection

- Ransomware has been disturbing the production systems for quite a long time. Every time it happens, there will be huge data loss. Now the core systems could be easily recovered from ransomware attack with the help of local backup and continuous data protection.
- CDP will back up data every 5 seconds to minimize data loss.
- The current infrastructure is an enhanced system that can recover lost data in case of accidental disk/server failure.

### ◆ Business Continuity

- The critical application iHomis is now elastic with Sangfor DRS & DRX. aCloud can automatically adjust system resources to cope with business peak hours.
- IT department doesn't need to shut down server to enforce planned maintenance, with Sangfor live migration technology, applications can be migrated to another node without any service interruption.
- The built-in HA could auto-switch workloads from one node to another in the case of hardware failure.