Definitions, Acronyms, and Abbreviations

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| Name | Definition |
| IMS | Information Management System |

Table 1: Definitions, Acronyms, and Abbreviations

# A. Introduction

## 1. Project Information

* + Project name: **Build an Information Management System for a datacenter**
  + Project Code: **IMS-datacenter**
  + Product Type: **Website**
  + Start Date: **4th January, 2016**
  + End Date:

## 2. Introduction

In the “Information technology age”, the need of using servers as data storage, uploading website to the internet or even to archive useful software. Normally, people prefer rental server or entrusting their servers in data center. One of the reasons is because the cost to buy and maintain server is so expensive, and other related problems such as monitoring temperature in server room, fire prevention, management of electronic and cable system, network connection, and security(copy data, computer burglary,..). In order to cut down amount of expenses, the individuals or companies often entrust their servers or rent servers at the prestigious data center.

Data center is the place that has good condition to run and maintain server. In current situation, data management of data center is still facing many difficulties. For instance, customer information, sever configuration or IP address mostly managed by Excel or Word. It causes a lot of time and efforts not only for staff in data center, but also the customer.

## 3. Current Situation

Management of a huge system as data center is really a big deal. There are not only 24/24 server monitoring, but also manage and maintain other infrastructure such as network, temperature, cables and so on. Manually managing will take a lot of time and efforts, even more human errors. It will be annoying to customer if their server information is tracked incorrectly. They would be in trouble with lots of nonsensical procedure. Or when IP address of a server is changed, staff has to find the server’s location to change the IP tag on it. It must take time to find the location even in a small data center.

## 4. Problem Definition

Below are disadvantages of current situation:

* Information of data center can be lost.
* Must have a large storage to save information.
* Waste lots of time of data center’s staff and customers.
* Waste lots of efforts of data center’s staff and customers.
* Sometimes cause conflict between data center’s staff and customers.
* Cause dissatisfaction to the customers when they use data center’s service.
* Very difficult to manage information when too many servers are entrusted.
* Unprofessional process, losing trust with customers.
* Need many staff to manage.

## 5. Proposed Solution

The solution of these problems is to build a website named “Information Management System for a data center”. This website can help the moderators of data center to search and handle customer information, server information, and server placement, IP address allocation faster and easier. Information can be stored and accessed quickly and safely.

IMS has following functions:

### Feature functions:

* **Customer information management**:
* Only shift manager can create and update customer’s information. If customer stops using data center’s service, shift manager will deactivate his account and.
* **Server information management**:
* Customer can be able to view their servers’ information. In data center’s side, staff can be able to view all server entrusted in the center
* Staff is not allowed to change server’s information without customer’s request.
* **Server location management**:
  + - * + Staff can add rack (where server is placed) to the system. Each rack has 42 location ( unit is U)
        + Server location is managed entirely by data center.
* **IP address management**:
* Staff can add new range of IP address into the system. They also can block or unblock IP address if necessary
* This system supports staff to record the IP address assigned to server and search available/unavailable IP address
* **IP address blocked time report**
* This system can help staff to create report of blocked IP address.

### Advantages and disadvantages:

* Advantages:
* Support staff managing information easier and faster, save time and reduce effort of staff.
* Customer can view information of their servers immediately by this system.
* Reduce conflicts, satisfy customer by meeting their need.
* Avoid losing information of data center.
* Can create report to make a fast decision.
* Disadvantages:
* Initially, it takes time to input information into the system.
* The staff must spend time to learn how to use the system and practice to use expertly.
* A few problems arising can happen and the system cannot cover all of the functions.

## 6. Functional Requirements

* 1. Manage customer information:
     1. Add/Update/Active or Deactivate customer information
     2. Record time customer go into data center
  2. Manage server information:
     1. Add/Edit/Search/Delete configuration of a server
     2. Record history of a server: carry on/out server room
     3. Create report of server delivery
     4. Record time server which was upgraded configuration.
  3. Manage placement of server:
     1. Add/ Update/ Search/ Delete location of server on a rack
     2. Add network configuration of server
     3. Record time server is moved from a rack to a rack
     4. Create report of server moving.
  4. Manage IP address allocation:
     1. Add new IP address
     2. Update usage status of IP address
     3. Record IP address assigned to server. IP assignment can be done manually or automatically
     4. Search available/ unavailable IP addresses
  5. Report usage history of IP address.
     1. Report blocked IP address
     2. Report free IP address
     3. Statistic IP addresses being used by customers

## 7. Role and Responsibility

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| --- | --- | --- | --- | --- |
| No | Full Name | Role | Position | Contact |
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Table 2: Roles and Responsibilities