

# **HOTEL NETWORK DESIGN REPORT**

***Submitted by***

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***Under the Guidance of***

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**BONAFIDE CERTIFICATE**

Certified that this report titled **HOTEL NETWORK DESIGN** is the bonafide work done by **JAYESH CHAUDHARI (RA2011028010094), ADITYA SINGH (RA2011028010089), MUKUND MAHESHWARI (RA2011028010086)** who carried out the lab exercises under my supervision. Certified further, that to the best of my knowledge the work reported herein does not form part of any other work.

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**Signature of the Internal Examiner-II**

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## **ABSTRACT**

A network design proposal for a 3 star hotel with the following infrastructure and networking requirements. The hotel has 15 floors with 10 rooms in each floor. The hotel has a lobby area. The hotel has a swimming pool area. ADSL Internet is available for the hotel. All the rooms should have computers installed. The computers in all the rooms should have internet connection. The swimming pool area and lobby should have wireless internet access. The guests in the rooms should have free internet access. The computers should have appropriate security software installed. The hotel management staff and the guests should be on different networks. There are 15 users in the hotel management who require computers. A hotel management server needs to be set up for the hotel management staff which should not be accessible by the guests. The wireless access in the lobby and swimming pool area should be secure.

## **OBJECTIVE**

Our main objective is to create an efficient and secure network that can handle all types of network loads. Creating a secure and separate network for both customers and hotel staff members.

## **NETWORK REQUIREMENTS**

- All the rooms should have computers installed.
- The computers in all the rooms should have an internet connection.
- The swimming pool area and lobby should have wireless internet access.
- The guests in the rooms should have free internet access.
- The computers should have appropriate security software installed.
- The hotel management staff and the guests should be on different networks.
- There are 15 users in the hotel management who require computers.
- A hotel management server needs to be set up for the hotel management staff which should not be accessible by the guests.
- The wireless access in the lobby and swimming pool area should be secure.

## Requirement Analysis :

These would be the minimum requirements for making a network design for this project.

Components	No of Components
Router	35
Access Points	15
Cables	100+
Server	1
Switches	15

## **NETWORK DESIGN STRATEGY**

### **For Rooms :**

We would have routers on each floor and each router is connected to another and switches are connected to routers and each computer represents a room and it is connected to the switch.

### **For Hotel Staff & Management :**

We would connect server to router and router to a switch and switch to rest computer under Hotel Management

### **For Lobby :**

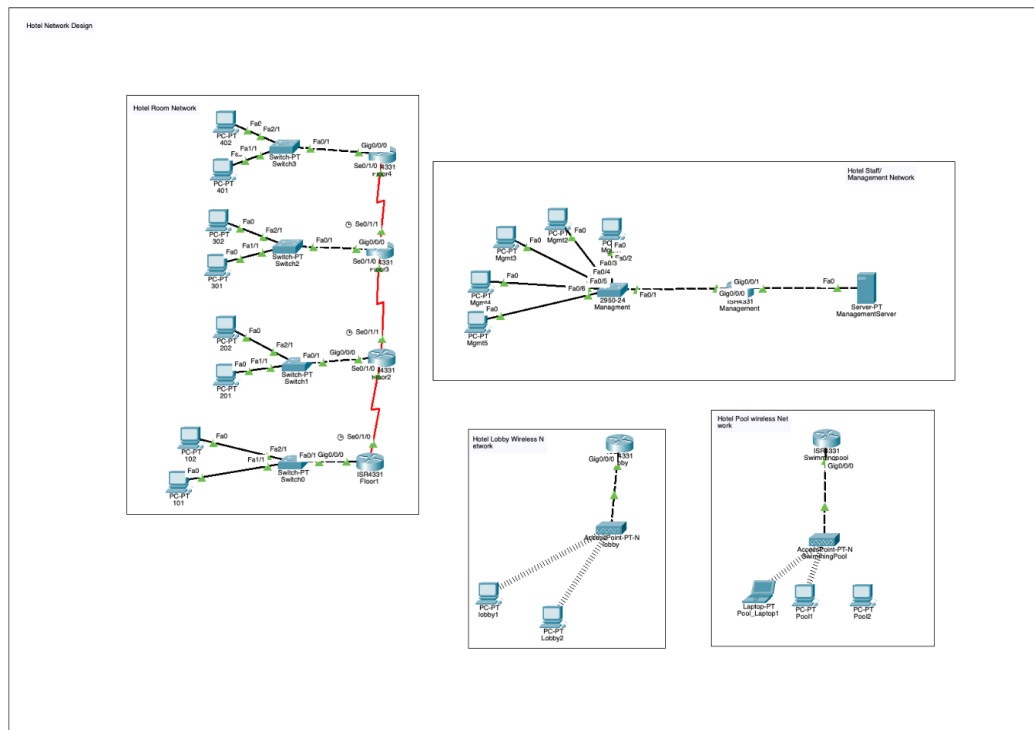
We would use a router and an access point and add password protection as given in requirements.

### **For Pool :**

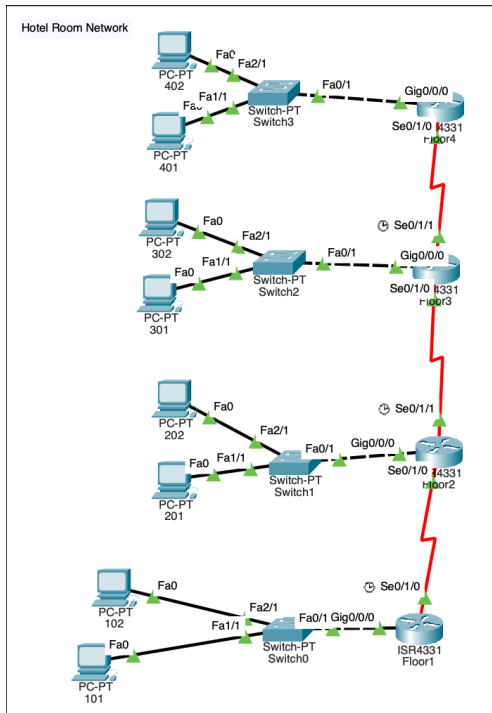
We would use a router and an access point and add password protection as given in requirements.



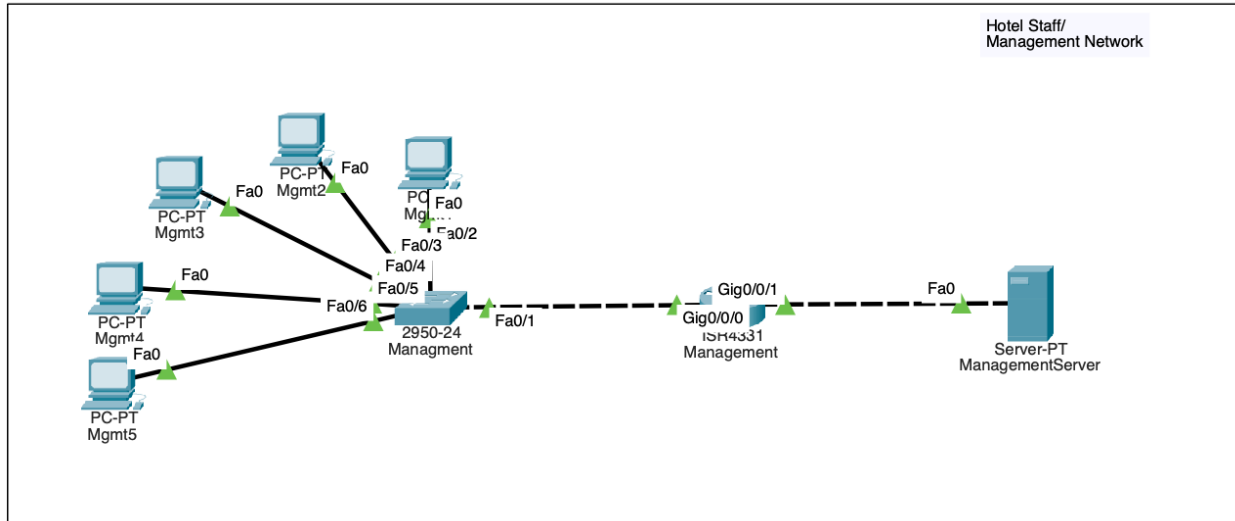
# NETWORK DESIGN DIAGRAM



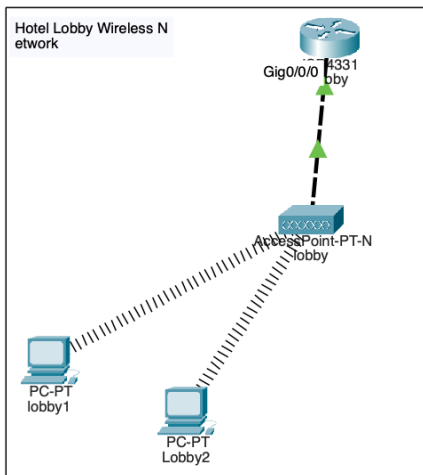
## Explanation :



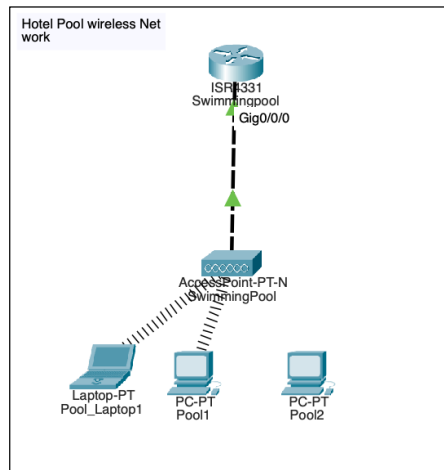
Hotel room network is for the rooms of the hotel. Each PC is representing a room and it is connected to a switch which is connected to Router representing the floor.



This is a hotel management network which is separate from the room which consists of a server connected to a router that is connected to a switch which is connected to each PC of Hotel Management.



Hotel lobby has router connected to access point which wirelessly connects to all Devices and is password protected.



Similarly the pool network also has the same design as the lobby.

## RECOMMENDED PRODUCTS

Components	Name of Components
Router	TP-LINK
Access Points	D-LINK
Cables	DbillionDa
Server	Amazon EC2
Switches	NETGEAR

## REFERENCES

- ❖ **Google**
- ❖ **Cisco**
- ❖ **Wikipedia**
- ❖ **Youtube**
- ❖ **Stack Overflow**
- ❖ **Stack Exchange**
- ❖ **GitHub**