Smart Police Station – Need of an hour

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Authentication and authorisation is considered for data security purpose.

Abstract:
Cloud Computing is a convenient model for on demand network. Cloud Computing (CC) refers to applications & services which we can run on a distributed network at any time anywhere condition is you should authenticated user of Cloud environment. This network uses hosted services and virtualized resources delivered over the internet. Police department is a sensitive department of society. Police department plays important role in society to maintain silence in Society. Sometimes because of limited facilities police cannot perform their duties properly.If entire work of the department we shifts toon cloud computing environment then it will be very helpful for police department as they can to concentrate more on their duties. It will reduce theirtime to solve any case. Suppose if any case gets closed now and after 10 years it gets reopened then it is not necessary to search all files and papers if the police department is using cloud computing.

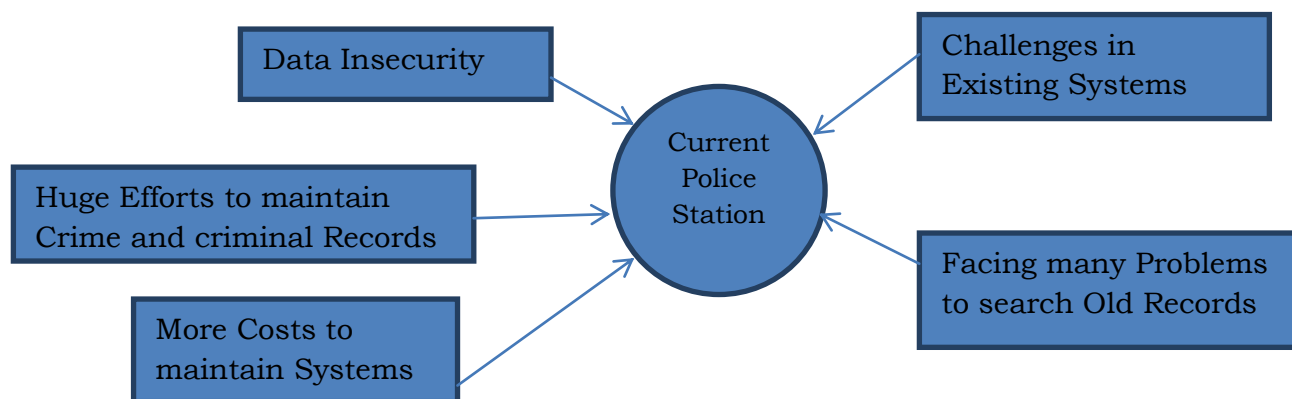**Keywords:** *Cloud Computing, Authentication, Authorisation, Centralisation*

Introduction:

Use of this eminent technology in police department is very helpful to general people also.[3] Police Department is facing lot of problems and because of these problems they can't give proper output to the society.

Objectives:

1) To reduce paper work, time and cost to maintain records.
2) Promote cutting edge technology which will help the society to get better
services from police.
3) New technology like digital evidence, digital case management, video conferencing, criminal data analytics.

Problems Faced by Police Department :

1) **Data Insecurity –**
   Records stored in police department are handled manually in files and registers. Any person can use it. So no security for confidential data.
2) **Huge Efforts to maintain Crime and criminal Records –**
   To solve any criminal case it is not a one day's work. So it is necessary to maintain records for many days, months or years. And everyday at least one FIR is filed in police department. So Police department is taking huge effects to maintain these records.

3) **More Costs to maintain Systems –**
   In Police department if client-server is implemented then storage of data will be come easy but problem lies in handle that architecture since it needs technical expertise. To maintain this architecture department should recruit extra IT person and that will be cost consuming.[8]

4) **Challenges in Existing Systems –**
   Now adays police departments are getting computerised but not connected with each other. So each police station is working

separately. Department people get training about computerised system but they can't solve any problem related to such systems andhence face problems.[3]
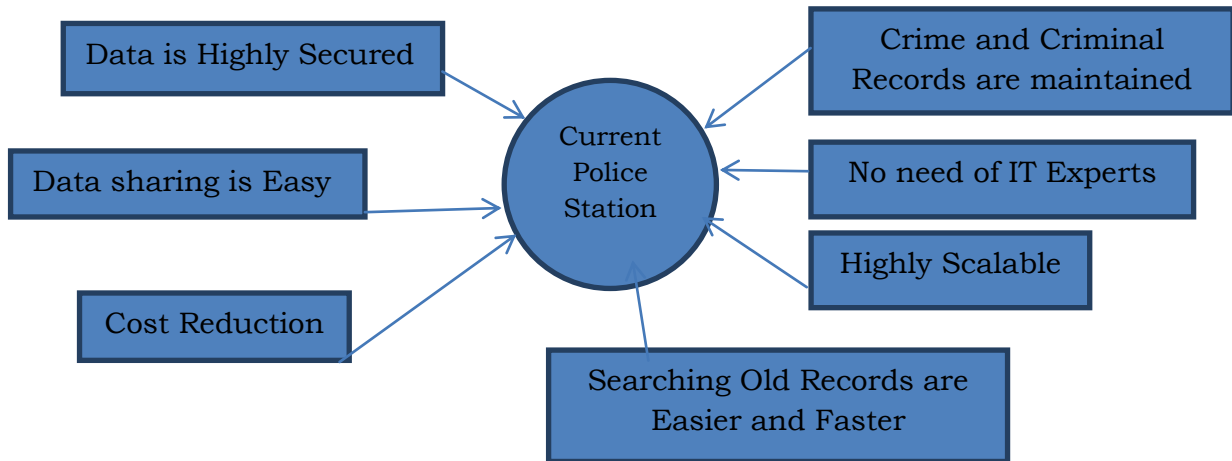
5) **Facing many problems to search old Records –**
It is very difficult to search old records specially when they stored manually. If police

department store these records on computer then it is not to much difficult to search these old records.

If the records of police department are stored on cloud computing and all government systems if we connect at a centralise location then it will be helpful for police department to find out any crime and criminal in easy way

Solution to Problems faced by Police Department-

If crime happens on boundary of two states the question is which police station will handle this case. Instead of this if we centralise all Police stations in India there is no question mark about boundary.[2][6]

1) **Data is highly secured**- If data is stored on centralised location and access is given to one person that time data is highly secured. If police stations shift their data on cloud computing environment then data cannot be shared without access so data is highly secured.
2) **Data sharing is easy-** Data is stored at centralised location so sharing of data from anywhere is easily possible.
3) **Cost Reduction-** whatever cost required for infrastructure is one time cost only so it is not necessary to stand architecture at every police station. It is not necessary to recruit extra people to handle this whole system. Only one time training is required to police people for how to operate the system.[4]
4) **Crime and Criminal Records are maintained-** The main problem in police department is it takes lot of time to solve case. It takes some time for it. Till result is not declared data of crime and criminal is important so it should be store carefully. It may be happen that case will take 5 to 10 years
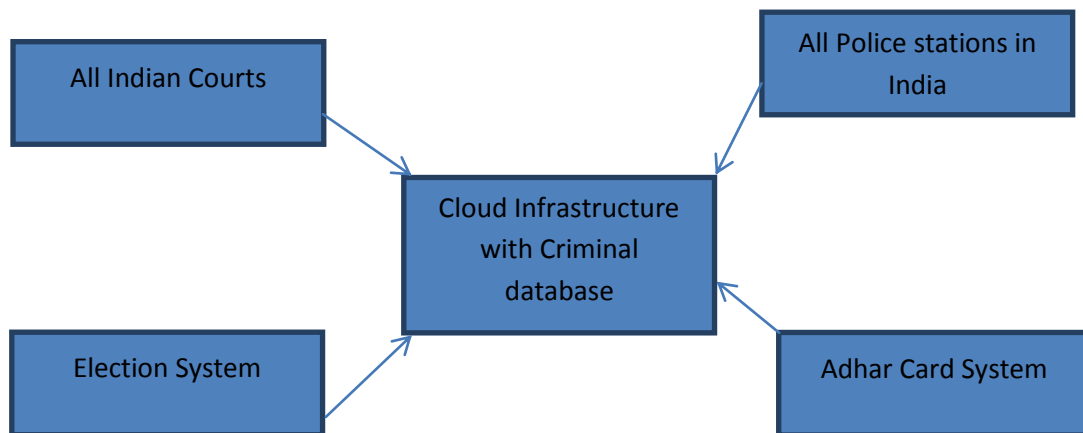
so handling of papers is very difficult task. To solve this problem store your data on cloud environment which is easily handled at any time and without any damage.[3]

5) **No need of IT experts-** It is not necessary to recruit IT experts for this work because once we give training to police department all data entry is done by police department only. And remaining work is handled by Cloud team.
6) **Highly Scalable-**Through this system it is easy to find out that which crimes are repetitive in nature. By analysed this police department can focus in that area.[5]
7) **Searching old records are easier and faster-** Data is stored at centralised location so searching old records is very easy at any place.

How can we develop 'A Smart Police Station'-

For this process we have to centralise all Police Departments. These police departments are getting computerised,but only in few cities for all over India.

We can use private as well public cloud in such cases. For Private cloud : Government ownership and for Public cloud : Service provider (data security check by regular audit.)We can link criminals data with Adhar Card, All Police stations, Election System, Courts and banks to verify criminal Record of any person.[2][7]
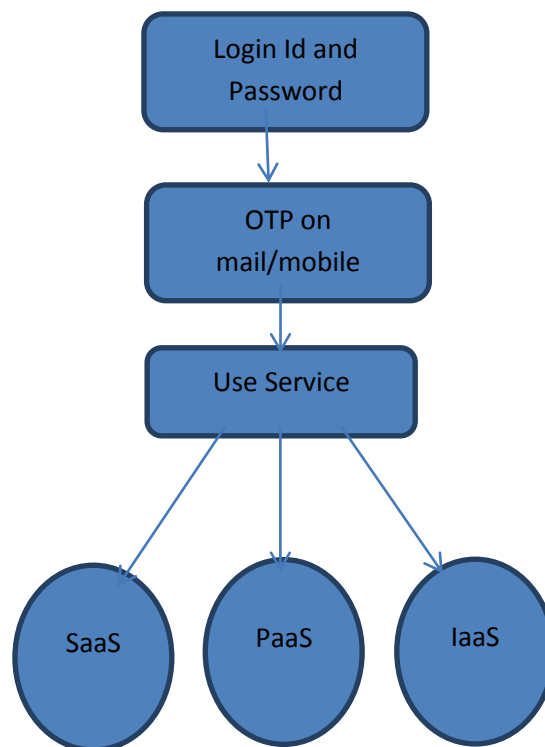
When all government departments are connected at one place only then it is easy to find out criminal. Suppose police department got fingerprints of criminal at the place of crime we can verify this in Aadhar Card System and we will get all details of that person. We can easily share all these records online with all these above shown departments. [1]
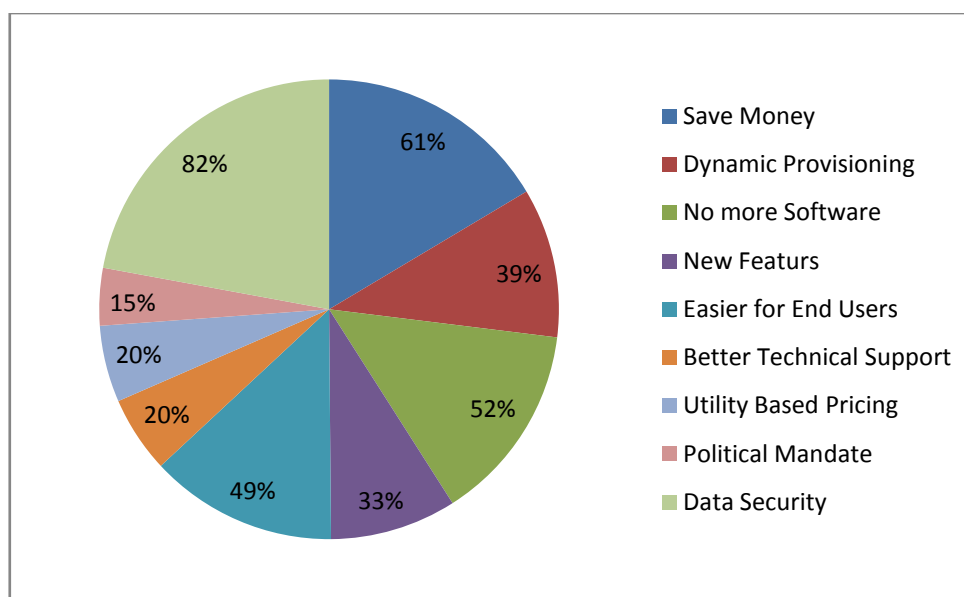
Security concern
When we are shifting police department data on cloud environment account access will be given to higher authority person only. System will take care of all these things. When user wants to use his account he has to enter his user id and password, When he enters his user id and password one OTP will be sent on his mail or on mobile number. When he enters his OTP then only he will get his account access. Authorisation and authentication of this account will be given to a higher authority person only. If any person from police department wants to share this data he needs to send such type of request to authorised person. When authorised person approves his/her request then only he can use that data under the observation of authorised person.

Analytical Study for How Cloud Computing is Beneficial for Police Department-

Conclusion:

Shifting of data on cloud computing will be helpful for police department. They have to just use app in their mobile phones, on one click they will get victims, no need to transfer criminals and victims from one place to another.

Police can easily find out whole history of criminal as well as it is easy to analyse that which crime is frequently happened in which area so police department will take more precaution in that area.[5][9]

Data access rights are at higher persons only so chances of leakage of data because of corruption will not happen. Suppose crime is happened at one state and police got some victims at that place then to search criminal is very easy task if we attach the cloud infrastructure with all government departments shown in above figure.

In short it will reduce time of police department and they will not get hectic schedule on their duty hours. Automatically they get proper time to solve any crime with user friendly system.

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