

# An Analysis of Security and Illustration of e-Municipality on Cloud

V. M. Prabhakaran\*<sup>1</sup>, R. Gayathri<sup>1</sup>, S. Priyadharshini<sup>1</sup>, T. Kathiravan<sup>1</sup>, S. Subbulakshmi<sup>2</sup>, R. Eswaramoorthy<sup>3</sup>

<sup>1</sup>Assistant Professor/CSE Department, Anna University, Coimbatore, Tamil Nadu, India

<sup>2</sup>Senior Process Executive, Pradot Technologies, Coimbatore, Tamil Nadu, India

<sup>3</sup>Assistant Professor/CSE Department, Anna University, Coimbatore, Tamil Nadu, India

## ABSTRACT

The hasty growth and devastating accomplishment of the Internet changes our lives- the way we interrelate, hear and work. Now a day's most of the organizations including government transport their services through internet. E-municipality is the function of information and communication technologies to swap over information between government and the citizens, government and production organizations and between government organizations. Cloud computing is a new way of accepting and providing services over internet. Cloud based e-municipality system provides many remuneration to Government like reduced cost, dispersed storage of data, ease of use of resources at lower cost, manages security, scalability, accountability and modifiability. This paper focus on the Illustration towards E-municipality process in Cloud Computing with K means, Approaches are defined to handle the e-governance and Integrated loom with its advantages and functionality.

**Keywords:** E-Governance, Information And Communication Technologies, Cloud Computing, K-Means

## I. INTRODUCTION

Currently, the e-municipality tends to take service as its core, while cloud computing has the characteristics of providing information technology in the way of service. In e-government, public sector organizations provide information and services to citizens and businesses with the help of modern ICT. Computing technologies have grown rapidly, and governments of all nations plan to make optimum use of such advanced technologies across public service organizations to communicate in ease manner. Inventions in the field of computing technologies

have made cost reduction possible, while also increasing the efficiency and flexibility of government sectors. Cloud computing, which provides information and computing services as utilities. Cloud-based e-municipality provides the best possible services to its citizens and businesses. In a developing country, there is no direct communication between people government. Lack of communication between people and government create a way for inducement. E-services are delivering cost-effective services, which can drive the growth of the economy and government production.

## II. LITERATURE SURVEY

S.N o.	PAPER TITLE	AUTHOR	PROBLEM STATEMENT
1	Assessing knowledge and awareness of sustainable urban foreign transport	Maria Eleonor Lindholm, Magnus Blinge	Importance of adequate knowledge and personnel resources in municipalities as well as communication information dissemination and knowledge exchange
2	Rapid impact assessment matrix analysis as decision tool to select new site for municipal solid waste disposal	Surindra suthar, Anupma sajwan	Rapid impact assessment matrix which comes under one of the optical assessment of municipal
3	Seasonal variation of municipal solid waste generation and composition in four east European cities	Gintaras Denafas, Tomas Ruzgas	Quality of recyclable and residual municipal solid waste is among other factors strongly influenced by the seasonal variation in MSW composition may strongly influence the quality of the waste
4	E-government portal best practices	Rafa E.Al Qutaish, Ali Idri	It is a website that is offering various useful electronic services to the citizens with the traditional government portals the service provided to the citizens need a lot of paperwork and many officers are required to conduct such services and also the citizens need to be present personally which means they have to learn their jobs for many hours
5	E-government maturity models	Abdoullah Fath Allah, Laila Cheikhi	It is to find the similarities and difference between them and also to identify their weakness and strengths
6	Priorities of municipal policy makers in relation to physical activity and the build environment	Monical wang, Karun valentine goins	Examine policy makers public policy priority related to physical activity and the built environment identify classes of policy makers based on priorities using latent class analysis
7	Comparing attitudes toward e-government of non users versus users in a rural and urban municipality	Dong Back Seo, Michel Bernsen	Many e-government and information system adoption studies have focused on peoples attitude during the initial and post adoption periods but have not taken into account the fact that many people never use or experience e-government services

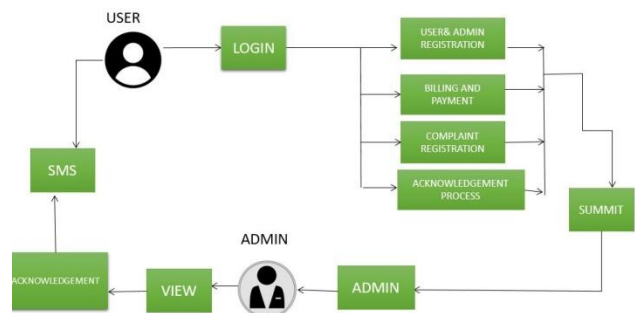
8	Establishing the accuracy of online panels for survey research	E.Bruggan, J.Vanden Brakel, J.Krosnick	This paper compares the accuracy of results obtained from the online “panels” with results obtained from respondents selected randomly from the population who answered questions either via the internet or via face to face interviewing
9	E-government and its challenges in developing countries	Mohammed Abdulammer, Burhanuddin Mohammed	Goal of this study is to increases the awareness of e-government for government ,employees,citizens and private sectors by identifying e-government
10	Municipal E-governance systems for urban local bodies in india	Srikanth Nadhamuni, Krishna Rupanagunta	Tries to take a strategic view of e-governance and tries to list the key essential components of municipal e governance implementation and problem is that an efficient manual process has been shoe-horned into “computerization” without looking at process of reengineering people,strategy and organization issues.

### III. CLOUD SECURITY IN ORDER WITH K-MEANS

Cloud security refers to a broad set of policies, technologies, and controls deployed to protect data, applications and the associated infrastructure of cloud computing. Security concerns associated with cloud computing fall into two broad categories: Security issues faced by cloud providers and Security issues faced by their customers. Cloud computing security is the set of control-based technologies and policies designed to observe regulatory compliance rules and protect information, data applications and infrastructure associated with cloud computing use. K-Means produce tighter clusters than ranked clustering. K-means algorithm is used for cluster the similar types of data’s from huge database. Database consists of user and admin process including billing payment, Complaint Process, Acknowledgement that is stored in a cloud. The details, which are given by the user and admin, will get stored in the cloud database for easy accessibility, the data in the database gets split into clusters .The clusters will

consist of similar data’s so that we are moving toward K-means algorithm. K-means is one of the simplest unsupervised learning algorithms that solve the well-known clustering problem. The procedure follows a simple and easy way to classify a given data set through a certain number of clusters fixed a priori. If variables are huge, then it is computationally faster than hierarchical clustering. K-Means algorithm is more efficient algorithm for mining large Databases and Cloud computing provides solution for storing large database with less cost.

### IV. ILLUSTRATION OF E-MUNICIPALITY



**Figure1:** Architecture Representation of E-Municipality

The architectural representation describes about the functionalities performed by admin and user. There are four processes .they are, User and Admin Registration, Billing and Payment, Complaint Registration, and Acknowledgement process. First process describes about how the user and admin register the necessary details .Billing and payment process designates the different methods for paying the bills. Complaint registration process carried out with water supply problem, Garbage management problems, Threatening animals and Road repairs. Final progression is acknowledgement process describes about sending and receiving the acknowledgement from admin to user.

E-Municipality Management System process the following,

- ✓ Establish measures and criteria for monitoring progress.
- ✓ Identify, tack, trend and correct problems.
- ✓ Track performance indicators.
- ✓ Monitors compliance to statutory requirements.

## V. INTEGRATED LOOM TO MUNICIPALITY E-GOVERNANCE

The list of cities in India were E-Municipality tends to be in peek such as Bhubaneswar, Pune, Jaipur, Surat, Kochi, Ahmadabad, Jabalpur, Visakhapatnam, Solapur, Davangere, Indore, New Delhi, Coimbatore, Chennai. In the initial thrust towards e-Governance in municipalities, there is a drive towards automating department level operations. The focus is typically on specific functions, such as:

- Property tax collection
- Financial Accounting
- Works Management
- Building Plan Approval

Property owners in the city can pay property tax online and check the status of their debts. Most Corporations has hosted property tax details on its web site and made provisions for online

payment using credit cards or Internet banking services. The collection of property tax in percentage for various cities in India is described below.

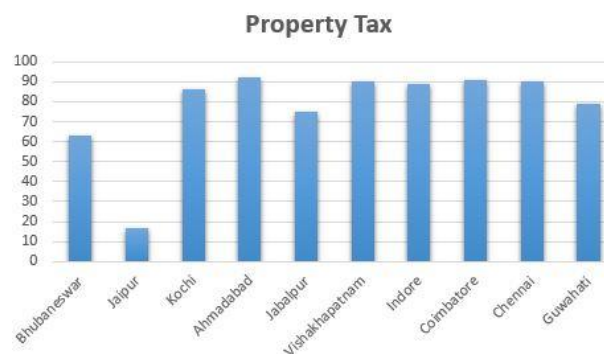


Figure2. Collection of property tax in various cities

## VI. APPROACHES TOWARDS E-MUNICIPALITIES

The evolution of E-municipality came through three very important approaches. They are:

- ✓ Traditional approach
- ✓ Client server approach
- ✓ Component based approach

In the traditional approach, there was a single application that handles the presentation logic, business logic, and database interactivity. These applications were also called Monolithic applications. The drawback of this approach was that if even a minor change, extension, or enhancement was required in the application, the entire application had to be recompiled and integrated again. Due the disadvantage of the traditional approach, the client/Server architecture (also called 2-Tier Architecture) was introduced. In this architecture, the data is separated from the client-side and is stored at a centralized location that acts as a server. The business logic is combined with the presentation logic either at the client- side or at the server-side that has the database connectivity code. If the business logic is combined with the presentation logic at the client-side, the client is called a fat client. If the business logic is combined with the database server, the server is called a fat server.

## VII. ADVANTAGES

Several advantages of e-municipality process are,

1. Improved efficiency, cost reduction and savings.
2. Time saving and Better Communication facilitation between government and peoples.
3. Transparency, accuracy and facilitating information transforming between government and citizens.
4. Easy and Quick implementation.
5. Increases of users ICT skills, internet knowledge and computer usage.
6. Accountability.
7. Reducing spreading of diseases.
8. Expanded reach of governance.
9. Convenient by getting easy access to most current information available without having to spend time in municipal office.

## VIII. CONCLUSION

Cloud framework with K-means defined to carry out the e-Municipality progression in effective manner. It will reduce the bridge between citizen and government. Approaches such as traditional, client server and component based defined to handle the database interactivity. Moving to cloud provides much more scalable and effective consequences.

## IX. REFERENCES

- [1]. Calabrese, F., Colonna, M., Lovisolo, P., Parata, D., & Ratti, C. (2011). E. Baralis, L. Cagliero, T. Cerquitelli, P. Garza, and M. Marchetti, "Casmine: providing personalized services in context-aware applications by means of generalized rules", *Knowledge and information systems*, vol. 28, no. 2, pp. 283–310, 2011. Real-time urban monitor using cell phones: A case study in Rome. *Intelligent Transportation Systems* 12(1), 141–151.
- [2]. S. Pandey, W. Voorsluys, S. Niu, A. Khandoker, and R. Buyya, "An autonomic cloud environment for hosting ecg data analysis services", *Future Generation Computer Systems*, vol. 28, no. 1, pp. 147–154, 2012.
- [3]. Laursen, K., & Salter, A. J. (2014). A. Ibaida, D. Al-Shammery, and I. Khalil, "Cloud enabled fractal based ecg compression in wireless body sensor networks", *Future Generation Computer Systems*, vol. 35, pp. 91–101, 2014.
- [4]. Dameri, R.P.: Comparing smart and digital city: initiatives and strategies in Amsterdam and Genoa. Are they digital and/or smart? In: Dameri, R.P., Rosenthal-Sabroux, C. (eds.) *SmartCity. How to Create Public and Economic Value with High Technology in Urban Space*, pp. 45–88. Springer, Heidelberg (2014).
- [5]. Sankaranarayanan S. Balamurgan, Dr. P. Visalakshi, V. M. Prabhakaran, S. Charanya Strategies for Solving the NP-Hard Workflow Scheduling Problems in Cloud Computing Environments. *Australian Journal of Basic and Applied Sciences* (2014).
- [6]. V.M. Prabhakaran, Prof S. Balamurgan, A. Brindha, S. Gayathri, Dr. Gokul Kruba Shanker, Duruvak kumar V.S NGCC: Certain Investigations on Next Generation 2020 Cloud Computing-Issues, Challenges and Open Problems *Australian Journal of Basic and Applied Sciences* (2015)
- [7]. V.M. Prabhakaran and Dr. Gokul Kruba Shanker S. Balamurgan, R.P. Shermey Internet of Ambience: An IoT Based Context Aware Monitoring Strategy for Ambient Assisted Living. *International Research Journal Of Engineering and Technology* (2016)
- [8]. Bencardino, M., Greco, I.: Smart communities. Social innovation at the service of the smart cities. *TeMA. J. Land Use Mob. Environ.* (2014)
- [9]. Alexopoulos, C., Zuiderwijk, A., Charapabidis, Y., Loukis, E., & Janssen, M. (2014). P. Neirotti; A. De Marco; A.C. Cagliano; G. Mangano; F. Scorrano (2014). *Current trends in Smart City*

initiatives Designing a second generation of open data platforms: integrating open data and social media. *Electronic Government* (pp. 230–241). Berlin Heidelberg: Springer.

- [10]. Mariotti, I., Beria, P., Laurino, A.: Car sharing peer to peer: un'analisi empirica sulla città di Milano. *Rivista di Economia e Politica dei Trasporti* 3, 1–16 (2013) Caragliu, A., Del Bo, C., & Nijkamp, P. (2011). Smart cities in Europe. *Journal of Urban Technology*, 18(2), 65–822.
- [11]. Sciullo, A., Occelli, S.: Collecting distributed knowledge for community's smart changes. *TeMA. J. Land Use Mob. Environ.* 6(3), 293–309 (2013).
- [12]. Arena, M., Cheli, F., Zaninelli, D., Capasso, A., Lamedica, R., Piccolo, A.: Smart mobility for sustainability. In: *AEIT Annual Conference 2013: Innovation and Scientific and Technical Culture for Development*, AEIT (2013).