Design e-Office Application for Population based on Cloud Computing

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ABSTRACT

Information and communication technology in the field of population e-office is very useful in supporting the process of data management, information, facts, distribution, and knowledge. The purpose of this research is to build a population e-office application that can produce time, cost and energy effectiveness. This research was developed using an open source-based online administration service administration system method with a cloud computing approach, so that it can be used to collect community data, business permits, recommendations, and administrative handling related to the community in the village. The results of this study indicate that in the existing village administration service system in general, the community and village officials deal with data through applications available for each of these sections separately. The exchange of data between departments, if needed, is still based on paper notes that are delivered from one section to another, it is hoped that this will not happen again with this research. A structured public service administration system architecture can be managed by this system and allows data to be shared in the system.

Keywords: cloud computing, e-office, population, administrative services

INTRODUCTION

Information and communication technology in the field of population e-office is very useful in supporting the process of data management, information, facts, distribution, and

knowledge. For government agencies in districts, sub-districts, villages, as well as at the RW and RT levels, one of the support services to the community is to provide cloud computing-based population e-office applications in providing services to the community directly.

Cloud computing technology is the right solution in utilizing computer technology with internet-based development which allows customers to rent and utilize information and communication technology services with infrastructure, platform and application management carried out by the provider, without any investment on the customer side, thus facilitating access and overall providing simplicity and efficiency both from the service provider side and from the community side.

In this case, the implementation of the population e-office application, from the central to the village level, also requires adequate technological support including information technology based on cloud computing. Population e-office is also defined as the transfer of electronic administrative data from one location to another online. The population e-office can be said to be a tool that can help many people with various administrative problems. There are many benefits offered in using this e-office,

The advantages of the population e-office application are the effectiveness of time, cost and effort. This means that the community does not need to come all the way to the Village Office who spends a lot of time traveling, costs fuel, and physically survives in the midst of traffic jams to make an application for a business license to the administrative officer at the Population Office. the use of population applications, e-mail or even video conferencing and so on to obtain administrative services.

Other benefits offered are overcoming the accumulation of application files, punctuality, time becomes more efficient because residents who need administrative services do not always have to go to the population office, but simply fill out electronic forms through their population e-office application that has been provided, so the public can this does not need to bother to go to the management regarding population because cloud computing technology has promised e-office population applications for the community.

In using the population e-office application based on cloud computing, only come to the population office to request this e-office application or the public can also download this population e-office application on the internet and ask for a username and password, after that people no longer need to come to the office. population e-office. it's quite simple to learn this application, in this application there are features regarding managing population administration, there are listed as examples of making family cards, updating family cards,

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making ID cards, making birth certificates and so on, so that people find it easier to learn because of the features in this application. This e-office application is complete.

In making this cloud computing-based population e-office application, of course, it costs money, for its own costs it is only intended for designers and programmers because this application is not too heavy as making a server on a network, for financing 2,000,000.00 as a result of the performance of designers and programmers,
For the people themselves, the use of this e-office application is not charged a penny, only the application download fee requires a fee. The rest of the management does not charge a fee because in Law No. 24 of 2013 article 176 a which explains that the administration of population administration is free of charge.

METHOD

In this study, an online administration service administration system based on open source with a cloud computing approach will be developed, so that it can be used to collect community data, business permits, recommendations, and handling administration related to the community in the village. The things that were carried out in this research were as follows: literature study related to cloud computing technology, surveys and data collection of information technology infrastructure design that can be applied to online public administration services, data analysis of survey results on real conditions in several service centers The community, especially the RT and RW in the village, then creates an online community administration service model from the village such as appointments to meet the village head, making recommendations to the sub-district as well as online business permits and other services such as making online family cards. Then an application system for administrative services was made to the online community in the village. In addition, at this stage a system will also be developed in a module manner to further facilitate the development of further applications and facilitate their implementation in different places. The steps taken in this research are:

1. Literature studies and searching for data and information on the internet are carried out to obtain the latest information on the development of online administrative service methods and models in the village;

2. Data collection and field survey – this activity is carried out in two ways, namely a direct survey of the village and the distribution of questionnaires to the community to obtain data

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on the method of service conditions and the level of service quality of an administrative service in order to obtain an overview of conditions in the field;

3. Data analysis and system modeling – carried out to analyze the data that has been collected using statistical methods to obtain system modeling parameters, both those developed in a structured manner or those developed with object-oriented methods.

RESULTS AND DISCUSSION

First Phase: Development of an Online Village Service Model

At this stage, an online village service model will be developed which includes making Family Cards (KK), ID cards, certificates, public health cards (BPJS) and building permits. In the design of this population e-office application, it can be used to make periodic reports. from village services so that every village service in an RW or RT can be monitored by village officials or by the sub-district. In this stage, the right information technology infrastructure strategy will also be developed to be able to provide administrative services to the community online in the village. The development of the information technology strategy uses a cloud computing approach based on open source. With this concept, it is hoped that it can be used to localize the existence of dissatisfaction by the community in the service, because the process can be known earlier, so that any administrative service needs by the community can be handled more efficiently.

Second Phase: Development of a residential e-office application design

At this stage, a population e-office application design will be developed by applying the concept of cloud computing to be able to provide services to every level of society with the same level of information either to the center or to the regions. With this concept, it can also provide convenience to villages that have limited ability to manage village administration because the availability of management personnel can be represented by a system that can provide solutions to village officials.

In this second stage, it introduces research that develops a cloud computing-based population e-office application design to the community for various village administrative purposes. The design of this population e-office application is made to be able to maintain the stability of modernization by utilizing modern technology.

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A brief explanation of the design of this population e-office application is a study that sees technological developments very rapidly and is a good use of technology, in the design of this application to be able to use it first the user or community has a password and username at the village office, the point is to avoid cases of data theft or hackers carried out by certain elements, the public is given the freedom to use the population e-office application to take care of their needs.

Figure 1. Login Design

This is the initial display on the population e-office, before entering the user first enters the password and username that has been given to the population office.

Figure 2. Application menu display

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Third Phase: Model Development

On the display in the population e-office application there are several sub-sub such as:

- The homepage in this sub-page explains the early history of the establishment of the population and civil registry office;
- profile with sub vision and mission, functions and tasks, leadership profile and organizational structure
- Services in this service are users or the public in making such as ID cards, certificates, permits, BPJS, KK in accordance with the procedures contained in this application.
- News, in this sub news related to village administration, it includes media news, news via video and also photos

Fourth Phase: Development of an Online Administrative Consulting Model

At this stage, a system will be created that can conduct problem consultations online or remotely as well as a system that can monitor community data in real time all the time so that it can know the conditions of community development more accurately. Some of the methods used in developing the administrative consulting model are with a humanist approach, so that people feel comfortable and open to express problems they are experiencing. The expected result at this stage is the existence of a system that can monitor the community online using cloud computing technology. In addition, it can also create a comfortable atmosphere for the community in carrying out village administration.

CONCLUSION

The data in this study was compiled every time a community member received administrative services from a section in the village, for example obtaining a business license, a certificate of domicile, a cover letter to the Sub-district Office; or based on the results of administrative activities, for example to obtain Bidik Misi scholarship assistance. In the existing village administration service system in general, the community and village officials deal with data through applications that are available for each of these sections separately. The exchange of data between departments, if needed, is still based on paper notes that are delivered from one section to another, it is hoped that this will not happen again with this research. A structured public service administration system architecture can be managed by this system and allows data to be shared in the system. The main components of this system

are: (1) administrative components, (2) Village Consultative Body components, (3) Village Secretary components, (4) RW Chair components, and (5) Technical Implementers.

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