

ANALYSIS NETWORK INSTALLATION ON INDIHOME AND DOUBLE CONFIGURATION ON DASHBOARD VOICE SERVICE SURVEILLANCE TREG-3

Islamia Nuraini

Universitas Bina Nusantara Jakarta Barat

Correspondent author: islamianuraini@gmail.com

Daerah Khusus Ibukota Jakarta 11530 Indonesia

Abstract

The projects related to management systems and business processes have a low risk in every job. This method can be done in overcoming installation problems on Indihome that add performance to customers consisting of an aggregate effort to perform maintenance by effectively utilizing material through the application standard procedures that the company has to develop the system. The business orientation has a correlation between production process focus and performance at the business unit level using the profit impact of the marketing strategies database. The relationship between production process focus and financial performance for business units was partially supported using return on sales and was not supported with return on assets and return on income. The companies have prioritized this Enterprise Resource Planning (ERP) plan to manage their daily business activities, such as financial management, procurement, production, projects, human resources, and others. The system can facilitate businesses with real-time and accurate information. The implication is a degree of production process focus must be recognized as part of a manufacturing strategy that is consistent with an overall business strategy. The method has purpose problems found in the network installation on Indihome and double configuration contained voice service Treg-3 surveillance to reduce the obstacles that occur in customers. The case study uses the Network Installation method, Activity Diagram, Use Case Diagram, Deployment Diagram, DFD level 0, DFD level 1, and DFD level 2.

Keywords: Activity Diagram; Business Process; Diagram, Deployment Diagram, DFD level; Enterprise Resource Planning; Use Case

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INTRODUCTION

The network installation Indihome and Ibooster website that focuses on double configuration is system and application on telecommunications technology and industrial revolution 4.0. Thus, developing rapidly, directly, or indirectly will affect the development of the Indonesian telecommunications system Digital Network is a program for Indonesia in the field of economic development and productivity for the Republic of Indonesia. The network installation on Indihome and Ibooster website that focuses on method can be done in overcoming installation problems on Indihome which increases performance for customers and problems in double configuration. If the project is carried out too long it will have triple risk constraints on time, cost, and scope that have an impact on customers and companies. If doing network installation problems on indihome and double configurations is very important to do Enterprise Resource Planning (ERP), management systems, and business

processes to measure their daily business activities, such as financial management, procurement, production, projects, human resource.

Meanwhile according to Laudon et al (2008), the system facilitates businesses with real-time and accurate information, so they can make business decisions well based on the data generated. The collecting transaction data together from various sources, ERP systems prevent data duplication by providing data integrity (O'Brien, 2005). The research has several problems in the Indihome installation and double configuration networks, inventory management and control in the manufacturing sector were needed. The security addresses developers to create programs to monitor inventory, reconcile balances, and report status to companies and customers. The research is necessary to look for problems and embarrassing solutions in identifying the problems needed to optimize efficiency, simplify operational activities, increase collaboration, save operational costs, increase data security, and make accurate business forecasts. The maturity level has Indihome problems with network installations and double configuration. These problems will hamper the flow of information and analysis, worker productivity, and sales development. The proper maturity and strategies planning will have an impact hampering the information flow and analysis, employee productivity, and sales development in the Indihome installation.

Another aspect that has a problem contained in the double configuration is deleting data from consumers registered on the lbooster website and if no data deletion is done caused by cleaning garbage data. Therefore, the system makes and manipulates a system that works when deleting it in real time. The function of deleting minimizes sustainable resources on double configuration. The configuration Fiber To The Home (FTTH), Gigabit Capable Passive Optical Network (GPON), Optical fiber, Splitter, Optical Distribution Network (ODN), Optical Distribution Purpose (ODP), Optical Network Terminals (ONT), Automatic Telephone Central (STO), Optical Termination Premises (OTP), Optical Line Termination (OLT), Network Operating System (NOSS-F), Network Management System (NMS), home telephone cables Indihome simulation services related to data storage in inventory management in the form of data source, data infrastructure, customer data on customers. Thus, the aspect has a key performance indicator in the series of checking, provisioning, jointing, and inventory processes in the warehouse. The critical performance measurements such as cost, quality, service, and speed in the business process and management system. PT Telekomunikasi Indonesia Tbk is engaged in telecommunications services and networks so the purpose of this research is to identify the level of maturity in management systems, business processes, and enterprise resource planning to implement and improve performance in these companies

METHODs

Enterprise Resource Planning

The Enterprise Resource Planning (ERP) implementation in telecommunications companies and related to networks in PT Telekomunikasi Indonesia Tbk. The company can integrate and control every business process can takes place, ranging from capital intensive, data, information systems, security, profitable, data management, etc. that are on the lbooster website, especially to analyze the double configuration. The company can also count every activity carried out, comparing conditions before and conditions after an activity is carried out. For the capital-intensive industry, data, information systems, security, profitable, data management, etc that are in lbooster, the effectiveness and efficiency in efforts to increase company profitability is very important. The addition it requires companies to be more responsive can change to occur and maximize profits through efficiency and increased productivity. The ERP deals with payroll, human resources, finance, double data, and so on. The ERP is to facilitate each part to do reconciliation.

The data consolidation, double data causes the double configuration is no longer needed, with each site being directly connected to the central office in real-time. The lbooster's Treg-3 voice service surveillance notification dashboard is a platform control panel that functions to manage all activities on a site or website. The dashboard is often displayed on a web page which is linked to a database that allows the report to be constantly updated. The system administrator dashboard consists of a real-time monitoring chart for services and system resources and a chart for comparing statistical information. However, this lbooster consists of a real-time for updating the data. These charts system administrator can not only analysis the service load and performance status but also carry out normal system operations, which for deleting data that is already unused such as access data the unregistered that has not been updated by technicians in the field. The Treg-3 dashboard voice service surveillance notification is related to business processes that are useful for analyzing inconsistent data. With the lbooster site ERP system can be obtained on the same day and hour.

The double configuration located on the lbooster website can be done in real-time and centralized because there is a Local Area Network (LAN) and Wi-Fi network. LAN networks are installed at headquarters and throughout the site. In addition, there is a Wide Area Network that connects sites with headquarters and the internet. To develop these solutions, the process of overcoming the problem in the double configuration can be found on the lbooster website and will be implemented in detail and applied to science in industry by using case diagrams, sequence diagrams, case diagrams, activity diagrams

Business Process

The Indihome simulation services related the data storage in management inventory in the form of data source, data infrastructure, customer data to customers provisioning, jointing related Fiber To The Home (FTTH), Gigabit Capable Passive Optical Network (GPON), Optical fiber, Splitter, Optical Distribution Network (ODN), Optical Distribution Purpose (ODP), Optical Network Terminal (ONT), Sentral Telepon Otomatik (STO), Optical Termination Premises (OTP), Optical Line Termination (OLT), Network Operating System (NOSS-F), Network Management System (NMS), home cables that called in Indihome simulation services related to data storage in inventory management of data source, data infrastructure, customer data deliver on customers that will be explained in detail and applied to science in the industry that will discuss DFD level 0, DFD level 1, DFD level 2.

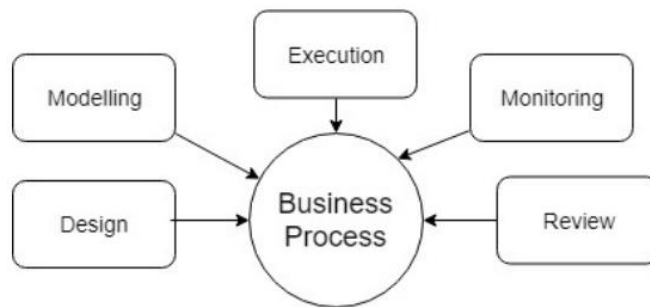


Figure 1. The Business Process for Network Installation Indihome

The new pair of installations will explain the series customers can use the services in this industry which consists of assurance, jointing, and provisioning that will be designed, modelling, executed, monitoring, and reviewed during the process of installation.

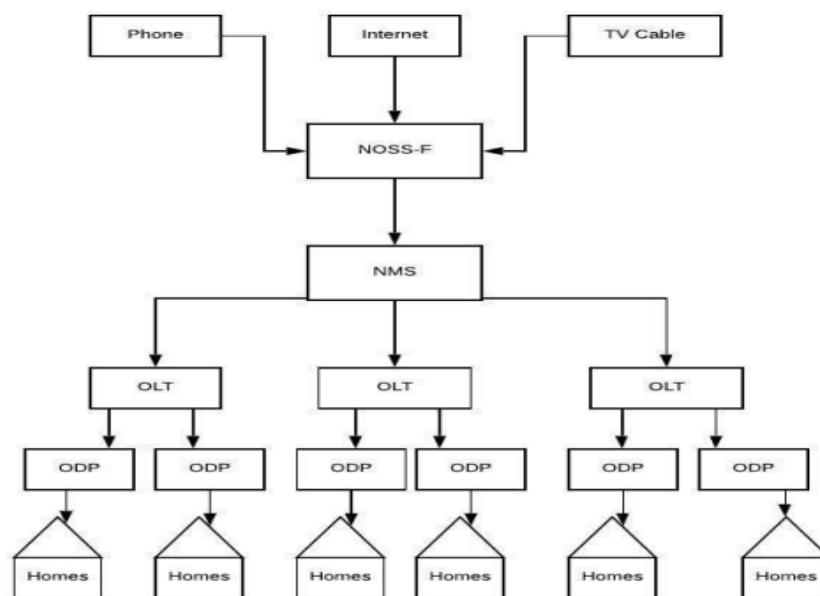


Figure 2. The Network Installation Indihome Process

The definition of assurance is a quality and trouble shoot guarantee that requires technically specific standardization that has a key performance indicator on this new pair installation assurance. The series of troubleshooting processes in the form of disturbances are to be guaranteed as a quality that will be used by consumers in the future so that the service will be established. The interference can occur because the fiber optic is disconnected then the jointing process is carried out. Then the provision of this new installation service is related to Capable Passive Optical Network Gigabit (GPON), Optical fiber, Splitter, Optical Distribution Network (ODN), Optical Distribution Purpose (ODP), Optical Network Terminal (ONT), Automatic Telephone Central (STO), Optical Termination Premises (OTP), Optical Line Termination (OLT) is continuous in installing new installations on Indihome services.

Therefore, this research explains the explanation of Capable Passive Optical Network (GPON), Optical fiber, Splitter, Optical Distribution Network (ODN), Optical Distribution Purpose (ODP), Optical Network Terminal (ONT), Automatic Telephone Central (STO), Optical Termination Premises (OTP), Optical Line Termination (OLT), Network Operating System (NOSS-F), Network Management System (NMS), home cable relating to the installation of new installations on Indihome services that will be used by consumers later when after being installed the understanding starts from a. Gigabit Capable Passive Optical Network (GPON) GPON stands for Gigabit Passive Optical Networks. GPON is a point-to-multi-point access mechanism. Its main characteristic is the use of passive splitters in the fiber distribution network, enabling one single feeding fiber from the provider's central office to serve multiple homes and small businesses. GPON gives the end user the ability to consolidate multiple services onto a single fiber transport network. This technology reduces costs and infrastructure while increasing bandwidth. It provides 2.5 GB / s of downstream bandwidth and 1.25 GB / s of upstream split ratio to each customer delivering a customizable, high-capacity fiber network for forms of IP-based services.

These networks are perfect solutions for environments with multiple separated nodes/points or buildings. GPON provides a large range of benefits that enable rapid, flexible, mass-market fiber to deploy at the lowest possible cost of ownership and rollout. The GPON also includes fixed broadband technology from end to end using an optical fiber transmission system. Optical fiber is a transmission medium whose main material is made of glass fiber and mixed with plastic which uses refraction of light in transmitting at high speed because it can transmit light signals from one location to another.

The splitter The splitter will decrease the signal that is coming into the splitter. The splitter can be called a branch. Each tool that has a redama from end to end starting from the connector cable to the splitter has a redama with a total maximum of 28db. The author will give examples such as in one area there are 8 houses, then we use a splitter compared to 1: 8. If the customer is above 8, it means using 1:16. The incoming light will have attenuation, the

maximum amount of attenuation according to the data. Therefore, the splitter is useful for splitting / dividing cables. The tool that measures damping is called Optical Power Meter (OPM) in dbm units. The Optical Distribution Network (ODN) Indispensable path for transmitting Passive Optical Network (PON) data and directly affects the performance, reliability, and scalability of a PON system.

The ODN, an integral part of the PON system, resides as the physical path for optical transmission between the OLT and the ONT. Its reach is 20 km or farther. Within the ODN, optical fibers, fiber optic connectors, passive optical splitters, and auxiliary components collaborate with each other. The ODN specifically has five segments, which are feeder fiber, optical distribution point, distribution fiber, optical access point, and drop fiber. The feeder fiber starts from the optical distribution frame (ODF) in the central office (CO), optical distribution points, and optical distribution points for long-distance coverage. The distribution fiber from the optical distribution points to the optical access point distributes optical fibers for alongside it. The drop fiber connects the optical access point to terminals (ONTs), and achieves optical fiber drop into user homes. In addition, the ODN is the essential path to PON data transmission and directly affects the performance, reliability, and reliability of the PON system. The Optical Distribution Point (ODP) Device that serves to protect FO cables (Fiber Optic). The main function of ODP is to divide one optical core into several customers. Following are the types of ODP that I have encountered when conducting Migration activities in the context of FTTH Projects with Telkom Access such as:

1. ODP Pole This type of ODP is usually placed on Telkom poles, for in this ODP area there are already almost all Telkom poles on Jalan are already in some housing complexes
2. ODP Closure may only be installed on SCPT cables and SSW cables both in the middle of the goal and near the Mast.
3. ODP Pedestal ODP Pedestals are usually installed at ground level, this ODP can be easily found in office or compound areas.

The ODP installation method itself must be installed in accordance with its designation, ODP Pole should only be installed on the pole, ODP Pedestal installed on the ground, ODP Wall installed on the wall and ODP Closure may only be installed on SCPT cable and SSW cable both in the middle of the goal and in near the pole. How to install ODP by picking one of the cores from the distribution cable in sequence. Then the core is inserted into the passive, passive commonly used in ODP which is passive 1/8.

The passive is split into the Optical Network Terminal (ONT). The ONT (also called the modem) connects to the Termination Point (TP) with an optical fiber cable. It connects to router via a LAN / Ethernet cable and translates light signals from the fiber optic line from TP into electronic signals that router can read. The OLT provides end users with services through

the ONT. The OLT can manage the ONT and ONT can work in a normal state only after the channel between the OLT and the ONT is available. The optical modem that connects to the termination point with an optical cable. It is used at the end of the user to connect to the PON network on one side and interface with the user on the other side. Data received from the customer end is sent, aggregated and optimized by the ONT to the upstream OLT.

The ONT is also known as an optical network unit (ONU). The ONT is an ITU-T term, while ONU is an IEEE term. They both refer to the user side equipment in the GPON network. A small difference between them might be the application locations. ONU can work in different temperature and weather conditions. This ODP uses FO cables that will enter the OTP house. From the OTP, it was sent to a rosette in the form of a white box shaped instrument in the homes of residents. From the rosette sent to ONT, then ONT gives 3 play access. When there are problems about the troubleshoot on ONT, have a problem goes away to use the Ethernet cable for connection. If the problem still exists, it's can reconnect the ONT power supply to clear its internal cache.

The Optical Line Termination (OLT) Optical line terminal (OLT) is the hardware endpoint located in the central office of the PON network. Its basic function is to control the optical distribution network (ODN) to go in both directions. OLT converts the standard signals used by fiber optic service to the frequency and framing used by the PON system. In addition, it coordinates the multiplexing between the ONT conversion devices. There are two float directions for OLT systems. One is the upstream direction of different types of data and voice traffic from users. The other is the downstream direction which gets data, voice and video traffic from the metro network or from a long-haul network and sends it to all ONT modules on the ODN. So the conclusions on ONT and OLT are indispensable components in the GPON network system. If considering the ONT or OLT devices, FS.COM is a good place to go. Different types of ONT and OLT equipment are provided with high integration, flexible adaptation and great reliability to meet all requirements.

The Automatic Telephone Central (STO) is a network source that will send signals to several ODCs using a feeder cable and will be connected into ODC and reconnect using a feeder cable. This ODP uses FO cables that will enter the OTP house. From the OTP, it was sent to a rosette in the form of a white box shaped instrument in the homes of residents. From the rosette sent to ONT, then ONT gives 3play access. In detail, the author will provide an explanation about STO itself is a telephone communication connection device located on the customer side, for example in office buildings that require a telephone line branching. In Indonesian, PABX is called STO or Automatic Telephone Central. In general, STO devices are connected to public telecommunications service providers. The STO size or parameter in the capacity of the number of telecom lines connected to the STO and the number of Extensions (branches). Starting with a unit capacity, tens, hundreds or thousands of Ext. At present, STO

has applied Internet Protocol (IP) technology. This device will manage incoming calls and forward calls to the destination number, so that users can easily make calls to the destination number, just by pressing the destination number (extension number or house number).

The Optical Termination Premises (OTP) installation aims to simplify the interference of the outside of the house (indoor) and the inside of the house (indoor). Thus, if there is interference on outdoor or indoor wiring interrupted only then it will carry out repairs or replacement and it will save orefficient in the use of drop cable. That is the passive device placed on the customer's home installation. The functions of the OTP are as follows; termination point or optical drop end mooring point on the customer side, Optical dropp cable connection with optical indoor cable (patchcord),

The NMS is a network management system (NMS) that allows network administrators to manage a network's independent components inside a bigger network management framework. NMS may be used to monitor both software and hardware components in a network. It usually records data from a network's remote points to carry out central reporting to a system administrator

The NOSS-F is a computer operating system (OS) designed to support workstations, personal computers and, in some instances, older terminals that are connected on a local area network (LAN). The software behind a NOS allows multiple devices within a network to communicate and share resources with each other include Fiber to The Home (FTTH). The FTTH is usually carried out by making a new network, but in FTTH carried out by PT Telekomunikasi Indonesia is the migration from the copper access network to the optical access network. This migration requires several stages in its implementation, starting from planning to being marketable.

The construction of this optical network requires partners working with PT Telekomunikasi Indonesia. Until the installation sequence of the new pairs on the Indihome services that will be deliver to the customers. The role of the organization's controlling holder in the company is considered important to carry out the process of preparing the master plan which is used as the foundation in the course of business in the company. This design is a fundamental revision and measurement of effectiveness carried out in a contemporary manner in relation to product sales, product quality, product service, and speed of production with benefits consisting of a. Improve the company's ability to produce goods or products specifically to maintain mass production desired by consumers. b. Increase satisfaction with goods or products purchased by consumers so that consumers will prefer company over competing companies that might produce the same goods. The implementation of the business process reengineering has its own impact on production companies that deal directly with consumers.

Management System

The Analytic Hierarchy Process used in this study aims to study the process of the management system contained in the network installation in Indihome in the form of an assembly in the Indihome installation, which has 3 divisions, namely assurance, provisioning, jointing which afterwards will be used by these consumers. The assembly and sales systems that will be felt by these consumers to learn the processes and procedures used by an organization to ensure that it can fulfill the tasks required to achieve its objectives. These objectives cover many aspects of the organization's operations (including financial success, safe operations, product quality, client relationships, legislative and regulatory conformance and worker management).

The instance, an environmental management system enables organizations to improve their environmental performance and an occupational health and safety management system enabling an organization to control its occupational health and safety risks, etc. The process system on management system include inventory, orders, warehouse, PO's, forecasting, analytics, multichannel, inventory and these will depend on fluctuations in demand, seasonality, supply chain logistics, and a product's natural life cycle will managing inventory. So that the installation process of this indihome installation has the benefits of an effective management system to an organization including: 1. More efficient use of resources and improved financial performance, 2. Improved risk management and protection of people and the environment, and 3. Increased capability to deliver consistent and improved services and products, increasing value to customers and all other stakeholders

RESULTS AND DISCUSSION

Analysis Result Measurement of Enterprise Resource Planning

The results of the implementation of the show that the company's relationship-oriented activities are badly captured by the enterprise system. The study limitations that future enterprise systems to be able to offer the company a better insight into its business network that represents an innovative strategy that integrates researches on interaction design and business process management with practical implications on double configurations on real time that are related to the business process in Regional Division III, West Java that needs in the stock procurement sector and all things that can be needed by the company.

Therefore, the author will provide an association of enterprise resource planning functions in the explanation of the double configuration function in reg - 3 dashboard voice service surveillance notification that refers to a double configuration relating to cleaning garbage data customers that use the system and manipulates the system that works when deleting it is a real time so that it can minimize sustainable resources so that it impacts on risk management in the double configuration which will be applied into use case diagrams,

activity diagrams, deployment diagrams will be shown in the below:

1. Use Case Diagram

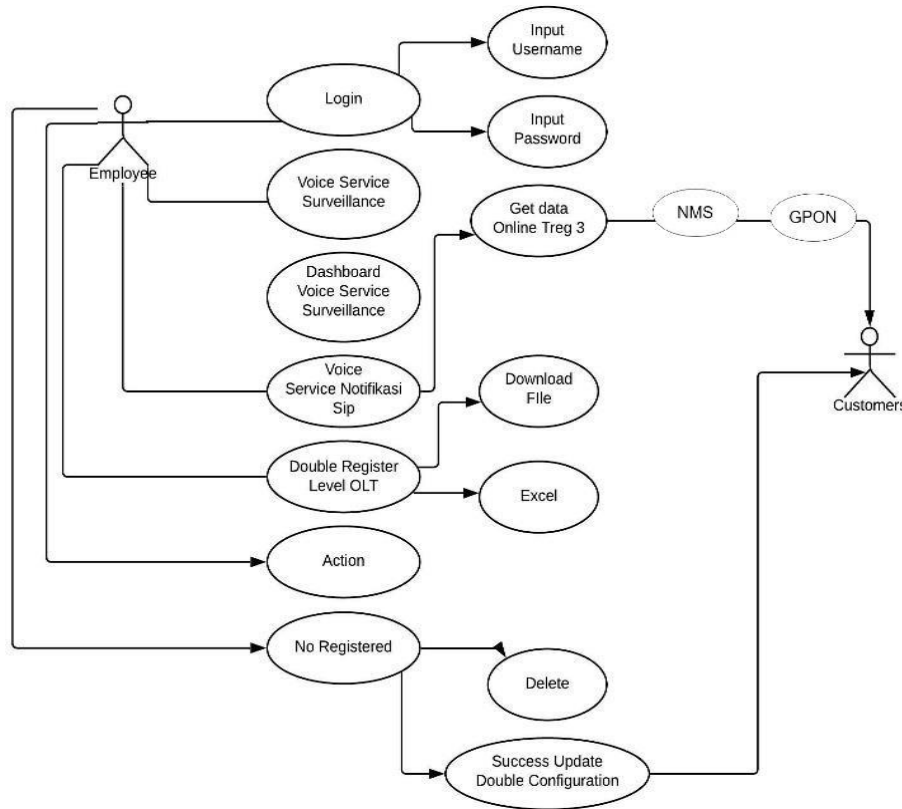


Figure 3. Use Diagram

The use case diagrams are graphic depiction of the interactions among elements of a system. A use case is a methodology used in system analysis to identify, clarify, and organize system requirements. The use cases, which are the specific roles by the Treg-3 dashboard voice service surveillance notification played by the actors name are employees within and around the system until deliver to the customers. The author uses the case study because of something as simple as the Treg-3 dashboard voice service surveillance notification will be developed and organized in detail from several systems consisting of employee, login, voice service surveillance, voice service surveillance dashboard, double configuration, double register OLT, and actors that have been analysis by the author

2. Deployment Diagram

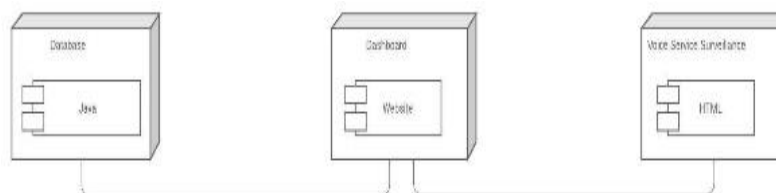


Figure 4. Deployment Diagram

Deployment diagrams are mainly used by system engineers. These diagrams are used to describe the physical components, their distribution, and association. Deployment diagrams can be visualized as hardware components or nodes on which the software components reside. The author uses the case study with the completion of using the deployment diagram to show the structure of the run time system also for managing executable systems through forward and reverse engineering that has the role and each of the objectives namely dashboard, database, and voice service surveillance which specify the specify relationship between the components in system's implementation view and the nodes in system's deployment view

3. Activity Diagram

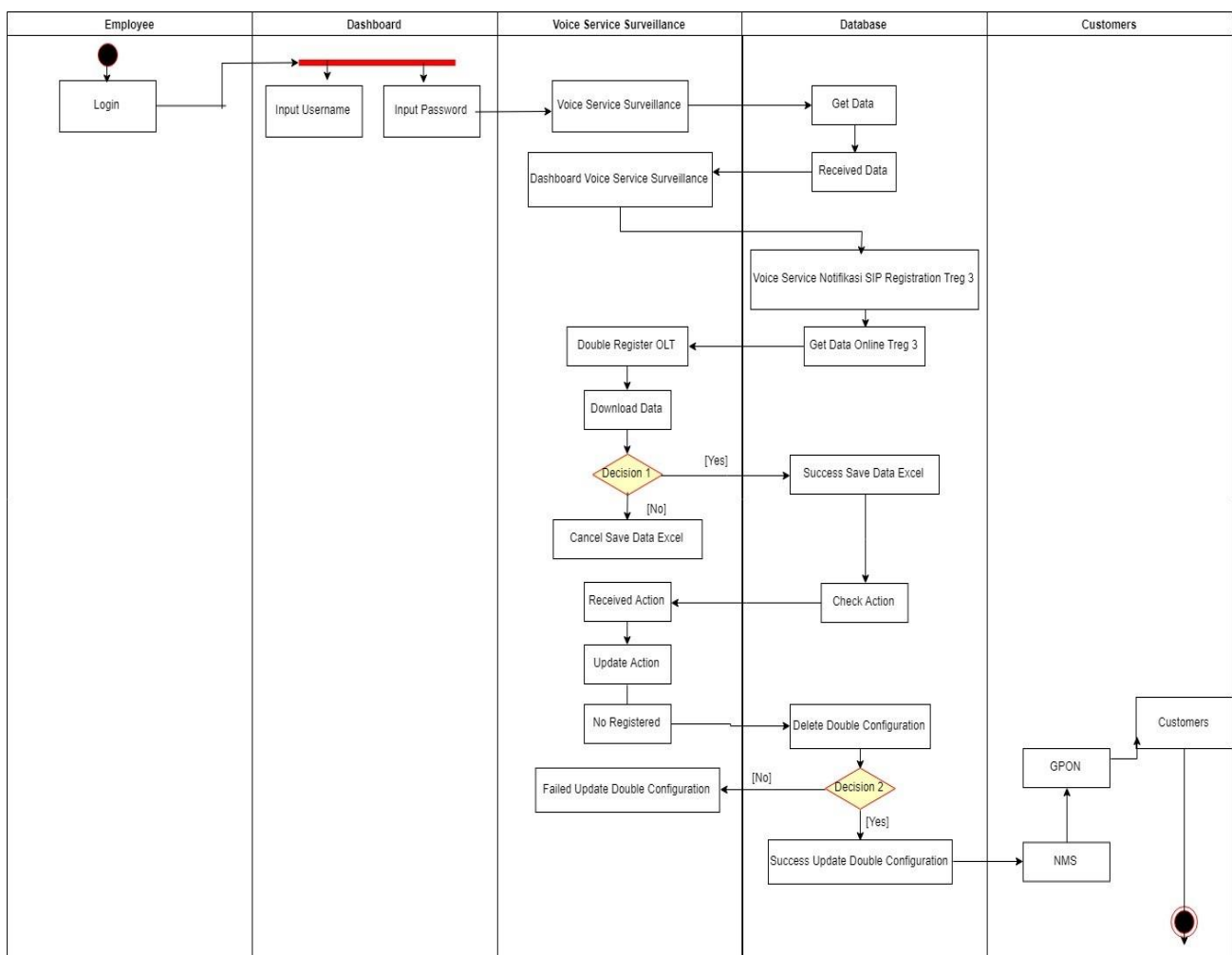


Figure 5. Activity Diagram

The activity diagram is a graphical representation of an executed set of procedural system activities and considered a state chart variation diagram. Activity diagrams describe parallel and conditional activities, use cases and system functions at a detailed level. So that the activity diagram representative by specific roles related to the Treg-3 dashboard voice service surveillance notification. The author uses the case study because the writer will

develop a system of workflows of stepwise activities and each action with support for choice, iteration and concurrency which have been divided into 5 workflows of stepwise actions, namely employee, dashboard, voice service surveillance, database, customers that each function each has the role of aiming for message flow from one activity to another.

Analysis Result Measurement of Business Process

The results of this design analysis are fundamental and effectiveness measurements carried out in a contemporary manner in relation to product sales, product quality, product service, and production speed. This is what is used as a reference in the preparation of company work plans that will become a priority at PT Telekomunikasi Indonesia Tbk, so the authors make a description that has a correlation on the workflow flow that will solve the problem will be applied to Data Flow Diagram Level 0, Data Flow Diagram Level 1 , Data Flow Diagram Level 2

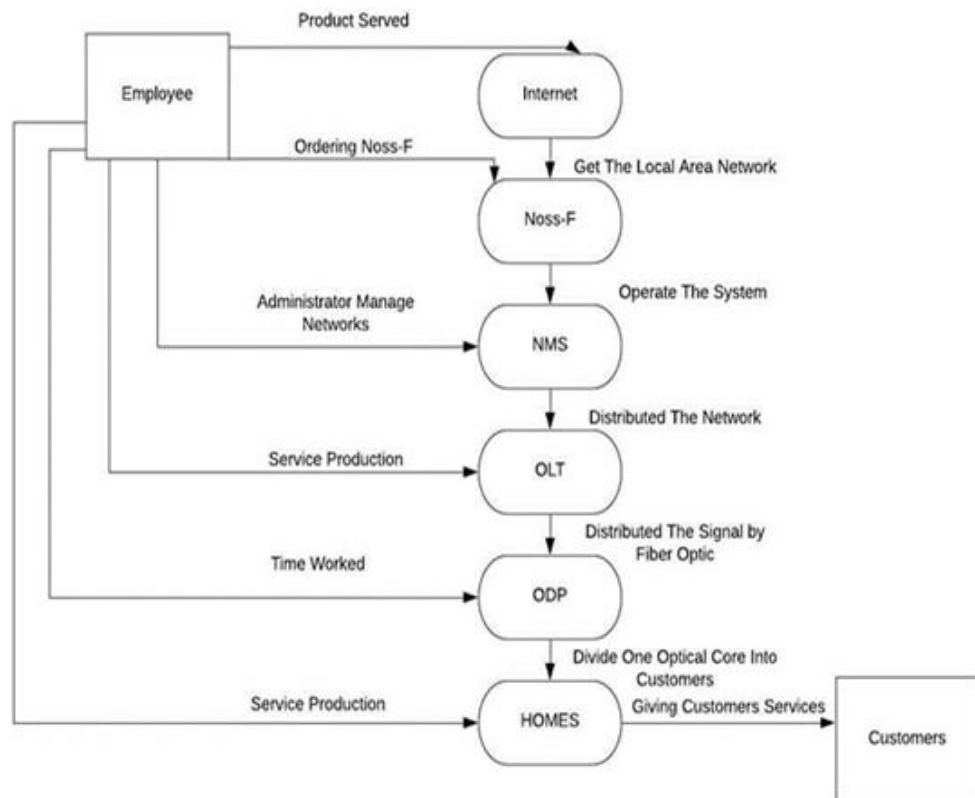


Figure 6. Data Flow Diagram Level 0

The DFD Level 0 it's a basic overview of the whole system or process being analysis that connects employee, internet, Noss- F, NMS, OLT, ODP, Homes and deliver to the customers. So thats DFD Level 0 is has a correlation each system also known as a context diagram, shows a data system as a whole and emphasizes the way it interacts with external entities. This DFD level 0 example shows how such a system might function within a typical retail business.

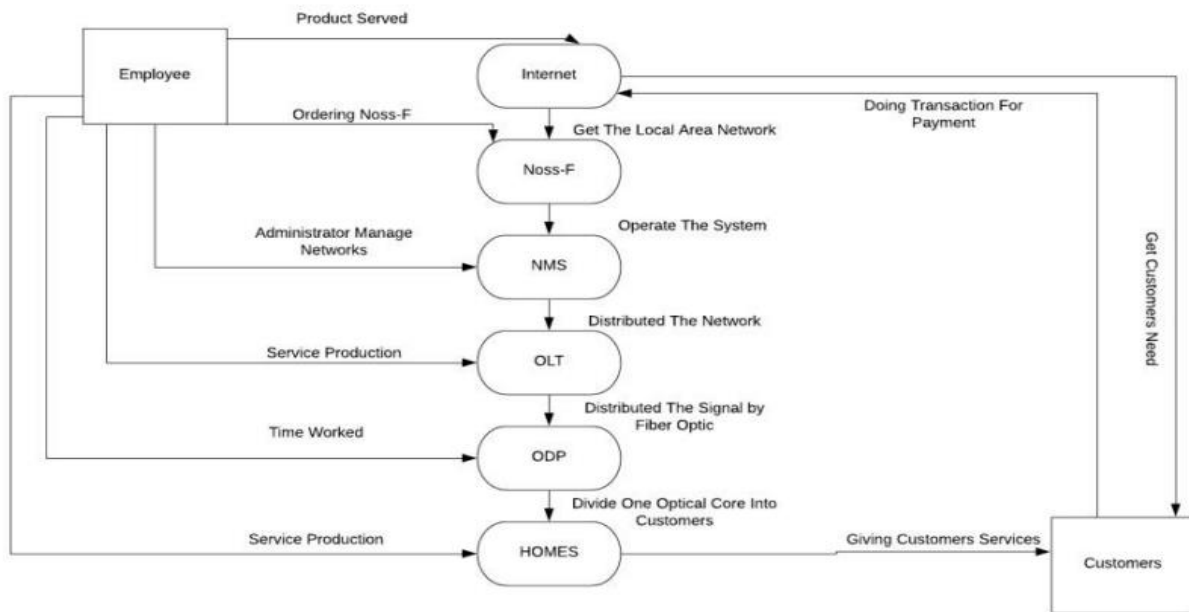


Figure 7. Data Flow Diagram Level 1

The DFD Level 1 notates each of the main sub processes that together form the complete system. And the relationship between the system and its environment must not be eliminated. In other words, the data flow that enters the system and the data flow that comes out of the system must be exactly the same as the one at DFD level 0. If for example finding a new data flow when creating DFD level 1, then in DFD level 0 must add data flow newly created in DFD level 1.

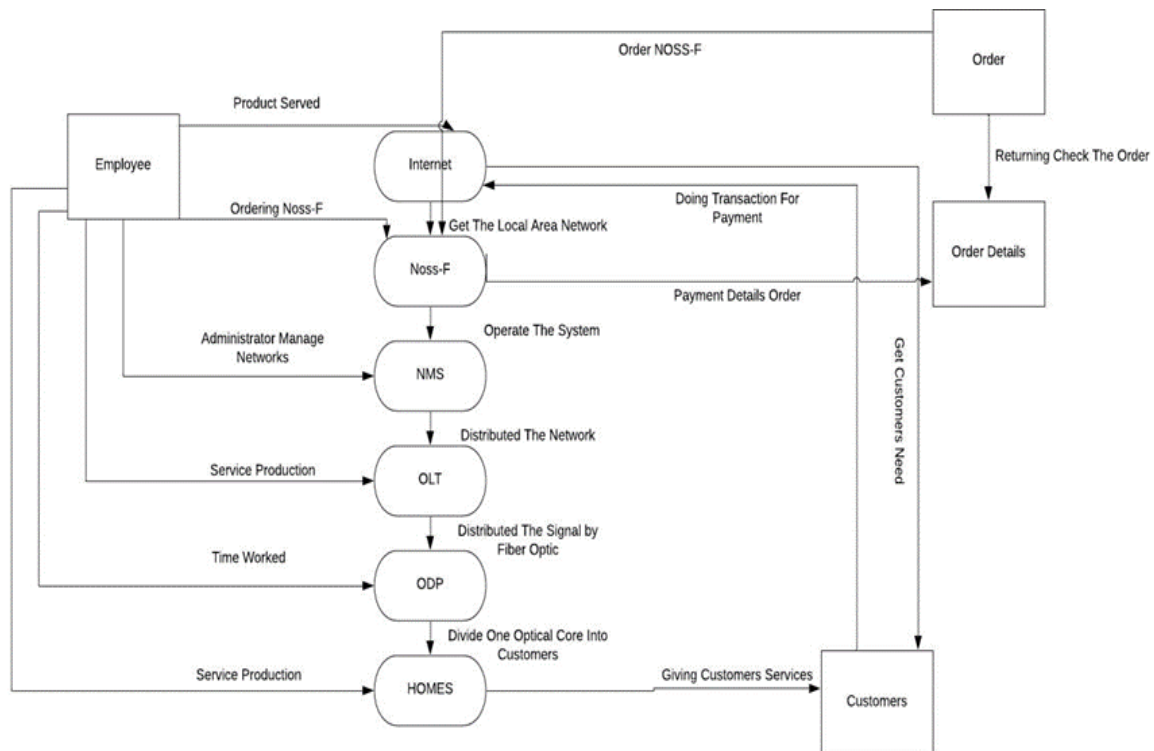


Figure 8. Data Flow Diagram Level 2

The DFD Level 2 Levels in DFD are numbered 0, 1, 2 or beyond. When performing topdown decomposition to a DFD to lower level DFDs, the inputs and outputs must be conserved between levels of DFDs. For example, levels n & $n + 1$ must have the same inputs and outputs cause to solve the problem use of business processes in the installation networks on indihome because the development of a moving market becomes very competitive and increasingly complex and tight business competition has presented new challenges for companies. Speed is an issue that deserves attention, which is how companies or organizations get and evaluate immediately. To overcome these problems, company leaders really need a solution that can help them to see a picture of their business as a whole (comprehensive) and real time so as to improve the ability of the company, increase satisfaction on goods / services to customers whose results the company can develop innovatively and reduce the risk management in the business process

Analysis Result Measurement Of Management System

The results of the management system analysis contained in the indihome system on network installation have a system design measurement in the assembly consisting of 3 stages, namely assurance, jointing, provisioning, implementing these standards, which will have criteria for changing business climate is influenced by various factors, including changes in policy by the ownership. PT Telekomunikasi Indonesia has a business orientation, competition conditions, and increasing demands by the stakeholders whose inventory management system requires tracking inventory levels, orders, sales and deliveries. It can also be used in the manufacturing industry to create a work order, bill of materials and other production-related documents and re-check to avoid product failures and inventory control systems work before the assembly of finished goods and before customers use the product indihome in order to improve product quality. Which checks inventory consists of raw materials, finished goods, transit inventory, buffer inventory, anticipation inventory, decoupling inventory, cycle inventory, maintaining inventory cause of each seems to be that of maintaining a high level of customer service or part of an attempt to minimize overall costs

CONCLUSION

PT. Telkom Indonesia Regional Division III West Java obtained conclusion as follows:

1. The accessing Ibooster on Treg-3 dashboard voice service surveillance notification that confirms the configuration of the garbage system data.
2. Installing new assurance, provisioning, jointing related Fiber To The Home (FTTH) according to the conditions then implemented to the field in a work real life.
3. Inventory process that applied into inventory management system is carried out with several stages in the process of Gigabit Capable Passive Optical Network (GPON),

Optical fiber, Splitter, Optical Distribution Network (ODN), Optical Distribution Purpose (ODP), Optical Network Terminal (ONT), Automatic Telephone Central (Central STO), Optical Termination Premises (OTP), Optical Line Termination (OLT), Network Operating System (NOSS-F), Network Management System (NMS), home cables with services that will be provided to consumers.

4. The results of the problem solving contained in the Indihome and double configuration network installation have 3 methods namely Enterprise Resource Planning (ERP), management system, business process which will improve the quality of products which offer goods services to consumers. And reduce the risk of the company, reducing overall cost, waste time for increase the standardization that has been set at PT Telekomunikasi Indonesia Tbk

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