**Technology Graduates Program**

**OJT – IT Orientation Report**

Unit :

IT Infrastructure

Period : 09 October – 13 October

Prepared by :

Name : Ajeng Ayu Pranata

Batch : 2023

**IT Infrastructure**

The IT Infrastrucure work unit is divided into 2 parts, namely insfrastructure and data center. The infrastructure is under the guidance of Mr. Wawan Irawan, while the data center is under the guidance of Mr. Dwi Joko Sulistio.

**♦ Takeaways**

**Day 1**. (Monday, 09/10/2023)

1. **Overview IT Infrastructure (General)**
2. Studying the organizational structure of sub-unit IT Infrastructure by Mr. Wawan.
3. Learn what focus daily activities are carried out and what tools are used in IT infrastructure.
4. Studying the infrastructure unit focuses on the tools that will be used for operations, such as what network circuits will be used, what tools will be provided to connect to storage.
5. **Data Center Operation Management (DCOM) (General)**
6. Studying the organizational structure of sub-unit IT Infa Data Center by Mr. Joko. Data Center Operational Management is separated into 8 units, and each unit has its own role.
7. Data Center Operational Management is separated into 8 units, and each unit has its own role.
8. Learn what focus daily activities are carried out and what tools are used in Data Center.
9. Learned that production is devided into data centers and disaster recovery or backup from data center.
10. Production access to the data center using user systems and cyberark.
11. Studying how the data center team must maintain data availability which must always reach >99%.
12. **System Changes Management**
13. System Changes Management (SCM) can be said to be a “gateway” to access the production server to make changes.
14. Learned why an application requires changes, and what the flow is for those changes.
15. Production errors can occur because: Wrong instructions or Human error
16. The flow for making changes is Development -> System Integration Testing (SIT), User Acceptance Testing (UAT) -> Production -> there are problems that need to be fixed, or there are parts that need to be updated -> Changes Request Document.
17. The flow changes is Change request → review → CCRT → Promote (Step additional hanya jika ada error) → PVT → implementation → post implementation.
18. Studying what the kind are in the changes management. Type of change is PSR, CRC, PI, Project, Problem, CR, SWR.
19. Learn how to request access to cyberark to make changes, and require approval.

**Day 2.** (Tuesday, 10/10/2023)

1. **Process Quality & Administration Payment (DCPQ)**
2. Learned what a focus areas are in process quality & administration payment. DCPQ main focus to handling compliance and budgeting.
3. Learn the difference between capex and opex budgets and how to submit capex and opex budgets.
4. Learn how to deal with a proposed budget not getting approval.
5. Learn how many and what DCPQ duties apart from the main duties. The task of DCPQ is Document Control/Monitoring, Emergency User ID, Budget, Completion of CIM (Control Issue Management), LED (Lost Event Data), & Audit Findings, Support Stock Opname DCOM, Support Activity Disposal, Reporting CSM & GTD MC, Review Checklist, Review Form,Suggest Improvement.
6. **Data Center System Operation (DCSO)**

Changes to \*Infra\* can be made by the Developer if it has been approved by SCM due to limited personnel in the \*Infra\* section

1. Study the division of DCSO sub units. DCSO is divided into 2, namely system operation support and system operation analytics.
2. See how the day-to-day tasks of the System Operation Support, what the System Operation Support units do such as has the responsibility of monitoring applications that are running in AS/400, such as MUREX, RTGS, etc., has to make sure all processes run based on the checklist, where the System Operation Support focuses, and how to fulfill all those tasks.
3. See how the day-to-day tasks of the System Operation Analytic work, what the System Operation Analytic units do such as arranging shift schedules, preparing all checklists and WI and if there is an audit, the analytical system team handles all documentation and also all administration for operator, where the System Operation Analytic focuses, and how to fulfill all those tasks.
4. Try the tools used to monitoring the AS400 application server in DC and DR.
5. See and learn how this unit handles incoming alerts from the data center through monitoring tools.
6. Learn how this unit reports to make repair orders to the division responsible for emerging alerts and reporting to management regarding emerging alerts.
7. Understand what conditions must be met so that the application can be monitored.
8. Understand what Documents requirements must be met for cyberARk flow in urgent and normal conditions.

**Day 3.** (Wednesday, 11/10/2023)

1. **Incident & Problem Monitoring**
2. Incidents are a process of handling problems in services by providing solutions as quickly as possible because incidents are temporary solutions (work around).
3. Studying categorization by incident teams. The incident team categorizes problems into several severities, there are severity 1, 2, 3, and 4. However, in practice the incident team usually only handles sev  and 2 only. And if an incident occurs, the incident team can escalate it directly to the relevant team.
4. Understand the application categories for severity 1 and 2. Incidents included in severity 1 are events that occur in critical applications in AS400 such as Murex and RTGS applications. Incidents included in severity 2 are incidents that occur in applications that are high or very important. Apart from being determined by the category of application that experienced the incident, the severity category provisions are also determined by other things: - The application is a critical application, an indication of how down the application is, the down can affect the bank at large or just a few people or sections. Then, will the application become completely inaccessible (downtime). - Critical applications, system degrees (e.g. only some parts of critical applications cannot be used, such as certain menus being inaccessible), are down but not bankwide.
5. understand that disaster recovery will be carried out if the incident has not been resolved within the maximum time (especially critical applications)
6. If the team has found a temporary solution but has not found the root cause of the incident, then the team must create a ticket to the problems unit.
7. Understand the main tasks of the problem team. Problem management focuses on the root cause or cause of the problem so that the problem does not happen again. Reports use investigation first, because the problem management team works with investigations.
8. I found out that the problem ticket was not closed for 10 days because I was afraid there would still be complaints about the ticket.
9. learn to understand testing for applications. For critical applications, testing needs to be carried out at least twice a year with minimum requirements. 1x live testing. Testing is divided into live testing and simulation testing: - Live testing is testing properly” moving the data center. - Simulation testing is testing with temporary movement and direct data center access returned to the previous data center.
10. **Data Center Facility**
11. See how the servers are placed in the rack.
12. Learn what is done to maintain the stability of the server room, such as maintaining electrical power, temperature, security, humidity, and smoke and fire sensors.

**Day 4.** (Wednesday, 11/10/2023)

1. **Service Delivery & Asset Management**
2. Understand the focus areas of this unit. Service Delivery: has the main focus on managing tools in the AS400 DCOM area to check the availability of the applications used. Service delivery manages several tools, namely BMC Control-M, asset management, IT Service management clientele, managing data center access. Asset management focuses on scanning data center assets for the AS400 and non-AS400 (endpoint) sections, you can also go to the database section using credential tools, namely BMC (BMC Control-M Discovery, CMDB, and Remedy) and Clientele.
3. Flow Scanning File BMC Discovery → CMDB → BMC Remedy. BMC Discovery is for scanning data center assets and is agentless and focuses on handling applications that have IP and scanning files which will then be saved into the CMDB, after the files are saved in the CMDB they can then be accessed using BMC-Remedy.
4. **Data Center Operation Support (DCOS)**
5. Understand that the division in DCOS is divided into 2 units, namely - Production & development and Data Agreement Units. - Backup Operation Support.
6. Learn the main tasks of DC Production, Develop, and Data Aggregator: - Maintenance AS400, - Maintaining storage stability, - Maintaining all projects that will move to production, and - Supporting historical data.
7. Understand the process of requesting data restore: Requestor → Fill in the Form → Service Desk → Generate Ticket → Assign to the DC Production, Develop, and Data Aggregator team → To get the data, the backup team must restore it first to a secure Data Domain, then encrypt it first First → Query the required data.
8. Learn the causes of patching. This is done every time there is a change in data. Flow Data Patching: Apps Team makes a request → IT Changes Management → Creates a Ticket to the Service Desk → Production Support (patching accompanied by the apps team).
9. Learn the main tasks of the backup unit. This unit's daily work is to perform backups, prepare backup media for all applications, and maintain backup results.
10. understand how daily backups work. Daily backups for the AS400 are kept for 31 days in the data domain (using virtual tape) & then collected monthly to be stored permanently in ECS (after 14 days in the data domain) after going through a compression stage that is 20x smaller than the previous size.
11. understand how permanent backup works. For daily backups, tape cleansing will be carried out at this time. For EOM backups, the backup results are stored in Elastic Cloud Storage (ECS) for 30 years (only long retention data).
12. **DR Operation & DR Release and Support Apps**
13. learn the main tasks of DR Operation. Develop and Maintain DR Procedures. Pre DRP: Review of the infrastructure required at the destination location where the DR process is carried out. DRP (Live/Simulated) Live: Make a real swing. Simulated: The transfer is carried out temporarily, and will be returned after testing is complete. Post DRP: Monitoring.
14. understand the DR Process: - Plan: Annual schedule that has been approved by the IT head, Following the CCRT schedule, Evaluation of checklist documents after the test, Minutes (documentary evidence) after the test, Target RTO ≤ 2 hours for critical applications. - Unplan (Tech-Refresh, Update): Following the last checklist from the DRP test, Not following the CCRT review schedule, Target IT Recovery ≤ 2 hours for critical applications.

**♦ imporvment Ideas**

1. In the data center facility, the maintenance process is still manual, you have to stay in the room because if an alert occurs it must be resolved immediately in the server room. This can be improved by creating a system that can complete alerts without having to come in person, for example creating a system to monitor and regulate temperature remotely so that alerts can be completed more quickly.
2. Currently, tickets for incidents and requests are still being combined. This can be improved by submitting changes in control-M to create a new option for the application menu. and creating a new ticket category in the system for the request ticket category so that the relevant team can more quickly resolve user needs.