“Remote Database Server” in the Operation of Datapath Ltd.

Md. Rahat Khan

This report is submitted to the school of Business and Economics, United International University as a partial requirement for the degree fulfillment of Bachelor of Business Administration

“Remote Database Server” in the Operation of Datapath Ltd.

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School of Business and Economics

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Letter of Transmittal

4 September 2025

Ms. Mimnun Sultana

Assistant Professor

United International University

Subject: Submission of an Internship Report on The Impact of “Remote Database Server” in the Operation of Datapath Ltd.

Dear Ma’am,

I am a student of BBA department of United International University (UIU). I have completed my internship report on the company Datapath Ltd, which is a requirement for the INT 4399: Internship. I have tried to show everything that happened to me during my four-month internship period in this report. I'd like to thank you for always helping me, giving me advice about this course.
Therefore, I would like to submit my report on your very concern. I hope you will be kind enough to discover my observation during the internship period at Datapath Ltd. Rather, if you need any further clarification, I would like to welcome the opportunity to consult with you to explore how my findings could best meet your needs.

Yours sincerely,

Md. Rahat Khan

ID- 111 201 240

United International University (UIU)

Certification of Similarity Index

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Declaration of the Student

I hereby declare that the research and findings presented in this project report titled ‘Remote Database Server” in the Operation of Datapath Ltd.’ represent my independent effort, research, and analysis. This report has been carried out under the valuable supervision of **Assistant Professor Mimnum Sultana, School of Business & Economics, United International University.**

I confirm that the findings, interpretations, and conclusions presented in this report are entirely my own and have not been copied or reproduced from any unauthorized source. All external materials, data, or literature referenced during this study have been properly cited and acknowledged, in accordance with the university’s academic integrity policies. I also certify that this report has not been submitted to any other institution or organization. For the fulfilment of any academic qualification, including a degree, diploma, or certificate. In preparing for this work, I have fully complied with the ethical standards, formatting guidelines, and academic regulations prescribed by United International University. I affirm that it upholds the highest standards of academic honesty and professionalism.

Md. Rahat Khan
ID: 111 201 240
United International University

Corporate Evidence

datapath

DP/HRD/2025/025
August 27, 2025

Certificate of Internship

This is to certify that **Rahat Khan** worked with us as an **Intern** in the **Actuarial** department. He joined our company on **June 07, 2024** and completed his Internship on **September 30, 2024.** He was a sincere worker and was not involved in any illegal activities as per our knowledge.

This certification is issued to whatever purpose it may serve him best. We wish him all the best.

Best Regards,

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Acknowledgement

This work has constituted an important point in my life so far. It was a wish come true for me. I knew as I wrote this acknowledgment that it was a moment I would never forget. Despite having experienced a great deal in my lifetime, both positive and negative, I am now prepared to embark on this exciting academic journey. Studying is a lifelong endeavor, and my family, colleagues, and supervisor have all assisted me in maintaining my motivation to perform better.

Allah is the most significant motivation source in my academic pursuits and daily life. Furthermore, I would like to seize this occasion to convey my sincere appreciation to my supervisor Ms. Mimnun Sultana for their unwavering support. In the absence of his guidance, encouragement, and support, I would have been incapable of completing this dissertation endeavor. The extraordinary qualities and accomplishments of my supervisor render me speechless with gratitude and admiration.

I would like to express my sincere appreciation to my Internship Supervisors, Mr. Saifullahil Maruf, QKA, GM of DataPath Ltd, as well as all the individuals in the Actuarial Department. From the beginning of my internship, they consistently showed a strong dedication to teaching the necessary knowledge for navigating the complex subject of actuarial work. Their contributions have played a crucial role in creating my comprehension and proficiency in this captivating field, directly impacting the substance of my report. The amicable and encouraging environment at Data Path Ltd has been instrumental in fostering a constructive and cooperative learning environment.

In conclusion, I would like to extend my gratitude to all the individuals, acquaintances, and colleagues who provided encouragement and support while making significant contributions to the successful completion of my dissertation. Their assistance has been of great value, and I am sincere in my appreciation for their effort.

Executive Summary

The internship report is based on an analysis of how Data-Path LTD is performing work on remote database system. I had the opportunity to understand how the corporate world maintains their work, from this internship. This report's major goal is to illustrate the concepts and experiences I had during my internship.

The purpose of this report is to present the findings of my internship with a retirement planning service provider. The aim of the internship was to understand how remote database servers facilitate work process in the companies.

The growth of retirement planning industry has grown rapidly over the past few decades in USA. Millions of US citizens rely on these plans for their retirement savings. As industry has evolved, the importance of using technology has become a must. A lot of companies are now using remote desktop services to outsource their work from other countries.

This paper mainly explores how Data-path LTD. uses remote database servers for their work. How efficiently they are performing and what constraints they are facing while performing their work and how they can overcome it.

During my internship, I had the opportunity to work closely with the company's Actuarial team and gain insight into the various systems used by the company.

List of Figures & Tables

List of Acronyms & Abbreviations

- BPO: Business Process Outsourcing
- RPF: Retirement Provident Fund
- Gross Comp: Gross Compensation
- 401k Cont.: Deferral
- R401k Cont.: Roth
- IRS: Internal Revenue Service
- FICA: Federal Insurance Contributions Act
- ERISA: Employee Retirement Income Security Act
- CPA: Certified Public Accountant
- TPA: Third Party Administrator
- QKA: Qualified 401(k) Administrator
- HCE: Highly Compensated Employees
- NHCE: Non-Highly compensated Employees
- ADP: Actual Deferral Percentage
- ACP: Actual contribution percentage

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CHAPTER 1: INTRODUCTION

I.1 Background of the Report

Retirement planning and financial management have changed greatly in recent decades in the USA, with employer-sponsored 401k plans becoming a key component of retirement savings for many people. The role of Third-Party Administrators (TPAs) has grown increasingly vital as businesses strive to find effective and dependable solutions to manage these plans. One study conducted by (Lusardi & Mitchell, 2011) revealed that, People and their families are taking on more responsibility for ensuring their own financial stability during retirement in the United States and beyond. A significant number of American workers primarily depended on Social Security and employer provided defined benefit (DB) pension plans.

Datapath LTD. is a joint venture of July business services. It offers comprehensive solutions for properly managing retirement plans for both employers and workers. With the introduction of technology, specifically the use of remote database servers, Datapath has used creative methods to simplify operations, boost security, and improve accessibility for all those involved in the management of 401k programs.

The significance of this study is to examine the operating dynamics of Datapath LTD. How it is working for July Business Services (TPA) service provider, with a specific focus on remote database servers to enhance plan administration efficiency. It offers valuable information on the factors that contribute to the management of 401k plans in the era of digital technology. Comprehending the intricacies of Datapath's operations is essential for employers, plan sponsors, and participants, as it contributes to the discussion on retirement plan administration.

I.2 Objectives of the Report

This internship report covers the operational dynamics of Datapath, a leading retirement plan outsourcing company.

- The objective of this report is to specifically investigate the effective use of remote database servers by Datapath Ltd. in the management of 401k plans.
- To acquire an accurate understanding of Datapath's operational procedures, enabling efficient delivery of services to its clients.
- To analyze the challenges that DataPath Ltd. continues to encounter in their operational processes

I.3 Limitation of the Study

Datapath's operation as a retirement solutions service provider using remote database servers for 401k plan administration raises many important challenges to system efficacy and security. Data transmission and storage risks in remote database infrastructure must be examined for security and privacy reasons. Performance optimization and scalability are difficult to achieve with growing data and user transactions. System integration requires optimized methods to assure data integrity and compatibility. Data accessibility and availability affect decision-making and customer service, making delays in networks and disaster recovery measures important. Strategic resource allocation without compromising performance or security is driven by cost efficiency and resource optimization. Finally, user experience and usability emphasize the necessity of intuitive interfaces and application design for stakeholder satisfaction and productivity. These research challenges must be addressed for informed 401k plan decision-making and continuing development.

I.4 Scope and Limitations of the Report

The study on the operation of Datapath LTD. as a joint venture with Third Party Administrator (TPA) July Business services; using Remote database servers (RDS). Where UNIFY, RELIUS, ASC play an extremely important role. It has the ability to improve efficiency, security, and compliance in the field of retirement planning. This study aims to fill gaps in knowledge regarding remote database infrastructure in the context of 401k plans. By examining aspects such as performance optimization, cost-efficiency, and user experience considerations related to remote database servers, valuable insights can be gained to enhance service delivery. This research contributes to the broader discussion on financial services technology and retirement planning solutions.

I.5 Scope of the Study

During the internship period, the main responsibility is to process 401(K) in Relius software. For processing 401(K), we need to follow some steps. Here is a rundown of the steps involved.

I. **Collection of information and making a checklist:** After collecting all required documents from the client, carefully review the plan document. It outlines the strategy, benefits, eligibility rules, and operational guidelines. Missing any details could disqualify the plan or cause errors, so a full review is essential for accurate processing.

II. **Revised Relius Plan documentation:** Relius is a well-known software and service provider that HR professionals depend on for assistance with qualified retirement and health benefit program administration tasks such as document generation, testing, reporting, and compliance. Data Path / July Business Services uses this software to process plans. That is why the requirements listed in the plan document must be modified in the Relius software for each design

III. **Importing the plan sponsor's corporate personnel data census report into Relius**: As previously stated, the customer is liable for supplying us with this information. Save the report as an Excel file after you've double-checked all the field formats. After that, you need to transmit the file to Relius in the "Comma Separated Values" (CSV) format. Relius will inform you if the import was successful or not when it has finished. An eligibility post will have to be made at some point in the future. By the terms of the planning agreement, this will instruct the software to determine whether workers have fulfilled the eligibility criteria (also known as participants) and to assign them an entry date into the plan.

IV. **Checking the count:** Must compare each component with the file from the prior plan year that has to be imported into the Relius application. The primary application, Relius, receives all of the data and information. Excel and other sophisticated algorithms are used in the complete census verification process. To determine whether the personnel are being sufficiently involved, this planning step is crucial.

V. **Work in Excel:** In an Excel spreadsheet, load the files containing the most recent and prior year's census. Additionally, you will import the client-provided census data into the spreadsheet and then compare the outcomes. When using this approach, it is standard procedure to compare the census files in Excel using the "VLOOKUP" technique.

VI. **Composes reports detailing progress:** There are many mistakes in the census records that need to be verified. The hiring and rehire dates did not include birth dates, and no contribution formula was provided. Therefore, it is up to the consumer to fix these problems. We will ensure that the Relius programming is updated whenever we receive a response.

VII. **Download the report detailing your contributions:** Manually computing each gift to check for faults and ensure everything is done correctly after requesting it from Relius. No matter what happens, we must remain committed to the original strategy. When a client over- or under-funds their plan, it's important to go over the plan paperwork and ask them to transfer or invest according to it.

CHAPTER 2: COMPANY AND INDUSTRY PROFILE

2.1 Industry Overview

The United States is currently facing a combination of factors that create a challenging situation. These factors include the approaching retirement of the largest generation in history, who are expected to live longer than previous generations. Additionally, individuals are now responsible for managing their own assets to last their entire lifetime, and there are new retirement income products available. Furthermore, there is uncertainty regarding healthcare expenses. There is a pressing need to substantially enhance the retirement expertise of the banking sector. By improving university educational curricula and financial services training programs, upcoming cohorts of financial services professionals will acquire a more comprehensive comprehension of retirement planning. The demand for retirement experts extends beyond the retail customer financial services industries, such as banking, mutual fund and insurance businesses, and broker/dealer intermediaries. In one study of Meredith al. (2008) analyzed that according to the Investment Company Institute (2007), employer-sponsored plans currently hold 65% of all retirement assets. Companies hire individuals to assist with several areas of the plan, including management, administration, compliance, and retirement counselling. In addition, they use the services of financial service providers, third party administration firms, pension attorneys, investment management organizations, financial education companies, and consultants for services that are not handled internally.

2.2 The 401 (k) plan

A 401(k) plan is a crucial element of the retirement plan sector in the United States, providing employees with a tax-advantaged method to save for their post-employment years. Employers commonly provide sponsorship for these plans, enabling employees to allocate a portion of their wages, frequently on a pre-tax basis, to a variety of investment options such as mutual funds and target-date funds. Employers may also provide matching contributions to incentivize participation and enhance savings. The 401(k) structure offers tax advantages, as pre-tax contributions accumulate without being taxed until they are withdrawn, and Roth contributions grow without being subject to taxes. Although the business is widely favored, it encounters obstacles like fluctuating rates of involvement, insufficient funds, and continuous regulatory modifications, underscoring the significance of financial literacy and clear fee systems for participants. According to ICI (2021), The total value of retirement assets held in 401(k) plans in the United States experienced a consistent increase from 2000 to 2024, ultimately reaching approximately 8.9 trillion U.S. dollars by the end of the third quarter of 2024.

However, an article in Financial Times (2023) showed that a recent survey conducted by BlackRock has found that a growing number of individuals enrolled in retirement plans in the United States are experiencing heightened concerns regarding their capacity to save for their later years. The percentage of participants who believe they are falling behind their savings goals has more than doubled since 2021, reaching 24%. The proportion of those who feel "on track" has declined by 13 percentage points from its highest point in 2021, reaching 56%. In contrast to the study, another survey revealed that 90% of employees expressed interest in investing a portion of their savings in a guaranteed income product also twelve major plan sponsors are currently testing the idea of making this type of investment the default option for their employees.

2.3 Organization Overview

Data Path Ltd. is an active outsourcing company located in Bangladesh, with a robust affiliation to the United States, specifically through its collaboration with July Business Services, a well-known organization that provides retirement plan services. Data Path Ltd is a supporting organization of July business service that acts as a Third-Party Administrator (TPA), has a vital responsibility in creating yearly Designations Reports for retirement plans. These reports encompass a range of employees’ benefits, including health and life insurance, vacation time, disability compensation, and retirement plans.

Data Path Ltd. was founded in 2005 by Ashfaqur Rahman. It started with a small team of six employees in Uttara, Bangladesh. Throughout the years, it underwent substantial expansion, which required relocation to bigger premises. In 2015, the company relocated to Mohakhali to cater to its increasing number of clients more effectively, while its workforce continued to grow. Today, Data Path Ltd. has broadened its activities, catering to not just July Business Services but also eight other companies, with aspirations to connect with more businesses soon.

July Business Services is a prominent corporation located in Waco, Texas. It is the main partner of Data Path Ltd. and specializes in providing a range of retirement plan services. Established in 1994, the company has expanded its services to cater to around 3,000 clients throughout all 50 states in the United States. Data Path's collaboration with prestigious organizations showcases its capacity to effectively collaborate with prominent entities while upholding a strong dedication to professionalism and precision.

Data Path Ltd. had a substantial leadership change in 2008 with the appointment of Mr. Ashfaqur Rahman as the CEO and Managing Director. With his guidance, the company has consistently prioritized providing top-notch outsourced services, highlighting the importance of both expertise and innovation. The company's strategy is based on conventional principles while using contemporary technical advancements. Data Path's ability to collaborate with a wide array of clients has facilitated the transformation of their enterprises into highly efficient and successful organizations. Data Path utilizes its vast industry expertise and a dedication to thorough research to effectively address the changing requirements of its clients.

2.4 SWOT Analysis

Strength	Weakness	Opportunities	Threats
1. Less competitive rivalry in the market 2. Stable business growth in Bangladesh 3. Gaining trust of client 4. Offer lower price than other TPA firms in USA 5. Secured software and IT based service	1. Promotional activities are comparatively wearing 2. Totally new service in Bangladesh so people have very little knowledge about the company 3. Employees need to be trained from the scratch which is time consuming	1. Creating a new job opportunities 2. Making strategic partnership with different company across the world 3. Creating scope for outsourcing in Bangladesh	1. Some new competitors are making them move in market 2. Clients are not bound to promissory 3. Not a very strong sector in Bangladesh for job seekers

Table 1: SWOT Analysis

2.5 Organogram of Data-Path LTD

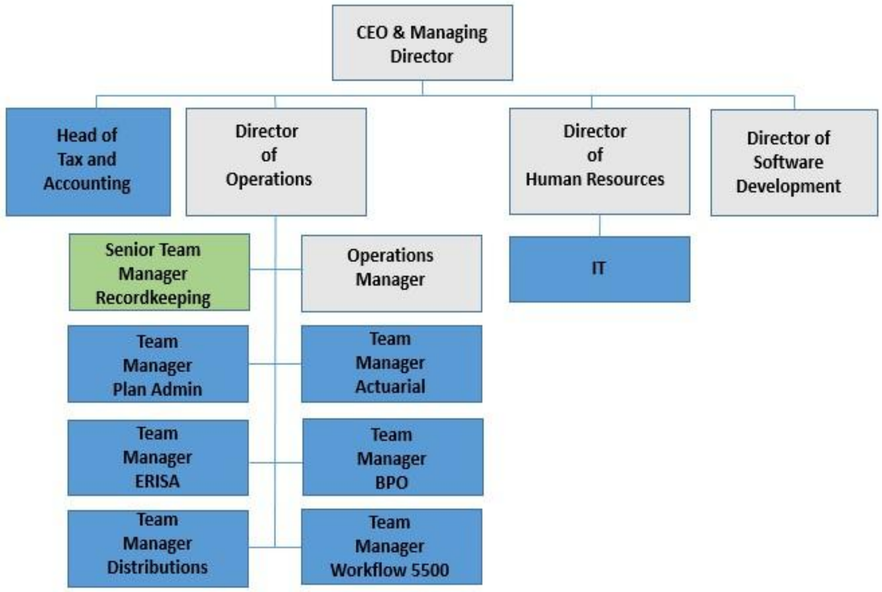

Figure 1: Hierarchy of Datapath

In the Datapath, the data follows a well-defined hierarchy, prioritizing the delegation of responsibility and supervision across multiple departments. The CEO has the highest position in the organization and is responsible for supervising the entire operation. This includes offering strategic guidance and making important decisions that impact various departments, such as sales, new business, ERISA, record keeping, plan administration, 5500, BPO, accounting, software department, IT, HRM, and actuarial. Below the CEO are the Directors, who usually oversee a particular department or a cluster of adjacent departments, ensuring that they are in line with the company's objectives and facilitating communication across their various areas.

Managers play a crucial role in carrying out departmental objectives, supervising daily operations, and guaranteeing efficient implementation of instructions from higher authorities. They act as the main intermediary between senior management and the operational teams, offering direction and resolving any potential issues that may occur. Assistant General Managers provide support to Managers, with a particular emphasis on certain areas of departmental operations or smaller sub-teams, enabling a more detailed and precise management style. Team Leaders have the responsibility of directly supervising operational teams, ensuring that tasks are accomplished punctually and meet the required standards. They serve as the primary supervisors, overseeing production and quality. Assistant Team Leaders provide support to Team Leaders by assuming responsibility for certain tasks or supervising a smaller portion of the team.

Senior Executives possess extensive experience and expertise in their respective disciplines, making substantial contributions to the department's performance through their deep knowledge and adept problem-solving abilities. Typically, they engage in intricate projects and provide guidance to junior team members. Executives, although less senior, have a vital function in the daily functioning of the organization. They primarily concentrate on carrying out assignments and initiatives within their respective teams. Trainee executives are junior professionals who acquire hands-on experience and learn from their more experienced colleagues. During their training and growth, they typically engage in duties that are more routine in nature. Interns, who are usually students or recent graduates, occupy the lowest position in the hierarchy. They are responsible for getting practical experience and acquiring knowledge about the department's operations. They aid with a range of duties and make valuable contributions to the department's workflow while being closely supervised. There are also some additional positions that is assigned to some specific position holders based on their expertise, i.e. Business analysts.

2.6 Services of Datapath

Datapath offers 2 types of services to their clients, Outsourcing services, and Software services. Details have been explained below:

Outsourcing

Select plans along with management:

- Data Path manages the intricacies of bundled recordkeeping and administration services, which encompass tasks such as plan documentation, form generation, compliance testing, and other related responsibilities.

Design Plan & Documentation:

- Evaluate the employer-controlled group and/or connected service group status.
- Develop a customized strategy that caters to the requirements of the proprietors, staff, and the organization itself.
- If we assume control of an existing plan, we will carefully examine the current plan terms and, if necessary, propose modifications to completely align with the employer's aims and objectives.
- Generate plan documentation by the requirements set by the IRS and DOL.
- Create the Summary Plan Description that must be presented to participants of the plan.

Administrative and Recordkeeping:

- Manage and update records of participants' vested percentages.
- Assess eligibility for the allocation of employer contributions and forfeitures.
- Distribute employer and employee contributions.
- Distribute the profits from the scheme.
- Distribute forfeitures if they are relevant.
- Distribution processing involves the computation of the distribution amount, the creation of necessary distribution notices, release forms, and the completion of IRS Form 1099-R.
- Loan processing involves the establishment of loan accounts, the creation of promissory notes and amortization schedules, and the monitoring of loan repayments.

Processing hardship withdrawals involves the calculation of the amount to be distributed and the completion of application forms:

- Perform the task of reconciling trust accounts.
- Compile participant statements.
- Supervise individuals who are obligated to receive dividends at the age of 70 and a half.

Annual Compliance Testing and Government Reporting:

- Calculations for determining the deductibility of contributions according to section 404.
- Testing for annual additions as specified in section 415.
- Testing that focuses on the upper portion of a system or process, known as top-heavy testing, is discussed in section 416.
- Testing the extent to which a system or program has been exercised by a set of test cases, as specified in section 410(b).
- ADP/ACP testing is relevant for 401(k) plans.
- Completion of IRS Form 5500 and its corresponding schedules.
- Creation of a concise and comprehensive annual report for participants.

Consulting:

- Modifications, terminations, and consolidations of plans.
- Provide support for Internal Revenue Service (IRS) and Department of Labor (DOL) audits.
- Offer support in modifying plan designs.
- Perform specialized analyses or forecasts for specific plans or participant benefits.

Software

- Datapath has extensive proficiency in highly complex programming languages, as well as skills in creating SQL and NoSQL databases.
- Provide technical support, UI/Ux designing, and Test engineering for software.
- Datapath creates advanced business applications using state-of-the-art technology stacks such as .NET/Core, C#, ASP.NET, Web Api, JavaScript, TypeScript, AngularJS/4, SQL Server, MySQL, HTML, CSS3, Less/Sass, Android/IOS, PHP, WordPress, and automated testing tools.

2.7 Market Competitors

Fin Source: Finsource was formed in 2011. It works a TPA similar like July Business Service. They started their stably. But they have also grown a lot in these years. This company can be a threat for Datapath, as Finsource has previously hired people in poaching approach.

They also provide similar services like DataPath Ltd. According to their website, they have 100 employees. They are currently providing 401k TPA service, Custodian service, software development service. As this company is also providing outsourcing services they also use, remote database system for their operation. To get access in the system they have to connect to the servers. DataPath has a much larger employee platform than Finsource. As we can already see that, there is quite a lot of difference between the number of employees. So, Data-Path is maintaining a much larger server system. Here, MIS also plays a major role. All the work is handled through this system. So, they might start facing issues when they try to expand their business. They load will get much larger.

Lorren D Stark: This is another company which provides similar retirement planning service like Datapath Ltd. They started their journey in the middle of 2023. They are also a very fast-growing company.

Currently they are running their operation in many countries. They also offer same retirement planning services. As, they are new to Bangladesh, they are at the very beginning system. They also use the same remote database system, for their operations. They must connect to through proper channel to get access in the system. As they are just starting their process, they are also facing some difficulties.

Every startup company takes lot of effort to get running. They have to set up whole new platform and servers for their employees. They haven’t started to give full package of retirement planning operation yet. They are providing some portions of services. So, it is hard to compare their system with the existing market companies.

CHAPTER 3: Methodology

This internship report comprehensively investigates Datapath's remote database operations in the USA 401(k) retirement planning industry. This methodology primarily utilizes qualitative research techniques, supplemented by quantitative research techniques such as statistical analysis, with a particular focus on secondary research, to provide a holistic perspective on the issue.

3.1 Research Design

Since acquiring quantitative data was more challenging, a qualitative approach was selected for the study. A review of existing documentation revealed patterns in system usage. The objective was to examine user experiences and system interactions to gather insights that could inform strategic adjustments and enhance the system’s overall efficacy.

3.2 Data Source

To obtain the essential information for addressing the study objectives, the selection of a data collection strategy is of paramount significance. This study mainly uses a secondary data-gathering strategy along with a primary strategy to get data samples from employees through questionnaires. This approach necessitates thoroughly examining diverse published sources, such as books, research papers, journal articles, and publicly available statistical information (BASSETT et al., 1998). The significance of this decision lies in its ability to utilize prior knowledge and expertise in combination with fresh information.

Utilizing secondary data from reliable sources ensures a comprehensive analysis of the existing literature on 401(k) retirement plans work in the US. A thorough understanding of theoretical frameworks and practical insights can be achieved easily through the examination of published materials such as books, technical reports, and journal articles Company internal documentation. Moreover, the analysis of publicly accessible statistical data allows for the identification of significant patterns and trends that are relevant to the study inquiries. Furthermore, the researchers are investigating actual situations within the retirement industry. This offers real-world examples and practical insights into the use of these technologies. This study is highly beneficial for obtaining a comprehensive understanding of retirement operations run by Datapath. To learn about Datapath's method to remote database operations, policy manuals, instructional resources, and structure diagrams were looked at as internal documents. This helped to figure out what technologies and methods Datapath uses.

3.3 Data Sampling

To analyze the data, samples are mainly collected using non-probability method by surveying employees of Datapath individually.

3.4 Analysis Techniques

What: This study examines the remote management of databases, of retirement rules. The study uses mainly secondary data obtained from documents, as well as statistical data sourced from Statista and academic journal papers.

Who: The participants are Datapath employees who have been selected as respondents by using nonprobability approaches.

Where: The study is being performed within the Datapath and incorporates the collection of data from its employees. Furthermore, its additional sources of information records of Datapath server, online platform Statista, and articles in journals that are not limited to a certain area.

When: The data extracted from questionaries after the employees being interviewed informally.

Why: The study aims to examine remote database management systems within the Datapath Ltd.

Way: The data has been collected using questionnaires by conducting informal interviews in a non-probability approach. The collection of secondary data was achieved through the analysis of diverse documents. The data analysis used the thematic analysis method, supported by statistical data obtained from Statista and academic journal articles.

CHAPTER 4: Remote Database Server

4.1 Unify

Unify serves as an extensive database for many types of 401(k) programs. This server is created specially to support Datapath Ltd.’s end. The initial responsibility of Unify is to retrieve and download all the necessary files that will be needed at a later stage for processing financial analysis of plans. Each employee of Data path ltd. who works for the client of July Business Services has a separate unified account. The files needed include the census file provided by the client, the compliance questionnaire file (including answers to client questions), past year reports, and any additional client instructions. Once all these elements are gathered, one can commence the fundamental tasks. The data in the Unify is so vulnerable that the missing alteration in Unity could have a significant influence on the plans, and the processor must be aware of this. Once a plan has been sold to a client, it is then referred to as an active plan. Subsequently, any conceivable modification implemented in the plan is promptly recorded in Unify, allowing viewers to easily track the plan's progress. The information displayed (figure: 2) includes the overall number of participants in a certain plan, along with their comprehensive details. The participant count is determined based on two categories. One individual meets the requirements, whereas the other individual is now engaged or participating. Charts are utilized to visually display the progress of the compliance report. Plan assets are the funds provided by clients for the benefit of their employees. This is alternatively referred to as the funded amount. The July Dashboard is designed to provide a clear understanding of the progress of a strategy to everyone. The required period and necessary modifications are needed to align with the client's preferences.

- **Unify Home Page**: After logging into the system employees can find out all the important information which is required to fulfil the tasks assigned. In the home page any employee can get current situation overview of the company.

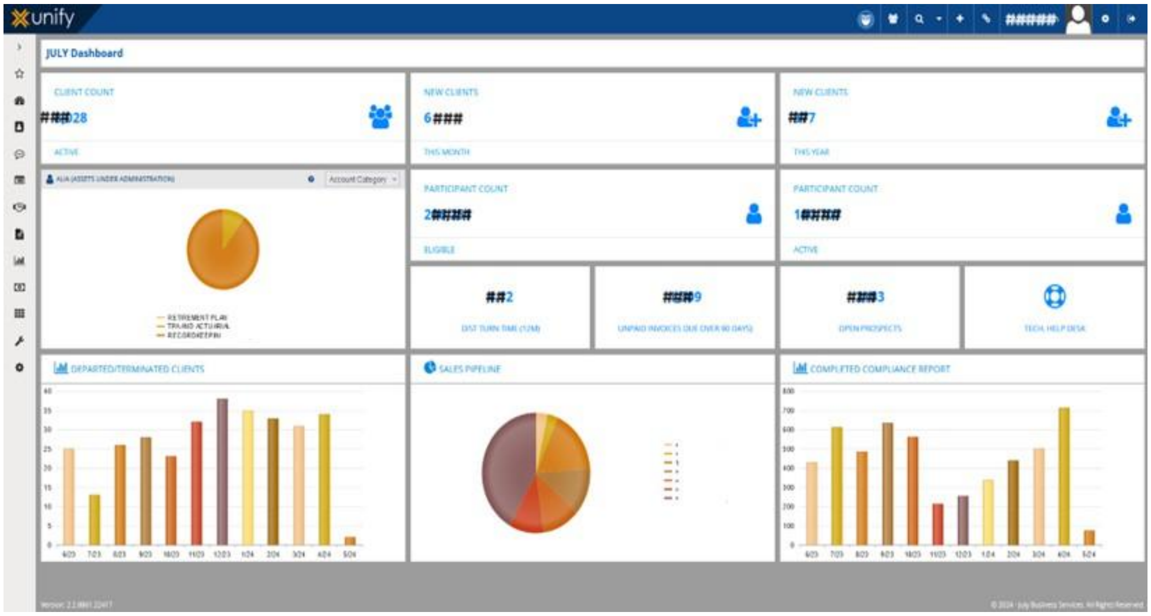

Figure 2: Homepage of Unify

Here employees can easily find out:

1. The total number of clients that Datapath Ltd. provides service for.
2. They can also find out how many new clients have arrived monthly and yearly wise. Every month the number of new clients is rising. From the main dashboard the employees can see who the new clients are and what services they are providing. So, from this information the employees can find out about the growth of the company.
3. The total number of participants who are taking service. Each of the client's plans have several participants. So, the employees can see how many employees are taking service.
4. They can also find out the number of clients who have terminated service monthly wise.
5. The "Sales Pipeline" helps employees to understand the monthly and yearly sales ratio.

- **My Work:** There are several jobs which every employee has to handle every day. To keep track of those, work the employees use "My Work" feature of Unify. It helps the employees to sort their work according to urgency. By using this feature, employees can also find out the status of their worklog. They ca easily find out whether the work is still in process, or on hold for any reason etc. By keeping track of the work, employees become more efficient.

- **Accounts Page:** Every client has an account with their company name. The home page includes details of the company, the name of the service providers, and the services that are being provided. In the following figure, it indicates that July Business Services are providing Recordkeeping Services, ERISA and Plan Administrative Services.

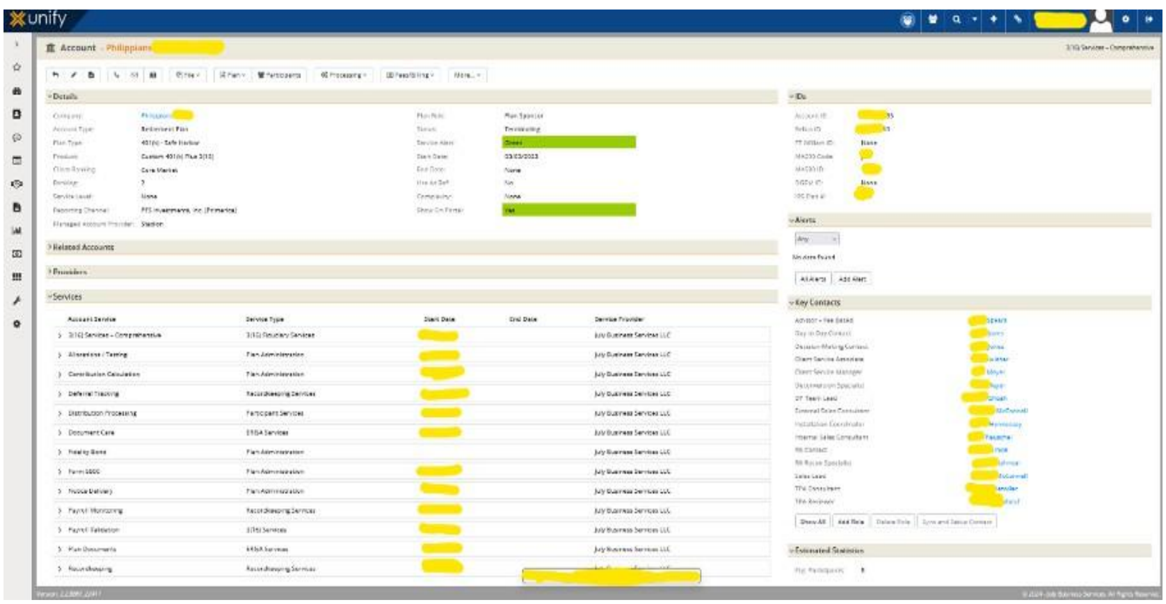

Figure 3: Plan information in Unify

- **Participant Page:** The Participant Menu of the plan shows the employees of the company that are receiving Retirement Plan services. It includes information about the employees such as First Name, Last Name, Address, Contact Number, email address and other relevant information to the plan. The Social Security number is masked as it is sensitive information.

- **File Menu:** The Dropdown menu of 'File' contains 'Plan Spec' that has plan documentation of the current year plan to execute the calculations. It also has IDA/Brokerage menu which includes accounting statements to determine gain loss of the invested amount. The 'Account Specs' will indicate the specification of the plan, valuation year, plan asset and other relevant information.
- **Project Year:** The Project Year refers to the interface where all the relevant information for Plan execution and calculation are depicted. As all the required data are being provided in a single interface, the efficiency of the plan execution increases.

So, we can see that Unify is helping employees to work in an easier way. It saves a lot of time. Because it keeps all work and files in an organized way.

4.2 Relius:

Data Path Ltd. relies primarily on Relius, it is a server that plays a crucial role in the company's operational procedures remotely, specifically in the creation and control of different client reports. Relius, an essential tool in Data Path Ltd., functions as a centralized platform that enables preparers and processors to conveniently access all the essential information and documentation needed to work on specific plans. Relius is specifically developed to facilitate the operational processes of retirement plan administrators and other professionals in the financial services industry. It offers a comprehensive database that enables efficient management of retirement plans, generation of reports, and secure storage of important documents. Relius facilitates the efficient collection of information, the updating of plan details, and the generation of reports tailored to individual clients. Relius is the primary source of information when a plan is allocated to a preparer. The preparer has access to a variety of papers on Relius, such as past reports, files received from the customer, and other pertinent data. These materials are essential for comprehending the plan's history and guaranteeing precision in the newly created reports.

Plan Search: This option allows the user to find out the specific plan which will be needed to find put for processing.

Close plan: this option is usually used when user needs to log out immediately from the plan which he/she is working on.

Plan Specification: This option is usually used when the processor needs to know about the generic of the plan as some plans have different methods to make analysis and processing.

Plan Census: This option helps the user to find out the participants' information within a given plan.

Census DER: The processor utilizes the Census and Census Data Entry Routine (DER) services to input employee and participant data. These functions are used to determine eligibility, vesting, service, and contribution allocation.

Transaction: Processor uses this function to create any transection activity for a participant within a plan.

Data Chart: This function helps to map the data flow of a plan which demonstrates using different charts and graphs.

Report Analysis: In some rare circumstances plan shows false/wrong information about the transaction, employees' information and to some extent the whole plan financial information, this function then used for analyzing the information by running an automated algorithm to mitigate the issues.

Fund ID: When a processor creates transection without knowing the fund name rather than the ID, then this function is used to identify the fund name through its mentioned ID.

Reports Que: Processes use this function when any report for a plan needs to be extracted.

Allocation Link Import for Outside Record Keeper: Processers uses this function when some fund newly allocated in the plan that has been outsourced from the external record keepers.

Employer Information: This function provides information of the employer or owner of a certain plan which is restricted to use by the assigned processors only.

Employer ID: This function helps to find out the employer to obtain the information of the employer or owner of a certain plan when only ID is given to the processor which is restricted to being used by the assigned processors only.

Data Query (SQL): This is a SQL (Structured Query Language) platform to analyze the data on the server.

Global census: Participants are usually found through the global census option to find out which plan they belong to when it's not possible to determine the specific plan that has information or data about that participant.
Help: Provide the basic information or necessary information about Relius.
Exit: Use for Immediate shut down of Relius when necessary.

4.3 ASC (Actuarial Systems Corporation)

Actuarial Systems Corporation (ASC) was founded in 1981 and is located in Sylmar, California. The company focuses on offering creative and affordable retirement plan systems for third-party administrators (TPAs) and professionals in the retirement planning field. Their set of combined products is made to improve efficiency and profit in handling retirement plans.
The Plan Document System (DGEM): ASC makes it easy to create and keep track of customized sample and volume file documents, as well as Summary Plan Descriptions (SPDs), plan changes, and administrative forms. It comes with built-in default settings, full validation checks, and works perfectly with ASC's Valuation, 5500, Client, and Task Tracking Systems.
Defined Contribution (DC) and Defined Benefit (DB) Valuation Systems: There are two types of valuation systems defined contribution (DC) and defined benefit (DB). These systems, which were made by statisticians, make it easier to set up and manage a wide range of retirement plans, from simple profit-sharing plans to complicated 401(k) and defined benefit plans, such as cash balance and DB/DC combo plans. The tools help with checking for compliance, figuring out who is eligible, and figuring out benefits
Compliance Testing System: About half of all 401(k)member accounts in the United States use ASC's Compliance Testing System. It can handle both small and large plans, and it can produce fast and accurate results. It also helps with the creation and management of complicated and adaptable plans.
5500 Forms System: The preparation of Form 8955-SSA, Summary Annual Reports (SAR), Form 5500 and accompanying schedules, and other relevant documents are streamlined by this web-based solution.

4.4 Increase of Efficiency by Using RDS

From above we found that, Data-path Ltd. is using both Unify and Relius as their remote servers. Through these, they are running most of their operations. To understand how much facilitation this has brought into the operating system, we just must move back a few years. At the very beginning when this remote database was not available, the work was very complicated. First, we must keep in mind that these works are very confidential. So, it was hard to keep confidentiality as the proper secure channel couldn't be ensured. Emails were the first channel to keep up the operations ongoing. So, there were high chances of security breach. Not only that, but the works also were not properly organized. So, it took so much time to process the works. Which created inefficiency. When the workload started to increase and work force also increased, DataPath Ltd. started using TPA software for their operations. This was the first step towards technological advancement. Through these channels, the work became much easier, and security factors were also developed. Little by little DataPath Ltd. Started to gain more confidence and July Business services also became more optimistic They were ready to outsource more work from Bangladesh. So, they started to give more projects to DataPath Ltd. Beside of retirement planning, they also introduced software development team. This was another big step towards technical advancement. Both companies started to think that they needed to introduce a platform to facilitate work. They need a place where all the projects can be stored, they need a place from where they can easily assign work, DP can process that work, then they can return it for review, and then then projects can be sent back to client from the same platform. From this idea, Unify platform was introduced. It has created simplicity in the work. It stores everything. A common platform for all ends.

CHAPTER 5: Remote Database Server's role in the efficiency of Work process

Technological expertise is a must in this industry. DataPath's operations depend on the remote database system. July gives them access to their server through a secure channel. As, Datapath Ltd.'s BPO department has several clients, and they use so much software to facilitate their work. The BPO clients also give access to their server through remote channels. So, a remote database has increased efficiency by giving common platforms.

Faster Turnaround:

As Datapath has a large workforce, they have strong server system and an effective platform to turn around their work faster. All work is being done in an organized way and on a common platform. So, it helps to get faster turnaround.

5.1 How Remote Database Server Works Efficiently

Centralized Administration of Information:

- A common problem for organizations before remote database servers was fragmented data spread among local computers or several systems. The result of this was:
  Data silos: Teams used out-of-date or insufficient data to operate with. High chance of error: Inconsistencies have been brought about by manual reconciliation procedures and duplication.
- Remote database servers allow all data to be kept in one place and made instantly available to authorized staff. Participants' information (name, age, plan type, and donations), for example, may be stored in Datapath's remote database.
- Employer-sponsored plan information (investment options, matching policies). historical information, such as performance logs and contributor histories. Strict guidelines for keeping and updating records help the system guarantee data integrity while minimizing manual labour and inconsistencies.

Real-Time Access:

- Employees may have to rely on shared drives or email spreadsheets in traditional settings, which might lead to delays.
- Remote database servers allow participants, clients, and staff to access the most recent data from any location at any time
- A Datapath customer support agent answers participant questions by immediately gaining access to the remote database
- To check account balances or modify their investment selections, participants go into a self-service site.
- Faster decision-making and quicker turnaround times for tasks like compliance checks and donation processing are guaranteed by real-time access.

Improved Decision-Making:

- Problems that have been around for a while: Making decisions is harder and takes longer when data is scattered or out of date, and there isn't a centralized and analytical structure in place.
- Analysing data with servers in other places:
  When you combine data, you can look at trends and results in real-time. Find participants who are getting close to their contribution limits so that you can send them proactive tips.
  By looking at the rates of plan involvement, we can suggest changes to employers. Finding strange patterns in payments can help find mistakes or signs of fraud.
- With these findings, Datapath can stay ahead of the competition and offer clients services that add value.

Disaster Recovery and Business Continuity:

- Risks Without Remote Servers: Hardware problems, natural disasters, or hacking can happen to on-premises servers, which can cause a lot of downtime or data loss.
- How remote databases keep things running:
  Redundancy: Data is copied to several places so that it can be accessed even if one computer goes down.

- Backups: If you set up automatic backups often, you can quickly get back your info if you lose it by accident.

- Systems for failover: If one server breaks, the service doesn't stop because a backup server takes over. These features make sure that important data stays available and safe, which lets Datapath keep running without stopping.

5.2 Remote Database Server's Efficiency in a 401(k) Context:

A Remote Database Server isn't just a place to store data it's also a key part of making things more efficient, safe, and scalable. In the case of Datapath, it makes sure that the business can meet the needs of customers and government officials while keeping service standards high. Putting this in your internship report will show that you know how important it is from a technical and practical point of view.

Efficiency in a 401(k) Context:

- Where a member asks to take money out of their 401(k) account. A remote database server makes things run smoothly in these ways:
- Sending a Request: The participant sends a request through the online site. Validation of Data: The server checks immediately to see if the user meets the requirements (for example, your vested amount and withdrawal limits).
- Approval Process: The compliance team is notified of the request and uses real-time data from the database to look it over.
- Payment Processing: The database connects payment systems to handle the withdrawal once it has been accepted.
- Record Updates: The participant's number is changed right away, and they are sent a confirmation message.
- If there wasn't an external database, this process would have to be checked and sent data by hand, which could take days. It's easier to do and can be done in hours or even minutes with an online database.

Enhanced Productivity Metrics for Datapath:

- Error Reduction: Up to 90% fewer human errors are made when data entry and validation are automated.
- Faster Turnaround: Contribution processing and compliance report generation are finished three to five times more quickly.
- Employee Efficiency: Workers devote more time to key projects like customer interaction or service enhancement and less time to monotonous work.

Issues Reducing Effectiveness:

Relying on Single Platform:

Unify has two divisions, the database server and the application server. Datapath Ltd has grown to a large company, but it is still relying a lot on the Unify server. Datapath's staff and customers are simultaneously accessing the same server. High server usage sometimes causes databases to go down.

The IT team is always ready to give support. But it still hampers the workflow of the employees sometimes. The IT team tries to find out the reason behind server down. Then they fix it. But sometimes it takes a lot of time to get fixed.

Dependence on Internet:

Accessing remote apps and desktops through internet is made possible with RDS (Remote Desktop Services). This is Windows-based technology. The July Network is only possible to access through the Remote Desktop Connection program. July has several servers. However, sometimes the servers keep freezing and crashing. Not only that, if the internet connection faces any issue. The whole system gets into trouble. Stable internet connection is a must to run the operation smoothly.

Chapter 6: Findings and Recommendations

6.1 Findings

Work Process and Efficiency

Strengths:

- Centralized Systems: Datapath uses remote database servers to improve workflow by creating a single platform for easily managing participant records, donations, and compliance data.
- Automation has made some routine jobs, such as payroll processing, tracking contributions, and creating compliance reports, easier. This means less manual work and better accuracy.
- Collaboration: Teams from different areas can use real-time data, making decisions faster and minimizing delays from scattered information.

Challenges:

- Manual Processes: Even with technology, some tasks like checking data, balancing accounts or compliance reports still need human attention, which can slow things down.
- Bottlenecks During Peak Periods: During busy times, like year-end reporting or tax deadlines, the system can slow down, which affects efficiency.

Data Management and Security

Strengths:

- Secure Systems: The remote database uses encryption, limited access based on roles, and regular backups to keep private 401(k) data safe.
- Regulatory Compliance: Datapath follows important business rules like ERISA and SOC 2 to ensure trust and keep information private.

Challenges:

- Basic Analytics for Future Insights: The database is good at saving and finding data, but it doesn't fully support analyzing trends or making predictions.
- Clients and participants often have trouble getting reports or information on self-

service platforms, showing that the user interfaces could be improved.

Client and Participant Interaction

Strengths:

- Self-Service Portals: Users can check their account balances, update their details, and change their donations easily through a simple portal.
- Responsive Customer Service: Teams can quickly respond to customer and user issues because they have easy access to current information.

Challenges:

- Portal Limitations: The present self-service portals could be improved by adding features like personalized dashboards, better navigation, and interactive tools for users to explore investment choices.
- Client Customization: Some clients have special needs that the current system doesn't fully meet, so human adjustments are needed.

Training and System Utilization

Strengths:

- Employees have a good grasp of basic processes and business needs, which helps things run smoothly.
- Sharing knowledge through team meetings and coaching helps new employees adjust quickly.

Challenges:

- Some workers are not fully trained in using advanced features of database systems or automation tools, which means that technology is not being used to its full potential.
- Not knowing enough can slow down work or make people depend more on IT help for simple tasks.

Scalability and System Infrastructure

Strengths:

- The current setup can grow easily, helping Datapath handle its increasing number of clients without major issues.
- Cloud options help businesses grow by easily managing more data and users.

Challenges:

- During busy times, the systems sometimes slow down because there are a lot of transactions. This shows that there is room for improvement.
- The scaling method works but could improve by using predictions to allocate resources before problems happen.

6.2 Recommendations

Enhance Employee Training

- To get the most out of our tools and methods, employees need to know how to use them properly.
- Hold regular training workshops for different jobs that focus on database systems, automation tools and advanced analytics.
- Offer engaging lessons and practical sessions for workers to learn complicated processes.

  Create a resource hub where workers can find guides frequently asked questions and best practices.

Expand Automation

- Automating routine and repetitive jobs makes work easier, reduces mistakes, and boosts productivity.
- Find manual tasks that can be automated, like sending compliance alerts, updating plans, or reminding participants about contribution deadlines.
- Use AI tools to find unusual patterns in data, like spotting errors in payroll donations.
- Use templates and rules to automate unique features for clients.

Optimize System Scalability

- To make sure everything runs smoothly during busy times, which helps users have a better experience and keeps operations reliable.
- Move to a stronger cloud system that can automatically adjust to handle a lot of transactions quickly.
- Use speed monitoring tools to spot and fix any slowdowns right away.

- Run load-testing models during quiet hours to improve system scalability and find areas that need work.

Enhance Client and Participant Portals

- Improving user experience helps build better relationships with clients and makes things easier for support teams.
- Include personalized investment dashboards, interactive retirement planning tools, and learning materials on the site.
- Make it easier to navigate and look for information so that participants can find what they need more quickly.
- Create a robot or AI helper to answer common questions and assist users with complicated tasks.

Strengthening Data Analytics and Reporting

- Advanced analytics allow Datapath to offer more proactive and data-driven solutions to clients.
- Use business intelligence tools to provide useful information about how well plans are performing, how engaged participants are, and trends in compliance.
- Provide forecast analytics to help clients foresee and tackle future problems, like not enough contributions from participants.
- Create customizable dashboards for internal teams to track KPIs and watch system health.

Establish Continuous Feedback Loops

- Feedback from clients, participants, and workers helps identify problems and encourages continuous improvement.
- Conduct quarterly surveys to gather feedback on portal usability, system speed, and service quality.
- Hold regular meetings with workers to talk about problems and come up with solutions.

  Set up a system to keep track of feedback so that all ideas are considered and responded to.

Chapter 7: Conclusion & Recommendations

Conclusion

In conclusion, my internship allowed me to gain a comprehensive understanding of Data Path Ltd.'s retirement plan management process because they primarily use Unify and Relius. Relius generates customer reports and oversees plan details, while Unify assists in gathering pertinent files for financial study. But we also had to deal with issues like inconsistent remote desktop services and server outages. We recommend redundancy measures, hardware upgrades, and server load balancing to improve. We suggested keeping an eye on server performance, figuring out what crashes are caused by, and enhancing network architecture to deliver reliable remote desktop services.

By implementing these suggestions, Data Path Ltd. will be able to run more efficiently and provide better customer service. This internship taught me a lot about real-world issues and how to solve them in the financial services industry.

Recommendations

Combining Server Optimization:

1. Distribute server usage evenly by using load balancing techniques.
2. Consider increasing resources or upgrading equipment to handle growing demand.
3. Look at redundancy options to minimize downtime during maintenance or malfunctions.

Improving RDS Stability:

1. Monitor server performance regularly and take swift action to fix any anomalies.
2. Examine the fundamental causes of server freezes and crashes.
3. Upgrade the design of the network to offer dependable internet connectivity.

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