ITAM Implementation for NetWorks LLC

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Summary

NetWorks LLC is a local network service provider that has been serving the southern Illinois area for a few years, recently their client based has expanded and so have their asset needs. The old system for managing assets was not very effective and resulted in issues on the job and within the company. Multiple physical documents were being used and excel spreadsheets kept track of the asset costs and licenses. While this may have worked fine when NetWorks was still in their infancy, now they are a bigger company with a couple dozen employees and hundreds more clients. Assets were going missing, licenses were expiring, and many unnecessary assets and equipment were taking up space and costing the business financially.

Many of the IT employees had heard of other businesses using new systems that provide a centralized asset management system. This is where NetWorks decided to implement an IT asset management system (ITAM). With the growing client base and inventory needs, the company decided it was time to invest in a more modern and efficient way to manage assets.

However, the market for IT services and software is quite vast and so many different options exist for ITAM systems, each with their own features and benefits. Therefore, NetWorks decided to meet with all the major stakeholders, owners, and employees to discuss what kind of business needs the system should fulfill. They determined that the ITAM needs to have asset tracking features, centralized real-time view of asset information, an alert system, and a way to measure performance. Once they determined the needs, the team researched the available options and met again to perform a cost-benefit analysis on the options that they found during research.

During the next phase, the team analyzed the data on the ITAM they found and purchased the most cost-effective system that also met the business needs. Then, plans for how assets will

be handled using the ITAM were developed. Next, a virtualized environment was created for testing purposes where any potential bugs or issues were discovered before installing in a production environment. Finally, the team installed the ITAM across the company and user training was implemented along with a performance analysis that was performed a couple weeks after the ITAM implementation.

Review of Other Work

The stakeholders at NetWorks could see the problems that were being caused by poor inventory controls and lack of consistency regarding assets, but they wanted to know why and how an ITAM is a good choice that can help with these issues. According to ManageEngine, an ITAM system can offer a streamlined process flow that allows assets and to tracked and managed from one place. It can help cut maintenance costs, reduce unnecessary assets, help with an auditing process to ensure compliance, identify stolen hardware, and offers visibility of the overall IT environment. In one case study, a large medical institution had issues with scattered assets, unused licenses, and lack of clarity about their IT environment. They wanted to curb costs, but they had no way to get answers about the hardware that it was using, or all of the licenses. By implementing an ITAM system, not only did they get answers to the questions they had about their assets, but they also managed to save 3 million dollars in just 3 years (ManageEngine, n.d.). Using this information about ITAMs and how other businesses have benefited gave the stakeholders more confidence that investing in an ITAM was the right decision moving forward.

Using a tagging device such as RFID chips on assets helps keep track and locate assets that are not able to be tracked using other hardware means such as a GPS sensor in a smartphone. The IT team at NetWorks saw how an ITAM system could easily track the laptops, smartphones,

and tablets that could use the ITAM software which accesses the hardware on the device to provide a real-time view of the device's location and status. However, other assets like a router or network tools cannot have the ITAM installed directly on the device so another method is needed to track these assets accurately. Omi-ID, a supplier of RFID solutions for asset tracking has a study of implementing an RFID tracking system for NASA. The LaRC (Langley research center) were having difficulties with tracking their data center and mobile laboratory assets. Their physical inventory process was becoming costly, time-consuming, and often highly inaccurate. They were using bar code scanners, but these proved to be difficult to read and did not provide the best method to easily locate assets across multiple facilities. Their team conducted a review and found an integrated RFID solution with asset management to be the most effective solution. NASA's project manager and senior systems engineer found that after the implementation, the speed at which their asset inventories are completed increased by 80%. In addition, their mobile lab asset inventory is reported to be 100% accurate and they achieved a return on investment from cost and efficiency savings within 18 months (Omni-id, 2020). Therefore, NetWorks IT team decided that using a type of tracking system such as RFID is an effective and efficient way to keep track of non-computing assets like network tools.

The owners at NetWorks LLC were eager to move out the ITAM into production as soon as possible after learning of the many benefits that the company could gain from this investment. Nevertheless, the IT team and management saw that the new change might leave employees frustrated, lead to lower productivity, and stress due to being thrown into a new system with little understanding. Therefore, it was seen as necessary to conduct end-user training for the employees that would use the system on a regular basis. The IT team assured the owners that although end-user training can be costly, it can pay off in the long-term if done effectively. An

article about end-user training by ITToolkit.com states that training has a cost, but it also provides many benefits. For example, to can lead to increased productivity because end users will spend less time seeking support and more time on productive tasks. Also, it can lead to fewer mistakes and greater confidence among employees that can positively impact morale and results ("*End-User Training: Understanding Value and ROI"*, n.d.).

Changes to the Project Environment

NetWorks was using multiple physical documents to keep track of existing assets as well as excel spreadsheets to keep maintenance logs and asset costs. This was causing numerous issues such as inaccurate details, missing assets, neglected assets due to poor maintenance logs, and unnecessary equipment. The IT team and management were wasting time when checking through all the logs and files to keep track of inventory for client jobs and it was costing the business financially.

After implementing an ITAM, the team now has a centralized place where they can get a real-time view of the IT inventory. In addition, maintenance alerts ensure that equipment has been repaired on time. Now management has a better understanding of what assets are being utilized and they have cut out some devices that were sitting idle and purchased more network cabling that was running low. Overall, the business' environment has seen a dramatic improvement in the inventory process that has saved a lot of time and cost for the team. They also no longer need to guess about the current inventory status which has saved on over-spending and resulted in more efficient work for clients.

Methodology

The methodology NetWorks used was ADDIE. This is a 5-phase model that is helpful for developing a project and carrying out the objectives with clarity. The different stages of the ADDIE model are analysis, design, development, implementation, and evaluation.

In the analysis phase, the IT team, management, the owners, and other key stakeholders met to determine what needs the ITAM system needed to meet. Then research was performed on a variety of ITAM system that are currently on the market. Finally, the cost-benefit analysis was used to determine which system was the best choice for NetWorks.

In design, the information gathered during the analysis phase was used to pick the right ITAM system that fits into the businesses current environment with the least cost and most benefit. The IT team and management also worked together to design plans for assets. The plans were designed for lost assets, new assets, maintenance of existing assets, and a plan for old or deprecated assets.

In the development phase, the software was tested in a virtualized environment that mimicked the type of systems the software will be running on. During the testing, the team found a few issues with the ITAM running on windows operating systems that was resolved by applying a patch to the affected systems. The IT team also used the processes that were created in the design phase and integrated them into the ITAM system.

In implementation, the ITAM system was installed across the company using group policy. The assets were tagged for tracking and the baselines for performance monitoring were set. Settings for the ITAM also were set according to what device was being used and what employee group was utilizing it. In this phase the training also began. Here, NetWorks worked with the ITAM company to supply training to the end-users.

Finally, during the evaluation phase the IT team and management met to discuss the current environment after the ITAM installation and compare the current operation and financial statistics. The user training was also evaluated to see how successful it has been.

Project Goals and Objectives

	Goal	Supporting objectives	Deliverables enabling the project objectives	Met/Unmet
1	Implement an ITAM system for NetWorks	1.a. Understand the business needs that the ITAM must fulfill.	1.a.i. Meet with management to discuss business needs for the ITAM	Met
			1.a.ii. Research the available ITAM systems	Met
			1.a.iii. Perform a cost-benefit analysis	Met
		1.b. Analyze and design plans for the ITAM system	1.b.i. Use the information gathered from 1.a. to make the decision on what the best ITAM system will be for the business	Met
			1.b.ii. Purchase the ITAM system	Met
			1.b.iii. Design plans for assets within the ITAM	Met
		1.c. Testing the ITAM	1.c.i. Set up a virtualized environment to test the ITAM	Met
			1.c.ii. Check for any bugs or potential issues	Met
		1.d. Install the ITAM	1.d.i. Set up the ITAM across all the company devices	Met
			1.d.ii. Setup user accounts for employees	Met
			1.d.iii. Tag assets/enter into database	Met

			1.d.iv. Record the baselines for later analysis	Met
		1.e. User training and evaluation	1.e.i. Work with ITAM provider or 3rd-party to provide training to staff	Met
			1.e.ii. Meet with management after a month to evaluate performance of the ITAM and compare to baseline	Met

Goals, Objectives, and Deliverables Descriptions

The overarching goal of this project was to successfully implement an ITAM system for NetWorks LLC. In doing so, business operations were improved such that less money was wasted on assets, current assets were maintained effectively and overall work flow of employees was improved. Less time was also spent by the IT team manually entering and checking data about assets. This upgrade proved to be a clear advantage that helped employees perform their jobs more effectively and reduced the complications that have occurred in the past with clients due to lack of consistency regarding asset management. This project was considered a success when the following objectives were met:

- Objective 1.a: Gained an understanding of the business needs that the ITAM needs to fulfill. This objective involved understanding how the ITAM benefited the environment and what needs it helped meet and finding the most cost-effective one. This objective was important in the process because it helped determine which system was implemented based on the features that were needed. This objective was completed when the research and cost-benefit analysis was completed.
- Objective 1.b: This objective involved purchasing an ITAM system using the data gathered during the previous stage and designing plans for assets in the company.

This objective was completed when the ITAM was purchased and the plans were put into place for how assets should be handled.

- Objective 1.c: This objective involved testing the newly purchased ITAM system and discovering any issues. This objective was considered complete when the system was fully tested in differing environments and any bugs or issues were corrected such that the system can run in the production environment.
- Objective 1.d: Installing the ITAM system across all the compatible company devices, setting up user-accounts, tagging assets, and setting the baselines for performance were all important tasks that ensured the implementation was successful. This objective was considered complete when all the setup was done and the baseline measurements were complete.
- Objective 1.e: User training was conducted for all employees who use the ITAM within their job functions to ensure successful utilization and integration of the new system. The team and stakeholders met about a month later to assess how the ITAM impacted the business and compared the baselines. When these events were complete, the objective was considered a success.

Project Timeline

In this section, compare the projected and actual timelines of the milestones or deliverables of the project and explain why the differences occurred. Explain the reasons for each deviation of the actual time frame from the estimated time frame.

Note: All timeline dates MUST be in the past as this document is an after-action report that should reflect a project that is completed.

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Milestone or deliverable	Planned Duration (hours or days)	Actual Duration (hours or days)	Actual start date	Actual end date
Meeting to understand business needs for ITAM	1 day	1 day	1/1/2023	1/2/2023
Research the ITAM on market	3 days	2 days	1/2/2023	1/4/2023
Cost-benefit analysis for the ITAM systems researched	1 day	1 day	1/4/2023	1/5/2023
Find an ITAM out of the available choices that meets needs and is cost effective	2 days	1 day	1/5/2023	1/6/2023
Purchase the ITAM system	1 day	1 day	1/9/2023	1/10/2023
Design the plans for how assets are handled	5 days	3 days	1/11/2023	1/14/2023
Test the ITAM in a virtualized environment	7 days	7 days	1/16/2023	1/23/2023
Check for bugs and issues	7 days	7 days	1/23/2023	1/30/2023
Install the ITAM across the company devices	5 days	5 days	1/30/2023	2/4/2023
Set up user accounts	3 days	3 days	2/6/2023	2/9/2023
Tag assets and enter into the ITAM database	10 days	10 days	2/10/2023	2/23/2023
Record the baselines for later analysis	1 day	1 day	2/23/2023	2/24/2023

Provide ITAM training for NetWorks' staff	7 days	7 days	2/27/2023	3/6/2023
Meet to assess ITAM performance and baselines after a month	1 day	1 day	3/6/2023	4/3/2023

Overall, the team at NetWorks stuck by the projected project dates and completed the project in an accurate timeline. There was some over-estimation of the time needed to complete some deliverables. For example, the research on the ITAM did not take the team as long as they expected. In addition, the asset plans were completed earlier because the framework for how the assets needed to be handled integrated smoothly into the ITAM system.

Unanticipated Requirements

One of the unanticipated outcomes occurred during the testing process in the development phase of the project. The team noticed some issues with the laptops and desktops running the Windows 10 OS. The ITAM software would occasionally crash upon starting and Windows Defender has flagged the software a few times. The team found that some of the systems had failed to update to the latest version of Windows 10 and some security patches were not installed. This was easily corrected by forcing an update across the domain by applying group policy.

Conclusions

The installation and utilization of an ITAM system by NetWorks was successfully implemented and has led to numerous improvements in the business. Employees have saved countless hours from not having asset information spread across numerous and often inaccurate sources. Maintenance schedules have remained more consistent than in the past and money has been saved by getting rid of unnecessary assets. In addition, the overall asset utilization of the company's existing resources is currently at 85%, which is 5% more than expected than the original metric goal. The amount of assets in the system have reached an estimated 98%, which has succeeded the original goal as well. Overall, the project was a success that has given NetWorks LLC a clear business advantage and lowered costs for the organization.

Project Deliverables

Appendix A shows the script that was used to install the ITAM software across all of NetWorks computers using a network folder share. This allowed the IT team to roll out the software across all of their laptops and desktops on their domain without having to manually install on each device.

Appendix B shows the asset inventory before and after the ITAM system. This shows a 26% increase in the number of assets that have been entered into the system which met the original goal of 95%. The next chart shows the assets that were being utilized across the company before and after implementation. After the ITAM, the asset utilization rose to 85%, which was a 15% increase from before. This was due to the IT team using active licenses for software and an additional tablet that was not being put to use before.

References

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Omni-id. (2020). Improving asset inventories by 80% NASA employs RFID asset management solution for data center and lab equipment. In *https://www.omni-id.com*. omni-id. https://www.omni-id.com/pdfs/DataSpan_NASA_RFID_Case_Study_FINAL.pdf

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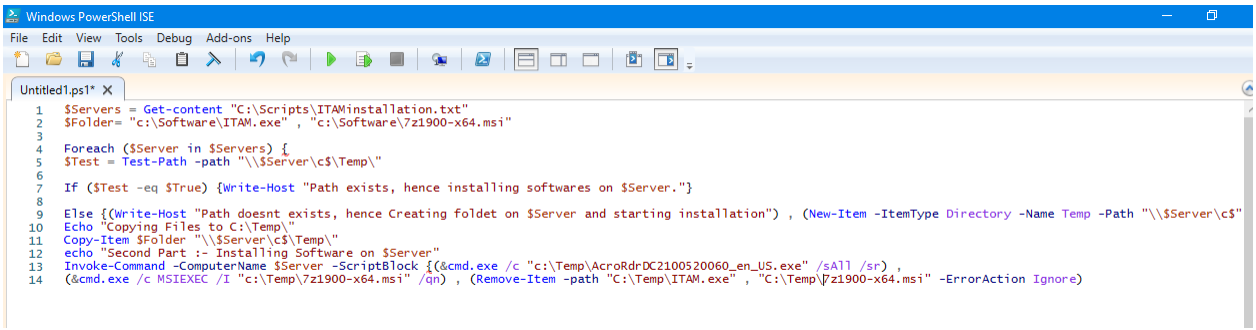
Appendix A

Script for Domain Wide Install of ITAM Software



Appendix B

ITAM Baseline Measurements Before and After