



A HOW-TO GUIDE ON MEASURING THE ROI OF IT



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Introduction

The primary task of IT is to keep business operational. That is, improve workflows, support digitization, keep networks and applications operational, and assure productivity. Despite all its contributions, IT is often mistaken as a cost center that does not generate tangible revenue for the organization. As a result, it's not uncommon for business owners to complain about burgeoning IT costs.

IT is under tremendous pressure to keep business operational and to fix things instantly whenever they go wrong. Which means, IT is never really credited with keeping business operational, but blamed when things go offline. This makes it difficult to recognize the true worth of IT to the organization.

However, it's possible to measure the benefits of IT and align it to a dollar value by calculating the intrinsic benefits of IT. To do that, we'll look at four areas within IT that take up the most IT budget:

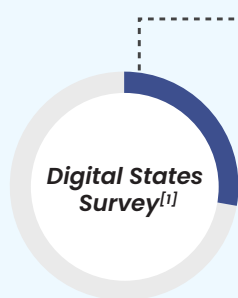
1. IT staff
2. Hardware and software asset investments
3. Contracted IT solution providers
4. Cloud infrastructure investments

Measuring the ROI of these four areas of the IT budget enables you to identify your technology investment and its impact as it provides valuable insights on where to spend your money to enhance your IT infrastructure and improve your business operations.

1

Measuring the ROI from IT staff

Costs for internal IT staff take up the largest portion of the IT budget; this includes salaries, training, overtime costs, and bonuses.



28%

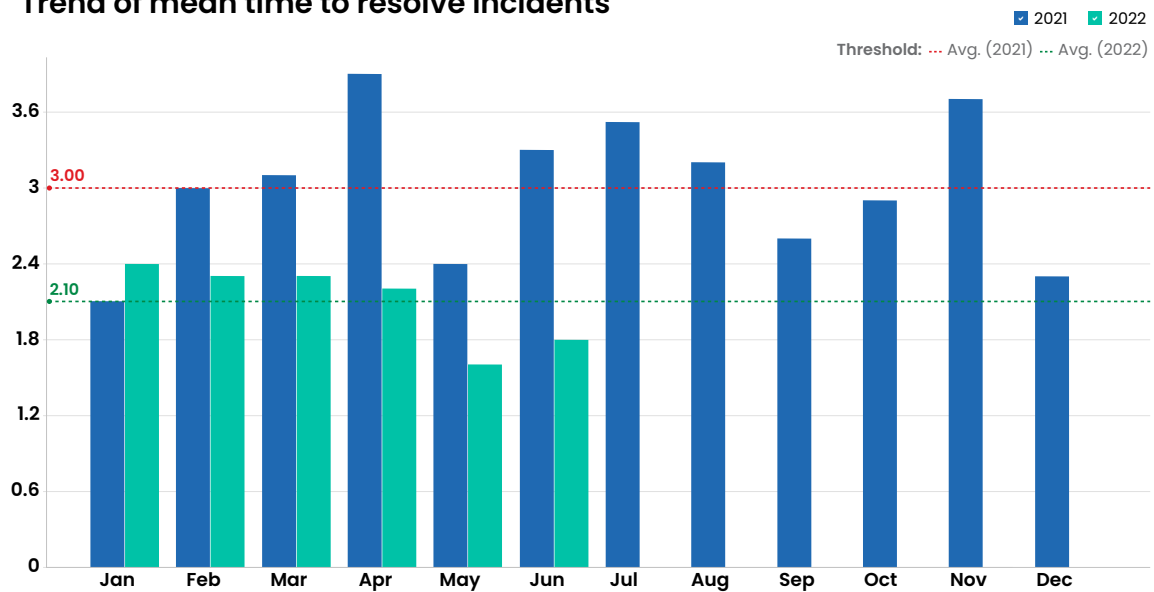
of the total IT budget is spent on internal IT staff.

Unlike other departments, such as marketing, sales, or DevOps, the IT staff's contribution to the business is difficult to measure as most is intrinsic and cannot be quantified. Also, there aren't clear-cut metrics, such as revenue per employee, project revenue, and revenue per hour, that can be used to measure the IT staff's contribution. There are a few ways to measure the IT staff's contribution to the business: that is, by measuring MTTR and MTBF.

Mean time to repair (MTTR) is a measure of the speed with which a help desk resolves incidents or rebounds after an incident. Comparing a trend of MTTR, if you notice a gradual decrease in the average MTTR value, it's an indication of performance improvements. That is, your IT staff is becoming faster at resolving incidents.



Trend of mean time to resolve incidents



The report above shows the average MTTR in the last two years. You can see that there's a 30% reduction in MTTR this year.

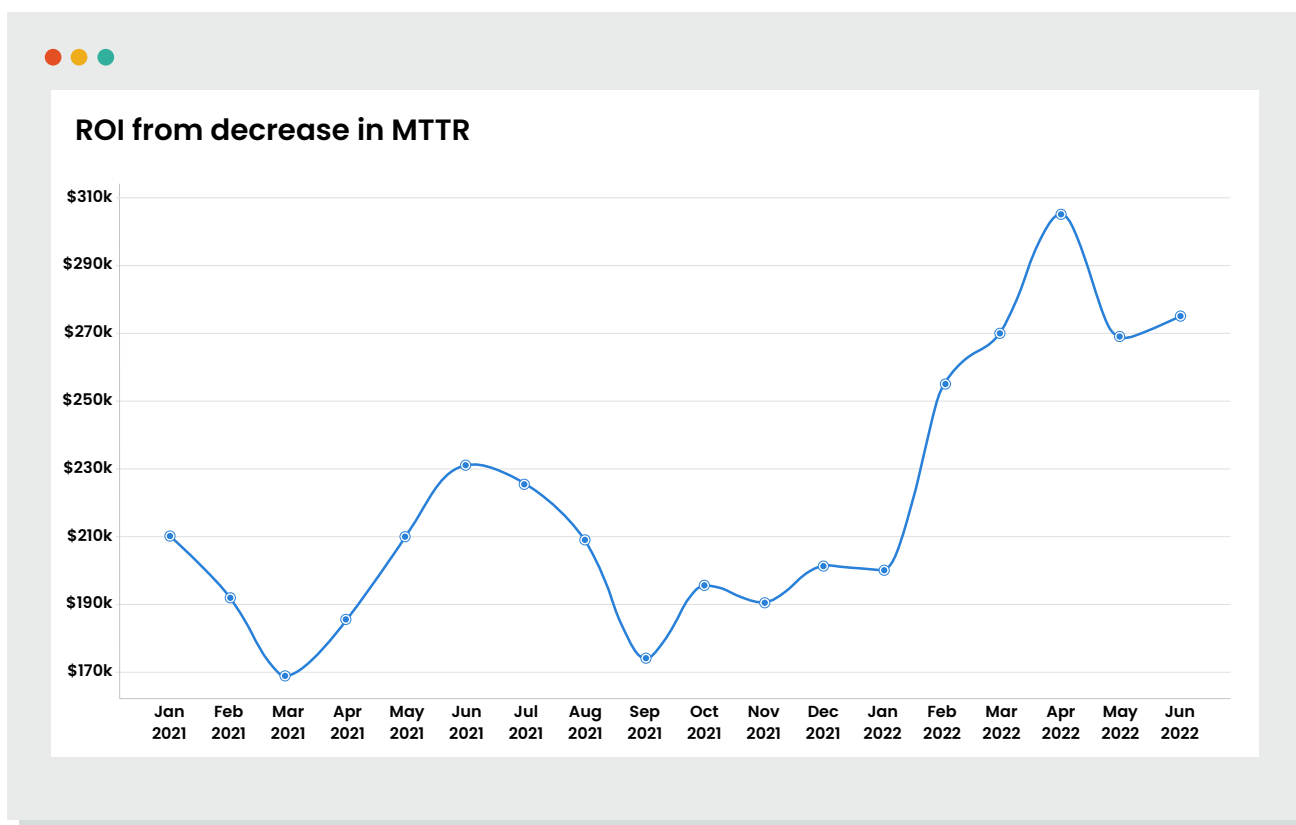
A 30% decrease in MTTR may seem impossible. However, an AI-driven solution aids the process of resolving incidents, eliminates human errors in data analysis, and provides visibility to bridge the skill gap among technicians. For instance, when an incident is detected, it is assigned to an L2 or L3 technician who performs RCA and manually fixes the issue. But an AI-driven analytics solution can automatically triage events and provide clues into the root cause, saving a considerable amount of time for your technicians, making it possible to achieve a 30% decrease in MTTR.

To calculate the ROI with decreased MTTR:

ROI = Variation in downtime (hours) x 60 (minutes) x \$5,600.

**average cost of downtime per minute is \$5,600
according to Gartner.^[2]*

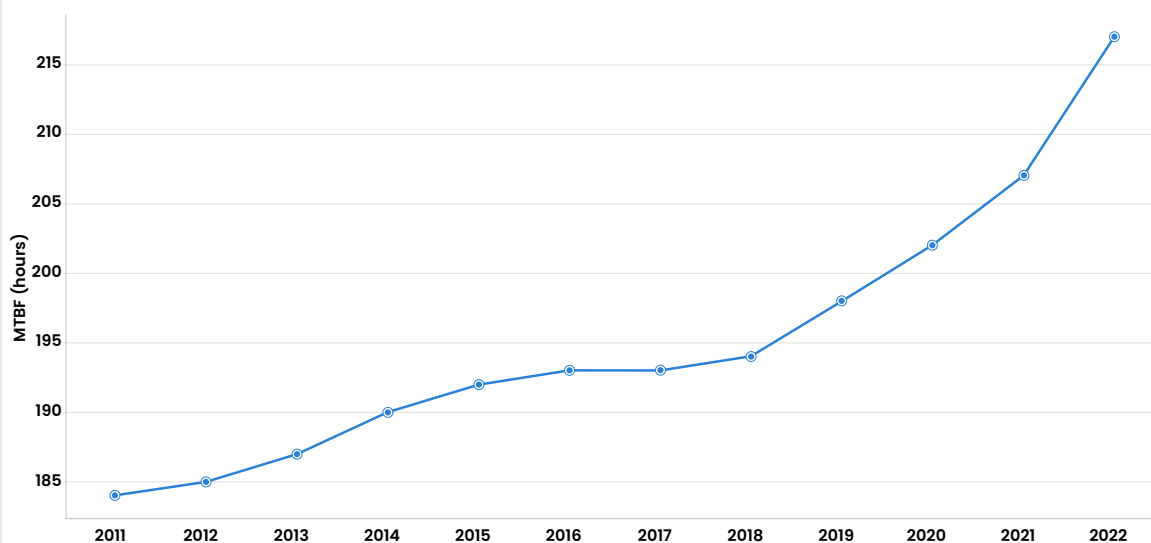
Here's a report that shows the costs saved by reduced MTTR for the last two years.



Mean time between failures (MTBF) is an effective maintenance KPI that measures the time between two incidents. MTBF is also a direct measure of agent performance. Keeping the MTBF as high as possible is crucial. As an added benefit, a high MTBF is helpful in predicting when a system is likely to fail and it helps the IT staff prevent future incidents. Here's a report that shows the trend of MTBF for the last few years.



Trend of mean time between failures

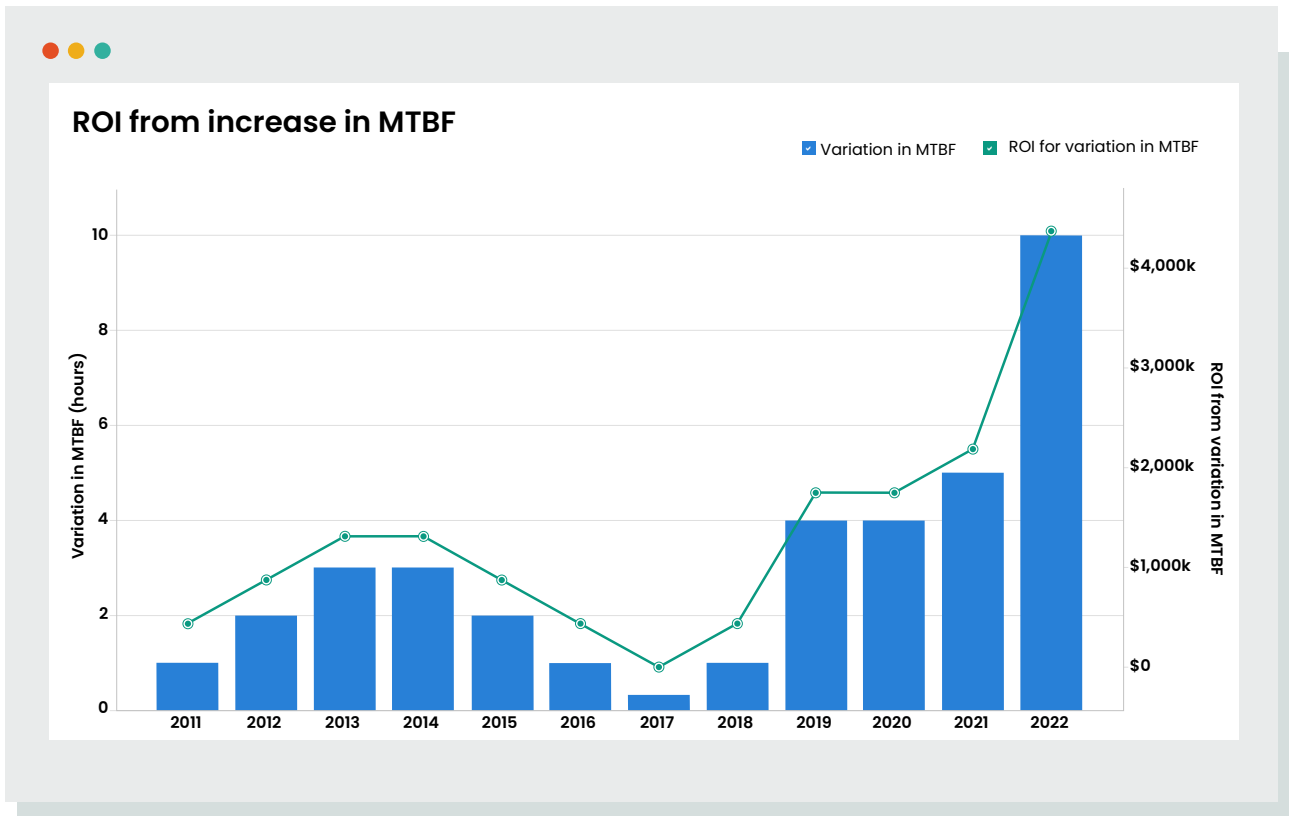


An increase in MTBF over the years indicates that technicians are becoming more efficient in identifying and fixing system failures, and improving in the quality of their service.

To calculate the ROI from increased MTBF:

$$\text{ROI} = \text{Variation in mean time between failures (hours)} \times \text{the average number of outages per month} \times 60 \text{ (minutes)} \times \$5,600.$$

The sample report below illustrates how the ROI has increased due to an improved MTBF.

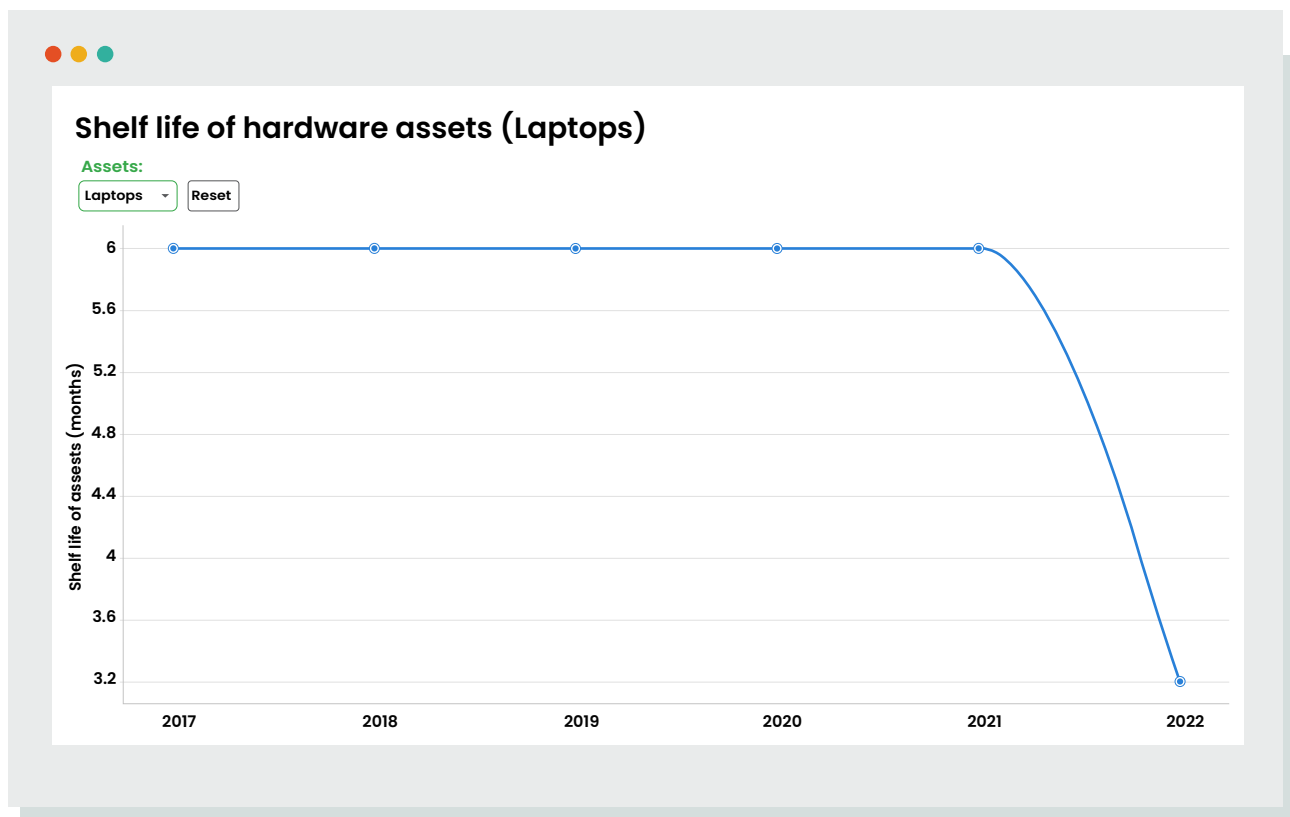


2

Measuring the ROI from hardware and software assets

Hardware and software assets are a necessity for work; they keep the business operational. To determine if you've made the right investment and to calculate the ROI of your hardware and software assets, keep an eye on the shelf life of hardware assets and frequency of software usage. Correlate asset usage with productivity, and ensure you're getting the maximum bang for your buck.

Shelf life of hardware assets: Every hardware asset has a "useful life" period, after which the asset is either decommissioned, given back to the vendors, or sold off. Assets sitting idle in IT store rooms don't generate any revenue, and are of little use to employees or to the organization. To ensure you get the maximum out of your hardware investment, assets should be used immediately after purchase. Better asset planning and management can ensure your hardware assets spend less time on storeroom shelves and more time in use. You can save a substantial amount of your IT budget simply by planning asset purchases more efficiently. Here is a sample report that demonstrates how the hardware assets' average shelf life has decreased over time.



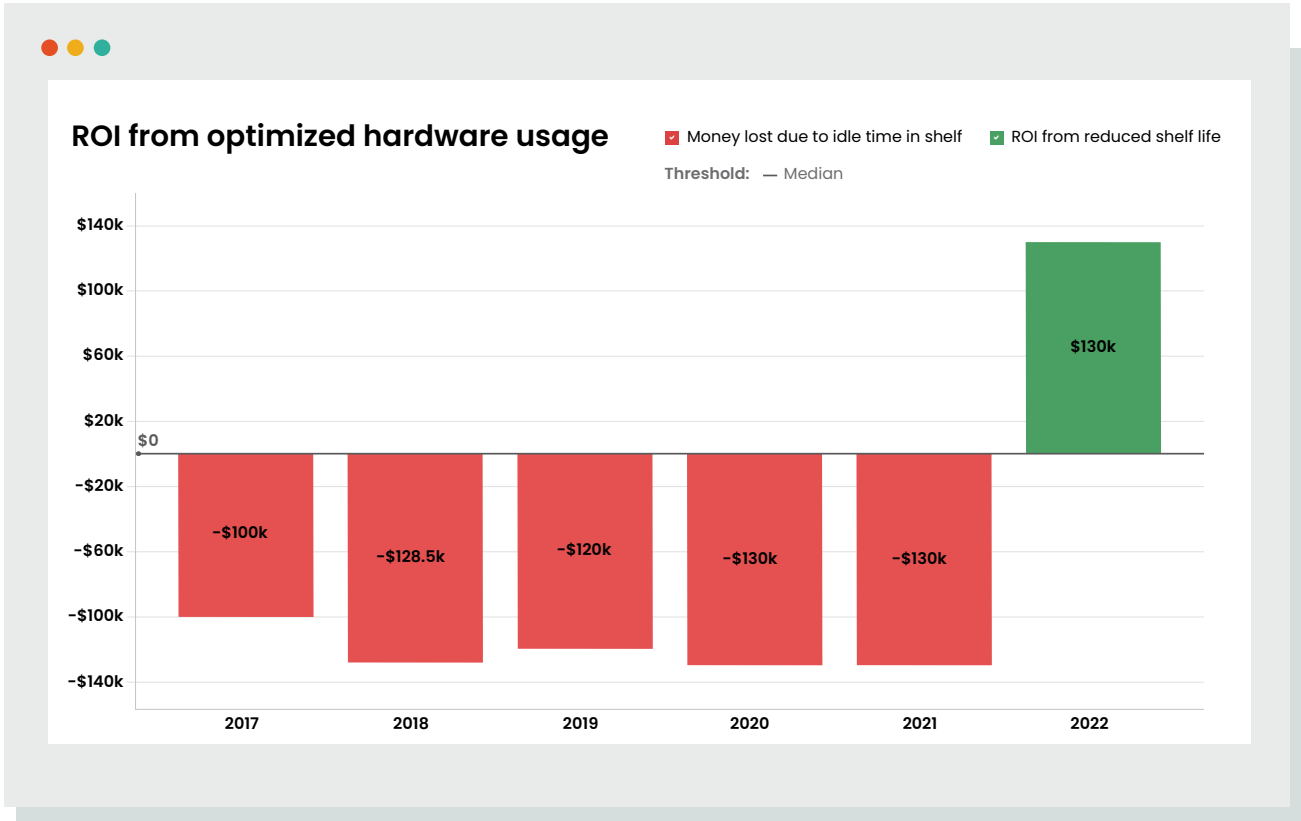
The report above shows the average shelf life of hardware assets in the last few years. You can see the average shelf life of laptops has decreased from 6 months to 3.2 months this year, indicating laptops spend lesser time on the shelves now than before. This is beneficial for the organization because it indicates that an appropriate, but not excess amount, of this hardware asset (laptops) is on hand, and more of the asset is in use.

To calculate the ROI from reduced hardware shelf life:

$$\text{Cost of owning hardware assets or asset depreciation value} = \frac{(\text{Purchase cost} - \text{Salvage value})}{\text{Total useful life of assets}}$$

$$\text{ROI} = \text{Variation in shelf life of assets} \times \text{depreciation value}$$

Here's a sample report that shows the cost savings by reducing the shelf life of laptops from 6 months to 3.2 months.



Frequency of software usage: Similar to hardware assets, software licenses also take up a sizable portion of an organization's budget. Certain software, such as the Adobe suite, AutoCAD, and Autodesk Revit, cost upwards of \$4,000 per user license per year. Therefore, it's crucial to provide software licenses to users only on an on demand basis. Additionally, regularly monitoring software helps ensure users are actually working with the software issued to them. If not, those licenses should be surrendered to issues to users who actually need them. Here's a tabular view that shows users, software titles, and the frequency of software usage.

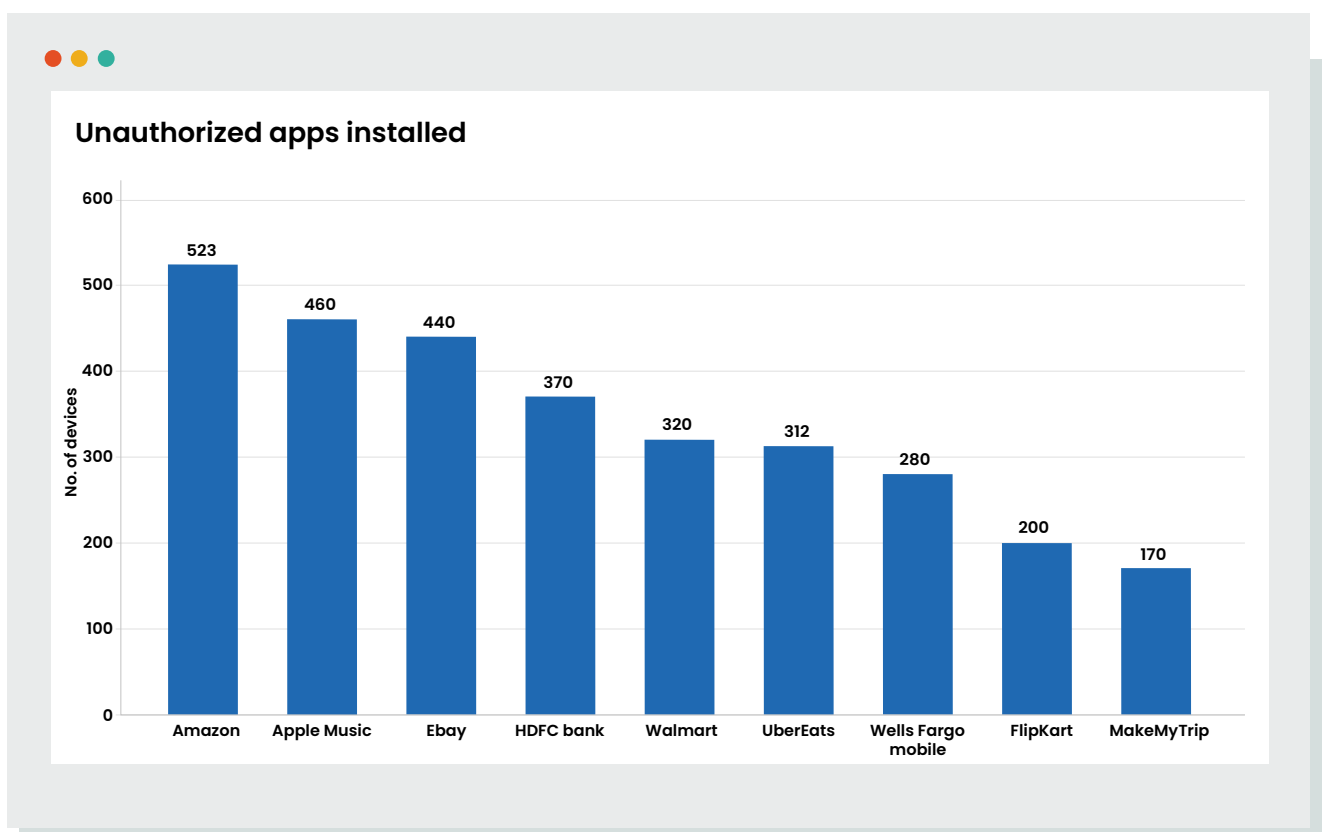
Software usage and potential for savings

	Employee name	Department	Software	Date of last use	Time since last usage (months)	Potential for savings
1	Kim Dohwan	Marketing	Sketch	15 August, 2021	11	\$10,000
2	Sam Rogers	Admin	Tally	03 March, 2022	5	\$12,000
3	Joseph Mann	Web development	Adobe suite	05 May, 2021	14	\$12,000
4	Roger Wright	HR	Payroll	06 January, 2022	7	\$12,000
5	Andy Marcel	Web development	GitHub	12 October, 2021	9	\$15,000
6	Mark Clars	Designer	Adobe suite	20 December, 2021	7	\$18,000
7	Simona Lewis	Marketing	Figma	04 October, 2022	13	\$13,000
8	Ann Mary	Designer	Canva	01 March, 2022	5	\$12,000
9	Joe Arido	Dev Ops	MS Office	01 January, 2021	16	\$14,000
10	Mark Peters	Marketing	Canva	05 April, 2022	4	\$12,000
11	Wo Chang	Marketing	Camtasia	05 September, 2021	10	\$18,000
12	Patrick O'Brill	Web development	GitHub	20 September, 2021	10	\$18,000

Based on this report, there are several users who haven't worked with the software issued to them in a year. Revoking these licenses might provide savings for the organization. Unlike hardware assets, which take time to be delivered to end users, software licenses can be procured instantly and on demand. There's a greater potential for saving on unused software licenses.

Organizations need to ensure proper usage of software licenses, as well as ensure end users don't resort to using pirated or unauthorized software. **Nike was sued by an IT company^[3]** after some of its employees were caught using pirated software. In another case, 12 medium-sized **Canadian businesses were fined \$431,336 for running pirated software on their computers.^[4]**

Now, how do you safeguard your business against such occurrences? You can regularly monitor your systems and keep them free of pirated or unauthorized software. Enable your technicians to receive notifications whenever any unauthorized or pirated software is installed on the devices that your organization owns by using the data alerts feature of your analytics application. Using this information, a report like the one below is built to determine the usage of blacklisted application usage. This data can help technicians remove such software and protect the business from getting into legal trouble for using pirated software.



3

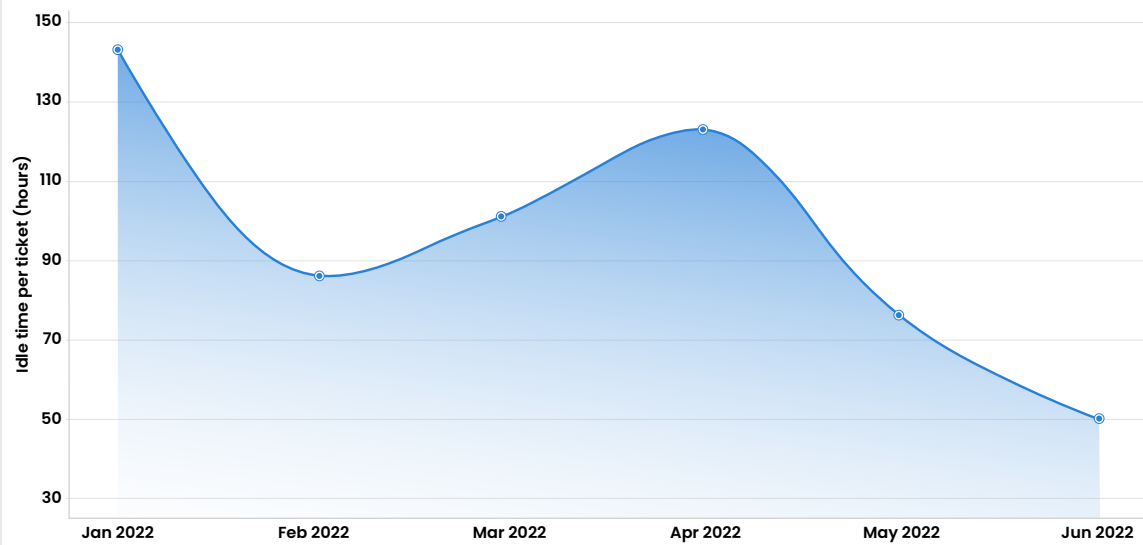
Measuring the ROI from contracted IT solution providers

IT's contracted solution providers are external consultants who help with strategy development and operation enhancement by assessing the needs of the organizations. By offering customized solutions, like deploying automation to resolve tickets and helping streamline help desk processes, external consultants often come up with innovative ideas to help organizations. Unlike internal employees, IT consultants are paid hourly, daily, or monthly, or based on results. Therefore, it can be challenging to quantify the revenue-related contribution of IT consultants. However, these two metrics allow you to assess the effectiveness of the solutions they offer: Time in an idle state, and time to resolve tickets.

Time in an idle state, or Idle time of tickets, refers to the time before a ticket is assigned to a technician, as well as the time in movement of tickets between technicians. Say a ticket moves from technician A to technician B, the transition never occurs instantly, and always takes time for the other technician, technician B in our case, to pick up. Effectively streamlining processes should trim down such unwarranted transfers and should minimize the time between transfers. Thus, a reduction in idle time of tickets can be considered a measure of effective solution implementation by IT contracted solution providers.



Trend of tickets in idle state



To calculate the ROI from a decrease in time in idle state:

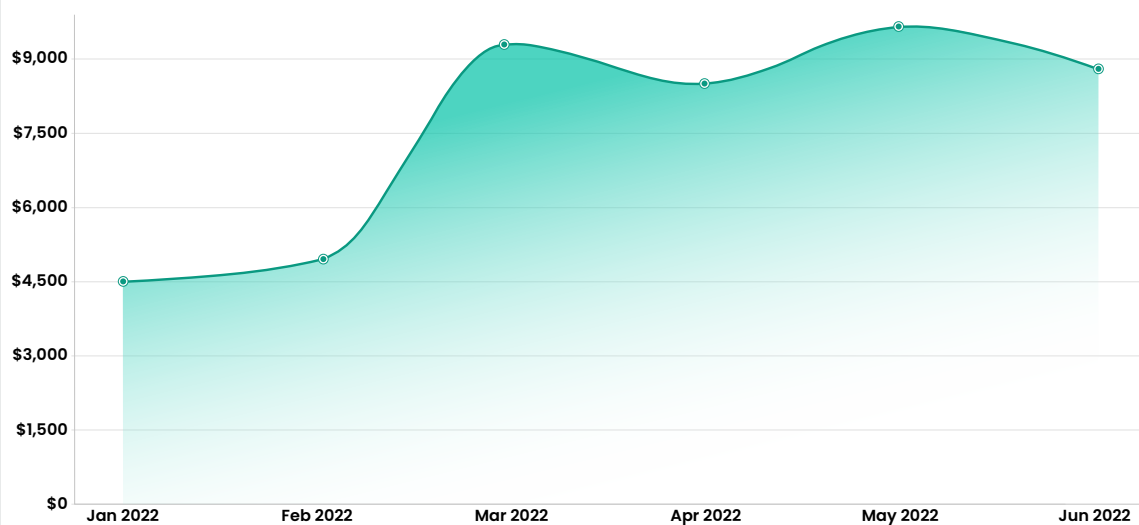
ROI = Difference in idle time (minutes) X \$2.50

**cost per minute to service a ticket = \$2.50.^[5]*

Here's a sample report that shows the ROI from a decrease in time in idle state.

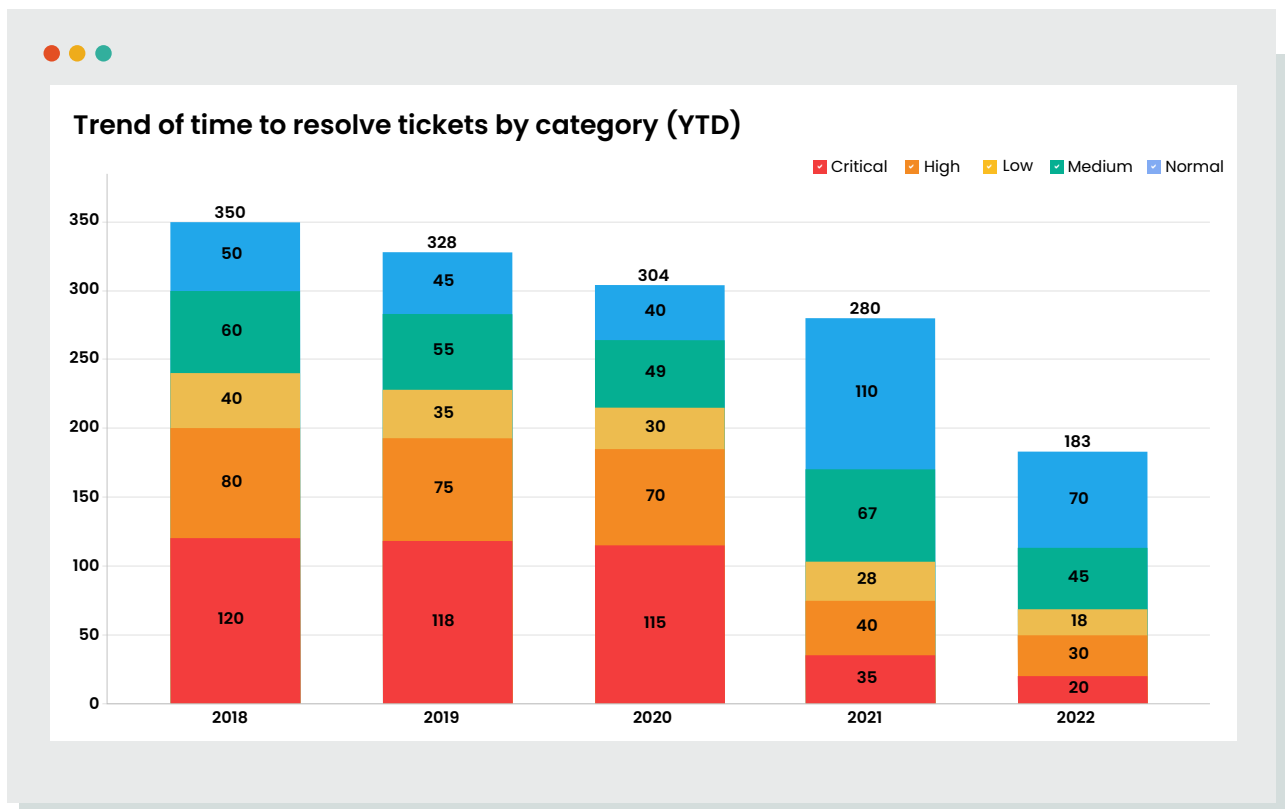


ROI from reduced time in idle state



Time to resolve tickets is a service metric that measures the time between ticket creation and the time that a ticket is marked as resolved. To increase end-user satisfaction, a quick ticket resolution time is optimal. Aside from decreasing ticket volume, faster ticket resolution can result from process-level changes made by contracted IT solution providers.

Here's a report that shows the decrease in the average time taken to resolve tickets by category. A considerable decrease in average resolution time is a sign that the solutions (provided by IT contracted staff) are effective.



ROI = Difference in time taken to resolve tickets X number of tickets X cost per minute (\$1.54)

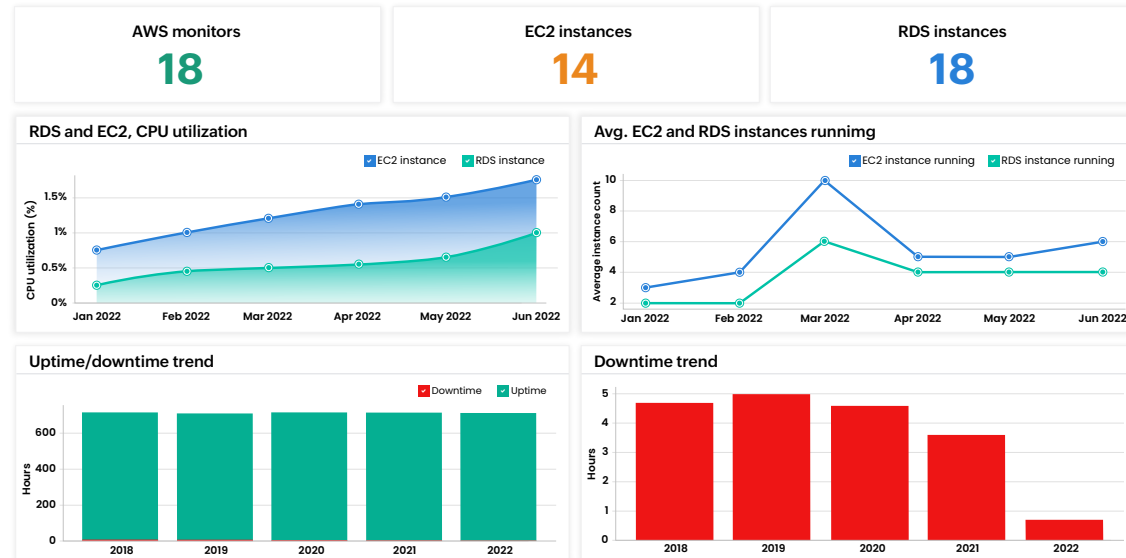
**average cost per minute to service a ticket is \$1.54 according to the help desk stats.*

4

Measuring the ROI from cloud infrastructure investments

Businesses are now migrating towards the cloud to digitize their operations thanks to the numerous benefits offered by the cloud, such as accessibility, security, efficiency, faster disaster recovery, compliance, and cost savings. However, a sudden switch to the cloud poses challenges like high expenses and extensive planning. Costs are one of the most crucial factors to take into account when moving to the cloud because not all cloud migrations employ the same pay-as-you-use or pay-per-use model. Meaning, unless properly monitored, cloud deployments can prove to be more expensive than existing on-premises deployment models. These factors make measuring the ROI of cloud investments tricky. However, keeping these factors in mind while moving to the cloud saves you a substantial amount of time and money. In most cases, a complete cloud migration might not be the best solution, therefore, consider opting for a hybrid migration based on the organization's demand. You can also choose between the pay-per-use and pay-as-you-go models for your cloud investment. For instance, your development team might need the cloud environment for just a few hours. Pay-as-you-go, which charges the cost on the amount of time and resources consumed, is the best choice in this situation. Here's a sample dashboard that shows the number of Amazon's EC2 and RDS instances purchased and used over a period in an organization.

Amazon AWS dashboard

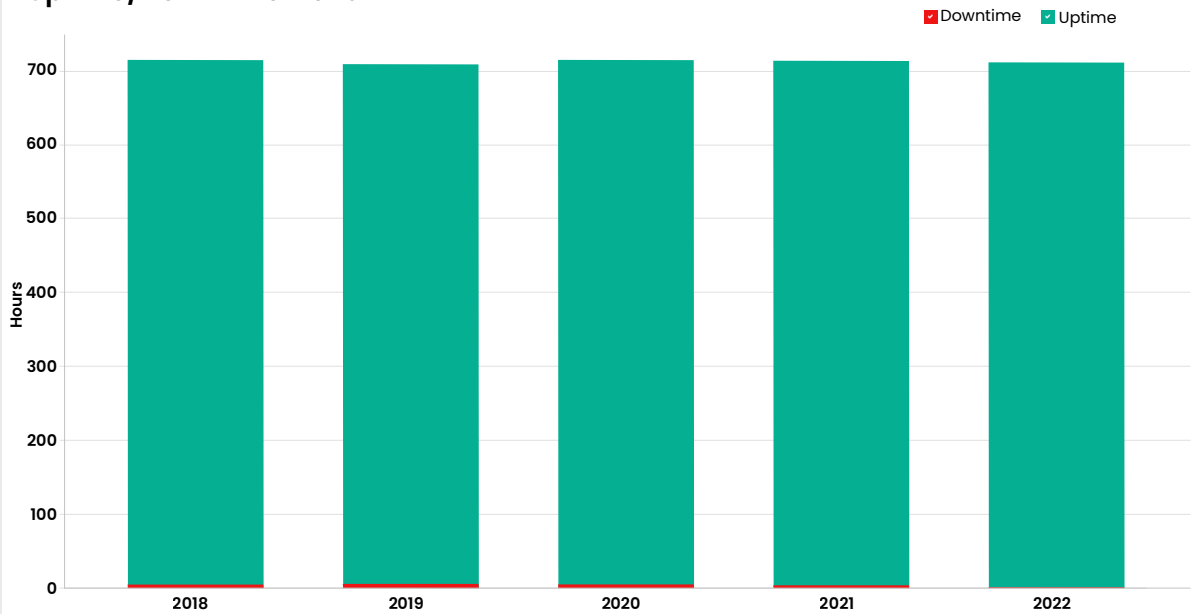


From the reports on the dashboard, 14 EC2 instances and 18 RDS instances were purchased. But in reality, only 10 EC2 and six RDS instances were actually used. This means the organization can now save a substantial amount of money on infrastructure investments by surrendering these idle instances.

To measure the ROI of cloud infrastructure investments, these two metrics are useful: uptime and downtime. Migration to the cloud infrastructure with an improved uptime and decreased downtime is optimal for a business to run. There's no way you can avoid a downtime. However, a quick recovery from downtime is critical to keep the business operational. A consistent decrease in downtime contributes to both improved return on your investment and incessant services. And, an increase in uptime means an increase in ROI. Here's a report that illustrates the increased uptime and reduced downtime.



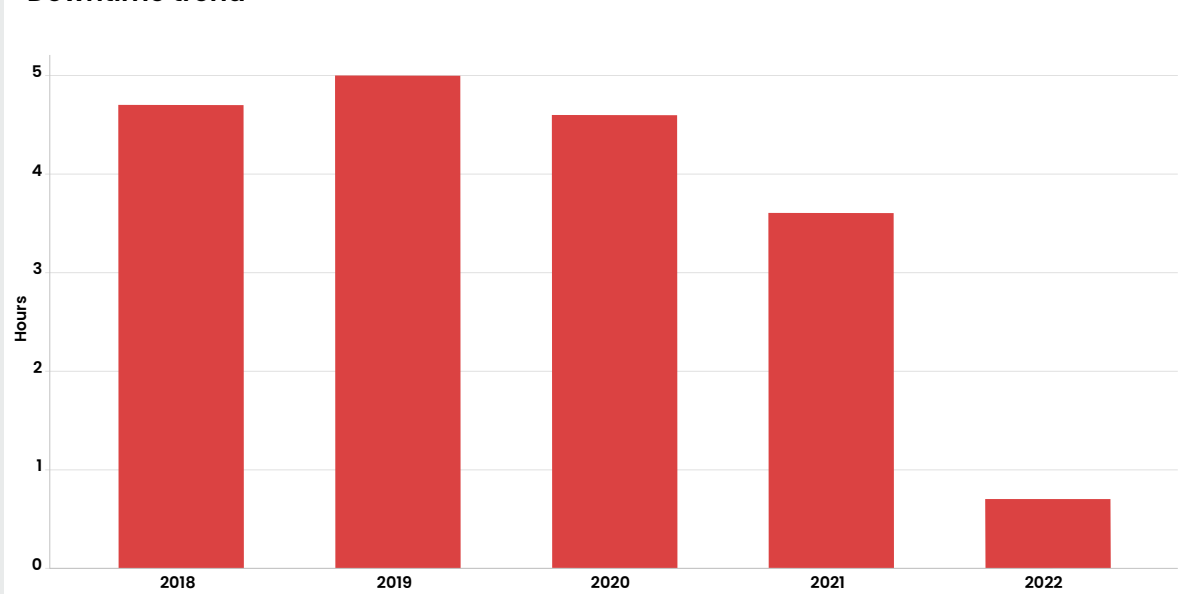
Uptime/Downtime trend



Here's a report that shows a reduced downtime along the years.



Downtime trend



To calculate the ROI from reduced downtime:

$$\text{ROI} = \text{decrease in downtime} \times 12 \text{ (months)} \times 5600$$

**cost of downtime per minute = \$5600 according to Gartner.^[6]*

Conclusion

Undoubtedly, IT is imperative to keep the business operational. In this e-book, we delved into the values that IT adds to your business by looking into four key areas that take up the most of the IT budget, and offered ways to measure their contribution to business using analytics. We hope this gives you a better visibility into your return on investment and provides insights on how to invest your IT budget to gain greater returns.



About

ManageEngine Analytics Plus

ManageEngine Analytics Plus is a self-service, AI-driven IT analytics solution that helps organizations implement complex initiatives that address requirements of expanding businesses. Analytics Plus visualizes IT data from several applications, and integrates out-of-the-box with several popular IT applications such as ServiceDesk Plus, Jira, Service Now, Zendesk, and Endpoint Central. Analytics Plus features an AI-powered analytics assistant that responds to voice and text prompts to provide meaningful visualizations. This eliminates the need for a data analyst to aid help desk managers, and reduces report building time while enabling organizations to make faster, data-driven decisions.

[Download a 30-day free trial of Analytics Plus](#) to kickstart your IT analytics journey. Want to know more about the product before giving it a try?

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280K
customers
across the world

20+
years of IT
management experience

90+
products
and free tools

190+
countries
served

Reference

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