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Introduction: The road to success

ManageEngine was not an overnight success. It took leadership vision, inherent curiosity to experiment, and the desire to be self-sustainable to get where we are. Today, you see an iconic building that is home to 12,000 employees and over 60 enterprise IT solutions used by more than 280,000 customers. What you don't see is the foundation it stands boldly on—the technology that has stemmed from years of deep R&D that brings these solutions to life.

This is the story of ManageEngine's path from an ambitious startup to a successful enterprise. In part one of this e-book, we talked about ManageEngine's journey, business model, and customer-driven culture. In part two, we'll talk about the steps we've taken to strengthen our technology, our growing IT infrastructure, the teams and processes working behind the scenes, and how we cultivate deeper relationships with the people who have been a part of this two-decade long journey.

This e-book is based on internal interviews with our IT leaders and includes excerpts from <u>Leadership Talks</u>, a video series in which our leaders share their personal opinions, anecdotes, and advice for small and medium-sized businesses.

WEBNMS TO OPMANAGER

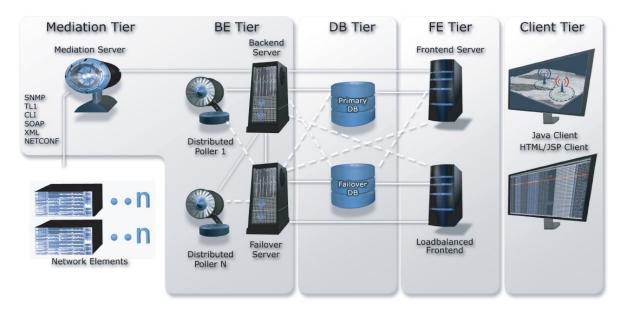


The first step

Advent Network Management, Inc. was established in 1996 with Java SNMP API 1.0 (a reusable code) on the adventnet.com domain, which gained interest from software developers. The 90s saw a huge optical network boom that benefited the telecom industry and was also the period of Web 1.0, or the early stages of world wide internet, so our initial focus was on network management and providing software for businesses in this industry. Telecommunication companies built networks and installed them worldwide. Carriers would purchase this hardware

and provide services to their customers. Our role was to supply software for these telecom carriers.

Over the next two years, the founders continued to work in this domain by building more products on top of the original library and expanding sales in the Silicon Valley. In 1998, Advent Network Management, Inc. was renamed to AdventNet. WebNMS, AdventNet's first product, shipped OEM solutions such as protocol adapters, software agents, and test and simulation toolkits.



From the archives: WebNMS framework 5 architecture

The dot-com bubble

In the late 90s, internet-based tech companies took over the market. These start-ups gained interest from investors and raised large funds within a short span of time. Telecommunication equipment companies invested heavily into laying optic fiber cables, adding new switches, and building wireless networks to keep up. However, the market didn't require so many companies to manufacture hardware for the modest requirements of the internet back then. Excessive spending, limited understanding of new technology, and market overconfidence led to the crash. By mid-2001, most of these venture-capital-funded companies were wiped out.

For AdventNet, the dot-com burst resulted in loss of customers. At this point, we were relying on a handful of businesses that survived the crash. This meant large deals, but an extremely limited and specific market with intense competition. We realized we needed to diversify and spread our addressable market. Our goal: to cater to any business that needs technology. Since we had roots in telecom network management, we had the commonality of domain knowledge and technology to move forward with a network management solution.

The ManageEngine way



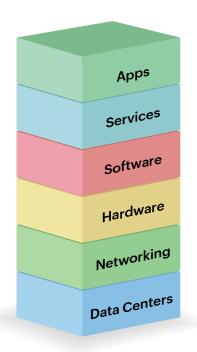
Taking IT management to the cloud

While ManageEngine was carving a name out for itself in the market, ManageEngine anticipated that cloud computing, accessing software over the internet, would be the next big thing. We predicted as early as 2007 that there would be a cloud explosion followed by consolidation.

When cloud computing was merely a concept, ManageEngine took the leap and decided to invest in on-premises and cloud-based solutions simultaneously. We started out with the on-demand version of OpManager, our network and server monitoring solution on a pay-as-you-go licensing model, and quickly expanded into help desk and desktop management.

Transitioning from on-premises to cloud solutions required following three approaches:

- Existing tech, new product: Zoho had just launched cloud-based applications, which gave us some much-needed technical insight. We were able to repurpose the existing code for some applications like our endpoint management suite of products.
- **New tech, existing product:** For some tools, like our help desk, we had a solid foundation in the on-premises version. With our insight into product management, workflows, and processes, we were able to adapt and transfer that knowledge to cloud solutions on a new tech stack.
- **New tech, new product:** Lastly, we took a completely different strategy for applications like website and server management, taking on a new product management angle and tech stack.



ManageEngine's business requirements depend heavily on internet-powered applications. From software accessed via browsers to mobile applications, infrastructure and technology play a critical role behind the scenes. Most data is stored in the cloud and can be securely accessed from any part of the world. As the world moves towards this cloudpowered model, more applications are churned out every day. To develop, deploy, configure, manage, monitor, and scale these applications, we need massive technical effort and resources with similar use cases being repetitively solved across applications.

In order to minimize effort and maximize output, these requirements can be provided as a common platform or framework. Zoho Corp uses a cloud platform that combines Infrastructure as a Service (IaaS) and Platform

as a Service (PaaS) tools. Developers can concentrate on building the application code (business logic) while the platform does the heavy lifting.

Development

Secure by design: Before DevOps, the early software development life cycle (SDLC) model used by most organizations was lean and product-oriented. Our focus was mostly on simple tasks and deliverables, which worked a decade ago. With the introduction of complex technologies, processes, and an increased focus on customer-centric services, our SDLC had to evolve.

Today, our SDLC mandates adherence to secure coding guidelines along with screening of code changes for potential security issues with our code analyzer tools, vulnerability scanners, and manual review processes. Each change and feature introduction is governed by a change management policy to ensure all application changes are authorized before implementation into production. We've talked about the finer details of ManageEngine's SLDC in our IT Release Management e-book.

Code-level security:

delivery

Security compliance tool Rule engine Configuration Rules management tools Build Build addition Report engine Webmaster engine Generate **Blocking status** Report Service

High-level overview of the internal security compliance tool

ManageEngine uses an internal security and compliance tool that identifies and reports the security vulnerabilities in a product executable. The goal is to promote secure software development by helping the developers identify the attack surfaces in their application and by providing solutions to minimize and secure those attack surfaces. The tool examines build executable, applies a set of rules, and prepares a security report containing the violations of the rules, if any. Based on the severity of the violations, the build release can be blocked.

A configuration team maintains the code created by the developers in our in-house centralized repository (like GitHub for general use). The team establishes and maintains the consistency of a product's performance, i.e, they use the product requirements, design, and operational information to sustain the product's functional and physical attributes throughout its life cycle.

Infrastructure

Data centers:

Zoho Corp has data centers worldwide to cater to the needs of customers according to their region. Each region has multiple independent data centers to host products and smaller points of presence (PoPs) to support data center activity and provide a seamless user experience. Identity and access management (IAM) then functions as an additional layer that routes traffic to the appropriate data centers within each territory.

The birth of Mickey:

Once we started building more products, we needed a streamlined framework to speed up the development process and release features quickly without compromising on quality. Enter Mickey, our in-house proprietary solution. Mickey (short for Micro Kernel) is an easy-to-use framework that is used to develop web-based applications.

The code for commonly used features like authentication and authorization is repetitive across multiple ManageEngine products. Implementing them repeatedly is a waste of time and creates a lack of uniformity. Mickey acts as a base code and provides the infrastructure and an organized execution environment. Thanks to Mickey, product teams can focus on business logic instead of worrying about how the application runs.

Internal monitoring:

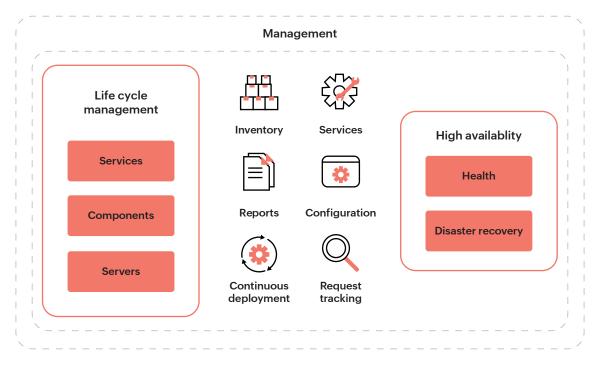
Zoho uses an in-house monitoring and instrumentation tool to keep the systems and processes involved in the cloud platform safe. Users can monitor parameters, components in a data center, and statistical data related to services via dashboards. In case the components or the processes running within a component have encountered an abnormality, raised events will be displayed on the dashboard, and alerts will be sent to the respective teams via email.

Admin console:

Zoho uses an in-house data center management tool to monitor and manage the complete data center infrastructure, cloud applications, and services used by the cloud applications.

Some of its responsibilities include:

- Inventory management.
- Operations management.
- Load balancer configuration.
- Server allocation.
- Certificate management.
- Disaster recovery switching.



Information security

Organizational security	Operational security	Infrastructure security	Data security	Identity and access control	General security
Endpoint security	Logging and monitoring	Server hardening	SDLC security	Single sign-on	Physical security
Internal audit and compliance	Vulnerability management	Network security and redundancy	Data isolation	Multi-factor authentication	Incident management
Security awareness	Malware and spam protection	Intrusion detection and prevention	Encryption	Administrative access	Responsible disclosures
Dedicated security and privacy teams	BCDR and back up	DDoS prevention	Data retention and disposal	Cloud access security brokers	Vendor and third-party supplier management

Gone are the days where we trusted anyone within the organization's network. ManageEngine's goal is to provide end-to-end security coverage for information that flows through the organization. Be it recording information like vendors, visitors, and employees or process control to restrict access, we have strict monitors in place to protect local information pertaining to our organization.

Customer data is encrypted both in transit (while customers are using our applications) and at rest in our servers. We also have a data deletion policy in place to discard customer data that is not in use or as requested by users. With the constant threat of cyberattacks, it's essential for us to be prepared through safety measures like internal and external testing to ensure our technology is up to date and capable of protecting sensitive information.

The ManageEngine Security Response **Center (MESRC)** :The MESRC monitors security forums like the US-CERT, National Vulnerabilities Database, and Bugtrag identify and resolve vulnerabilities reported on ManageEngine products or on the third-party software bundled with ManageEngine's products. Users can report vulnerabilities through our bug bounty portal. After getting information about a vulnerability, the MESRC works with product experts to validate the claims, investigate the cause, and take up remedial measures and fixes. Once the solution is ready, it is provided as a service pack or patch to all customers following the usual support process.

Compliance: Zoho has a dedicated compliance team to review procedures and policies; align them with standards; and determine what controls, processes, and systems are needed to meet the standards. The team also conducts periodic internal audits and facilitates independent audits and assessments by third parties. In our e-book, A CIO's guide to re-thinking compliance, we discussed the nuances of these regulations and our actions in detail. The following is a list of certifications and regulations upheld by the organization.

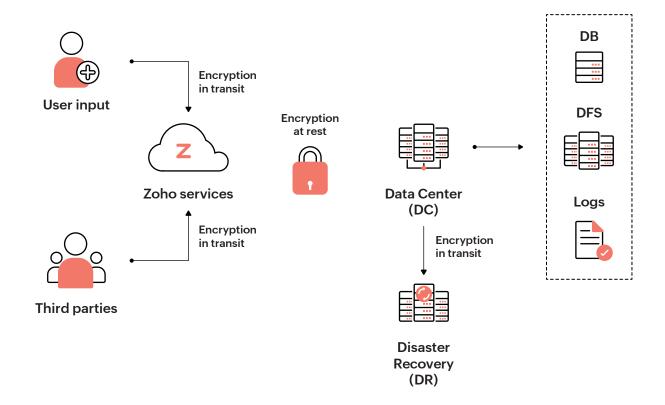
Certifications	Role	
ISO/IEC 27001	Specifies the requirements for establishing, implementing, maintaining, and continually improving an information security management system within the context of the organization	
ISO/IEC 27701	Enhances the existing information security management system with additional requirements in order to establish, implement, maintain, and continually improve a privacy information management system	
ISO/IEC 27017	Gives guidelines for information security controls applicable to the provisioning and use of cloud services by providing additional implementation guidance for relevant controls specified in ISO/IEC 27002 and additional controls with implementation guidance that specifically relate to cloud services	
ISO/IEC 27018	Establishes commonly accepted control objectives, controls, and guidelines for implementing measures on safeguarding PII that is processed in a public cloud	
ISO/IEC 20000	Specifies requirements for an organization to establish, implement, maintain, and continually improve a service management system and supports the management of the service life cycle including the planning, design, transition, delivery, and improvement of services to meet the service requirements and deliver value	
SOC 2 Type II	An evaluation of the design and operating effectiveness of controls that meet the American Institute of Certified Public Accountants' Trust Services Principles Criteria	
SOC 2 + HIPAA	An independent third-party audit firm has examined the description of the system related to application development, production support and the related general information technology controls for the services provided to customers from Zoho's offshore development center based on security, privacy, and breach requirements set forth in HIPAA Administrative Simplification provisions.	
CSA STAR Registry	The Cloud Security Alliance (CSA) defines and raises awareness of best practices to help ensure a secure cloud computing environment and help potential cloud customers make informed decisions when transitioning their IT operations to the cloud. The CSA assessment helps cloud service customers assess the security capabilities and practices of a cloud service provider.	
GDPR	A pan-European regulation that requires businesses to protect the personal data and privacy of EU citizens for processing of their personal data	

Certifications	Role	
ССРА	A data privacy law specific to the processing of personal information of California residents that requires businesses to protect their personal information and provide privacy	
Signal spam	Reports that help provide feedback loop (FBL) data, primarily technical information for identification of spammers and marketing abuse, from maj ISPs like Orange.fr, SFR.fr, and so on. It has many spam reporting plug-interpretation for third-party browsers and email clients focused on French communities worldwide.	

Encryption: Zoho Corp has established strict policies to adapt Transport Layer Security (TLS) to all its connections. TLS ensures a secure connection between end users and our servers by allowing the authentication of both parties involved in the connection and by encryption of data to be transferred. TLS protocol ensures third parties can't eavesdrop or tamper with communications.

For third-party communication, we use HTTPS. Transactions that involve sensitive data use asymmetric encryption. For these, we generate a pair of public and private keys in our key management service (KMS). We encrypt these pairs using a master key and the encrypted key pairs are stored in the KMS. The master key is stored on a separate server.

Public keys are made available to third parties through the certificates while we store the private key in the KMS; after authentication, the encrypted data is decrypted in the KMS.



Building a craft-driven organization



The forces behind the scene

Zorro: Zoho has multiple data centers (DC) across the world, storing information of millions of end users. Zorro is the team responsible for Zoho's data center operations. The team identifies and mitigates threats, provides necessary assets, and continually monitors and improves the DC's performance without compromising the security and privacy of end users.

Sysadmins and PitStop: Sysadmins, or system administrators, monitor corporate servers and manage employee requests. Their responsibilities can be categorized as user management, infrastructure management, and asset management. Since we're a fast-growing organization, managing employees' device-related requests demanded the creation of a dedicated team: PitStop.

The PitStop team is responsible for activities relevant to employees like:

- Providing laptops for new employees.
- Installing operating systems and other required software on devices.
- Maintaining antivirus solutions for all user devices, test machines, and servers.
- Maintaining and configuring Wi-Fi throughout the campus.
- Updating security patches.
- Maintaining hardware and software inventories.

PitStop technicians are stationed on each floor. Employees can drop by or contact the team via email or internal communication tools.



User Management

- User device onboarding and offboarding
- User device requests
- Device repair
- Software installation
- Operating procedure documentation



Infrastructure Management

- Servers and application management
- Repository management and data backup
- Wi-Fi configuration
- · Media disposal
- Patch management
- Antivirus management



Asset Management

- Inventory management
- Hardware and software evaluation and procurement

Responsibilities of sysadmins

Network operations center (NOC): The NOC team monitors local area networks (LANs), wide area networks (WANs), and network devices. The scope of work includes analyzing problems in network devices, troubleshooting issues, reporting incidents, communicating with site technicians, and tracking problems to resolution. The NOC team monitors DCs and network devices such as routers, switches, and firewalls while the Zorro team manages servers and load balancers as part of server monitoring. Physical access to the center and logical access to the tools is highly restricted.

All servers, core network components, and their processes are monitored both internally and externally. Zoho uses a primary internal monitoring tool that provides failure alerts via a dashboard. This dashboard is displayed in the NOC, which is monitored around the clock. We also have an in-house developed data centre life cycle management (DCLM) tool that allows deployment, monitoring, and management of services, components, and servers, etc.

Zoho's DCLM tool is the DevOps console for the Operations (Zorro), Network (NOC), and Service Delivery (SD) teams and is the management gateway to all deployments. These three core teams work together to keep our IT infrastructure up and running smoothly. You can learn more about their roles and responsibilities in this IT operations management e-book.

Al at ManageEngine

A recurring question from customers and tech enthusiasts is, "How does ManageEngine keep up with new trends and the constantly evolving IT landscape?" The answer is that R&D has always been a focal point, regardless of which stage of growth we're in. Nearly 40% of our revenue is allotted to extensively studying and identifying what the market would demand tomorrow.

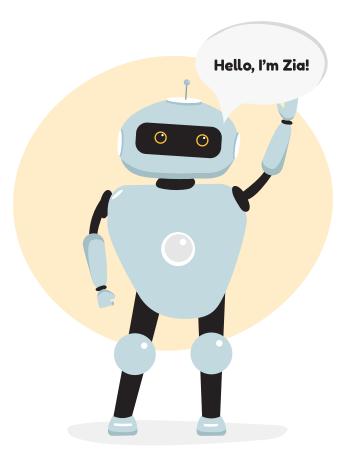
Rajesh Ganesan, president of ManageEngine, talks about the role of AI in business and IT: "Businesses always undergo phases of change and every business is leveraging technology to change their basic functions and offerings. AI is part of this next phase of reinvention that businesses will

undergo. It is being incorporated heavily into company roadmaps across almost every industry." With AI being incorporated into multiple aspects of IT infrastructure management, organizations will have to streamline their existing processes to adapt to the changes that come along with implementing this technology. At ManageEngine, we are working on AI under four broad divisions:

- 1. Statistical machine learning
- 2. Computer vision and optical character recognition (OCR)
- 3. Natural language processing (NLP)
- 4. Video and voice processing

Feature	Description	
Univariate anomaly detection	Identification of unusual spikes in any time-series plotted against single metrics	
Multivariate anomaly detection	Detection of aberrations caused by multiple or a combination of several parameters using matrix sketching algorithms	

Feature	Description
Forecast engine	Prediction of future data points based on both the past and the present data. It uses customized models such as logarithmic, exponential, polynomial, and power models
Malware analysis	Analysis of hardware components to identify pirated data and potentially malicious files entering the organization, and protect the system
Markov chains	A probablistic model that aims to identify the likelihood of each transition in a sequence of events
Error classifier	Classification of errors using the longest common subsequence algorithm where when given the original and the corrected sentences, it differentiates between them and identifies the corrections made
Curve similarity (via dynamic time warping)	A tool to find a specific pattern in graphs when asked in a query
Blockchain	A decentralized open ledger system to store data, making it tamperproof and securing it further with public and private keys
Bot script	A bot framework that helps in the creation of virtual assistants and other help bots using NLP
Web spam detection (via UEBA)	Tool used to identify if a form is filled by a human or a bot (spam) by tracking the pointer movements
Sentiment analysis	Model to understand the mindset of the sender behind the text or mail
Ticket handling automation	An ensemble of models to automate the help desk ticket handling system
OCR	Tool used to extract text from text-superimposed images, files, handwritten documents, etc.



Zia

Zia is a continuously learning AI-assistant. Zia is used across ManageEngine solutions like endpoint management, help desk, and advanced analytics tools to perform various functions.

What can Zia do?

- Execute commands via a voice assistant.
- Offer virtual support.
- Provide relevant predictions.
- Assist users via a chatbot.
- Provide automated insights (Ask Zia).
- Deliver contextual suggestions.

It's worth mentioning that Ask Zia is one of the first NLP assistants that we started building. The R&D team started working on this way back in early 2014. It took almost five years for the feature to release in 2018.

Privacy first: how do we do it?

Privacy is not just a legal obligation but an ethical choice.

Privacy is increasingly becoming an important subject in the industry. While the market focus is mostly on B2C, we are trying to bring the attention to B2B. Protecting user privacy has always been a top priority, and in 2020, we took a stance and blocked adjunct surveillance. This meant eradicating the trackers from our website and products, particularly the trackers from companies with ad-driven business models. We also have strong policies in place and we're constantly working on new methods to keep customer information secure.



Ulaa:

Ulaa (which means exploring in Tamil), is our privacy-centric, enterpriseenabled browser. It is built on Chromium, the open-source browser. As a business with a comprehensive suite of primarily web-based products, our teams felt the need to acquire a deeper understanding of the underlying platform—the browser. Creating a browser tailored to our needs also enables us to provide more extensive and meaningful integrations of our products for customers. Ulaa is currently in its beta version and has multiple features in the works. Our goal is to make Ulaa the default browser for employees eventually.



Security and privacy awareness training:

The objective of our annual training is to reinforce the importance of data security and privacy. It covers data security and privacy at Zoho, the challenges we face as an enterprise, and the expectations from employees to ensure a secure and privacy-first Zoho. The Central Information Security and Privacy Team is responsible for initiating, preparing, and curating the content for the program. Employees attend modules and take up assessments. Each team is assigned a privacy champ who ensures all employees take part in the session. Non-compliance results in low data protection and compliance scores, followed by corrective actions.



Data Privacy Day:

Data Privacy Day is an international effort held on January 28 every year to remind individuals of their rights, and empower employees and businesses to accept their responsibilities of safeguarding personal data and enabling trust. At Zoho, we celebrate Zoho International Privacy week (ZIP), during which the privacy team hosts events, shares resources spreading awareness, and educates teams through past incidents and hypothetical scenarios. In 2022, we also introduced a privacy bounty program for employees to identify and report privacy loopholes or bugs in our tools and processes.

FOSTERING SUSTAINABLE RELATIONSHIPS



Relationships with customers

Who inspires us? If you ask our leaders, they'll tell you that our customers are visionary product users who have inspired and influenced our product roadmaps. Even in our formative years, we've had a great business and personal rapport with customers, one that has only evolved to a deeper, more meaningful relationship in the last two decades.

Customers have always been vocal about their expectations and feedback on our products, a trait our product teams value deeply. At any given time, we have around 500-1,000 customer-suggested features in the works across ManageEngine's suite of products. In fact, one key feature in our flagship product was introduced because of a single customer! The customizable priority matrix on our help desk solution was added upon a customer's request.



Localization and internationalization:

Localization (L10n): adapting existing software solutions to meet the language and cultural needs of each region the solution is used in.

Internationalization (i18n): building solutions keeping in mind the future requirements of each market as we expand. One of the key objectives of internationalization is to make localization easier.

In 2006, our team noticed a support email from a non-English-speaking prospective customer who was trying to replace their existing help desk software. They jokingly mentioned that they would first have to learn English before they could purchase our solution. That incident pushed our teams to work on localizing the solution to their language and expanding to other languages like Chinese, Arabic, and Spanish. Today, our help desk solution supports 21 foreign languages.



Customer events:

ManageEngine routinely hosts a series of user conferences and seminars worldwide to engage with customers. These events usually run for two days, covering talks from our IT leaders, technical workshops, one-onone meetings, and certifications for all IT professionals.

Down the line, we also intend to host a customer advisory board (CAB) program for enterprise customers to interact with other leaders in their region, tap into their expertise on trending IT topics, and discuss common industry challenges and their solutions.

Creating an employee-centric workplace

Employee experience has been a priority in IT for the last couple of years, more so since the pandemic. ManageEngine follows three core principles to offer employees a space that prioritizes their wellbeing above all.



Experiment: Employees are encouraged to take up different roles and find out where they can unlock their potential. Our workspace is often equated to a lab or a playground—a space for employees to not just learn their trade, but also to try out various aspects of product development and become well-rounded individuals. Our leaders experimented with different roles like product support, writing, coding, and marketing. In fact, doing so led to the creation of some of our most successful products. Now, they're passing that curiosity and desire for more knowledge on to future leaders.



Flexibity: We no longer focus on hours clocked in or mode of work. Are employees keeping up? Are they as productive, if not more, when working hybrid? Absolutely. For our IT leaders, their responsibility lies in enabling a business model where employees can work at their own schedule and still get the job done.

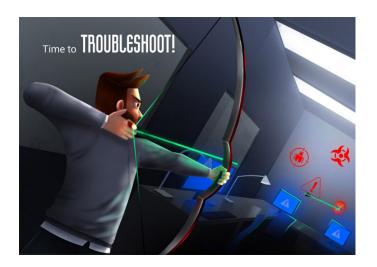


Availability: What does a good student need? A great mentor. ManageEngine is privileged to have senior leaders who have stuck around and have seen many phases of the organization's growth. Their incomparable domain understanding helps employees come up with solutions to challenges they encounter. Employees can reach out to leaders over chat, call, or in person to get advice, tips, or even a pep talk to get back on track.

IT-centric events:



Sysadmin Day: Every year, we celebrate Sysadmin Day in July to appreciate and celebrate the backbone of our organization, often working silently in the background to keep our systems running and our productivity up. We celebrate with mailers, e-cards, games, and prizes.





Bug bounty: Zoho's security team has an internal bug bounty program. The aim is to encourage responsible disclosure of vulnerabilities, resolve bugs before they affect business, prevent incidents of widespread abuse, and ultimately make our products more safe, secure, and bugfree. Developers who participate are rewarded and ranked for their contribution.



Hacktober: The month of October is dedicated to security awareness. Throughout Hacktober, the security team hosts events to aid in better understanding the foundations of security and safe practices to be followed to have a safe and gratifying user experience. Employees participate in games, creative events, and vulnerability challenges, and often share awareness posts on our internal collaboration app.

Working with partners

Partners have played an essential role in shaping ManageEngine. In many cases, partners are the face of our organization, especially in countries where we don't have a direct presence. Initially, we started working with partners in countries where English is not the primary language for business communication.

In an interview with Sridhar Iyengar, head of operations in Europe, we talked about the importance of partners in ManageEngine's journey. Partners share an amicable relationship with us that allows us to work and grow together easily. He believes partners are our eyes and ears on the ground who give us an outside perspective, providing feedback on how we're doing in different markets and sharing what steps we should take to improve.

Our relationship with partners has grown tremendously over the years. In 2008, we had ten partners, one in each region. As business expanded, we added five countries every year and ended up working with 20 partners over the next five years. By 2014, we introduced a multi-partner system for some regions and distributors in select countries. Today, we are working with over 200 partners across the world. Apart from partners who represent our products, we also work with tech partners who build complementing products that can offer better value to customers.

Customers view partners as an extension of ManageEngine and engage with them to not only find the right solutions for their businesses, but also to implement and utilize them the right way. They provide end-to-end support. We work with partners by conducting partner training sessions; providing technical assistance, marketing resources, and best practices for solutions; and engaging with customers if the issue is complex and requires in-depth knowledge of the tool.

Every year, ManageEngine also organizes a global partner meet—a five-day event in January where partners visit our headquarters in India and interact with product teams. Product experts conduct in-person sessions and give them an overview of what to expect in the year ahead, product roadmaps, growth trajectories, and areas partners should focus on.

DESIGNING WORLD-CLASS PRODUCTS



On the horizon

Zero Trust: Post-pandemic, the future of work has been influenced by digital-first customers and remote-first employees. Balancing a hybrid work model requires sophisticated framework. security ManageEngine is currently implementing Zero Trust in phases. The implementation team is working on strengthening verification parameters and increasing dependence on user and device identification. Our goal is to implement organization-wide Zero Trust.

Low code: ManageEngine recently launched AppCreator, a low-code application development platform that allows citizen developers with limited technical knowledge to build apps tailored to their needs. AppCreator addresses two pain points that often hinder business productivity: overload of automation requirements and a lack of resource availability.

Remote cloud and on-premises cloud: Over the next few years, ManageEngine will also be focusing on remote-cloud and on-premises cloud solutions. If you compare our product portfolio against Zoho's, you might notice

a few similarities. For instance, we have ManageEngine's Analytics Plus and Zoho Analytics as well as AppCreator and Zoho Creator. It's not a coincidence. The aim here is to support both forms of deployment.

The underlying framework for these hybrid cloud solutions is the same. These frameworks are built in-house from scratch and can be customized to meet cloud or on-premises requirements. Hybrid cloud solutions will be made available across as many products as possible to give customers flexibility and control over their data, or as Sridhar Vembu likes to say, ensure customers don't feel over-clouded.

Democratized IT: The future of work or just another buzzword? Democratized IT is all about providing end users with access to the right information and tools at the right time. Moving forward, democratized IT will enable fast, reliable, and decentralized decisionmaking. Powered by integrated workflows and automated processes, work will be self-organizing, high velocity, and digitally dexterous.

Democratized IT describes IT personnel who embrace this new decentralized, remote, and frequently autonomous nature of work while simultaneously keeping their corporate networks safe. It is not hyperbole to say that the future of work is dependent upon the democratization of IT.

Rajesh Ganesan President, ManageEngine

Manage Engine

ManageEngine is currently working on providing avenues for citizen developers to come up with innovative solutions to daily challenges. Our help desk solution contains a developer space where admins can customize modules as per their requirements, export them, and showcase them in a marketplace.

Parting thoughts: simplifying IT together

ManageEngine has had a remarkable journey. What started as a team of engineers creating simple point products for sysadmins has now evolved to an ecosystem of contextually integrated solutions for businesses. Our aim, at the time of inception, was to reduce the friction of taking a product from the web and deploying it in an enterprise IT setup.

Since then, we have carved a niche for ourselves in the global enterprise IT management market as an emerging leader and a supporter of small businesses. Millions of admins and technicians worldwide trust us to manage their IT operations, including networks, servers, applications, service desks, Active Directory, security, desktops, and mobile devices. From one product to 120 and from ten to over 10,000 employees, we've witnessed phenomenal growth and are a legacy in the making.

Twenty years down and we're just getting started.



About ManageEngine

As the IT management division of Zoho Corporation, ManageEngine prioritizes flexible solutions that work for all businesses, regardless of size or budget. ManageEngine crafts comprehensive IT management software with a focus on making your job easier. Our 120+ award-winning products and free tools cover everything your IT needs. From network and device management to security and service desk software, we're bringing IT together for an integrated, overarching approach to optimize your IT.



About the author

Mahanya is a content specialist here at ManageEngine. She has been a part of ManageEngine Academy since 2020, sharing in-house stories and resources for IT leaders. When she isn't creating content, she spends time with rescue dogs.