ResearchGate Impact Factor (2018): 0.28 | SJIF (2019): 7.583

# Streamlining Operations: Automating Daily Tasks Using Scripting

# Raghavendra Rao Sangarsu

Senior Software Professional Phoenix, AZ, USA Email: raghava.sangars[at]gmail.com

Abstract: Efficiency, agility, and productivity have never been more critical than in today's fast - paced, hyper - competitive marketplace and ever - evolving business landscape. However, companies are always under pressure to improve operations, reduce costs, and at the same time innovate and provide quality products and services that meet the changing needs of customers. In this regard, automation is a key aspect of making changes to the way businesses operate. Automation, which is usually achieved through scripting and the use of more advanced technologies, has become an integral part of modern business practices. It provides the opportunity to simplify everyday activities, to eliminate human error, and to eliminate resource overload. Through automation of repetitive processes, organizations can free up human resources to pursue more strategic and innovative projects that will lead to innovation and growth. The influence of automation does not remain limited to the realm of traditional domains. It has been developed to address the sophisticated problems of big data management, leveraging the power of the IoT to capture and process huge amounts of data, and enabling the adoption of microservices architecture for better scalability and flexibility. In this fast - changing environment, companies that implement automation can better adapt, compete, and succeed. Automation does not only improve operational efficiency but also enables organizations to become more agile, responding quickly to changes in the market and customer demands. In the light of technological development, automation continues to play a crucial role in moulding business in the future, which provides a way to sustainable success in a digital age.

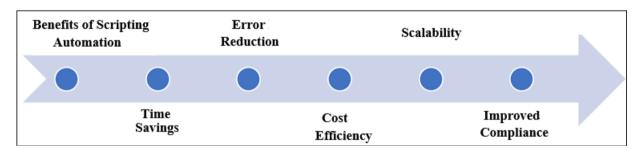
Keywords: automation, efficiency, innovation, agility, productivity

#### 1. Introduction

Automation has substantially changed how organizations operate, offering considerable speed, accuracy, and scale advantages. As businesses strive to enhance efficiency and maintain a competitive edge, scripting, the practice of

writing executable code to automate tasks, has become a critical tool [1]. This white paper addresses the basics of scripting automation and the benefits and challenges based on the established practices for 2018.

# 2. Benefits of Scripting Automation



## 1) Time Savings

It must also be emphasized how vital scripting automation is to save time. By making programs that begin scripting to automate repetitive tasks, they have gained a resource that is often more valuable than money – time. Employees are relieved from the pressing, repetitive nature of their roles and tasks, allowing them to prioritize more advanced activities. There are quite a few advantages of this strategic alignment, including improvements made in innovations in customer service and higher competitiveness of businesses [2].

Scripting automation will relieve us from all the routine tasks and work faster and more precisely than one man can. For example, in a data - oriented world, automating data entry or extraction tasks can help to reduce one's workday by hours or even days. This increased efficiency brings shorter turnaround times in organizations that serve customers promptly and efficiently with better effectiveness in meeting

deadlines, reacting faster to changes in the market, and so forth

#### 2) Error Reduction

Organisations minimise the intrinsic risks of manual procedures by routine and automated activities. This is regardless of how capable a man is bound to err due to factors like fatigue, dissent or fickleness [3]. By following the instructions and rules of the book, Automated scripts ensure that errors are reduced at all costs. For instance, automation can enable financial processes with an exact calculation tool to avoid some economic differences or compliance breaches for precaution [4]. By minimising these threats, organisations can preserve their resources while retaining rep reputation and regulatory compliance.

# 3) Cost Efficiency

The kind of cost - efficiency economy driven by automation in scripting is also varied, primarily because of cheaper

Volume 9 Issue 5, May 2020

www.ijsr.net

Licensed Under Creative Commons Attribution CC BY

Paper ID: SR24213024754 DOI: https://dx.doi.org/10.21275/SR24213024754

ResearchGate Impact Factor (2018): 0.28 | SJIF (2019): 7.583

labour prices. When organisations use automation to fulfil manual and repetitive operations, human resources can be engaged in another area requiring more attention. This often leads to cost savings; less staff may perform repetitive duties [5].

In addition, there would be fewer operational costs attached to observing the error when script automation is used. The cost of correcting or the price of remedial action that may result from non - compliance can be astronomical. This assists in reducing such costs by automation, thus giving rise to accuracy and compliance as and when the system is launched.

The second reason that automation reduces the level of waste in organisations is that it helps to utilize resources properly. Instead of tying human resources to repetitive work, they can be involved in value - adding work such as planning, research or customer engagement [5]. This guarantees the allocation of resources wisely, and the organization is in a strategic position for sustainable development.

#### 4) Scalability

The scripting automation that serves as the key to scalability is an essential aspect of the modern world and the current speed of things around it; for organizations to gain a competitive advantage, they need to be dynamic enough to meet changing circumstances in the market environment. This is so because scripting automation allows businesses to increase their operations on a scale without necessarily burgeoning but proportionally raising resources [6].

Nevertheless, scripts that work automatically can process more tasks efficiently. Automation is efficient, quickly adapting to any additional customer order, handling a new database or analysing a more extensive data set. Scalability has allowed many organizations to change and grow with the increasing market demands while saving a lot of money.

## 3. Improved Compliance

Automation by scripting is essential in compliance with the predetermined processes that must be followed and the standards set by the regulatory body. In highly regulated industries, organizations are dependent on rules and standards. Industries such as the financial, healthcare, and pharmaceutical industries fall under this category.

The scripts run automatically and follow rules and procedures without human intervention. This uniformity minimizes the threats of non - compliance, as non - compliance can cause a penalty for the regulatory body and ruin the brand's reputation. Such automation of compliance - related processes enables organizations to show the world their desire to follow industry standards and preserve the interests of the parties concerned [3].

In its entirety, scripting automation provides benefits such as time savings, reduced errors, cost - effectiveness, scalability, and better compliance. These strengths allow organizations to run better, direct resources smartly, and confidently restructure themselves to environmental changes. With the help of scripting automation, it is possible to utilize the

advantages of the phenomenon and bring about significant competitive advantages that can ensure sustainable business growth in the modern competitive environment.



# 4. Challenges and Considerations

#### 1) Complexity

The process of scripting automation may be complicated and involve programming language - oriented knowledge, including frameworks. This technicality is a learning curve for novice users who are not accustomed to coding, thus hindering the flow of automation initiatives [7].

#### 2) Maintenance

Automated scripts need regular reconfigurations and upgrades to be compatible with changing systems and software environments. Automation failures can arise from the failure of maintenance, and this negates the very idea of automation [4].

## 3) Security Risks

However, if automatic processes are not implemented and handled securely, they may create vulnerabilities. This requires solid security measures to ensure that automation risks are minimized [8].

# 4) Resource Allocation

Implementing scripting automation is not a free investment; it needs time, resources, and infrastructure. As an initial, high cost, it may pose a barrier for some organizations, especially smaller ones [9].

# 5) Integration

Automated scripts may require integration with other systems and workflow to achieve compatibility and interoperability with the existing systems. The process of integration is crucial to proper and effective planning and testing [10].

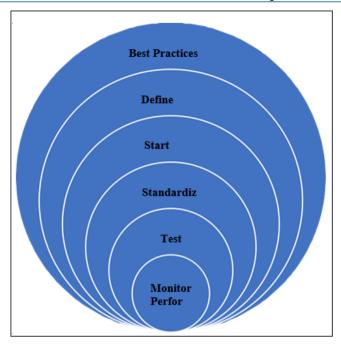
**Best Practices for Scripting Automation** 

Volume 9 Issue 5, May 2020

www.ijsr.net

Licensed Under Creative Commons Attribution CC BY

ResearchGate Impact Factor (2018): 0.28 | SJIF (2019): 7.583



#### 1) Define Clear Objectives

Automation efforts should be apparent regarding their objectives and the area within which they will be implemented. This ensures that automation initiatives stay centred on the corporate vision and mission, eliminating needless efforts in non - critical areas.

#### 2) Start Small

To develop experience and strengthen confidence, bodies must begin with small, well - definable automation jobs before moving to large initiatives. Making small makes an initial learning phase possible, resulting in the best results and Performance.

#### 3) Standardise Processes

It is suggested that procedures and workflows be standardised before their automation. This factor guarantees reliability and reproducibility of automation outcomes, so the amount of unpleasant surprises [11].

#### 4) Test Thoroughly

To run automated scripts through deployment, it is essential to subject them to a thorough testing process, which should be done in a controlled setting. This test phase is performed to overcome the problems that may have been identified so that they can be corrected to ensure that the automation works as intended [12].

#### 5) Monitor Performance

The monitoring and reporting techniques must be applied to help improve the Performance of automated processes and ensure that their operations are monitored. State three more benefits of continuous monitoring and the ways it achieves them [12]. Therefore, such constant monitoring also identifies optimization points that ensure that automation is correct and effective for a long time.

#### 5. Conclusion

Scripting automation has undoubtedly become a revolution in businesses. It enables organisations to eliminate the vast amounts of wasted costs, saving time and effort and trade with higher accuracy and at a larger scale. Automation liberates human resourcefulness into higher pales by streamlining administration of everyday activities. This then becomes an incentive for promoting innovation and promoting growth.

Notwithstanding some challenges associated with the adoption of scripting automation among organisations, the proposed challenges can be conquered provided the organizations strictly follow certain conventions and methodologies. Working toward a systematic introduction to automation, accompanied by a distinct perception of shifting organizational needs and interests, can open a way for automation acceptance. The translation industry is also dependent on both the domain knowledge and another platform needed to precisely match the languages, to make the final translation. However, the importance of scripting automation in the translation industry is mostly seen in the fields of business; which is much more manifold now where competition is unbridled; being also the most reviving one and growing with a quick rate in spite of the efficiency gained from cost reduction and operational efficiency is not the only advantage provided by it, but also the agility needed to respond to dynamic issues. The corporate agility so addressed is critical to enable the organisations to remain strategic innovators, thereby realizing the perpetuating tenets of sustainable growth as we step further into the fourth industrial era. Implementation of automation technology is sure to provide enterprises with an even greater level of efficiency, productivity and, consequently, success.

# References

- [1] T. A. Limoncelli, C. J. Hogan, and S. R. Chalup, *The Practice of System and Network Administration:* Volume 1: DevOps and other Best Practices for Enterprise IT, vol.1. Addison Wesley Professional, 2016.
- [2] D. Jones and J. Hicks, Learn PowerShell Scripting in a Month of Lunches. Simon and Schuster, 2017.
- [3] E. L. Covington *et al.*, "Improving treatment plan evaluation with automation," *J. Appl. Clin. Med. Phys.*, vol.17, no.6, pp.16–31, Nov.2016, doi: 10.1120/jacmp. v17i6.6322.
- [4] M. Linares Vásquez, K. Moran, and D. Poshyvanyk, "Continuous, evolutionary and large scale: A new perspective for automated mobile app testing," in 2017 IEEE International Conference on Software Maintenance and Evolution (ICSME), IEEE, 2017, pp.399–410. Available: https://ieeexplore.ieee.org/abstract/document/8094439/
- [5] R. Marciniak and D. Berend, "Disclosing RPA trend in the business services," *Manag. Chall.21th Century Vol. III*, pp.119–132, 2017.
- [6] B. D. Rouhani, A. Mirhoseini, E. M. Songhori, and F. Koushanfar, "Automated Real Time Analysis of Streaming Big and Dense Data on Reconfigurable Platforms, " ACM Trans. Reconfigurable Technol. Syst., vol.10, no.1, pp.1–22, Mar.2017, doi: 10.1145/2974023.
- [7] S. Kandel, A. Paepcke, J. M. Hellerstein, and J. Heer, "Enterprise data analysis and visualization: An

Volume 9 Issue 5, May 2020

www.ijsr.net

Licensed Under Creative Commons Attribution CC BY

ResearchGate Impact Factor (2018): 0.28 | SJIF (2019): 7.583

- interview study, "IEEE Trans. Vis. Comput. Graph., vol.18, no.12, pp.2917–2926, 2012.
- [8] T. Takahashi and Y. Kadobayashi, "Reference ontology for cybersecurity operational information," *Comput. J.*, vol.58, no.10, pp.2297–2312, 2015.
- [9] T. Koulouris, M. C. Mont, and S. Arnell, "SDN4S: Software defined networking for security," *Hewlett Packard Labs Palo Alto CA USA Tech Rep*, 2017, Available: https://www.labs.hpe.com/techreports/2017/HPE 2017 07. pdf
- [10] S. M. Mohammad, "Continuous integration and automation," *Int. J. Creat. Res. Thoughts IJCRT ISSN*, pp.2320–2882, 2016.
- [11] V. K. Suri, M. Elia, and J. Van Hillegersberg, "Software Bots The Next Frontier for Shared Services and Functional Excellence," in *Global Sourcing of Digital Services: Micro and Macro Perspectives*, vol.306, I. Oshri, J. Kotlarsky, and L. P. Willcocks, Eds., in Lecture Notes in Business Information Processing, vol.306., Cham: Springer International Publishing, 2017, pp.81–94. doi: 10.1007/978 3 319 70305 3\_5.
- [12] J. Wettinger, U. Breitenbücher, O. Kopp, and F. Leymann, "Streamlining DevOps automation for Cloud applications using TOSCA as standardized metamodel," *Future Gener. Comput. Syst.*, vol.56, pp.317–332, 2016.

Volume 9 Issue 5, May 2020 www.ijsr.net

Licensed Under Creative Commons Attribution CC BY