

RBA More Effective than RPA for Automating System Operations

“Advanced filtering → Navigation → Automated response” flow solves system operation-related troubles

Although the number of systems to be managed and of management tools being used at system operation sites continues to grow, some extant operations duties still remain. Yet even as the quantity of these operations duties increases, workforces at these sites are not, and thus personnel are getting stretched thin. This is why companies are looking into automating their system operations.

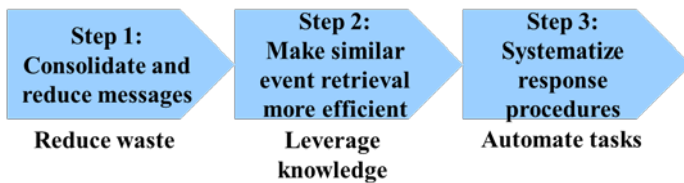
That said, merely automating your conventional operational processes has limited effects. There are not many simple tasks involved in system operations, and special measures rooted in personal experience or temporary measures to be taken during emergencies place mental and physical stress on personnel. Thus, figuring out how to reduce the number of situations requiring human judgment becomes the key to making improvements.

RPA (Robotic Process Automation)—which has garnered attention in recent times—has tended to be used in the automation of simple tasks including GUI (Graphic User Interface) operations. However, this does not necessarily mean that RPA would be suited to automating system operations duties, too. Below, we describe automation using “RBA” (Runbook Automation), which is ideally suited to more complex IT duties.

| | Features | Background |
|--|--|---|
| RPA (Robotic Process Automation) Operational automation for business divisions | <ul style="list-style-type: none"> Has rapidly gained attention since 2016 No coding required Automation of GUI operations | <ul style="list-style-type: none"> Workstyle reforms Evolved from BPO |
| RBA (Runbook Automation) Operational automation for IT divisions | <ul style="list-style-type: none"> Used in Japan from around 2010 Efficient realization of ITIL Systematization of management procedure manuals | <ul style="list-style-type: none"> Spread of standardization (ITIL) Increased operational volume via virtualization / cloud |
| AIOps (AI for IT Operations) (Algorithmic IT Operations) System operations leveraging machine learning | <ul style="list-style-type: none"> The dawn of AIOps Leverages big data and knowledge Predict, project, analyze | <ul style="list-style-type: none"> Advances in AI technology Personnel shortages, technology succession |

Backgrounds and Features of the Various Automation Methods

Automating your system management requires following three steps. First, review your daily duties and reduce wasteful tasks. Next, effectively utilize the knowledge that you have amassed in your past response history, etc. Finally, there comes task automation. Neglecting to follow these steps puts you at risk of establishing inefficient management through automation.



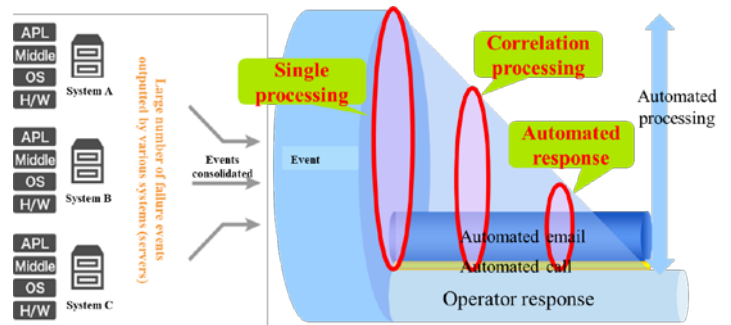
Step 1: Review everyday processes and reduce waste

Keys to success

- Collect messages from multiple management tools
- Delete messages that can be ignored, e.g. duplicate messages
- Observing message correlation, further reduce the number of messages

A review of operations duties reveals that collecting information and gaining situational understanding require considerable time. The first step is to consolidate the dispersed messages coming from your systems. Although systems issue a huge number of messages every day, nearly all of them are ignored. The “ignore” task itself places a surprisingly large burden, and this is wasteful.

One option would be to set fixed rules for your system, such as “if the same messages are issued during a certain period of time, consolidate them into one”. Doing so enables you to cut down on messages that cannot be inhibited by individual systems. And by ascertaining correlations spanning multiple tools, you will be able to pare your messages down to only those which are truly necessary.



How Message Reduction Works

Step 2: Make similar-event retrieval more efficient

Keys to success

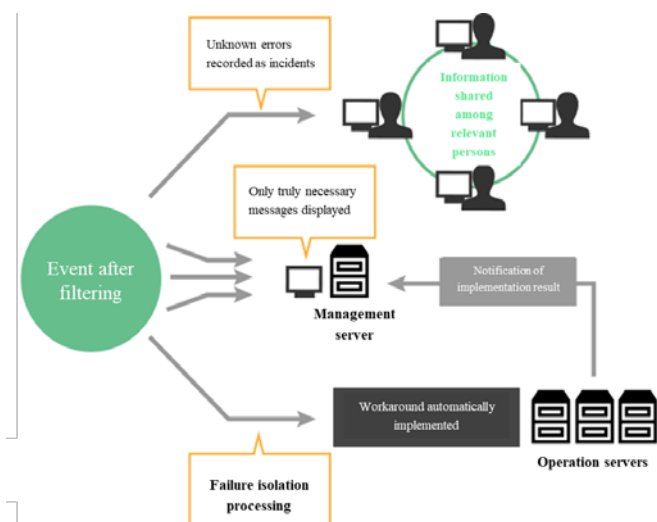
- Consolidate knowledge, and enable relevant persons to share accumulated information
- Increase efficiency of retrievals for similar tickets in past response history or knowledge database
- Recommendation feature using machine learning also effective for vague content

The next thing to do is to make your primary responses for the events that have been narrowed down be more efficient. In many cases, determining system conditions and deciding on allocations and responses depends upon individual or non-standardized knowhow, which makes reducing the load difficult. What is effective here is leveraging your past response history.

First, you need to gather knowledge in an integrated manner to share it among the relevant persons. However, simply gathering this information does not make it easy to utilize effectively. Retrieving past similar events can often require a certain artistry rooted in experience. The effective thing here is to use your service desk tools to categorize information so as to make your retrievals more precise. Recently, the leveraging of recommendation features using machine learning has produced results.

The key here is not to force the automation of all your tasks, but rather to retain the element of human judgment. An effective way to proceed is to start off with manual responses, and then gradually automate more and more aspects of your processes. By continually using to master this, you will accumulate knowledge and raise your automation rate.

Among automation methods, RBA is the most effective. Even complicated procedures written in your management procedure manuals can be automated simply by systematizing your response flow. This works for cases involving both manual and automated operations, and it allows you to set recovery flows for when abnormalities occur, thus enabling you to smoothly and steadily pursue automation.



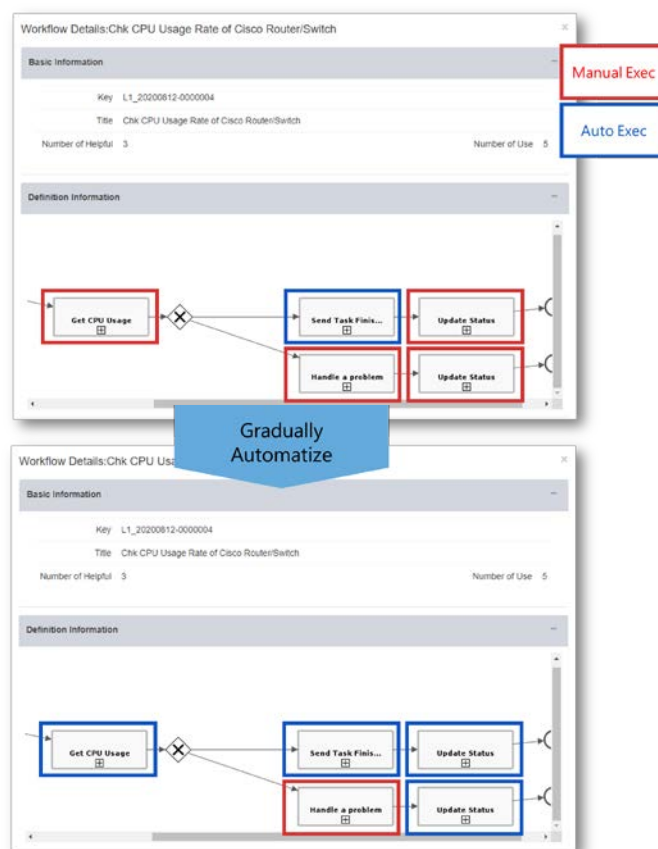
How Primary Flows Work

Step 3: Systematize response procedures to enable automated responses

Keys for success

- Gradually systematize response procedures that were previously done by individuals
- Retain the element of human judgment, without needlessly forcing automation
- Raise automation rate through continual use

Lastly, we have response automation, but consider that automating all of your operations duties could potentially increase the risks involved. Making your automated tools grasp special background circumstances etc. is a difficult thing, and in some cases, forcing automation on low-frequency, complex responses can make maintenance troublesome and inefficient.



Response Flow Involving Both Manual and Automated Responses

These three steps can all be achieved through NRI's package-type "Senju/ASM" or SaaS-type "mPLAT/AMP" platforms. We encourage you to take this opportunity to embrace the kind of automation that produces results.

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*The content of this White Paper article is current as of December 2019.

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