

CASE STUDY

Team Enablement through
Microsoft Power Automate
and Teams Collaboration

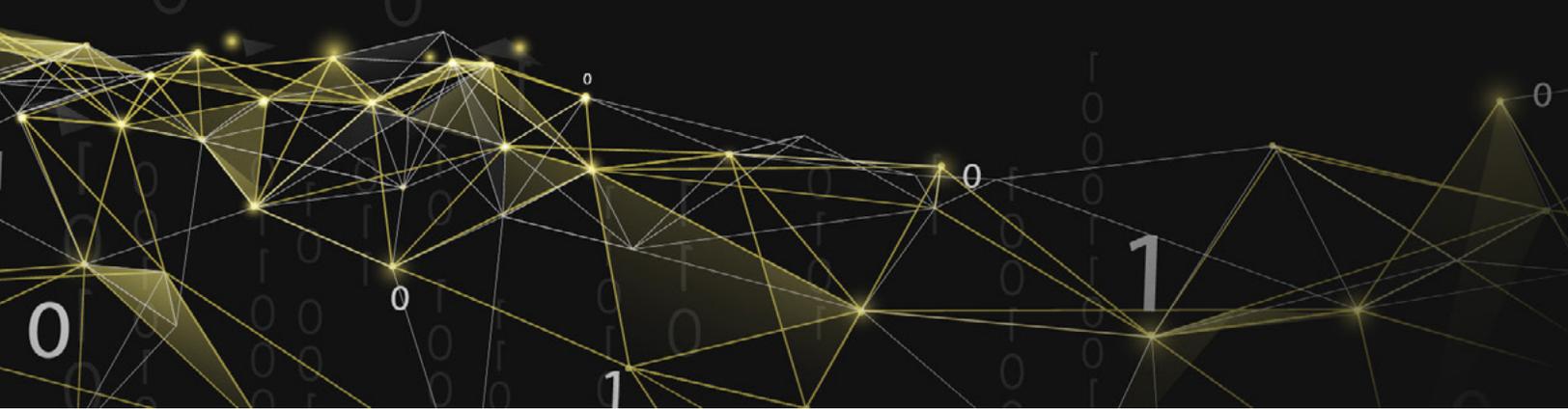
REQUIREMENTS

- Remove the risk associated with manual email communications
- Fully automated alerting of priority incidents, service escalations, modifications to in-house code repositories and change control requests
- Encourage MS Teams channels to be used as the primary internal communication vector between internal departments
- Reduce e-mail traffic
- A cloud-based technology news alert platform within MS Teams
- Sufficient M365 licensing is required to support the solution
- Overall workflow automation



The Challenge

Hentsū has identified an opportunity to enhance internal communications in a way that fosters quality of life and reduces e-mail chatter. In this case study, we will be covering Power Automate use cases, as well as MS Teams collaboration, workflow automation and more. The use of automated flows delivered through Teams channels allows Professional Services, DevOps, Managed Services and Client Relations to communicate in a fluid and natural setting. Relying on an email to be manually composed after a priority incident or anomaly has been detected, leaves a single point of human failure open. Hentsū has decided to automate our client's service escalations and high priority incidents through Power Automate. Formally known as Microsoft Flow, this platform streamlines communications between third-party and Microsoft apps to enhance productivity and reduce manual overhead. Think of Power Automate as a cloud-based algorithm service, that combines sets of flows to reduce manual or repetitive work that is often associated with reporting and communications between applications. This solution has also been curated internally for Bitbucket repository notifications related to merge or pull requests, as well as informative tech news updates.



Key Considerations

1. Identifying the triggers required to initiate each flow
2. Locating the compatible Jira Service Desk and Bitbucket APIs/Webhooks required to establish secure connections to Power Automate
3. Designating the purpose for each O365/Teams group and which members to be included in each
4. Hentsū staff were already accustomed to MS Teams and its many collaboration features

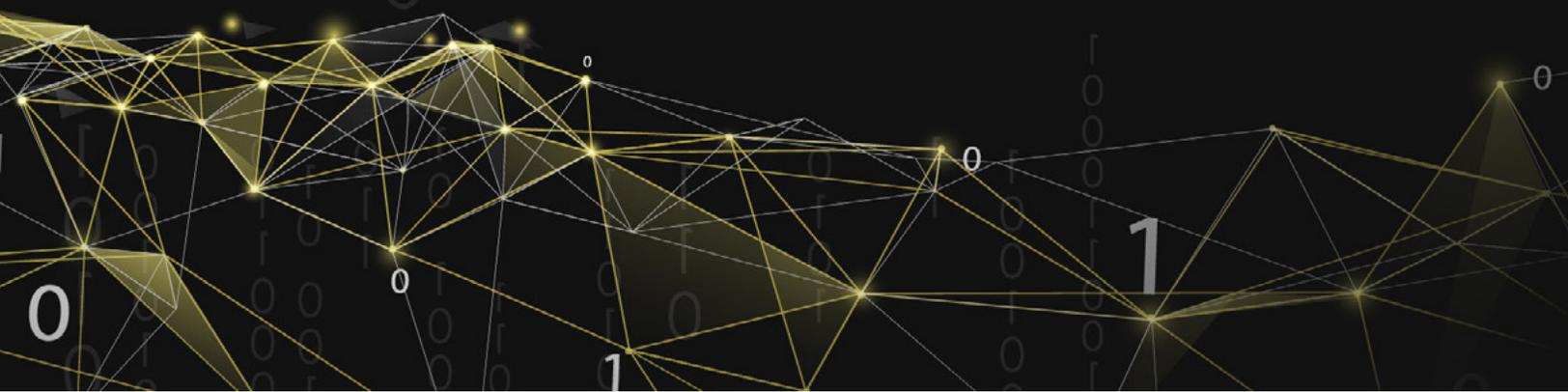
TECHNOLOGIES USED

- AWS (Amazon Web Services), Microsoft Azure, Citrix, Duo Security, Zabbix, and FortiGate
- All sending vendor PSIRT advisories to Microsoft Teams channels which inform Hentsū of required/emergency security patches and events
- Atlassian (Jira & Bitbucket)
- Service escalations and change control request notifications
- RSS technology news feed subscriptions
- Centralized to a single Teams channel to encourage technical discussions and debates



The Solution - Workflow Automation

Hentsū had reached a crossroads and identified that e-mail is not the most effective method to collaborate on service-related escalations and priority requests. Instead, we sought out to leverage the tools already available to us with our Microsoft 365 subscriptions to remove the human element from the detection of a variety of events. It was quickly evident that MS Teams with the help of Power Automate flows, has the capability to effectively tie the appropriate teams together and promote collaboration in an automated fashion. In short, workflow automation was achieved. We no longer had to rely on a single person(s) to detect a problem and manually loop individuals in through an e-mail chain. This can often be difficult to track. Alternatively, Power Automate would monitor our Jira Service requests and the bulk of our core technology vendors,' based on the priority level. These alerts are visible in dedicated Teams channel and using group membership, the correct individuals are always included. In addition to workflow auto-



mation, our goal was to achieve consistency, both in the fashion that the alerts are delivered and the syntax in which they appear.

After designing the initial HTTP request-based flows from our vendors' PSIRT advisory alerts and internal Jira ticketing system, we re-purposed the flows for other scenarios. Bitbucket repository updates, branch changes, commit/pull requests, and informational messages were integrated into Power Automate by modifying existing flow templates. This allowed our DevOps and Professional Services teams to collaborate and review one another's code in an open channel that is inclusive to all team members. Members of these channels can modify their Teams chat notifications to be as informative as they would like.

To add some allure and showcase the innovative solutions, we connected RSS news feeds to an internal channel dedicated to Cloud Technology News. This provides a consistent platform that engineers could use to stay up to date with the most recent news in our sector. This concept is quite attractive for Financial Services clients who are looking for curated news presented in a central location, relating to their corresponding sector(s).

The beauty of these automated workflow solutions are their sustainability and re-usability. Using traditional e-mail has its benefits but does not have the consistency required by many developers and in-house technology teams.



Technical Details

During the planning phase, the most difficult challenge was deciding on the trigger that would actuate each flow. Though a simple HTTP request was used for most scenarios, each trigger required vigorous fine-tuning to ensure consistency across all platforms, especially for external vendors, due to the lack of insight into their internal systems. When using HTTP based webhooks, it is a challenge to figure out which applications expose their APIs. It is important to consider the limitations of Power Automate in relation to specific connections and the available actions associated with each.

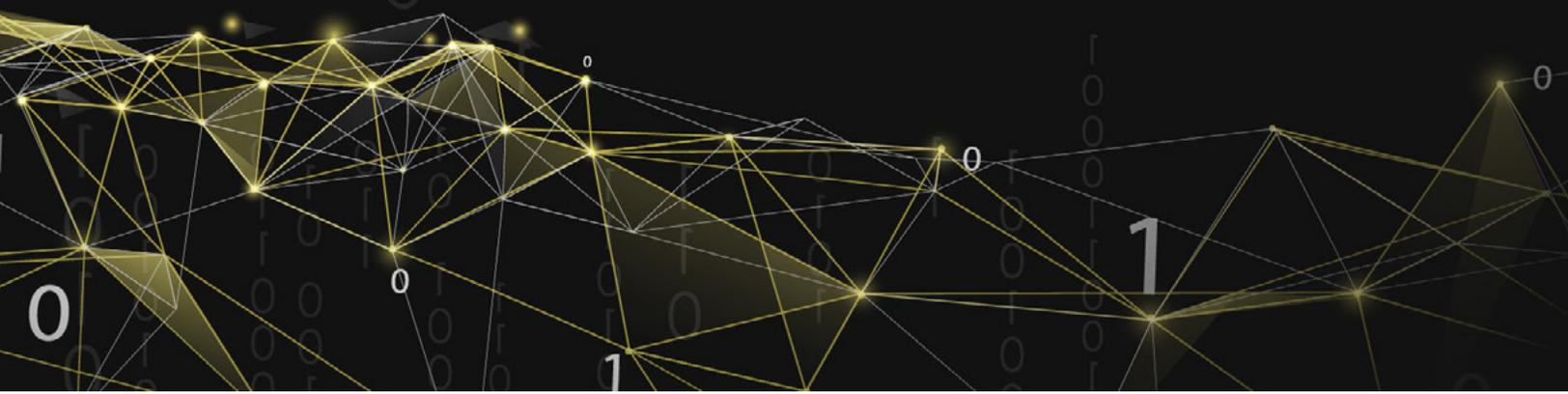
For our internal based Atlassian applications (Jira & Bitbucket), research and probing were required to locate the exposed APIs used to set off the desired webhook events. Once located, the Webhook URLs were used as an initial trigger for each flow. Observing the specific responses and behavior from each app was necessary to curate the final communications via Teams and reduce un-necessary chatter or errors. Defining the variables and deciding on how to initialize each variable within the flow was necessary to deliver an informative notification which makes sense. Specific actions or behaviors are associated to each defined variable based on certain conditions. For example, when a variable matches "Priority 1," the flow will then take action to inform the relevant Teams channel with a matching event title. The output formatting for an event is directly related to the variables within each flow. The output message syntax for each event went through multiple revisions before being considered acceptable.

One of the most important aspects of the project was to utilize malleable templates, which allow for exporting and re-use in similar scenarios. We designed the flows so that only select triggers and variables would need to be altered during future re-purposing efforts. The sustainability of a solution and its potential to be recycled, is one of the main requirements for the approval of a project within Hentsū.



Caveats

- Users must be willing to default to MS Teams rather than email for alerting and reporting
- Not all applications and vendors have the required APIs exposed for webhooks to be utilized as a trigger
- A dedicated and licensed M365 service account is required to host the Power Automate flows
- Flows may require maintenance if the webhook call-backs or variables are altered



Impact

The choice to automate over a fixed platform comes with its advantages and disadvantages. Workflow automation is accomplished with this particular solution. Overall, the automated flows that Hentsū adopted have enhanced team collaboration and increased communication between our global departments. Reducing human error and relying on manual alerting processes is no longer a concern for most of our core systems. The ability to templatize the flows for re-use has added huge benefits and ensured sustainability of the solution. We are looking forward to the enhancement and up-cycling of these solutions for both internal and external use cases.



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