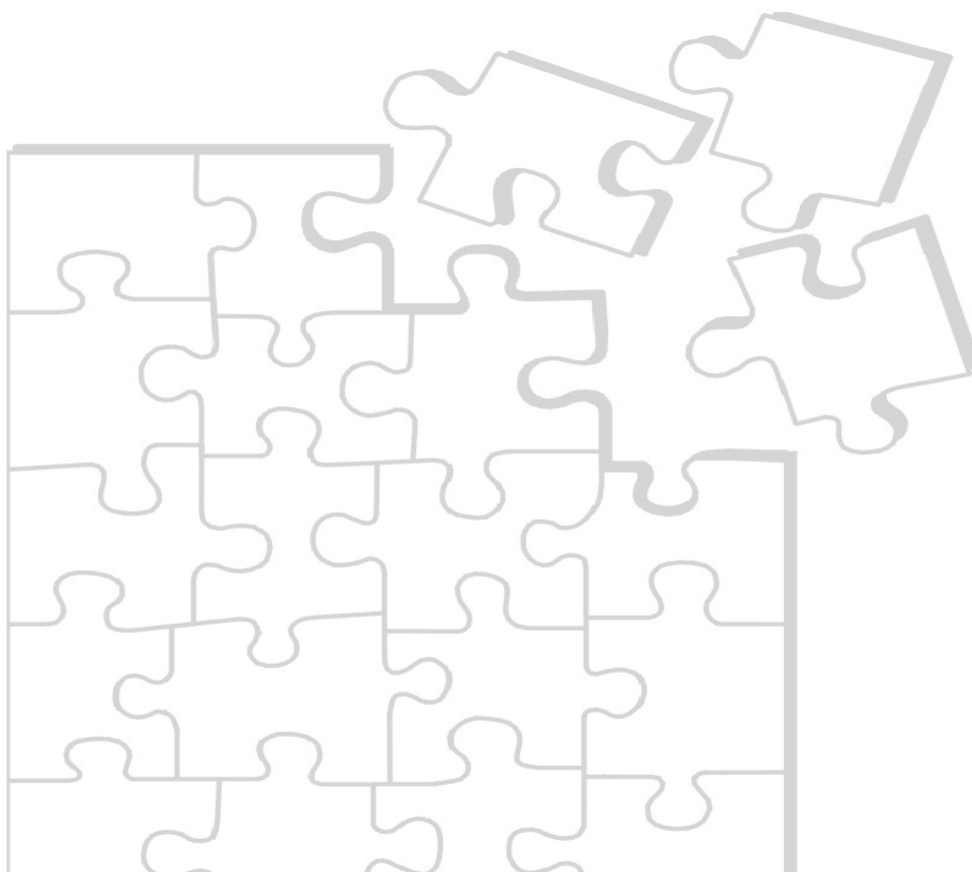




Closing the IT Process Automation Gap



Many IT organizations are in the midst of deploying ITIL processes. If they are using the large NSM vendor solutions with built-in ITIL processes, operational processes beneath the high level ITIL processes do not exist, creating an IT Process Gap. Opalis' complementary solution enables IT staffs to fill in the underlying operational processes that support ITIL's high level processes, allowing IT staffs to automate processes end-to-end. Opalis also enables IT organizations to automate processes across heterogeneous management tools, using pre-built integrations and using an easy drag-and-drop graphical user interface.

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Automating ITIL Processes and Beyond

IT organizations are increasingly turning to ITIL, the IT Infrastructure Library, to help them establish IT process best practices. The key industry drivers behind recent ITIL adoption and interest include the need to establish IT controls to meet compliance requirements, the push for operational efficiency and cost reduction, as well as Business Service Management initiatives to align IT more closely with the business. With the current industry interest in ITIL and IT processes, many if not most IT management vendors label their tools as ITIL-compliant. However, because a vendor labels their product as ITIL-compliant, it does not mean that the product will solve all of an organization's IT process needs. One of the reasons for this is the Process Automation Gap that exists. We begin with a brief overview of ITIL and IT processes, in order to understand the context and what to look for in solutions that assist in the implementation of ITIL.

A Brief Overview of ITIL

ITIL is an industry framework that describes and defines the best practices for improving major IT Service Management processes. Within IT Service Management, ITIL is organized into two main categories: Service Support and Service Delivery. For the purposes of this paper, the focus is on ITIL's Service Support processes, which include processes such as problem, incident, release, change and configuration management. ITIL's strength is it provides the framework for each of these major IT processes by defining terminology, describing structures and process flows, as well as IT organizational roles and responsibilities.

One of the challenges that ITIL tackles is defining IT process best practices that traverse organizational boundaries – in particular, bridging across traditional IT silos. ITIL does this by describing the high level process, which is valuable in developing the overall process flow across an IT organization. However, at the same time, IT staffs must understand that ITIL does not, nor was it intended to be a comprehensive definition of all IT processes and all detailed sub-processes that support the high level ITIL processes. For example, the Incident Management Process is defined by ITIL using the following high level steps:

- Incidence detection/acceptance and recording
- Classification and initial support
- Matching
- Investigation and diagnosis
- Resolution and recovery
- Incident closure
- Incident ownership, monitoring, tracking and communication

As seen from this example, the process definition is at a high level, which provides a starting point for much needed overall process guidance. But it also leaves many unanswered questions and missing details for defining the specific tasks and activities that are required to complete each step in the high level IT process. In reality, IT organizations have a hierarchy of IT processes – starting at the high level processes, below that are intermediate process levels, and at the bottom

are basic, low level task processes. For example, consider the ITIL process step, “Investigation and diagnosis” of an incident. All of the detailed sub-processes and tasks that IT staffs would typically perform to complete the “investigation and diagnosis” step are not directly addressed by ITIL. The sub-processes may include numerous tasks that an administrator would typically perform in response to an incident, such as monitor, retrieve a status, check the data in another tool, update the incident or change ticket, and update the configuration database throughout the workflow life. However, there are so many possible permutations of sub-processes, depending on the incident situation, the administrator(s) performing the tasks, and existing processes. This is probably one of the reasons that ITIL did not venture into defining all of the detailed sub-processes – it would have been too unwieldy to attempt to describe all of the possible permutations of sub-processes for each step. And in many cases, the sub-processes must be customized to fit the processes of each specific IT organization. So although this was a good decision for the creators of ITIL, it leaves a large void for IT organizations that want to implement and automate their IT processes further down the management stack for end-to-end processes.

The IT Process Automation Gap

In response to their IT customers’ need for IT processes, all of the major Network and Systems Management (NSM) vendors like BMC, CA, HP and IBM have, and continue to incorporate ITIL processes, structures, and process workflows in their management solutions. By and large, these vendors are primarily focused on enabling the high level IT processes as defined in ITIL, with some extensions, in order to help their customers attain broader vendor initiatives such as Business Service Management (BSM). This focus for the large NSM vendors makes a lot of sense. Because of the breadth of their product portfolios, they are uniquely positioned to help their customers by facilitating the automation of the high level ITIL processes as they span across their broad portfolios of products and the traditional IT technology silos.

The large NSM vendors’ process efforts mirror ITIL’s approach, where the main focus is on implementing and automating the high level IT processes. Many of these vendors also extend down into some of the intermediate process levels in specific products. But these vendor solutions have not met the need for heterogeneous integration with tools to execute intermediate and low level IT processes. It is this area of intermediate to low level IT sub-processes that the large NSM vendors have left untouched, which Ptak, Noel and Associates (PNA) calls the IT Process Automation Gap. PNA calls attention to the IT Process Automation Gap because while IT organizations do need to deal with their broader, high level IT process implementation issues, they must also be aware that there is a significant group of IT sub-processes not addressed by BSM ITIL process initiatives. And the IT processes in the IT Process Automation Gap present a significant opportunity for IT to automate and reap the rewards of process automation.

Opalis’ Run Book Automation: Filling the IT Process Automation Gap

A Run Book Automation (RBA) tool like Opalis fills the IT Process Automation Gap by supporting the goals of ITIL processes and continuing where the high level processes end. RBA workflows complement the high level process solutions implemented by NSM vendors. For example, the NSM vendor’s monitoring tool detects a legitimate event that automatically triggers the creation of

a trouble ticket. The high level process then does a hand off by automatically triggering an Opalis workflow that queries the CMDB for more information about the failed object, such as checking to see if there is a scheduled change for that object that may account for the failure. If the failure is not due to a change, then the next task in the RBA workflow is to perform diagnostics such as pinging the server, and then checking with the native server management tool to see what might be causing the problem. Once the diagnostics are completed, the RBA workflow interacts with the NSM Service Desk to automatically update the trouble ticket with the diagnostic output and the latest status, and the ticket is routed to the proper tech support. As this example illustrates, RBA actually fills the process gaps that support and integrate with the higher level ITIL automation processes to automate the IT processes end-to-end.

Opalis' RBA is a key leverage point for automating IT processes not only because it is designed to easily build and deploy automated processes, but it also connects with various vendor management solutions that allow IT staffs to automate any chosen IT process in their environment, between any heterogeneous tools. RBA also provides the "missing link" that connects processes upstream to the high level process Business Service Management solutions.

Opalis' RBA solution is purpose-designed to facilitate easy design, creation, orchestration, management, reporting, and built-in actionable management tool integration for IT process automation. Opalis is deployable as a stand alone solution but also as a complementary solution when paired with the high level IT process solutions of the large NSM vendors, as depicted in Figure 1. As the Figure shows, Opalis' solution extends the value of the high level ITIL processes by "completing the picture" and filling in any supplementary process automation tasks that IT staffs require to automate their processes from end-to-end. Opalis' solution also provides critical integration with a multitude of point management tools that enables the creation of vendor-agnostic automated processes that span between the high level IT processes and the point management tools that are already being used to manage the environment.

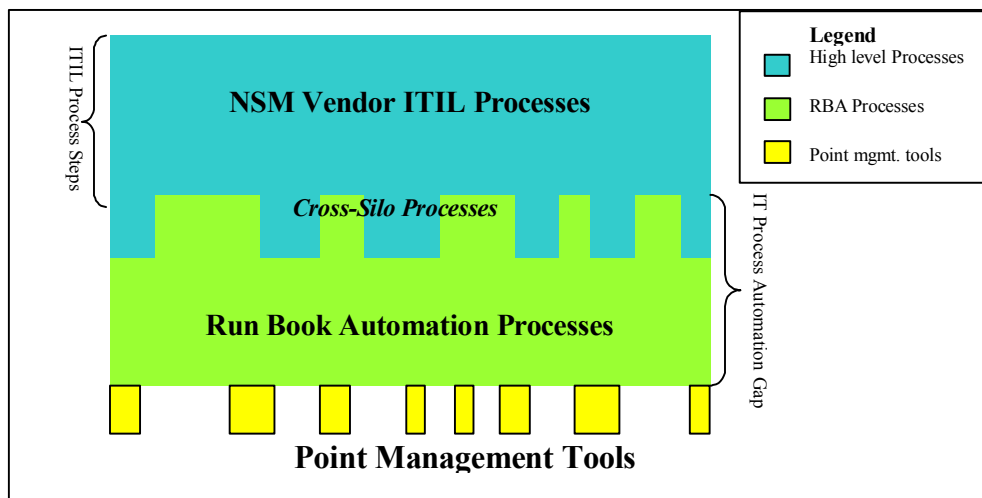


Figure 1: Complementary Solutions: High Level IT Processes and RBA Processes

Opalis and RBA: A Key Leverage Point for Automating IT Processes

Well defined workflows and strong governance are the basis for implementing high quality and efficient Incident, Problem, Change, Configuration and Release processes in an IT environment. Achieving this goal is a challenge for most IT organizations for a number of reasons. First, typical workflows often lack detailed documentation or they frequently exist only in the minds of a limited number of key experienced support personnel. Secondly, ensuring consistency in execution is challenging when considering the multiplicity of IT staff, locations, organizational groups, applications, users, infrastructure, management styles and management tools that may be involved in a single process workflow. For example, a sequence of tasks in a workflow may span multiple organizational silos and/or locations, as they touch multiple applications and infrastructure domains, with various IT personnel using different management styles and tools. In this environment, it is impossible to ensure consistency and efficiency using ad hoc manual methods, and this is where automated methods are valuable.

Opalis' Run Book Automation enables well-defined workflows by providing a graphical user interface to design workflows, out-of-the-box best practice workflows, the ability to automate and test workflows to ensure that each workflow produces consistent results, and quality data for trending and analysis. In addition, automation of processes supports governance and compliance policies because it ensures that the process consistently follows the defined requirements. Opalis' audit trail provides valuable documentation for compliance purposes.

The strength of Opalis' Run Book Automation solution is its out-of-the-box capabilities that make it easy to design, build, integrate, orchestrate and manage automated processes. The easier it is for users to design and build automated processes, the more likely they are to deploy and use them. These built-in automation capabilities are highlighted below:

- ❖ **Pre-built Workflow Processes:** Opalis provides over 90 out-of-the-box workflow process templates for ITIL Incident, Problem, Change, Configuration and Release Management that are starting points for automating processes. These workflows are used as-is or customized to fit specific requirements.
- ❖ **Pre-built Workflow Objects:** Over 250 out-of-the-box workflow objects, which are reusable pre-defined process object/actions are used to design automated processes through a drag-drop-connect graphical interface to embed workflow object icons in automated process workflows. Objects perform file processing, email processing, database interaction, event or schedule triggers, communication/notification, system operations, and standard protocol integration.
- ❖ **Pre-built Integration Packs:** Over 25 out-of-the-box integrations with a variety of management solutions such as BMC Remedy, Atrium, and Performance Manager; HP OVO and Service Desk; CA Service Desk; Net IQ; Microsoft SMS, MOM, Active Directory, and Virtual Server; IBM TEC and Storage Manager; EMC Smarts, Legato NetWorker, and VMware Virtual Server; Cognos; and Backup Exec.
- ❖ **Built-in automation orchestration:** Opalis Integration Server controls process automation orchestration.

- ❖ **Built-in process monitoring Dashboard:** The status of automated processes are tracked and displayed via a Dashboard.
- ❖ **Rule-based process workflows:** Control processes and execution using policies based on security, user groups, configurable dialogs and more.

Opalis Process Automation: Building Blocks for Automating IT Processes

Opalis allows IT staffs to begin automating simpler, low level processes that solve specific IT pain points. These task-oriented processes show immediate results and quickly demonstrate the value of standard processes. They are easily tested, which enable IT staffs to use these repeatable, automated processes quickly, broadly, and with more confidence. An efficient way to build automated processes is building them hierarchically – leveraging well-tested, automated lower level processes and combining them to form increasingly complex, composite automated processes. This approach culminates in eventually linking the intermediate processes upstream into the high level BSM solution ITIL processes.

Another advantage of automating operationally task-oriented IT processes is the fact that they are typically faster to implement because of their simpler nature, and they typically span only a very limited number of organizational boundaries. By contrast, implementing the high level IT processes typically takes more time because of organizational hurdles, including carefully navigating organizational and political boundaries. So for IT organizations implementing and automating ITIL processes, taking a “build to the middle” approach is an efficient way to achieve IT process automation more quickly and effectively. That is, simultaneously implementing and automating IT processes from the top-level and the lower-levels, and concurrently building automated processes toward the middle levels where they eventually link together.

Opalis and High Level IT Processes

Opalis’ built-in integration with the high level ITIL process solutions provides a quick and easy way to plug in supporting RBA task process workflows.

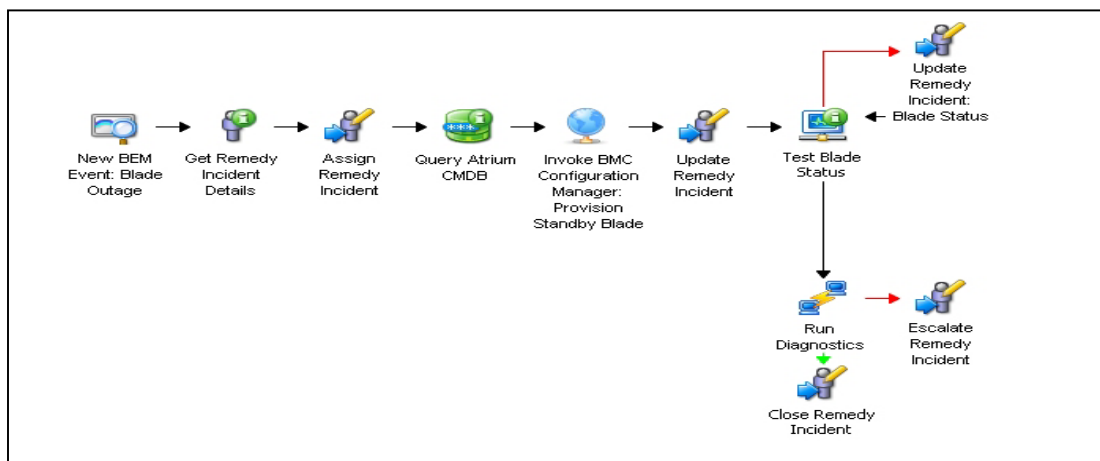


Figure 2: Automated Workflow of Opalis and other solutions (Graphic courtesy of Opalis)

In this way, the Opalis processes become supporting, task specific operational process workflows that support ITIL processes. Figure 2 is a practical example of the power of RBA in conjunction with BMC's IT Service Management 7. It illustrates how the tools complement each other in a heterogeneous IT management environment.

Customer Use Cases

Bank of Montreal Financial Group, a financial services provider, uses Opalis to automate its virtual server management, including handling requests, commissioning, decommissioning and lease expiry. By standardizing and automating virtual machine fulfillment and request processes, staff time required per request was reduced to 2 minutes, from 1 to 2 hours per request before the automated processes were deployed. In addition, they now have auditing and reporting, allowing them to better control their storage use, as well as tracking virtual machine ownership and the associated project.

Chico's, a retail chain with over 475 stores nationwide and in Puerto Rico and the Virgin Islands, uses Opalis to automate IT administrative, maintenance, and business processes. In total, they automated 60 processes across 14 servers. One of their projects using Opalis integrates processes with Microsoft Operations Manager (MOM). Opalis automatically notifies MOM and administrators when processes fail, and automates corrective actions. Michael D'Anna, Senior Systems Administrator, says "I love the fact that Opalis can automate corrective actions procedures for other applications because it means I don't have to spend time coding a resolution script for MOM to run."

Conclusion

ITIL processes provide an excellent framework for IT organizations that are seeking to improve their IT process flows, gain efficiency and effectiveness, and increase the maturity of their management of IT. However, typical manual implementation of ITIL processes requires a significant amount of upfront planning and coordination to lay out the processes end-to-end before moving forward. However, one approach that eases the implementation planning burden is by using a combination of management solutions that automate the high level ITIL processes, and complementing it with a Run Book Automation solution like Opalis that fills in the process automation gaps.

This complementary solution combination enables more rapid implementation of end-to-end IT processes using pre-built process components and workflows, which gives ITIL implementers many startig points for building workflows across IT that fit their organizational needs. Implementers are also free to apply automation, at their discretion, to any part of the processes. Judiciously automating IT processes increases the efficiency and repeatability of those processes. Well-tested, repeatable IT processes lessens the risks for IT by eliminating opportunities for human error, as well as freeing up valuable IT staff resources from constantly performing mundane tasks, and allowing them to focus their attentions on activities that really require human intuition and decision making.

Opalis' Run Book Automation solutions are a quick and efficient way to implement processes and automate where needed. The advantage of an RBA solution is its broad applicability to automate processes at many levels and within multiple groups of the IT organization. Because of its ease of use, pre-built integrations, pre-built best practices workflow templates, and pre-built workflow objects, Opalis provides answers for ITIL implementers about "how" to automate their processes. And for most ITIL initiatives, answering the "how" questions are difficult barriers that hamper progress. With Opalis, ITIL implementers can quickly bypass some of the "how" barriers so they can speed up ITIL implementation and the organization can begin to reap the benefits of IT processes more quickly.



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Opalis Software, Inc.
2595 Skymark Avenue, Unit 206
Mississauga, ON, L4W 4L5
Canada

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About the Author

Audrey Rasmussen leverages her experience of over 28 years in the information technology industry, to help her clients as they navigate through the accelerating changes in the information technology industry. Over the years, she had developed experiences in various contexts (expertise in systems and application management, working with very small companies to very large corporations, industry specializations, business focus, and technical focus), which combine into unique insights into the information technology industry. Previously, Audrey served as vice president at Enterprise Management Associates, where she focused on systems and application management. She was also a systems engineer at IBM, where she supported customers with small-to-medium sized distributed systems, as well as industry specialties. Audrey was also co-author of the Network World Fusion Network and Systems Management newsletter for several years, and she is widely quoted in publications such as Network World, InformationWeek, Computerworld and eWeek. Audrey holds a Bachelor of Science in business administration/finance from the University of Southern California

arasmussen@ptaknoelassociates.com

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