Challenges in End-to-End Automation of IT processes

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Jochen Kellner <jochen@jochen.org>
• Current role service architect
• Formerly SAP basis admin, team lead
• Working for a large IT systemhouse
• Large SAP Systems, lots of users
• Volatile environment
• Security
Agenda

- Motivation
- IT processes?
- Challenges
- Solutions?
- Impediments
- Wrap-Up
Motivation

- IT systems are getting more complex
- Less people, more work, required to get faster
- Large organizations → Taylorism divides work in small tasks
- Each switch to another (manual) agent takes roughly a day
  Even for a 10 minute task…
- Workflow optimized for execution time, throughput, or utilization?
IT processes?

Let’s look at Changes:

- Request for Change creation
- Change organization/planning/approval
- Do the (technical) thing
- Close change, document work
- Get the information back to the requester
• Simple technical changes are a solved problem: we have SALT, ansible, and similar tools
• Integration into ITSM processes seems the next challenge (for us) Can we reduce these processes?
• Changes to CMDB, admin tools (DNS, IP Management,…)
• Integrated processes along the core value chain through the organization
IT processes? (3)

• How to measure complexity of IT processes?
  • Number of steps, agents, processing time, work needed
  • Size of data to (re-)enter
  • „How many forms to fill for server installation?“
Challenges

- Get cooperation from all parties (seeds, use opportunities)
- Get the needed information to the agent
- Get the request with structured data that can be reused
- Aka Service Request (process: start, defined input, predefined steps, end, reproducible outcome)
- (directly) use the request data in automation (needs verify)
- Update documentation (e.g. CMDB)
- ITIL change for documentation – really needed?
• Make (manual) tasks and processes vanish: create a change to automate a task away instead of “everytime we need to do X, create and manage a change”
• Exposure of APIs and using them instead of manual processes (contract between provider and consumer)
• Desired state: make it idempotent
• GitOps instead of ExcelOps – needs re-thinking and tooling
Impediments

- Institutional inertia (this is now changing for us)
- Excel as a first thought (use the “right” hammer^Wtool)
- Time to rethink the whole process (as seen from the requester)
- Manual data entry (possibly in Excel...)
- Duplicate data entry
Wrap Up

- Technical automation is mostly solved
- Remove manual processes
- Make existing data usable for automation
- Use existing data instead of manual re-entry
- Get all needed information first, then execute
- Fail fast. Fail safe?
“Eliminate, Optimize, Automate”
Questions and answers

Questions and remarks?