



## CASE STUDY

# Automation & DevOps Issues in Life Sciences

### YEAR

2020

### INDUSTRY

Life Sciences

### EMPLOYEES

120k+

## Challenge

Our client, an innovative life sciences company with goals of helping people living with certain chronic organ problems, was looking to increase automation that could be applied to their processes. The client manages configurations of over 2,000 virtual servers manually. Although the team has a long-term goal to move to a highly automated infrastructure, they find themselves hindered by the time required to satisfy day to day requests to modify systems. Early discussions with the client revealed three specific problems that, when addressed, would yield immediate benefits to the team: #1 - Due to the nature of their business, the client must maintain a standard of "minimum necessary access" to protect sensitive healthcare information. In many cases, there were users that needed access to systems on a temporary basis. As a result, there were frequent (often daily) requests to modify systems to grant, and subsequently revoke access to various subsets of systems for different groups of users. The unpredictability of the requests could only be managed by a tedious manual process. #2 - The client was faced with frequent requests to adjust the memory and CPU capacities of virtual systems to address changing workloads of the various groups that they were assigned to. Although the individual changes were easy to implement in VMware™, availability demands for systems meant that changes usually needed to be made in the middle of the night. The client wanted to streamline and automate the changes so that they could happen at a scheduled time without the need for manual interaction. #3 - They also needed to remove the toil associated with deploying new systems. Although there is automation for creating a cookie cutter system that included creation of a couple of common system accounts, there was customization necessary that all had to be performed manually. Since the client uses CyberArk™ to centralize access management, one of the more time-consuming activities related to setting up machines was configuring matching user accounts on the unix systems and in CyberArk. The CyberArk setup required navigating through several pages in a Web UI, so even with a modest pool of machines and a handful of users, there might be several hours of redundant work required to get all of the necessary accounts set up.

## Solution

iuvo took charge of the automation process by using our expert level DevOps knowledge and writing ansible playbooks to help solve their issues. For VMWare and permissions issues the client was using a tool called ServiceNow™, which operates as an orchestration tool for machines. Prior to the new automation being created, ServiceNow was acting as a ticket tracking system that would route change requests to appropriate individuals for action. Using ansible, the process is now completely automated. Instead of the ticket going to a human to complete the work, the ticket is now routed to a human for a simple approval and the ansible playbooks do the actual work, including revoking privileges after the allotted time. In the case where permissions are granted and later revoked, the later step is scheduled without further approval required. The work above involved coordinating with the client's ServiceNow team to establish standards for integrating the ansible with ServiceNow. These standards support the work done so far and will facilitate future integration efforts.

In addition to the work above, we also provided an ansible playbook that accepts an easily written configuration file and creates consistent user accounts in CyberArk and on the appropriate unix systems. Instead of a tedious manual process that takes hours, multiple accounts can be created on multiple machines in a matter of a few minutes. (including the time required to write the configuration file.) Although not currently integrated with ServiceNow, the same standards were followed as in the previous cases and integration should be straight forward once the ServiceNow team has time to do the work.

Most importantly, all of the work we did with this client, from the conception and planning to the ansible playbooks development to implementing the automation was done while training their IT team. We ensured at least one person on their team was learning from what we were doing so that they could continue creating and implementing ansible playbooks and continue to share that knowledge internally. iuvo ensured our experts were mentoring and providing cooperative engineering because our goal is always to ensure our clients' long-term success.

## Results

### Hours to Minutes

IN TIME SAVINGS

### Cost Savings

IN TIME EFFICIENCIES

### Retention

LONG TERM IMPROVEMENTS LEAD TO  
EMPLOYEE RETENTION

### Education

ENSURING LONG-TERM SUCCESS AND  
CONTROL

## Outcome

The work iuvo completed was instrumental in securing significant time savings for the client. Their work managing these manual processes went from hours each day to minutes with the onset of the automation we developed. The hours saved directly translates into cost savings for the company because staff members are able to focus their time on proactive, meaningful work. With more interesting work to do and few hours of sleep lost, we expect the long term improvements to lead to improved employee retention. Education is by far the biggest benefit the client received from the work we completed for them. The folks we mentored were selected specifically by management with the confidence they will evangelize the work and spread it throughout the company while we work on other important projects for them.

## Ready to discuss your IT challenges?

Request a consultation and we will connect you with the right solution.

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