

# Passing The Torch

Building a New Grad Program to Mentor the  
Next Generation of SRE

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# Quick Introduction

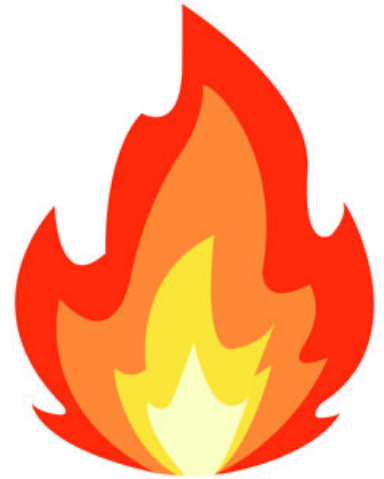
- Started my career at a helpdesk for a large independent Canadian ISP.
- Moved into Systems Administration by handling the “abuse@” mailbox and configuring ISDN modems for corporate clients.
- Once all the Telco’s bought up the independent ISP’s, I moved into webhosting, then into the online credit and gift card processing market.
- Spent a lot of time in the web 2.0 space toward the end of that era at the point where it was starting to bridge over into our current generation of social media.
- Currently run a large DevOps professional services consulting group as part of Pythian, a full-service professional, and managed service company.



# Allow me to Set the Stage



- We saw an undeniable job market shift.
- What was already a competitive job market turned fierce.
- The cost to acquire and retain talent increased. Meaning that It started taking a lot longer to find, hire, and start new talent
- The increase in working from home, or hybrid options opened up new opportunity for some companies, but for others (like mine) introduced additional competition while eroding what was a really awesome differentiator



# So... What did we do with this Data?



## Where?

- We already hire across multiple world wide geographic locations I.E. we already have access to a large talent pool

## How?

- We reviewed our established hiring process.
  - Our process was still solid, but we found that it was a bit slow. More so now than in the past people were entertaining multiple offers regularly and we had experienced a few instances where a candidate had accepted another offer before we were able to complete our process.
  - We tweaked and tightened up a few parts of our process to do our best to make quicker hiring decisions while not compromising the process and our desired level of quality.

# But What about “The Who?”

- The review of our existing process identified a fundamental truth about the way we hired.
- We would always tried to hire the most senior person we could.
- We had constructed a false narrative that the work we were doing could only be done by “the most senior person”
- We couldn’t conceive of how we could possibly bring in less seasoned resources to “do what we do”  
**spoilers:** we were so wrong....
- In short we were closing ourselves off from a significant portion of the talent pool, in large part because of our egos.



The solution that we decided upon, was to build our a more robust career progression framework, and to start an “Emerging Talent” program for new graduates.

***Sounds pretty simple right?***

As with most simple things, there is a lot of hidden complexity that you don’t discover, or appreciate until you attempt to execute your “simple solution”





Why?

# We stand upon the shoulders of giants

- They aren't teaching what we do in schools.
- We are all here because we had multiple people take us under their wing when we were younger and help us to learn the craft and to grow.
- We must shoulder the responsibility of bringing in the next generation of SRE/DevOps people
- There is a higher bar of entry for SRE/DevOps people.
- There are a lot of "other" people who get tasked with doing the SRE/DevOps/Infra work who are not passionate about it because there aren't enough of us to go around. In a lot of cases these people aren't following best practices and there are often quality, reliability, and security concerns etc.
- By mentoring the next generation, we can help them avoid some of the mistakes of our past
- We can instill great habits and standards from the start
- It is important for us to "pay back" the investment that our mentors made in us



# HOLD ON

# The business side of things – I.E. What's in it for me (the company)

- We unlock access to a bigger talent pool
- We will have a healthy pipeline of fresh, excited people joining the company every year, and subsequently "graduating" out of the program and into larger roles in the company
- They will be budget friendly compared to your 10-20+ year senior resources
- With a good career progression framework in place, they will hopefully stay with the company longer as they have more opportunities to grow.
- Allow us to build a good partnership with local colleges and universities
- Help us achieve velocity with some of our projects
- It will provide coaching/mentoring opportunities for the more senior members of the team which will help them with their own career advancement
- We are good corporate and community citizens



# Initial program framework

We had never done this before, so we had to make a few wagers when we were designing the program. The goal of the program was that after a decided upon period the new grads would achieve the current qualifications for an entry level engineer in our company.

**Note #1:** This program is not us bringing on interns or CoOp students. The program is for those people who are just graduating or within a year of having graduated.

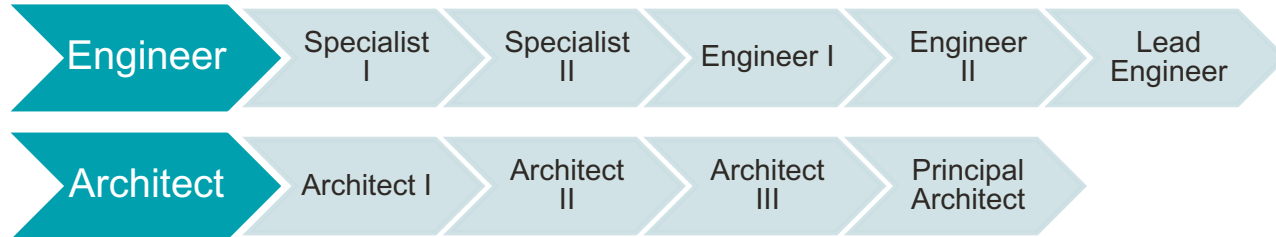
**Wager:** We would mostly be dealing with people with almost 0 SRE or DevOps knowledge, or experience.

**Wager:** We guessed that our program would take someone with 0 knowledge/skills in SRE/DevOps and get them to the point where they would be performing at a junior engineer level in 2 years.

Before the New Grad Program:



As a result of the New Grad Program







# Interview and hiring:



We were right, over 95% of the applicants we talked to had almost zero knowledge about SRE/DevOps. They had maybe heard about it in a paragraph in one of their textbooks, a very few had used some basic tooling for one or two of their assignments.



We thought it was going to be difficult to find people. We were wrong, and we had an abundance of choice.



We quickly realized that we were some of the first interviews that these young people had ever gone through. We made a commitment to go above and beyond to ensure that the experience was positive for them.

# What we learned from the hiring process

We have a good process in place for hiring at my company but looking to hire people who's only experience was knowing the textbook definition of SRE/DevOps uncovered just how much of our current hiring process relied on many unconscious assumptions. When we registered that we were really and truly dealing with people in their first, or possibly second professional job we had to adjust how we interviewed and what key attributes we were looking for.

Our traditional technical skills evaluation became mostly optional. We could work with a lot of the candidates around SDLC, a bit of Git/GitOps and MAYBE some CI/CD but other areas such as IaC, Observability, Alerting, DR/HA, Security, and even public cloud were just not something they had been exposed to or may have only touched on in a school project or two.

Thankfully our #1 key attribute which is a growth mindset, eagerness to learn new things, and critical-thinking came in spades with our new grad candidates.

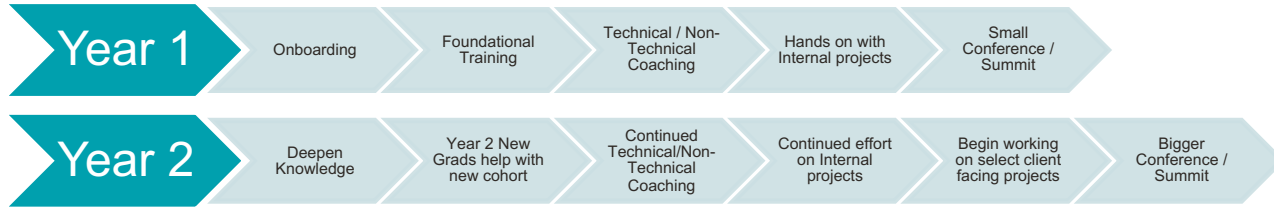
# If you Buld it...

- We hired 2 amazing new grads, and as is the case with new hires we found ourselves with a few months before they started to get the roadmap for them out of our head and ready to implement when they arrive.
- We want to give the new grads the best experience we can, everyone on the team and in the company were aligned.
- When we started getting into it, we started shining lights into dark corners and understood that we had a lot of work to do in order to bring people onboard with almost 0 prior experience and more so not to pass our bad habits onto the next generation.

**CAUTION**

**ENTERING  
CONSTRUCTION  
ZONE**

## New Grad High Level Roadmap:



# Onboarding:

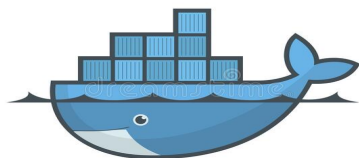
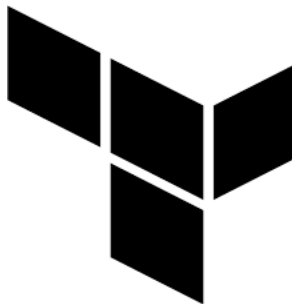
While preparing for the new grads we realized that our onboarding process assumes a lot. When you hire people who have already worked for multiple companies of various sizes and have held the role already you end up not having to (or at least not thinking you don't have to) cover a lot of the basics. For the new grads we had to develop, or add to existing onboarding topics such as:

- Google Workspace fundamentals
- Calendar and Meeting etiquette
- When you are working in the office etiquette
- Working from home etiquette
- Internal & external communication expectations
- Time tracking, and reporting
- A greater focus on the fundamentals of our tools without an assumption they've used them at another company (I.E. Jira, Confluence, Slack, etc.)



# Foundational Training:

Defining the technical roadmap was easy, we know what tech we work with, and we put in place a roadmap for the new grads to learn that tech, ensuring that we had budget and funding lined up to support their development.



# Foundational Training:

Tech changes, and just using some modern tech here and there doesn't mean that (organizationally) you are doing SRE/DevOps.

We needed to develop and provide our new grads with a cultural onboarding to the larger concepts, philosophies, and history of SRE/DevOps focusing both from industry perspective as well as our own corporate history of SRE/DevOps and how that all translates into team culture shared values and goals.

While developing these sessions we understood that they would be important alignment tools for all new SRE/DevOps hires not just the new grads.



# Technical and Non-Technical coaching:

- Identified 2 people who would be the initial mentors for the new grads
- Worked with them leading up to the arrival of the new grads to help bring the roadmap to life
- Made sure they were aligned
- Plans were made to give others on the team the opportunity to work with, and mentor the new grads.





# Working on internal projects:

*What is an "internal project" at my company we're consultants, we don't have an app we work on, but we do have internal projects that we participate in to build out reusable artifact, reference architecture, code "accelerators" and other tools that we develop to do our client projects with a higher level of maturity (I.E., don't reinvent the wheel) and efficiency (I.E., reusable artifacts).*

Prior to the new grads these internal efforts had minimal structure and management to them. It was important work, but it was also a lot of "rainy day" work.... And as we all know the rain never comes.

We decided with our new grads coming on board we would run the internal projects with the same rigor as the client facing projects. This would allow the new grads to learn how to deliver project work in a lower-stress, lower-risk environment where stakeholders were all internal and deadlines were mostly arbitrarily set by us.

# Working on internal projects:

- Deciding to run our internal projects “**properly**” exposed us to more of our own inconsistency, lack of process, and lack of documentation.
- It presented us with the opportunity to take a lot of the how we deliver our work which to this point had been mostly tribal knowledge, and relying on strong, and generally senior people to “carry things over the finish line”
- And we decided that was not how we wanted to continue to operate as a team.
- For the record, we did know this before the new grads, but very much took the “if it isn’t broken...” approach. And to be honest it was broken; we just hadn’t hit that point yet were we decided to fix it.



# QUEUE THE MONTAGE!!



# Putting our house in order:

The impending arrival of the new grads gave us the “kick” we needed to put our house in order and start to really define our team standards around things such as:

- Coding Standards
- GitOps workflows and standards
- Deployment standards
- Communication standards
- Ticket system setup for projects and reporting
- Documentation tools and standards

We also had the chance to make some decisions around working towards eliminating some old technical debt, and to try and not pass that on to the new grads.

It also started to give us answers to the uncomfortable questions around why only the “senior most people” could do the work.

While starting with our internal projects these decisions are creeping their way into all the work we do.





# They're here! – Lessons learned (so far)



We dramatically underestimated the eagerness, and speed that they learn at. Coming out of University they were still very much in “Learning” mode, and we found that we had to move them along faster than we anticipated.



We wanted them to be in the office, We thought that for their first, or maybe second job that they would still need that structure that an office provided. Our offices have reopened but they are now being used more as a gathering place, rather than a daily workplace. We're considering our position on this as we look to the next cohort.



We do have to spend some extra time setting them up, explaining process that we just take for granted and what we are trying to achieve and the all important why, and how this all comes together. But that's okay because it forces us to “show our work”

# They're here! – Lessons learned (so far)



We are doing a lot more code review, pair programming, and test-driven development, and in general doing what we would in the past say we were doing.



We have proper test/sandbox environments because of the new-grads, which is a big win for the whole team.



Bad habits, bad/lack processes, bad/lack of documentation, and technical debt don't happen overnight. It takes more than a few months to clean all of that up, and stop it from creeping back in.



- This is not a “Big Company” problem.
- Ensure that learning how to coach and mentoring is on your development roadmap. It’s not just a “Manager” skill
- You, and your team will learn as much, if not more from your new grads than they learn from you.
- We need more well trained SRE/DevOps people out there, and through mentoring and the apprenticeship model we can drive standards and quality.
- More people doing SRE/DevOps != less opportunity for us.

**My Challenge to all of you:**

**Commit your Company/Team/Self to mentoring 1-2 brand new people per year**

# Thank You.

Questions?