

Report of companies visit

Wednesday 14th of November 2018, Tokyo, Japan

1 Introduction

This one-day program consists of visiting 03 companies: Amazon Web Service (AWS), Pixie and NTT Communications.

I choose to visit those companies because of the following reasons:

1. They have an important place on the Internet ecosystem here in Japan and in the world
2. I was really interested on how they use new technology to run their services
3. It will be an unique opportunity to discuss with professional in the field and to present my project with OOL in order to receive some comments.

My objective is to gather ideas from feedback and comments I will receive to improve the project I am working on.

2 Preparation

In order to prepare in advance the visit, we were creating some questions to be sent to each company before our visit. The questionnaire was divided in 3 sections; below is the list of the questions:

General information:

1. What kind of service and scale of service do you deliver in Japan?

Technology used:

2. What kind of network technology do you use?
3. What are the most challenging parts on managing the network?
How many people are working on the network operation?

Stuff training:

4. Do you provide training to the staff for the operation?
What kind of training?
How many people?
For how long?

SDN technology:

5. Do you use SDN technology?
What are the use cases?
Why did you decide to deploy the technology?
From when do you use SDN?
Is it possible to see a demonstration?
6. What kind of issues did you encounter with the technology?
7. What advantages/benefits did you get from the technology?
8. Most survey said that the concern about SDN is the complexity ([Source: https://www.packetdesign.com/blog/comparing-and-contrasting-sdn-across-the-pond/](https://www.packetdesign.com/blog/comparing-and-contrasting-sdn-across-the-pond/)).
What is your opinion about that?
What about the security?

9. Do you have any recommendations regarding SDN technology deployment?

3 Details of the visit

3.1. Amazon Web Service (AWS)

Location: 1-8-1 Shimomeguro Meguro-ku, Tokyo 153-0064, Japan

Visit time: 10:00 to 13:00

Visitors:

- 金海 好彦
- 横山輝明
- 森藤 福真
- Santatra

We were received by two representatives of the support team: 角川 and 関山. They presented generally how Amazon is organized and also the cloud service they offer to customers. Before starting to discuss about the questionnaire, they gave us a demo regarding AWS Virtual Private Cloud (VPC) service.

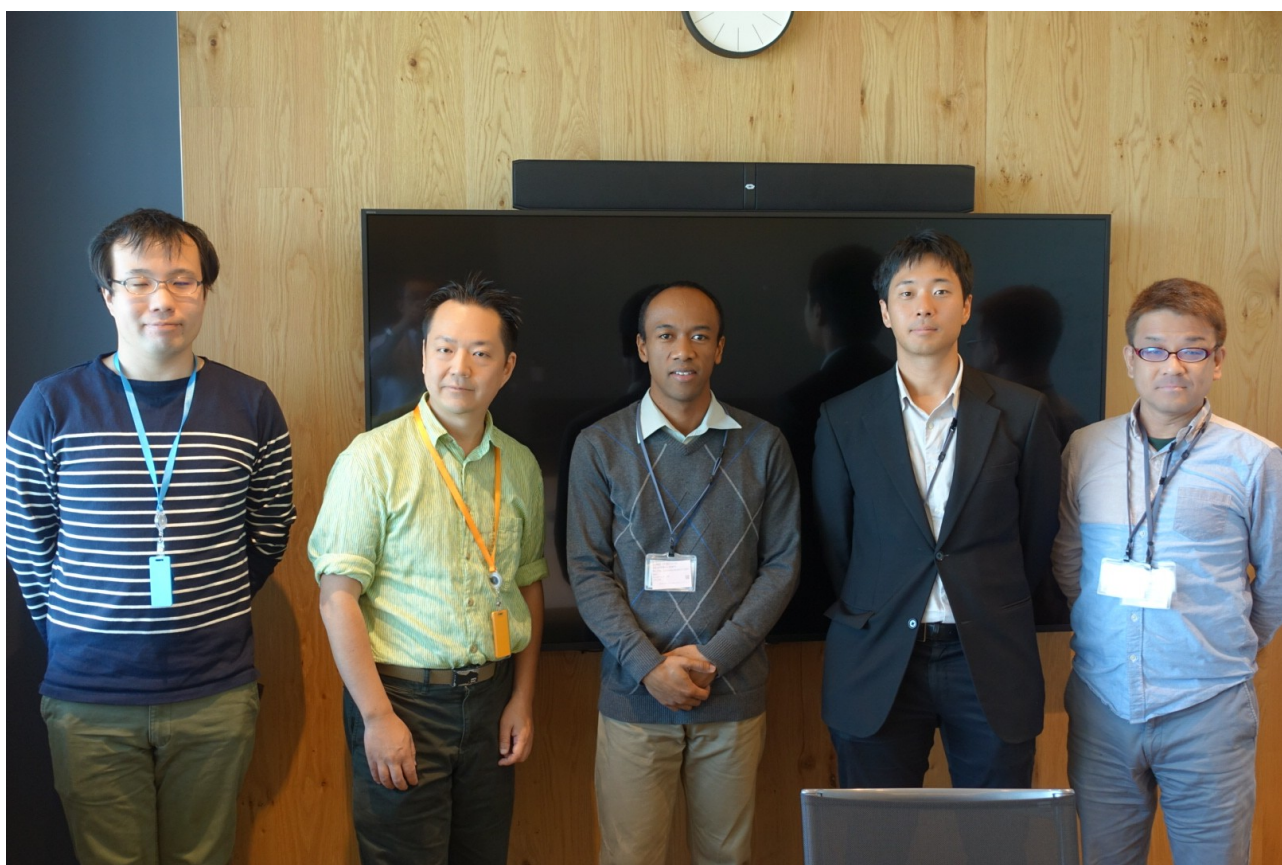


Illustration 1: From the left side, Mr 関山 and Mr 角川 from AWS.

3.2. Pixie

Location: Iidabashi Grand Bloom 2-10-2 Fujimi, Chiyoda-ku, Tokyo 102-0071, JAPAN

Visit time: 14:00 to 16:00

Visitors:

- 横山 輝明
- 森藤 福真
- Santatra

We were received by Mr Marc Bruyere, who is a researcher at Internet Initiative Japan (IIJ), from the University of Tokyo. Before starting his presentation, we were trying to define what is SDN from our own point of view. It was very important that everyone was in the same level of information, in order to have a good understanding of his presentation which was about the use of SDN at an Internet Exchange (IX) called SDX. Especially, the cases of Pixie, NSPIXP and TouSix, which is an IXP in Toulouse France, were presented.



Illustration 2: From the right side, 山本 成一, researcher at the University of Tokyo, and Mr Bruyere, researcher at IIJ.

3.3. NTT Communications

Location: Granpark Tower 3-4-1 Shibaura, Minato-ku, Tokyo 108-8118, Japan

Visit time: 17:00 to 19:00

Visitors:

- 横山 輝明
- 森藤 福真
- Santatra

We were received by Mr Kenji Arai and Takeo Saga, they are in charge of the cloud service in NTT Communications. After I introduced some slides about myself and my project at OOL, they presented the project on which they are working on with McLaren Formula1. They are focusing on the application of SDN on WAN technology called SD-WAN service. A demonstration of the tool was done, followed by Q&A and discussion.



Illustration 3: On my left Mr Arai and on my right Mr Saga, from NTT Communications.

4 Conclusion

I have learned and seen different application fields of SDN during this visit, mainly in datacenter part, at IX level and finally at WAN part. It was a very rich experience because not only I had an opportunity to visit big Internet firms, but also I was able to get comments for my research. What I understood during this visit is the importance of defining a final goal, our aim, which will help us to easily select the appropriate tool in order to achieve it. I have identified during this visit two important terms for helping to understand SDN, they were “programmability” and “automation”. My day did not start well because my train was late so I was not able to come on time for the first visit, however everything was fine and I was very satisfied of my visit. Finally, I thank 金海 好彦, 横山輝明 and 森藤 福真 for their help/support during this visit, and OOL for giving me this opportunity.