



NTT Communications Group
NTT America, Inc.

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JANOG32 / 運用チームの作り方

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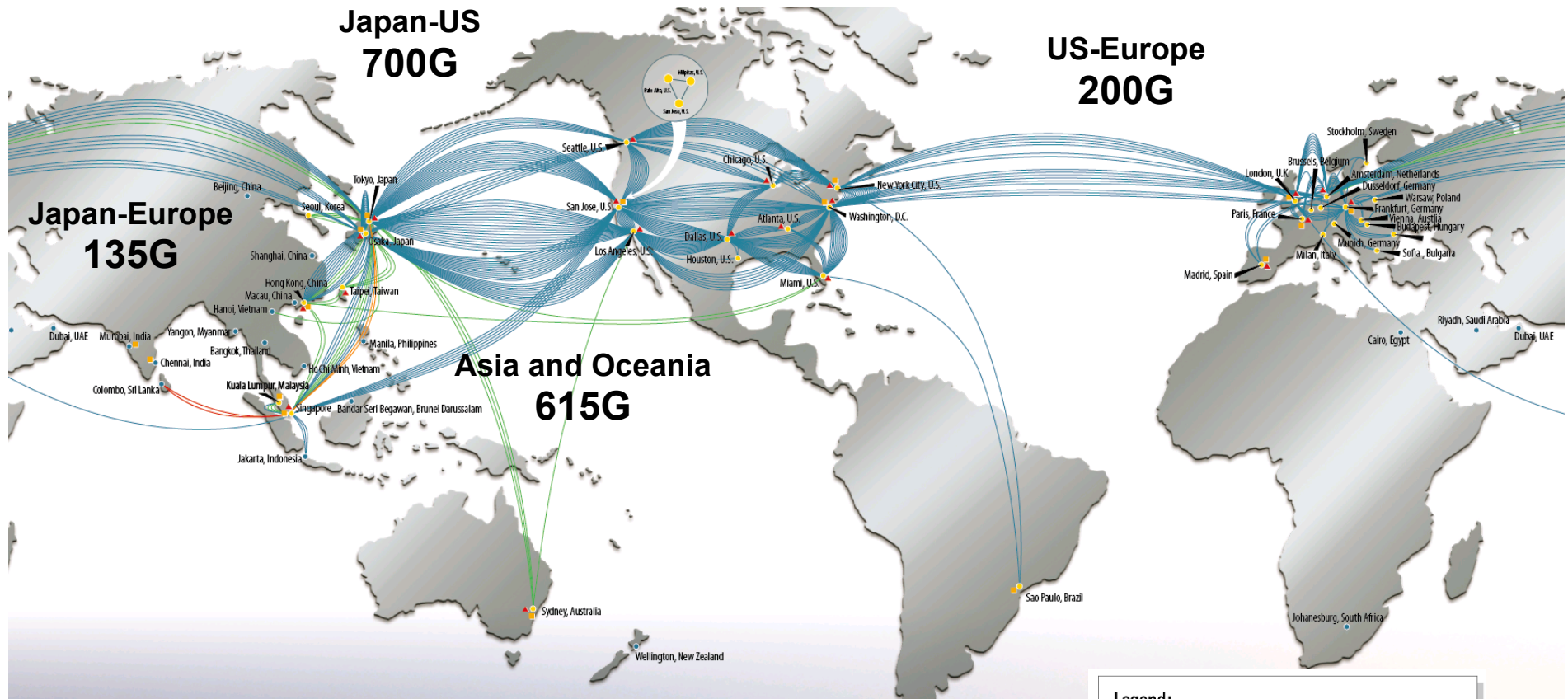
Who am I?



- AS2914 (Global IP Network) Ops -> Dev
- バックボーンオペレーション(欧米亜)、開発業務
- 2012年9月末より米国赴任中

Operator and Developer of the backbone (Japan, Asia, Americas and EU)
Not a jedi yet, but still just a padawan ☺
Transferred to the US from Japan in Sep 2012

What's AS2914?



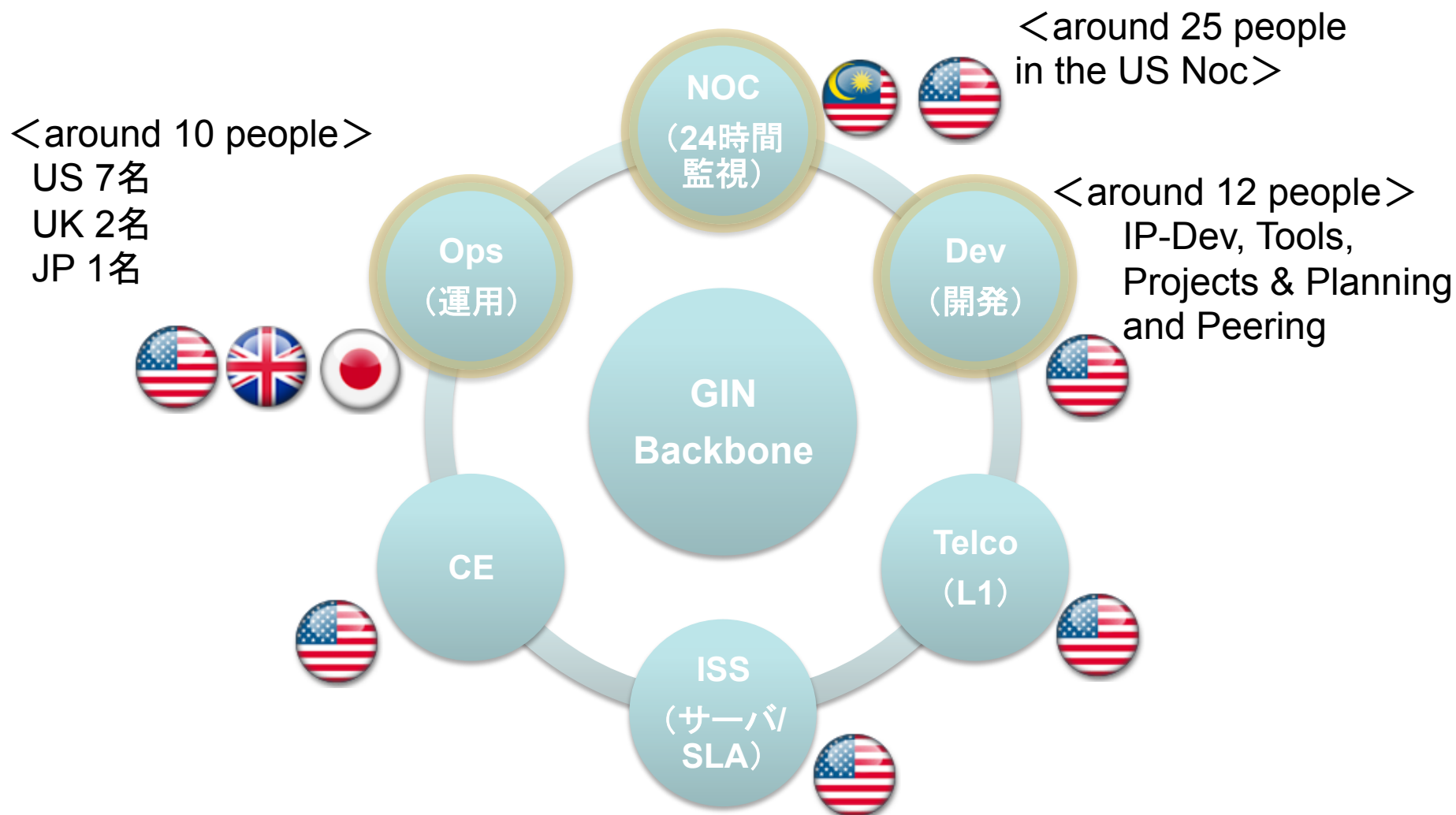
500 routers in the backbone
Especially in Japan, there are some CE routers
connected to customers.

as of April 2013

アジア(特に日本)では、バックボーン配下に顧客収容ネットワークがある。

AS2914 バックボーン技術チーム体制

Organization Chart – Technical teams



このほか、セールス部隊や、アジア各国内ネットワークを担当する部隊(東京、アジア各国現地法人など)が居る。

バックボーンでトラブルが起こったらどう連携していますか？

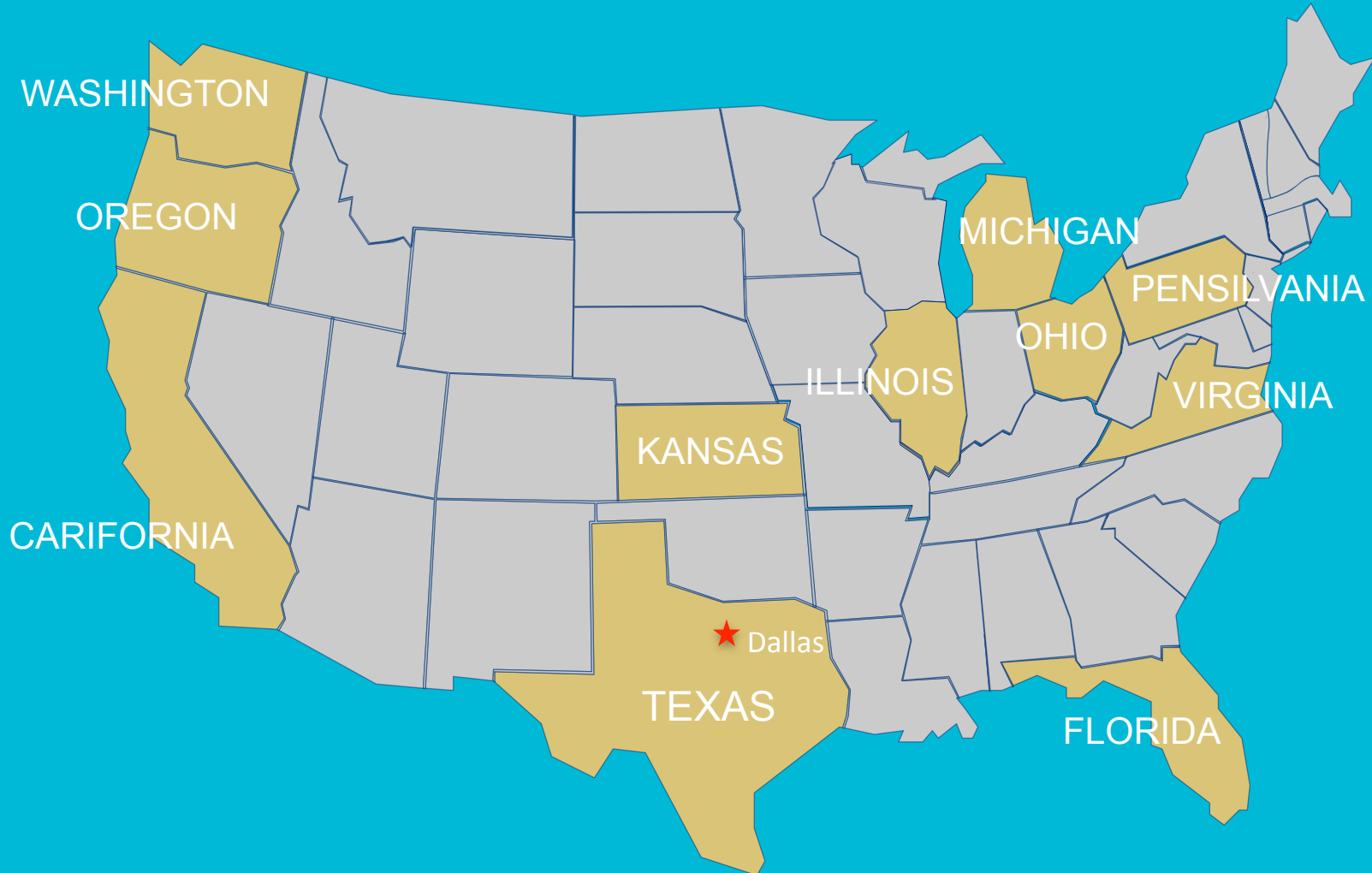


What if a trouble occurs in the backbone?



- Noc is in charge of first/basic troubleshooting (24h/365d), and also a contact point for customers.
- Ops takes care of any trouble if it's complicated, looks at it and fixes it. They also contact Venders to analyze the trouble.
- Dev takes care of deep analyzing the root cause. They keep in touch with venders deeply, and test upgrade codes etc.

Our work locations in the US



Everyone except Noc works from home

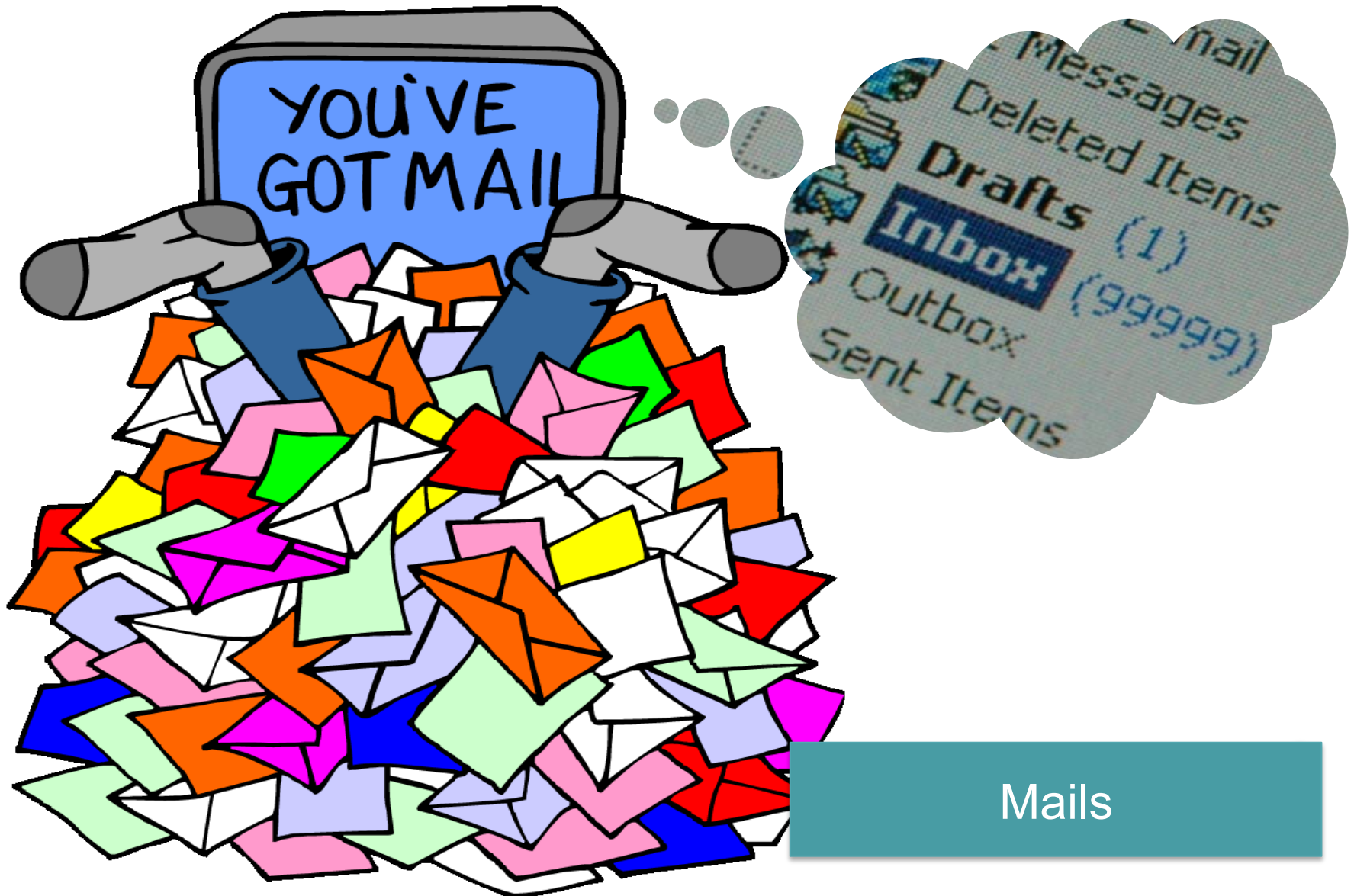
オペレーションチームのナレッジ／情報共有 How to share information within Ops



Telephone Conferences



オペレーションチームのナレッジ／情報共有 How to share information within Ops



Mails

オペレーションチームのナレッジ／情報共有
How to share information within Ops



Jabber



オペレーションチームの教育

How to train a new employee



Training by vendors and colleagues
(onsite & by remote)



メーカー・先輩による研修
(オンサイト&リモート)

オペレーションチームの教育

How to train a new employee



先輩：
「俺の背中
を見ろ」

Colleagues say “Look up at me,
and just grow!! You can do it.”

オペレーションチームの教育

How to train a new employee



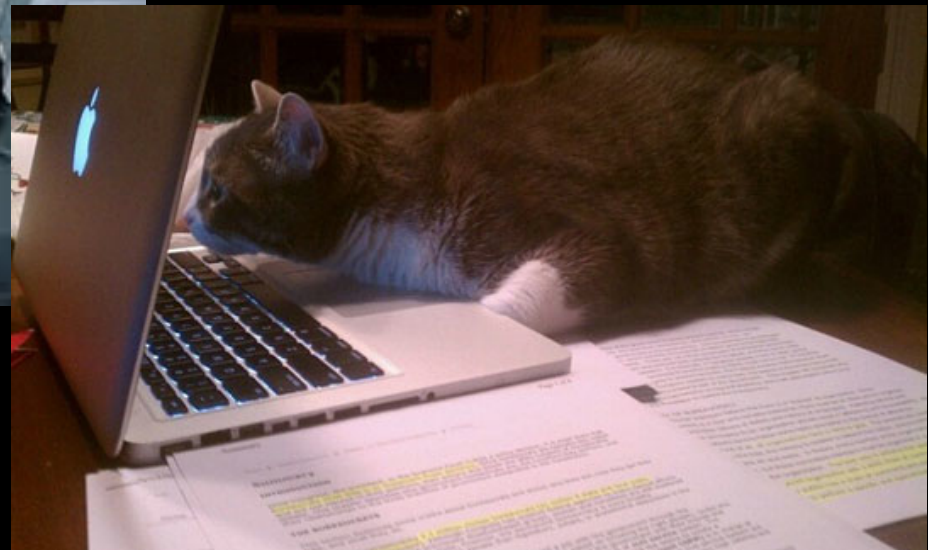
keep learning by myself even in
the midnight



夜な夜な勉強


実機も壊し触り

Keep operating the commercial routers (try not to break them 😊)



オペレーションチームの教育 How to train a new employee

and become independent...



そして大海原へ...

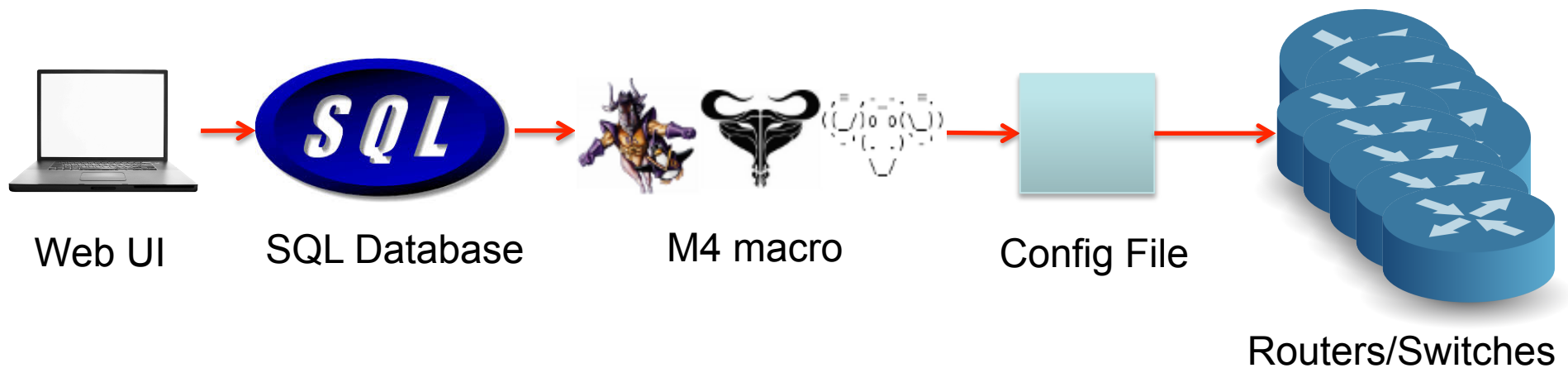
How to operate the backbone



- 内製ツール利用 “Configtools”
- 全てのコンフィグ情報がSQLDB化されている
- コンフィグ投入は自動化
- マニュアルでコンフィグを打つことはほとんどない

- We use “Configtools”, which is a tool to set/change configurations automatically
- Fully automated configurations
- The configs of all of the routers are in a SQLDB
- No manual configuration on devices

Config Tools Workflow



詳細はこちら: JANOG29 ネットワーク運用のツール化と省力化
<http://www.janog.gr.jp/meeting/janog29/program/auto.html>

FAQ ABOUT U.S. OPERATIONS

FAQ 1. アメリカでは平日夜・土日は働かないの？

- (職務によりますが)そんなことはありません。
- 時間帯にあまり縛られていない。

Q. In the US, do people work even on weekends and in the night on weekdays?

A. It depends on duties, but basically yes especially in emergency.

FAQ 2. パケットロスしても気にしないんだろ？



- エスカレーションが来て対応します。
- ただし、技術的にどうしようもない時はある。

Q. You guys don't care even if packet drops occur in the backbone?

A. We of course do. We are escalated from the noc, and take care of it. But sometime there's no way to resolve it technically.

FAQ 3. 意見はハッキリ言うんだろ？



- 曖昧ではない、クリアで正直な意見が好まれます。
- クリアで正直な意見 ≠ ズケズケと言う
- どの文化でも同じだと思いますが、相手を尊重する丁寧な言い方は重要

Q. In the US, do people express their opinions very forthrightly compared to Japanese?

A. It looks like people generally like clear and honest opinions, but it isn't equal to saying opinions too forthrightly. Saying something politely and respecting others' opinions are surely important. I think it's the same in every culture.

FAQ 4. 飲み会とかあるの？



- 不定期にあります。
- face to faceで会ったときに激しく飲みます。

Q. Do you guys go out drinking w/ colleagues?

A. Definitely! But it's a little bit irregular compared to Japanese. When we see in person, we are gonna be crazy drink a lot and have fun 😊

FAQ 5. どんな人材が好まれる？



- モチベーションが高く、結果を出せる人
 - その次に、モチベーションが高く、実力はそこそこ（高ポテンシャル）
- モチベーションは評価される
- 仕事に来るのを待ってない人
- 意味の無い根性は全く評価されない

Q. What kind of people are highly-regarded?

A. This is my personal opinion, but people who are highly motivated, self-driven and can achieve results by themselves tend to be highly-regarded. Motivations are welcomed, but meaningless motivations w/o any results aren't.

FAQ 6. アメリカと日本の違いは？



日本

- ・ 原因追及～状況分析～改善までのプロセスが得意
- ・ 同じ問題を二度と起こさないようにするためにあらゆる手を尽くす



アメリカ

- ・ 仕事全体を見渡し、問題の大小を判断するのが得意
- ・ お客様から見た問題の大きさを判断し、それほど大きくない問題は、必要以上に追求をしない
- ・ そして、最もやるべきことに全力を尽くす

どちらが「いい」「悪い」という議論に陥りがちだが、
お互いを標準化するよりも、違いを生かすことが重要

FAQ 6. What's the difference between the U.S. operations and Japanese ones?

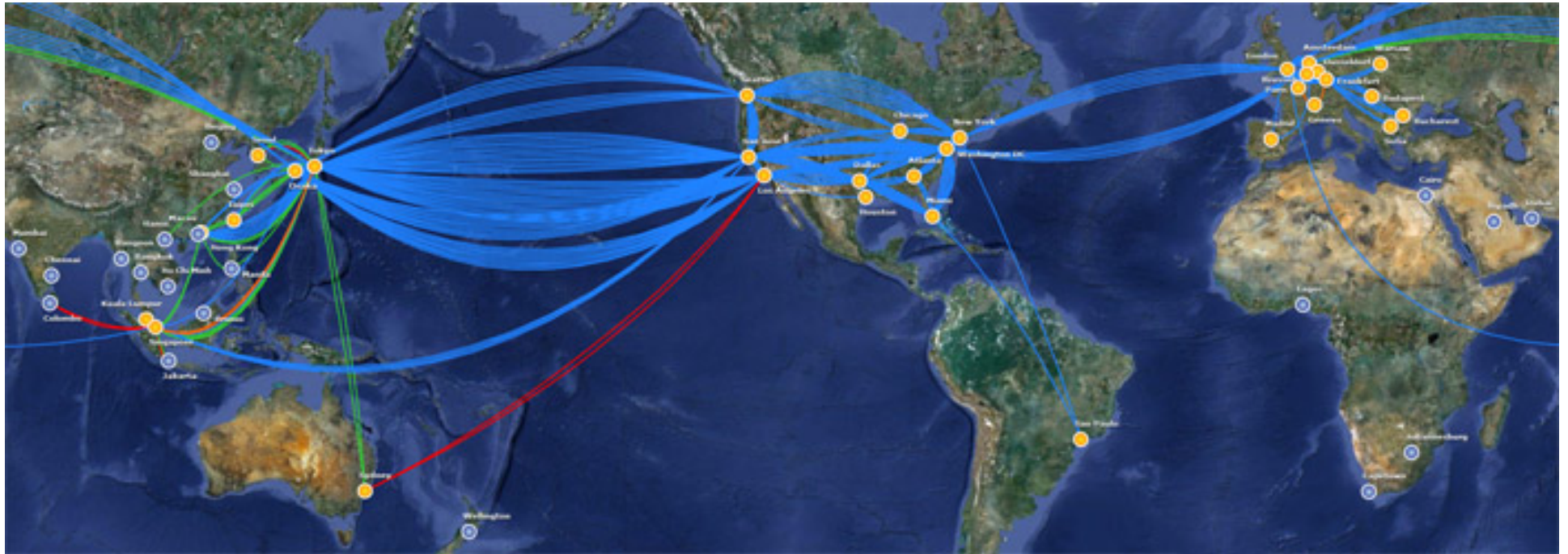


- Japanese strengths:
 - pursuing a root cause when a trouble occurs
 - improving something not to cause the same trouble again
 - making any efforts to prevent any reoccurrence
- Americans strengths:
 - finding a balance between chasing a one thing and keeping things going on
 - giving appropriate priorities to tasks they have
 - focusing on the most important task they need to do
- In Japan, I think most Japanese engineers believe pursuing root causes of something (for instance - troubles) is the first and mandatory step to control service quality and to make service better.
- I also still believe this is one of right ways to improve something. Toyota has been doing so for a long time and it's now a global company.
- But sometimes Japanese tend to stick to one thing and dig too deep into root causes even if it's not a big issue.
- Sometimes Japanese have to stop everything to find the "unnecessary" causes. Not usually but in some cases we need to find a balance between sticking to one thing and keeping things going on.

1. EU/JP/USオペレーション相互補完
2. コンフィグレーション自動化
3. 仕事の緩急（優先度）の付け方
4. 在宅勤務だけど高モチベーション
5. “Don't ask permission, just ask forgiveness!”

1. help each Ops member in EU/JP/US, who lives in different time zone - non-stop operation
2. automated configuration – more efficient and streamlined operation
3. find a balance between chasing root causes and keeping things going on
4. highly motivated even though they work from home
5. “ Don't ask permission, just ask forgiveness! ”

Questions?



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