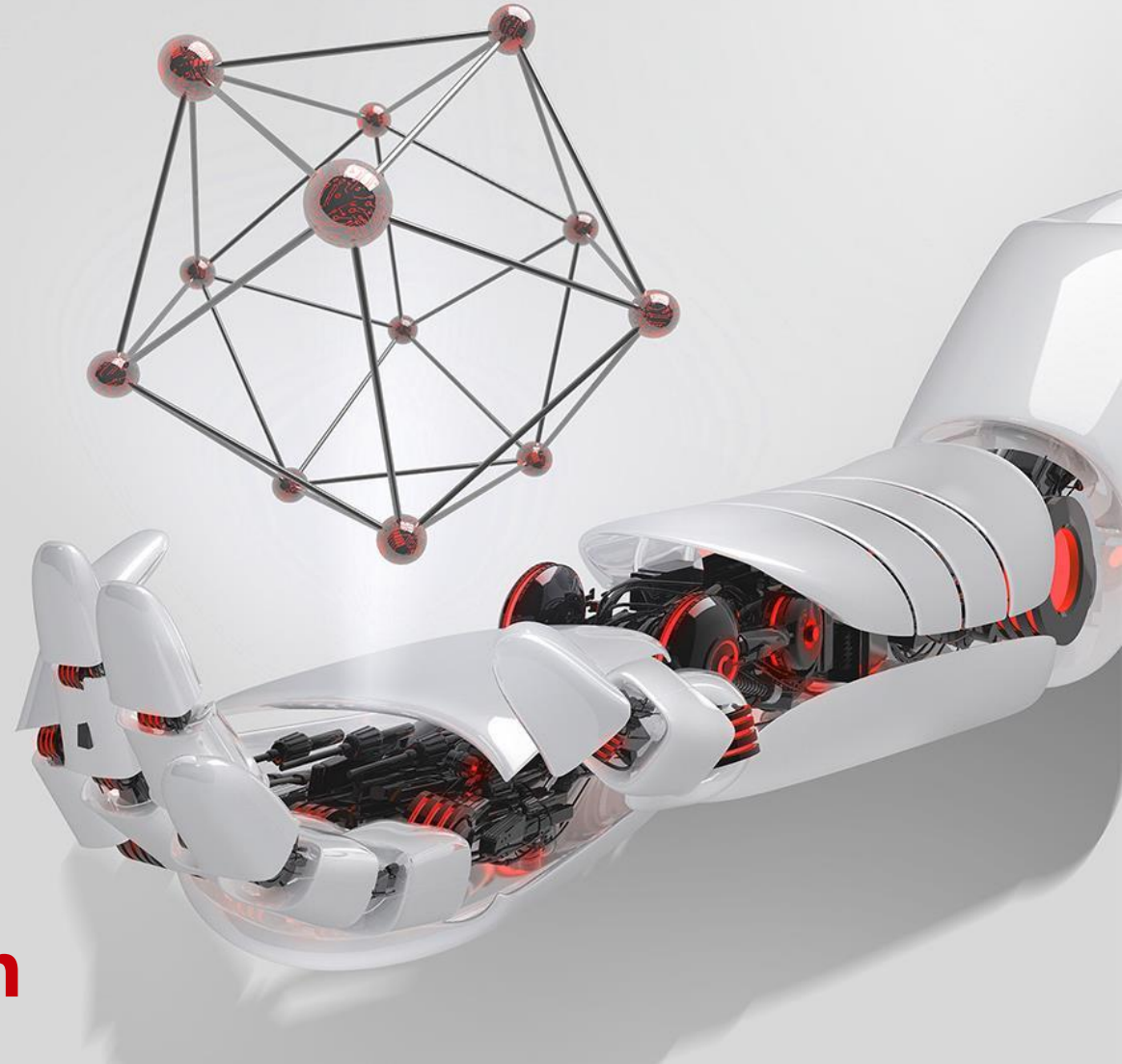


ENOG55 Huawei vendor update & SRv6 in Data Center



Takashima.Ryuichi at Huawei.com

Security Level:



本プレゼンテーションのポイント

- ✓ データセンター内、データセンター間ネットワークでの SRv6 の利用用途はあるのか？ 飲みながら話したいのでその頭だし
- ✓ JANOG の時に「ちいさくてみえなかった」という声が多かったので、弊社の実装とかロードマップをもう一度

SRv6 brings openness to future data center network

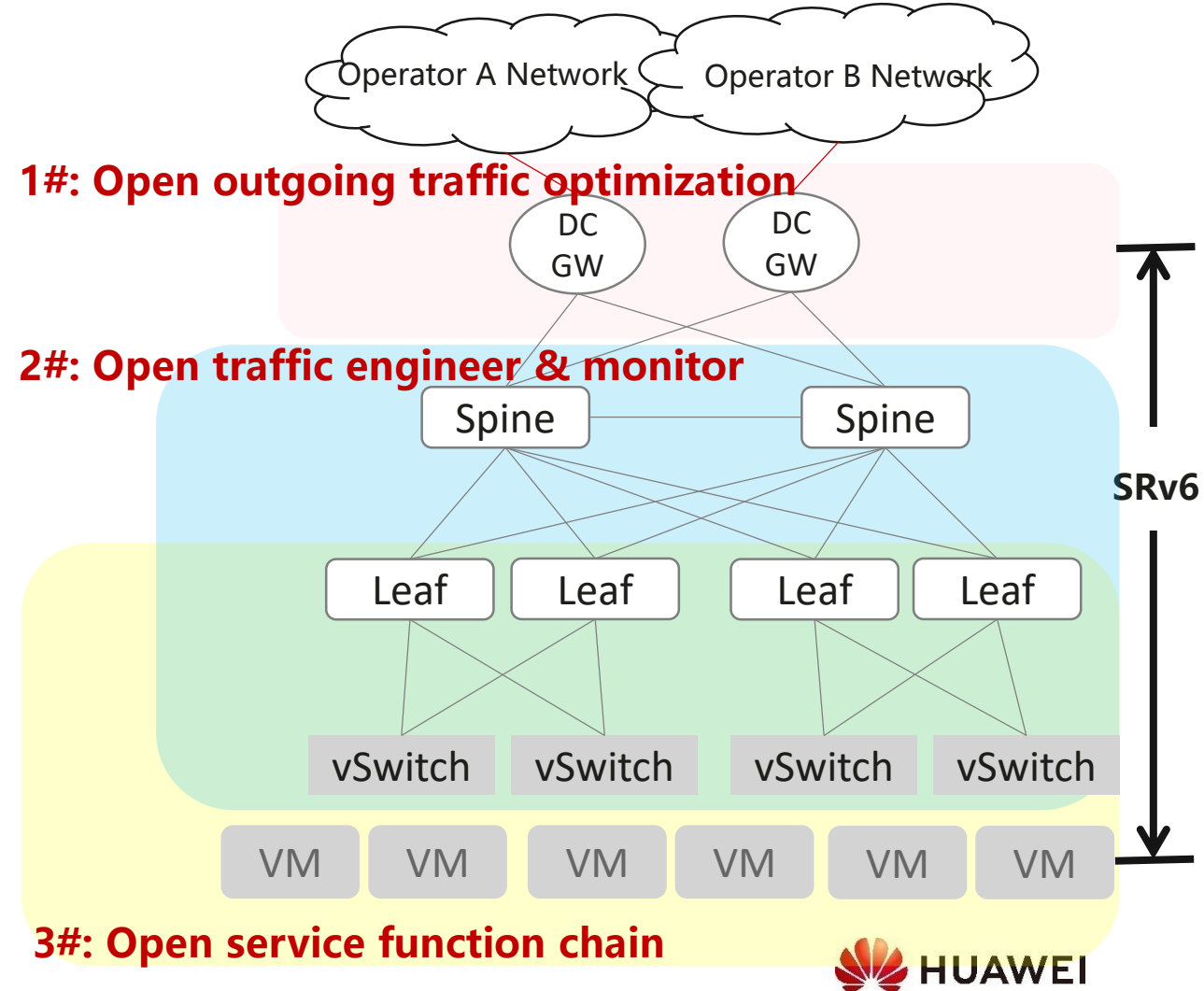
Traditional DCN

- Built for connection & isolation
- Controlled by network administrator
- Sealed to tenant & application

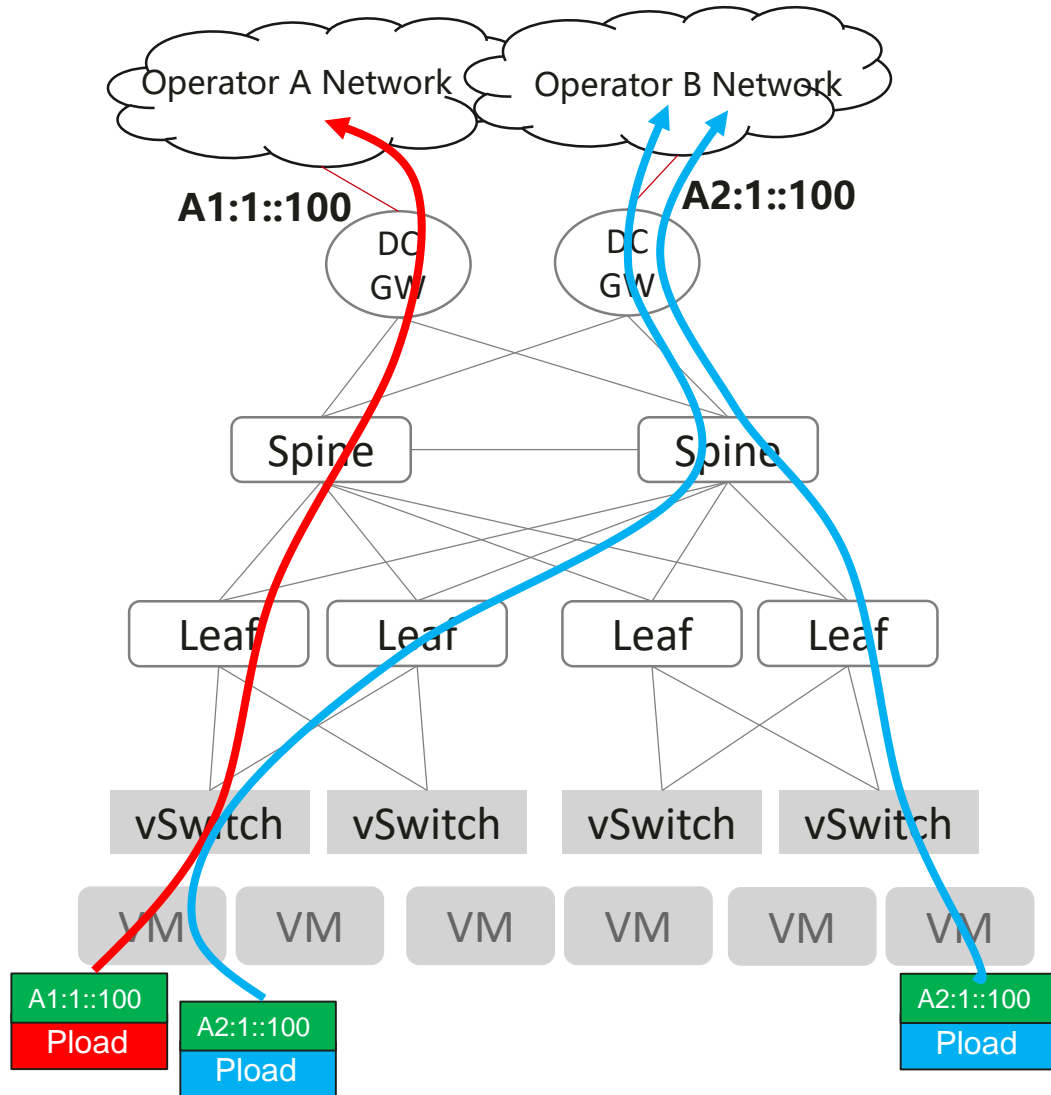
Challenge

- More and more services are moving onto cloud.(AI/Enterprise/VR/V2X)
- Various requirements are rising to DCN(Bandwidth/latency/Service aware/Cost aware)
- DCN is becoming complex day by day

SRv6 could provide DCN capability to tenant & APP, without modification to DCN network



DC use case #1: SRv6 OPEN outgoing traffic optimization

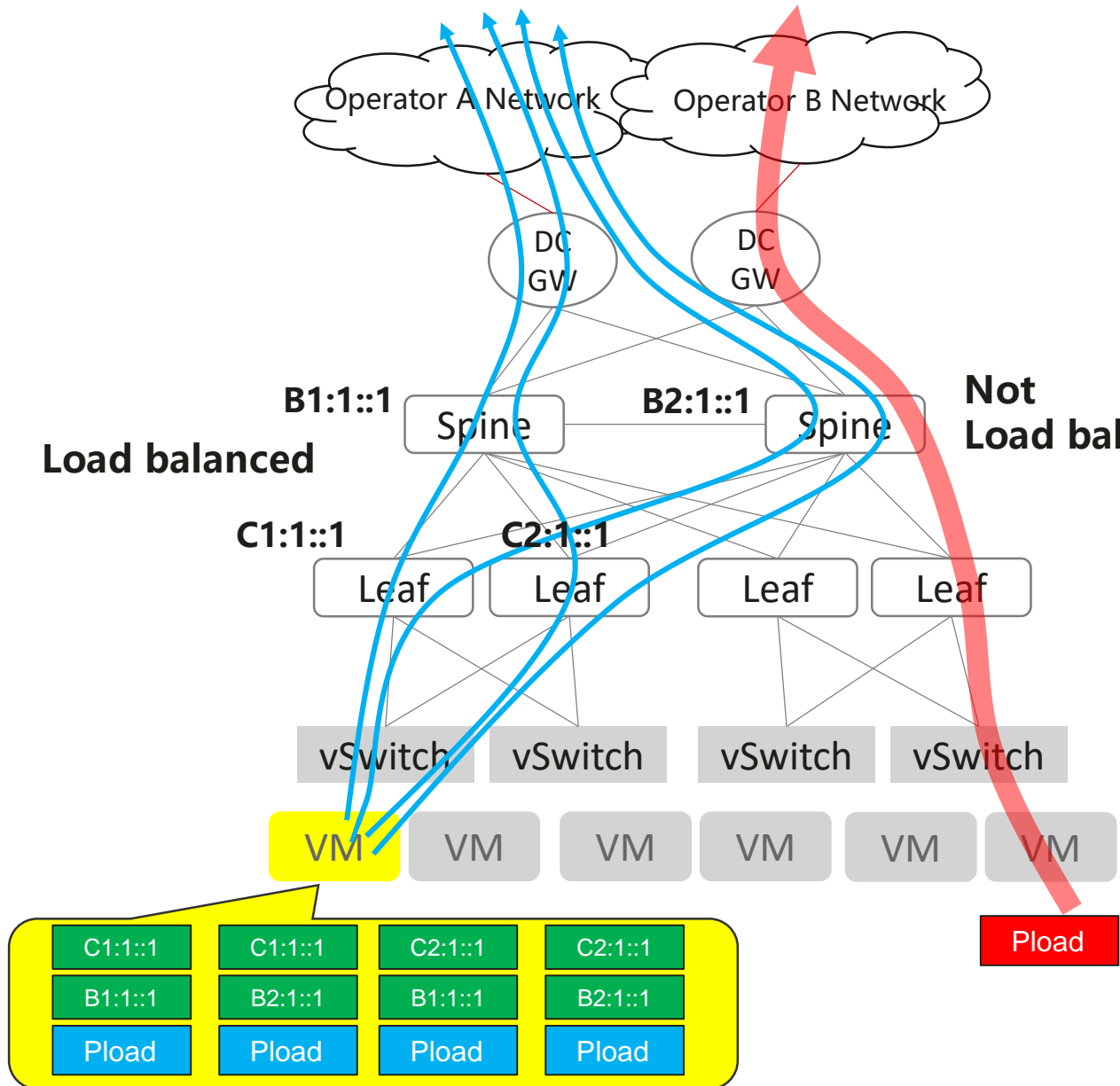


- | Operator A network |
|--------------------------------|
| ✓ High international bandwidth |
| ✓ Low packet loss |
| ✓ Costly |
| ✓ Binding to A1:1::100 |

- | Operator B network |
|-------------------------------|
| ✓ Low international bandwidth |
| ✓ Normal packet loss |
| ✓ Cheap |
| ✓ Binding to A2:1::100 |

Open traffic optimization to Service
Tenant & APP can use SRv6 SID to choose different network for outgoing traffic to gain different SLA or different fee.

DC use case #2 SRv6 OPEN traffic engineer & monitor



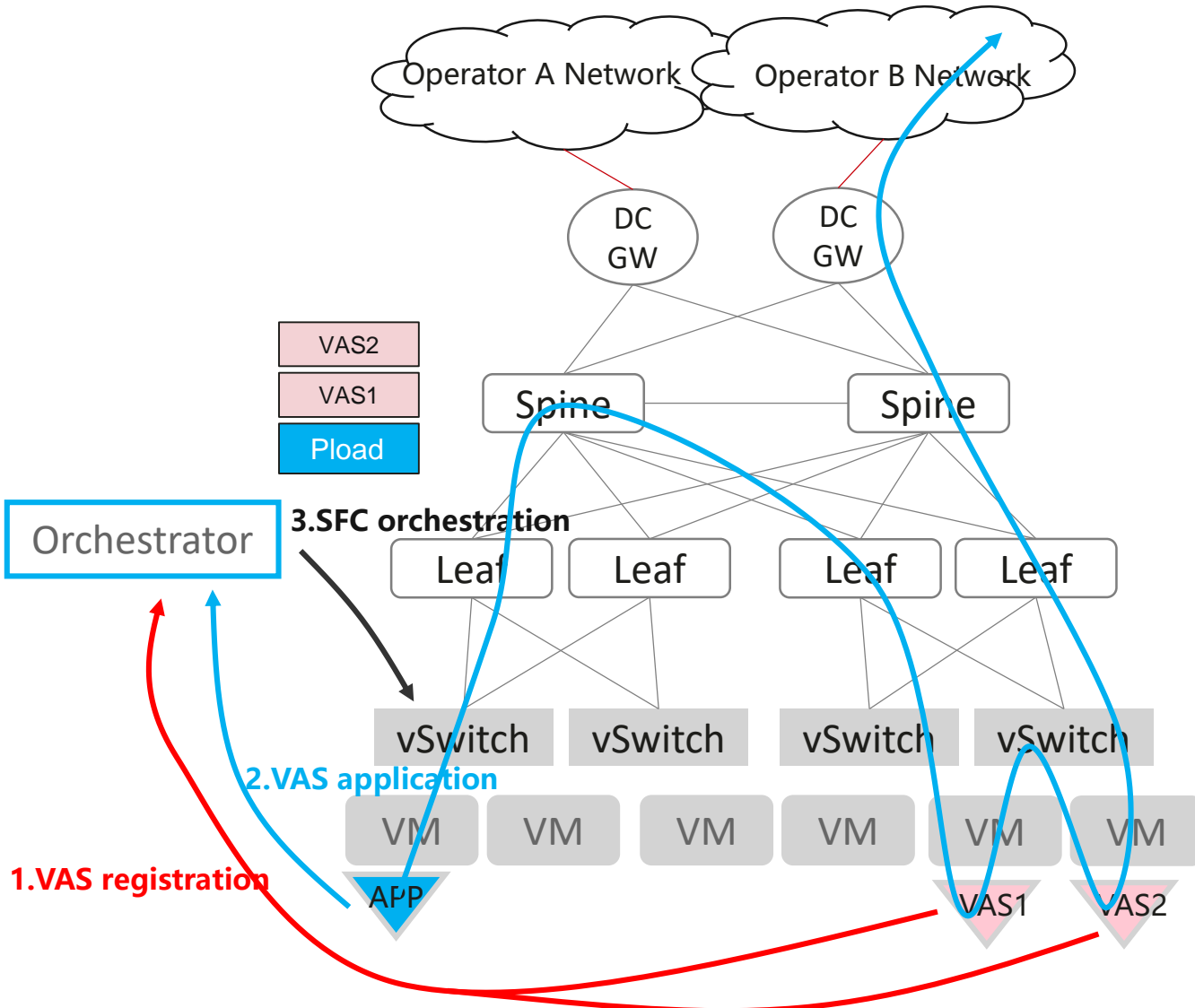
Elephant Flow

- ✓ While **VM migration** or **Big data** machine learning
- ✓ Big traffic in single flow, **can not load balance** in network

Open Traffic Engineer and Monitor to Service

- ✓ **User Define**: Tenant & APP who knows elephant flow, will identify the flow with different path SIDs
- ✓ **Traffic protection**: Traffic load balance is done
- ✓ **Full path performance monitor**: Probe can also be sent along the paths for monitoring latency or packet loss on the paths.

DC use case #3 SRv6 OPEN service function chain



Traditional SFC based on PBR

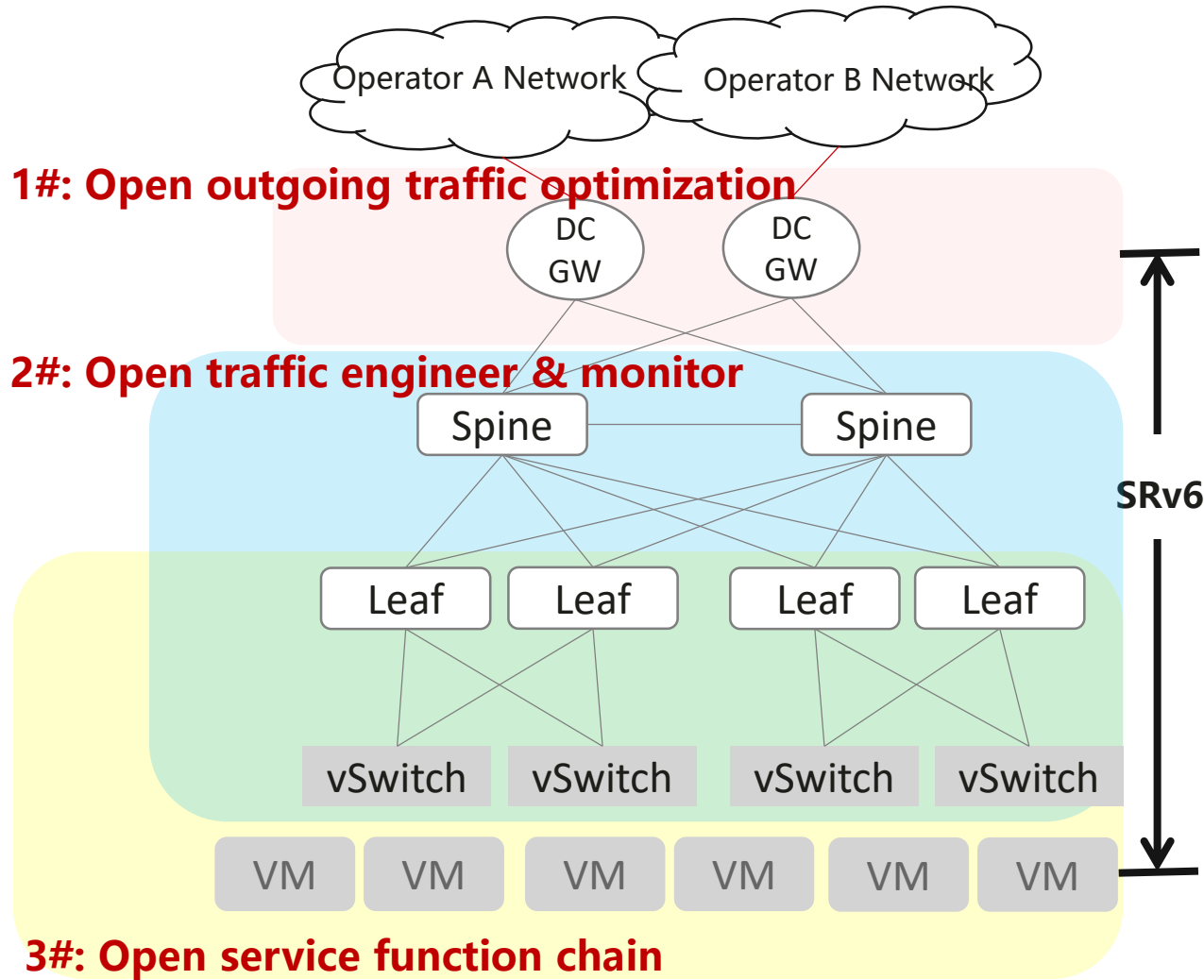
- ✓ Configuration on **each box** for **each service flow**
- ✓ **Huge work** for DCN administrator
- ✓ **Long period** before new service on-sale

Open SFC to tenant and vas vendor

- ✓ **Non-DCN involved**: State in SRv6 header; Stateless in DCN network
- ✓ **All self-help**: VAS added by VAS vendor; SFC customized by tenant
- ✓ **TTM shorten**: enable new business-model



SRv6 OPEN DCN, driving future innovation cloud ecology



- ✓ **Programming only in flow**
- ✓ **Open DC, Open Cloud**
- ✓ **Innovation Driven**
- ✓ **New Business Model**

おまけ: Huawei Segment Routing+EVPN Roadmap

SR/
MPLS

Eyes only.

SRv6

If you need this, please contact
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懇親会で話したいこと

- ✓ データセンタ内、データセンタ間ネットワークでのユースケースはあるのか？
- ✓ 実際問題、求められるのはどこまで？
 - オーケストレータやリソースブローカは自分で作る？ 提供してほしい？
 - 作るソフトウェアエンジニアいる？
 - アプリケーション/VMからのシグナリングはする？ しない？ したい？ できる？
- ✓ 1

Thank you.

把数字世界带入每个人、每个家庭、
每个组织，构建万物互联的智能世界。

Bring digital to every person, home, and
organization for a fully connected,
intelligent world.

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