I2RS Working Group Introduction

Note Well

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- The IETF plenary session
- The IESG, or any member thereof on behalf of the IESG
- Any IETF mailing list, including the IETF list itself, any working group or design team list, or any other list functioning under IETF auspices
- Any IETF working group or portion thereof
- Any Birds of a Feather (BOF) session
- The IAB or any member thereof on behalf of the IAB
- The RFC Editor or the Internet-Drafts function

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Statements made outside of an IETF session, mailing list or other function, that are clearly not intended to be input to an IETF activity, group or function, are not IETF Contributions in the context of this notice.

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A participant in any IETF activity is deemed to accept all IETF rules of process, as documented in Best Current Practices RFCs and IESG Statements.

A participant in any IETF activity acknowledges that written, audio and video records of meetings may be made and may be available to the public.

Welcome to the I2RS WG Interim Meeting

Day 1 Agenda

Introduction, Discussion of agenda and goals	(Edward Crabbe, 40')	9:00
Discussion on Small Group Output	(Alia Atlas, 20')	9:40
Policy and Use Case Examples	(Sue Hares, 20')	10:00
Topology Modeling Discussion	(Edward Crabbe, 20')	10:20
Use Cases	(Alia Atlas, 10')	10:40
Topology Use Cases	(Jan Medved, 20')	10:50
Small Groups #1		11:10
Lunch		1230
Small Groups #1		2:00
snack break		3:45
Wrap Up Presentations & Feedback		4:00
Adjourn		5:45

Day 2 Agenda

presentation of results	9:00am
small group meetings #2	10:00am
presentation of results	12:00am
lunch	1:00am
connecting architecture to use-cases	3::00pm
small group meetings #3	2:30pm
snack break	4:30pm
presentation & next-steps from each group	4:45pm
wrap-up	5:45pm

Assorted Administrivia

wg chairs: Alia Atlas <akatlas@juniper.net>
                       Edward Crabbe <edc@google.com>

Many thanks to:

jabber scribe volunteer:
minutes:
etherpad:

Thanks to Juniper for providing space, coffee and snacks!

Optional Dinner Tonight

Xanh Restaurant
110 Castro St, Mountain View, CA 94041

45$ / person

Please Pay Ed at either break or lunch
I accept CC via square

Charter Review

Use Cases in Charter

First Order (Functional)

- Read/Write Interactions with RIB (**not** FIB)
  - no direct access to FIB
- Control and Analysis of BGP
- Extraction of Topology Data

Second Order (Usage)

- control of egress based augmented (non-NE local) data
- reaction to network attacks
- service layer routing

Milestones

Target Date	Months Remaining	Document Type	Document Content
7/2013	4	Informational	problem statement
7/2013	4	Informational	high-level architecture
8/2013	5	Informational	use cases
9/2013	6	Informational	protocol requirements
9/2013	6	Informational	encoding language requirements
2/2013	13	Standards Track	information models
2/2013	13	Informational	analysis of existing IETF / other protocols / encoding languages against requirements
2/2013	13	NA	Consider re-chartering

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BERLIN!

Draft Inventory and Content

Problem Statement

Use Cases

High level Arch
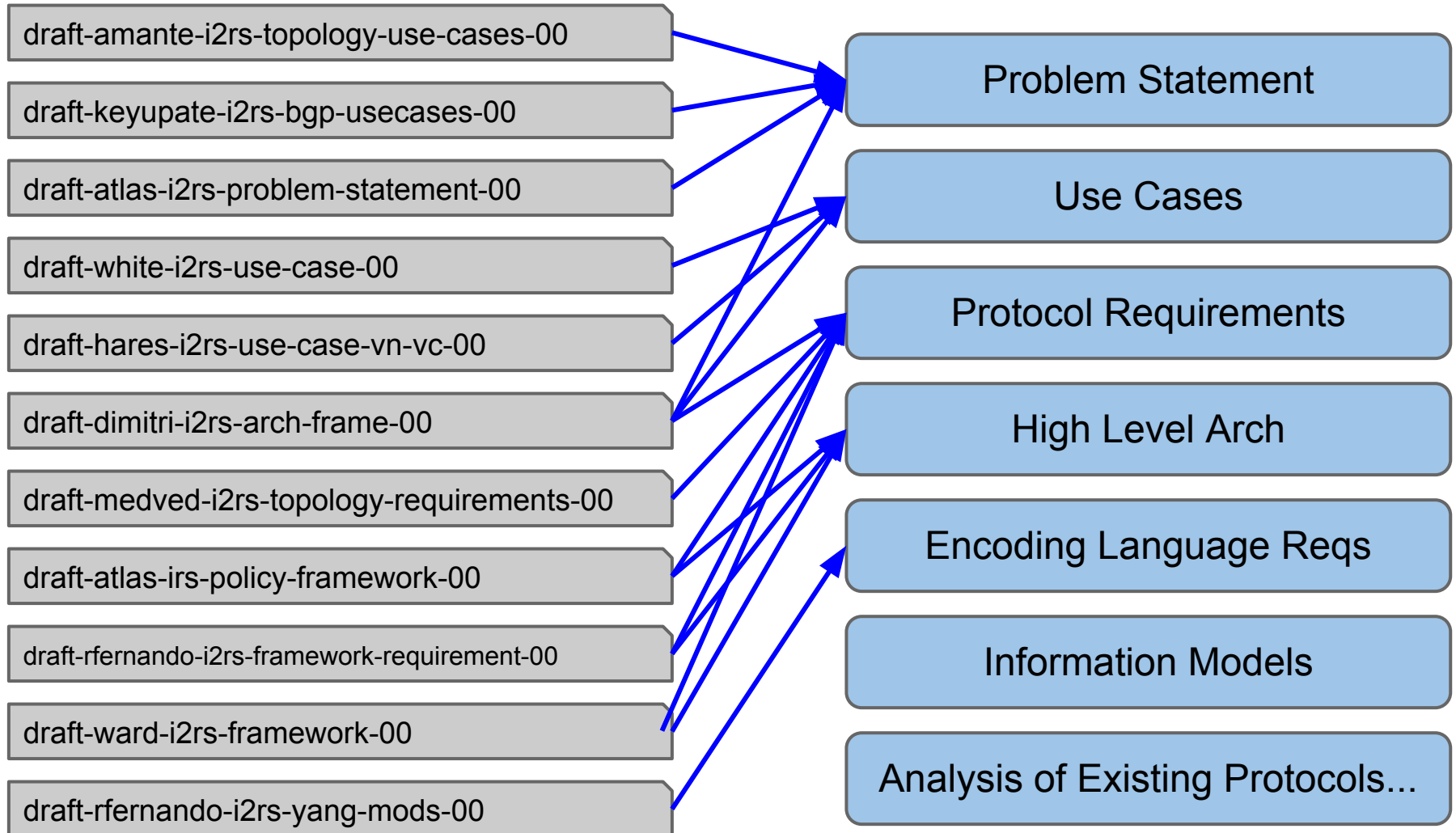
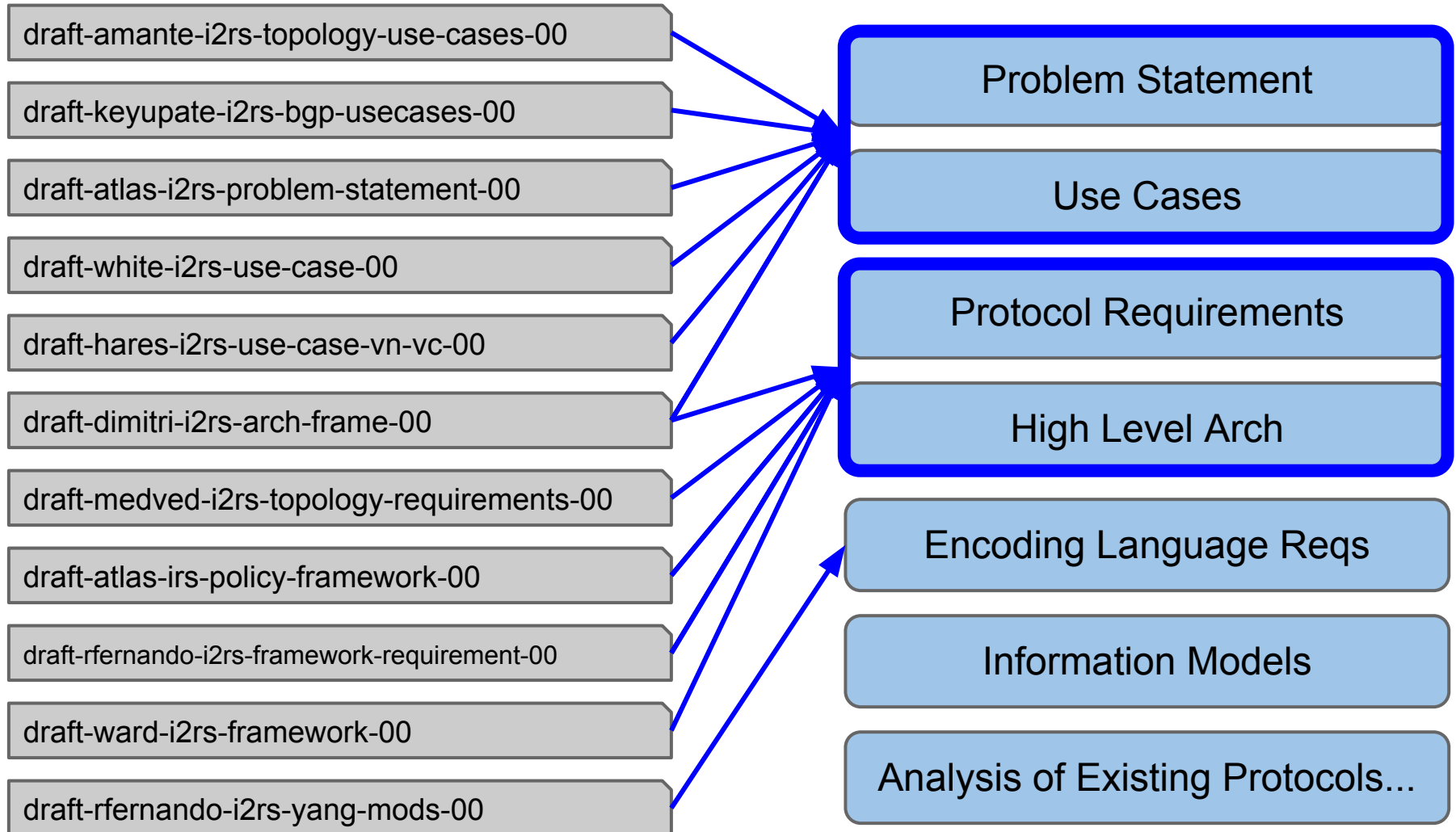Protocol Requirements

Encoding Language Reqs

Information Models
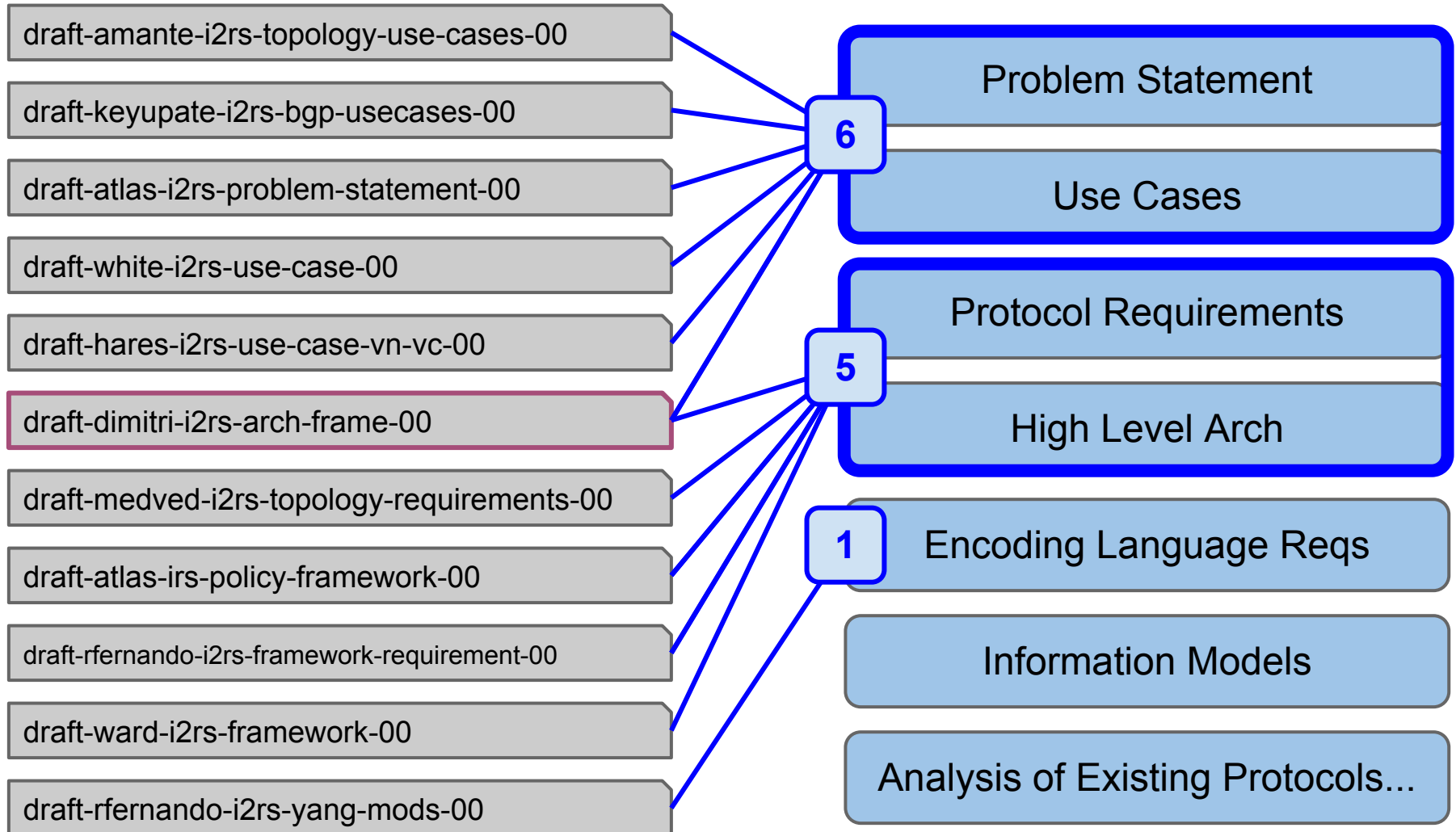
Analysis of Existing Protocols...

Draft Inventory and Content

draft-amante-i2rs-topology-use-cases-00

draft-keyupate-i2rs-bgp-usecases-00

draft-atlas-i2rs-problem-statement-00

draft-white-i2rs-use-case-00

draft-hares-i2rs-use-case-vn-vc-00

draft-dimitri-i2rs-arch-frame-00

draft-medved-i2rs-topology-requirements-00

draft-atlas-irs-policy-framework-00

draft-rfernando-i2rs-framework-requirement-00

draft-ward-i2rs-framework-00

draft-rfernando-i2rs-yang-mods-00

Problem Statement

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draft-dimitri-i2rs-arch-frame-00

draft-medved-i2rs-topology-requirements-00

draft-atlas-irs-policy-framework-00

draft-rfernando-i2rs-framework-requirement-00

draft-ward-i2rs-framework-00

draft-rfernando-i2rs-yang-mods-00

Problem Statement

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Interim Meeting Agenda

Meeting Focused Around Small Groups

Since you're all here, let's get some work done.

Small groups focus on a specific use case or subject area.

Time spent discussing use cases and producing results and actionable plans for work and drafts

Small Group Structure

- Managable size for making progress
  - you be the judge, but preferably 3-8 people
  - small enough to make progress
- Allow for Remote Participation
  - Give folks on VC a chance to express views
  - All remote groups ok too
- Resources
  - Groups are assigned a topic, a google hangout and a participation spreadsheet - this is given at the end of this presentation and on paper at the group table.
  - Please enter your names into the small group participation spreadsheets
  - Let me know if you have issues with the hangouts

Small Group Procedure

Each Table has a printout on it with a group number and 2 short links on it:

- A hangout
- A spreadsheet

Please:

1. Join the Hangout for any remote participants
2. Enter your names and focus area in the Spreadsheet

Small Group Goals & Output

Focus on:
- Problem Statements
- Use Cases
- High Level Architecture
- Modelling

At a High Level Produce:

- Actional plans for drafts
- Agreements for collaboration on drafts
- Draft text
- Architectural Requirements
- A brief presentation to sync up with the rest of the group

Looking at Use Cases

- What are the specifics of the use case
- What are the high level protocol requirements for the use case
- What new functionality, if any, is required for the use case?
- What existing protocols overlap with the use case? Are any of these protocols readily usable to produce the same effect?

Example of Small Group Work

DDoS Protection

Description:

Based off an attack profile, drop or selectively route traffic across a subset of devices on the network edge.

Example of Small Group Work

DDoS Protection

What is required here:

- A method to describe filters
- A method of collecting statistics on filter match
- A method to mirror traffic based on some match
- A method to route traffic based on some match
- A method of reliably pushing state updates to devices

Example of Small Group Work

DDoS Protection

What existing protocols currently perform these type of operations, if any? How is this done today?

- A method to describe filters
  - FlowSpec, NetConf ...
- A method of collecting statistics on filter match
  - SNMP, bulkstats ...
- A method to mirror traffic based on some match
  - FlowSpec, NetConf ...
- A method to route traffic based on some match
  - FlowSpec, NetConf/YANG ...
- A method of reliably pushing state updates to devices
  - NetConf

Example of Small Group Work

DDoS Protection

Why are these not sufficient?

What additional functionality is required?

How can we do better?

Small Groups Day 1

Group	Focus	Participant List Spreadsheet	Hangout Link
Group 1	Service-Chaining	http://goo.gl/4g2Ws	http://goo.gl/P7ln6
Group 2	Optimized Exit Scenario	http://goo.gl/bWB0Y	http://goo.gl/j470B
Group 3	Distributed Reaction to Network-Based Attack	http://goo.gl/oxLb2	http://goo.gl/NWuvR
Group 4	Improving Hub-and-Spoke Overlay Routing	http://goo.gl/kjD4b	http://goo.gl/dKgT6
Group 5	Other RIB-layer use-cases	http://goo.gl/Vs0Py	http://goo.gl/t3M3g
Group 6	Topology - Services Provisioning	http://goo.gl/Ftn6f	http://goo.gl/HZJTN
Group 7	Standardized Topology Model, Path Computation, and interactions with Alto	http://goo.gl/LQD1M	http://goo.gl/QfwaZ
Group 8	Topology & Customer Interfaces & Peering Interfaces	http://goo.gl/3Zsht	http://goo.gl/BGEb4
Group 9	Overlay Topology Troubleshooting & Monitoring; Topology Component History	http://goo.gl/P305M	http://goo.gl/qQuhU
Group 10	Other Topology use-cases	http://goo.gl/Kj6Od	http://goo.gl/g83yZ

Small Groups Day 1

Group	Focus	Participant List Spreadsheet	Hangout Link
Group 11	BGP Error-Handling; BGP Troubleshooting	http://goo.gl/MxKJU	http://goo.gl/yAlnQ
Group 12	Centralized VPN Provisioning	http://goo.gl/lQ2wv	http://goo.gl/DR8XX
Group 13	Centralized BGP Policy Updating	http://goo.gl/OMvBJ	http://goo.gl/lzFle
Group 14	BGP Route Manipulation	http://goo.gl/zOJ6K	http://goo.gl/g78be
Group 15	Other BGP Use-Cases	http://goo.gl/K4Aqz	http://goo.gl/YTeXl
Group 16	Taxonomy of Network Applications	http://goo.gl/9erFw	http://goo.gl/Uxk3b

Discussion