

IETF技術文書をざっくり理解するためには

2019/1/25 12:00~12:05(5分)
JANOG43@甲府

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宮坂 拓也

インターネットドラフト = 読みにくい?

speakers. This way, any BGP router (as also the centralized BGP speakers) MAY obtain aggregated Link-State information for the entire BGP network. An external component (e.g. a controller) can obtain this information from the centralized BGP speakers or directly by doing BGP-LS peering to the BGP routers. An internal software component on any of the BGP routers (e.g. TE module) can also receive the entire BGP network topology information from its local BGP process.

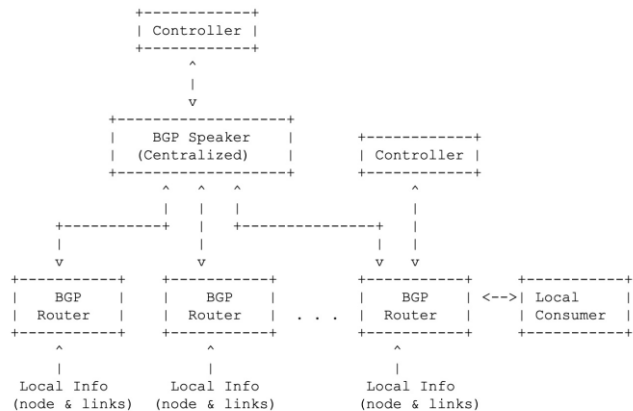


Figure 1: Link State info collection

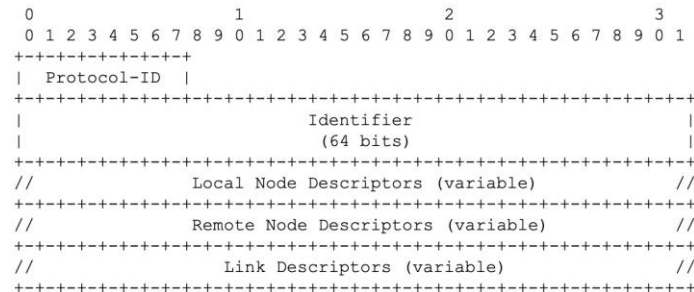
The design described above relies on the base BGP IPv4 or IPv6 routing underlay or any other mechanism for reachability for the BGP-LS session establishment with the centralized BGP speakers. Another alternate design would be to enable BGP-LS as well on the hop by hop EBGp sessions in the underlay. This approach results in the topology information being flooded via BGP-LS hop-by-hop along the BGP routers in the network. Other peering designs for BGP-LS sessions may also

TLV Code Point	Description	Reference Document
1026	Node Name	[RFC7752]
1161	SID/Label	[I-D.ietf-idr-bgp-ls-segment-routing-ext]
1034	SRGB & Capabilities	[I-D.ietf-idr-bgp-ls-segment-routing-ext]
1036	SR Local Block	[I-D.ietf-idr-bgp-ls-segment-routing-ext]
266	Node MSD	[I-D.ietf-idr-bgp-ls-segment-routing-msd]

Table 1: Node Attribute TLVs

3.2. Link Advertisements

BGP-LS [RFC7752] defines Link NLRI Type as follows and also defines the Node and Link Descriptor TLVs used:



例 : <https://datatracker.ietf.org/doc/draft-ketant-idr-bgp-ls-bgp-only-fabric/>

本発表の伝えたいこと

インターネットドラフト(I-D)はなぜ読みにくい？

- ▶ 抽象的な表現だから？
- ▶ 細かいから？
- ▶ 英語で書かれているから？

本発表では、IETFドラフトを読む上で、I-D以外で得ることができる情報についてお伝えします！

- ▶ それにより、「**このインターネットドラフトがどういうシナリオで使えるのだろう？**」といったレベルの理解を目指します

前提知識

IETFやインターネットドラフトに関する前提知識としては、

- ▶ JANOG41で高木さんが発表された「**Internet Draft 読んでみた**」が最高に参考になるので、是非見てください！
- https://www.janog.gr.jp/meeting/janog41/application/files/4715/1685/5412/idyondemita_takagi2.pdf

いちらん！



1. プレゼン資料 (IETF本会議)
2. プレゼンの録画 (IETF本会議)
3. ISOC-JPのIETF報告会

いちらん！

1. プレゼン資料 (IETF本会議)
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プレゼン資料の確認方法

まずは、そのI-Dが所属するWGのページをdatatrackerで開く

▶ <https://datatracker.ietf.org/wg/idr/about/>

WGの確認の仕方などは高木さん資料参照！

The screenshot shows the datatracker.ietf.org website. The browser address bar displays the URL <https://datatracker.ietf.org/wg/idr/about/>. The website header includes the IETF logo and navigation links for Datatracker, Groups, Documents, Meetings, Other, and User. The main content area is titled "Inter-Domain Routing (idr)" and features a horizontal menu with buttons for About, Documents, Meetings, History, Photos, Email expansions, List archive, and Tools ». Below the menu, the "WG" section provides the following details:

Name	Inter-Domain Routing
Acronym	idr
Area	Routing Area (rtg)
State	Active
Charter	charter-ietf-idr-05 Approved
Status Update	Show update (last changed 2018-11-07)
Dependencies	Document dependency graph (SVG)
Additional URLs	- IDR Wiki - Issue tracker

プレゼン資料の確認方法

次に、Meetingページへ移動する

The screenshot shows the IETF Datatracker interface for the 'Inter-Domain Routing (idr)' project. The 'Meetings' tab is selected and highlighted with a red circle. Below the navigation tabs, there are sections for 'Future Meetings' and 'Past Meetings'. The 'Past Meetings' section contains a table with columns for meeting ID, date, time, and links for 'Agenda', 'Minutes', and 'Materials'. The 'Materials' links are highlighted with a red box, and a blue callout bubble points to them with the text '過去のIETF会議の資料がまとめられている'.

Meeting ID	Date	Time	Agenda	Minutes	Materials
IETF 104		00:00			Materials
IETF 103		00:00			Materials
interim-2018-idr-01	Fri 2018-10-26		Agenda	Minutes	Materials
IETF 102	Fri 2018-07-20	11:50	Agenda	Minutes	Materials
	Thu 2018-07-19	18:10	Agenda	Minutes	Materials
IETF 101	Mon 2018-03-19	15:50	Agenda	Minutes	Materials
IETF 100	Mon 2017-11-13	13:30	Agenda	Minutes	Materials
IETF 99	Thu 2017-07-20	09:30	Agenda	Minutes	Materials
IETF 98	Fri 2017-03-31	09:00	Agenda	Minutes	Materials
IETF 97	Tue 2016-11-15	15:50	Agenda	Minutes	Materials

過去のIETF
会議の資料
がまとめら
れている

対象のI-Dが発表されたIETF本会議を探す

datatrackerなどで対象のI-Dを検索し、**ver-00が投稿された時期**を確認

- ▶ **Ver-00が投稿された直後のIETF**でそのドラフトの詳細を説明することがよくあるので、ざっくり理解するには一番良いため
 - もちろん、詳細に知るには各バージョンの差異などは確認は必須
 - 著者によっては、I-Dコピペなだけのプレゼンの場合もあるが泣かない！

IETF Datatracker Groups Documents Meetings Other User

BGP Link-State Extensions for BGP-only Fabric

draft-ketant-idr-bgp-ls-bgp-only-fabric-01

Status IESG evaluation record IESG writeups Email expansions History

Versions 00 01

draft-ketant-idr-bgp-ls-bgp-only-fabric 00 01

Mar 2018 Sep 2018

Document Type Active Internet-Draft (individual)
Last updated 2018-09-03

2018/3に投
稿された！

(参考) WG-draft/RFCは注意

WG-draft/RFCの場合はタイムラインが2個以上出てくる・・・

- ▶ その場合も個人ドラフト時代のver-00が発表された本会議資料を見てみるようにしています

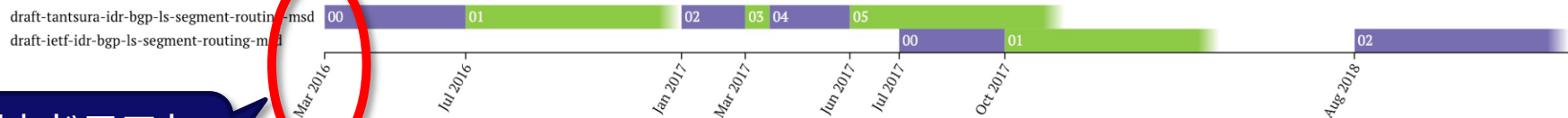


Signaling MSD (Maximum SID Depth) using Border Gateway Protocol Link-State

draft-ietf-idr-bgp-ls-segment-routing-msd-02

Status IESG evaluation record IESG writeups Email expansions History

Versions 00 01 02



個人ドラフト
のver-00

プレゼン資料の確認方法

前ページで調べたver-00投稿時期の直近の会合資料を選択する

The screenshot shows the IETF Datatracker interface for the 'Inter-Domain Routing (idr)' group. The navigation bar includes 'Datatracker', 'Groups', 'Documents', 'Meetings', 'Other', and 'User'. A 'Document search' box is on the right. Below the group name, there are tabs for 'About', 'Documents', 'Meetings', 'History', 'Photos', 'Email expansions', 'List archive', and 'Tools'. A 'Session requests' button is also present. The main content is divided into 'Future Meetings' and 'Past Meetings' sections. The 'Past Meetings' section contains a table of meeting records.

Meeting ID	Date	Time	Agenda	Minutes	Materials
IETF 104					Materials
IETF 103					Materials
interim-2018-idr-01	Fri 2018-10-26		Agenda	Minutes	Materials
IETF 102	Fri 2018-07-20	11:50	Agenda	Minutes	Materials
	Thu 2018-07-19	18:10	Agenda	Minutes	Materials
IETF 101	Mon 2018-03-19	15:50	Agenda	Minutes	Materials
IETF 100	Mon 2017-11-13	13:30	Agenda	Minutes	Materials
IETF 99	Thu 2017-07-20	09:30	Agenda	Minutes	Materials
IETF 98	Fri 2017-03-31	09:00	Agenda	Minutes	Materials
IETF 97	Tue 2016-11-15	15:50	Agenda	Minutes	Materials

2018/3に投稿されたので、IETF101を選択！

プレゼン資料の確認方法

前ページで調べたver-00投稿時期の直近の会合資料を選択する

The screenshot shows the IETF Datatracker interface. At the top, there is a navigation bar with 'IETF', 'Datatracker', 'Groups', 'Documents', 'Meetings', 'Other', and 'User'. A search bar on the right contains the text 'idr-bgp-ls-bgp-only-fabric' and shows '1 / 3' results. Below the navigation bar, the main content area is titled 'IETF-101 : idr' and 'Monday Mar-19-2018 1550'. There are three main sections: 'Agenda, Minutes, and Bluesheets', 'Slides', and 'Drafts'. In the 'Slides' section, the item '06-idr-bgp-ls-bgp-only-fabric-IETF101 (slides-101-idr-06-idr-bgp-ls-bgp-only-fabric-ietf101-00)' is highlighted with a red box. A blue callout bubble points to this item with the text '発見!!!'. Another blue callout bubble points to the search bar with the text 'ページ内検索でドラフトの名前で検索'. The 'Drafts' section lists several other documents, including 'BGP-LS Extension for Inter-AS Topology Retrieval', 'BGP Link-State Extensions for BGP-only Fabric', 'Methods for Detection and Mitigation of BGP Route Leaks', 'BGP Extended Community for Identifying the Target Node', 'BGP Signaling for SRv6 based Services', and 'BGP Link State extensions for IPv6 Segment Routing(SRv6)'.

ページ内検索でドラフトの名前で検索

発見!!!

プレゼン資料ゲット！



draft-ketant-idr-bgp-ls-bgp-only-fabric-00

Ketan Talaulikar (ketant@cisco.com)
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IETF 101, London, March 17-23, 2018

What does this draft propose?

- BGP-LS specified originally via RFC 7752 for “north-bound distrib of link-state and TE information”
- BGP-LS focus has been mostly on distribution of information for IGP
- draft-ietf-idr-bgpls-segment-routing-eps introduced distribution information from BGP for Segment Routing Egress Peer Engineer

This draft specifies the mechanism for distribution of network top and TE information in a network running BGP as the only routing protocol

IETF 101, London, March 17-23, 2018

Why is this required?

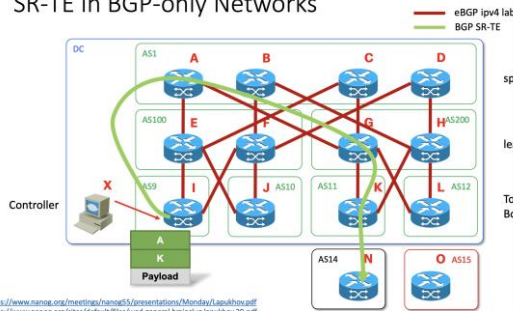
- Several DCs/MSDCs [RFC7938] run BGP as their only routing protocol today
- In such networks, controllers do not have the underlying link topology and TE information view (as available with IGP via BGP-LS)
- Having such a topology enables TE use-cases in BGP-only networks using Segment Routing [draft-ietf-spring-segment-routing-msdc]

This draft describes the use-case where Segment Routing TE paths can be setup in networks running only BGP by using this topology information

IETF 101, London, March 17-23, 2018

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SR-TE in BGP-only Networks



<https://www.nsnpp.org/meetings/name55/presentations/Monday/Laughhov.pdf>
https://www.nsnpp.org/sites/default/files/wednesday/brainiac/laughhov_20.pdf

IETF 101, London, March 17-23, 2018

What is NOT changed ...

- Base BGP underlay using IPv4/IPv6/LU/SR is unchanged and follow the BGP decision process
- Existing BGP Peering models are used (current draft version focus on eBGP single hop as in RFC7938; other models are not precluded)
- BGP-LS sessions to controller(s) may be formed using the reachability provided by this underlay routing

In the Segment Routing TE use-case, controller provides specific TE paths for the overlay services that is instantiated via SR Policies on specific BGP head-end nodes

IETF 101, London, March 17-23, 2018

Next Steps ...

- Solicit WG review and comments/inputs/feedback

IETF 101, London, March 17-23, 2018

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<https://datatracker.ietf.org/meeting/101/materials/slides-101-idr-06-idr-bgp-ls-bgp-only-fabric-ietf101-00>

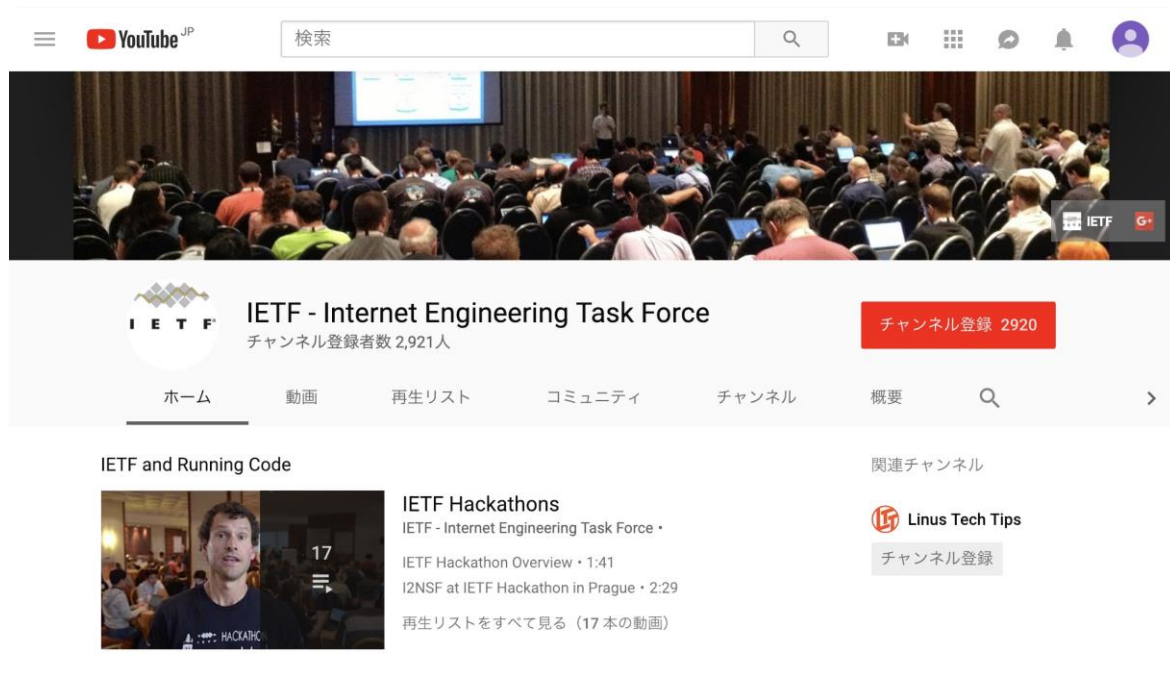
いちらん！

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プレゼン動画の確認

YouTubeに全部あがっています！チャンネル登録を！

▶ <https://www.youtube.com/user/ietf>



The screenshot shows the YouTube channel page for IETF (Internet Engineering Task Force). At the top, there is a navigation bar with the YouTube logo, a search bar containing the text "検索", and icons for video uploads, grid view, chat, notifications, and a user profile. Below the navigation bar is a large video player showing a conference room with many people seated at tables, some with laptops open. Underneath the video player is the channel header for "IETF - Internet Engineering Task Force", which includes the IETF logo, the channel name, and the text "チャンネル登録者数 2,921人". To the right of the header is a red button that says "チャンネル登録 2920". Below the header is a horizontal menu with tabs for "ホーム", "動画", "再生リスト", "コミュニティ", "チャンネル", "概要", and a search icon. The main content area is divided into two sections. On the left, under the heading "IETF and Running Code", there is a video thumbnail for "IETF Hackathons" with a play button and the number "17". To the right of this is a list of videos: "IETF Hackathon Overview" (1:41), "I2NSF at IETF Hackathon in Prague" (2:29), and a link to "再生リストをすべて見る (17本の動画)". On the right side of the main content area, under the heading "関連チャンネル", there is a recommendation for "Linus Tech Tips" with its logo and a "チャンネル登録" button.

プレゼン動画の確認

検索で「IETF101 IDR」とかすれば出てくるはず

- ▶ IETF本会議情報は前のプレゼン資料確認時に特定したもの！
- ▶ WGセッション全体の録画のため、見たいI-Dの部分はシークして探してね

The screenshot shows a YouTube search interface with the query 'IETF101 idr'. Below the search bar, there is a filter icon and the text 'フィルタ'. A video thumbnail is displayed with the title 'IETF101 IDR' and a duration of 1:35:32. To the right of the thumbnail, the video title is 'IETF101-IDR-20180319-1550', followed by 'IETF - Internet Engineering Task Force • 42 回視聴 • 10 か月前' and 'IDR meeting session at IETF101 2018/03/19 1550'. A URL is provided: <https://datatracker.ietf.org/meeting/101/proceedings/>.

The screenshot shows a presentation slide titled 'IETF101 IDR' with the subtitle 'SR-TE in BGP-only Networks'. The diagram illustrates a network architecture with a 'Controller' connected to a 'Payload' (ASes A, K) and a 'DC' (Data Center) containing multiple ASes (A, B, C, D, E, F, G, H, I, J, K, L, N, O). The network is divided into 'spine' and 'leaf' layers. A 'ToR Border Switch' is also shown. The diagram uses red lines for 'eBGP ipv4 labeled-unicast' and green lines for 'BGP SR-TE'. A small inset video shows a speaker at a podium. The IETF logo is visible in the bottom right corner. The slide number '5' is in the bottom right corner. The footer text reads: 'IETF 101, London, March 17-23, 2018'.

(参考) 議事録の確認

英語が聞き取れなくて議論がわからない！ といった時は議事録を

Inter-Domain Routing (idr)

Session requests

Future Meetings

IETF 104	Waiting for Scheduling	00:00			Materials
	Waiting for Scheduling	00:00			Materials

Past Meetings

IETF 103	Waiting for Scheduling	00:00			
	Waiting for Scheduling	00:00			
interim-2018-idr-01	Fri	2018-10-26		Agenda	Minutes
IETF 102	Fri	2018-07-20	11:50	Agenda	Minutes
	Thu	2018-07-19	18:10	Agenda	Minutes
IETF 101	Mon	2018-03-19	15:50	Agenda	Minutes
IETF 100	Mon	2017-11-13	13:30	Agenda	Minutes
IETF 99	Thu	2017-07-20	09:30	Agenda	Minutes
IETF 98	Fri	2017-03-31	09:00	Agenda	Minutes
IETF 97	Tue	2016-11-15	15:50	Agenda	Minutes

6) BGP Link-State Extensions for BGP-only Fabric

Ketan presenting.

Keyur: I've not read this draft. There is no new TLVs defined. Is this a informational document, or is it doing something which requires interoperability or standardization?

Ketan: This is proposed standard track because it describes the procedures for BGP only network, specify which descriptors are needed to ensure interoperability.

Keyur: I may not choose to honor those procedures, just send everything in BGP-LS and should still work.

Ketan: Links and nodes are described with right descriptors for two way. If they are done differently by implementation there's issues. The procedures are in this version, new TLVs may be introduced in future.

いちらん！

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ISOC-JPのIETF報告会

「英語だとちょっと…」な人にはISOC-JPが開催するIETF報告会がオススメ！ **日本語で最新技術内容を紹介してくれます**

- ▶ https://www.isoc.jp/wiki.cgi?page=IETF_Update_Meeting
- ▶ 全ドラフトについて紹介するわけではないので、お目当てのI-Dが無いかもですが、興味のあるWGやエリアの資料は見た方がいいと思います

IETF_Update_Meeting

[IETF報告会](#) / [IETF Update Meeting](#)

[IETF報告会について](#) / [About IETF Update Meeting](#)

開催主旨

ISOC-JPでは、年に3回開催される[IETF meeting](#) の開催後に国内にて「[IETF報告会](#)」を開催しております。[IETF meeting](#) の参加者から報告者を募り、[IETF meeting](#) で交わされた議論内容を報告していただき、国内のコミュニティに展開するイベントとなっております。また、このイベントを通じ、参加者の相互交流をはかれれば、と考えております。皆様、是非ご参加下さい。

We, ISOC Japan Chapter will hold [IETF](#) update meeting in Japan after [IETF](#) meetings which are being held 3 times a year. In this meeting, we'll ask some of attendees of the [IETF](#) meeting to report about topics related to WGs and other activities of [IETF](#).

開催予定

- [IETF104 報告会?](#) : 2019年TBD

開催済み

- [IETF103 報告会](#) : 2018年12月14日(金)
- [IETF102 報告会](#) : 2018年8月31日(金)
- [IETF101 報告会](#) : 2018年4月27日(金)

ISOC-JPのIETF報告会

タイムテーブル

資料たくさん!

Topic(トピック)	Start Time(開始時間)	Duration(発表時間)	Speaker(話者)	Affiliation(所属)	Material(資料)
開催挨拶	13:30	0:05	ISPC		
H30年度「IoT/BD/AI時代に向けたデジュール及びフォーラム標準に関する標準化動向調査」調査者の募集	13:35	0:00	ISOC-JP		
IETF101開催概要	13:35	0:15	小林茉莉子	Keio University	IETF101_summary_plenary_ao.pdf (259)
IETF101ホットトピック/全体総括	13:50	0:30	米谷嘉朗	JPRS	20180427-IETF101-report-02.pdf (279)
ハッカソン報告	14:20	0:15	中島博敬、 鈴木未央、 西塚要	Mercari, NICT、 NTTCommunication	isoc_ietf101_hackathon_nishizuka.pdf (191) 中島: オンライン資料 Hackathon_Report_IETF101_mio.pdf (369)
休憩	14:35	0:10			
(特集1) IETF における5G関連技術の議論動向	14:45	1:00	栃尾祐治、 本間俊介	株式会社富士通研究 所、日本電信電話株式 会社	isoc_ietf101_5G_tochio.pdf (669) ISOC-JP_IETF101_5G_Slice_NTT-Homma.pdf (565)
休憩	15:45	0:10			
(特集2) TLS1.3とその周辺の標準化動向	15:55	1:00	奥一穂	Fastly	isocjp-tls20180427.pdf (1155)
休憩	16:55	0:10			
リモート参加のススメ	17:05	0:15	後藤浩行	グリー株式会社	IETF101_goto_remote.pdf (199)
Security Area および 暗号技術に関する動向	17:20	0:15	菅野哲	株式会社レビダム	ISOC-JP_IETF101_Security_and_Crypt.pdf (233)
DOTS WG	17:35	0:10	西塚要	NTT Communications	isocjp_ietf101_dots_nishizuka.pdf (241)
閉会挨拶	17:45	0:05	ISPC		

まとめ

本発表ではIETFのI-Dに関する、

- ▶ プレゼン資料 (IETF本会議)
- ▶ プレゼンの録画 (IETF本会議)
- ▶ ISOC-JPのIETF報告会

について紹介しました！

でも！詳細に理解するにはI-Dそのものを読まないといけません！