



THOMSON REUTERS



# Multi-Vendor BIER Interoperability Test November 2018

The European Advanced Networking Test Center and Thomson Reuters invite all interested vendors to join our upcoming multi-vendor interoperability test for Bit Index Explicit Replication (BIER).

This interoperability event will be the very first opportunity worldwide to validate the brand new, next generation IETF multicast protocols in-depth with multiple vendors — with the opportunity to publish positive results.

The test cases will be aligned with relevant use cases for network operator multicast services. The event is co-organized by Thomson Reuters who co-authored an IETF draft for BIER use cases. During a workshop day, vendors will have the opportunity to demonstrate progress made to observers from service providers and enterprises.

In detail, we plan to cover these BIER aspects:

- BIER and SR/MPLS Interworking
  - SR/MPLS to be assumed for unicast traffic for all test use cases
  - BIER fast recovery (based on SR TI-LFA) BIER underlay path calculation (leveraging SR IGP Flex- Algo)
- L3 Multicast Services (MVPN over BIER)
  - Multicast Client Distribution - Hub-And-Spoke (MVPN Extranet)
  - E2E DC-WAN-DC Inter Connectivity (Segmented BIER Multicast)
  - Live/Live Multicast via Disjoint path (BIER Scoping Interworking with unicast underlay)

- L2 Multicast Services (EVPN over BIER)
  - L2 (p2p, p2mp, mp2mp) connectivity for BUM traffic

The test will be a closed doors fully immersive event taking place at EANTC's lab in Berlin. Successful results will be published in a white paper.

## The Event at a Glance

<b>Test Event</b>	November 5–16, 2018 EANTC, Berlin, Germany
<b>Workshop Day</b>	November 15, 2018 EANTC, Berlin, Germany (by invitation only)
<b>Conference Calls</b>	Kick-off: September 4, 2018 All calls at 17:30 CEST
<b>Conference Bridge</b>	All necessary WebEx information will be provided via E-mail.
<b>Which equipment should take part?</b>	<ul style="list-style-type: none"> <li>■ Physical and virtual routers, switches and CPEs</li> <li>■ Emulators/Analyzers</li> <li>■ Network controllers</li> </ul>
<b>Registration Deadline</b>	<b>October 1, 2018</b>

## Participation Benefits

Our multi-vendor interoperability events are well established. EANTC as an independent party creates an ecosystem to conduct testing in the most advanced application scenarios addressing service providers' and enterprises needs. The tests provide a platform for in-depth verification, troubleshooting, and code updates.

## Marketing Channels

- Thomson Reuters and EANTC will **pre-announce the BIER tests** in newsletters, websites and via social media – reaching enterprises, service providers, and analysts worldwide.
- The **white paper** is a vital marketing tool for tracking results. It contains the test topics and findings. Visit [www.eantc.com](http://www.eantc.com) for examples of previous events.
- **Press releases** will be published by EANTC and participating vendors.
- **Participant Profile Video/ Webinar (optional)**: Each vendor can opt-in for a professionally produced video or customized webinar. This will provide the opportunity to reach customers all over the world.

## Preparational Conference Calls

The first open conference call for all vendors will be held on Tuesday, September 4, at 17:30 Central European Summer Time (CEST). All interested vendors are invited. In advance of each call we will send the call-in details to the event's mailing list.

## Mailing List

All updates are distributed using an EANTC mailing list. Please register for subscription by sending an E-mail to [bier2018@eantc.com](mailto:bier2018@eantc.com)

## Test and Demo Concept

The objective of the test is to verify functionality of Bit Index Explicit Replication (BIER) in a service provider and enterprise oriented environment.

We aim to provide a proof point for service providers that shows an innovative end-to-end concept of data center and wide area network inter-connectivity for multicast services. By presenting a realistic example of a next generation multi-vendor service provider network, participating vendors can demonstrate the maturity and applicability of their BIER implementation.

EANTC will develop a number of comprehensive test cases based on industry standards, our experience and participating vendors' contributions. The test cases will focus on verifying interoperability between implementations of two or more vendors.

To gain as much benefit as possible from multi-vendor testing, all tests will be executed during two weeks. However, vendors are not required to support all tested features. Each vendor is encouraged to participate in test areas selected from our test plan that are most fitting for the product marketing strategy.

In the white paper we will present the tested scenarios and features, their relevance in present and future networks, corresponding results of the test cases and which device models were involved.

We propose the following test topics, subject to change according to vendors' interest:

- Layer 2 VPNs: p2p, p2mp and mp2mp BUM in EVPN over BIER, E-Tree over BIER
- Layer 3 VPNs: Multicast in L3VPN Networks using Segment Routing, Hub and Spoke
- Fast Recovery: BIER using TI-LFA for convergence in Segment Routing network
- Encapsulation: MPLS, non-MPLS and IPv6-only networks
- Deep Packet Inspection: NETFLOW, SFLOW, IPFIX or equivalent flow stats export protocol to support BIER DPI
- BIER Extensions: PCEP, BGP-LS
- Basic BIER support: ISIS/OSPF, BIER Ping and global table
- Compatibility: IGMPv2, IGMPv3, 3rd party PIM domain, mLDP
- NETCONF/YANG: support for IETF BIER YANG and Openconfig YANG models, BIER Model Driven Telemetry YANG model

EANTC develops the test plan in close collaboration with interested and committed vendors. This invitation serves as a call for proposals. We are open to suggestions and proposals.

## Participation Fees

Vendors are responsible for all shipping, customs and logistics costs for the transport of their equipment to and from the test location in Berlin, Germany. The participation fees cover refreshments and lunch during the hot staging event.

The fees also include the test plan development, EANTC moderation of the preparational calls and discussions. All results will be combined in a white paper by EANTC. The electronic version will be available free of charge; hard copies can be ordered from EANTC at cost.

Type of Participation	1st Device Class	Each Additional Device Class
<b>Full Event Participation</b>	EUR 19,000	EUR 9,500
<b>Optional: Video Package</b>	EUR 2,500	
<b>Optional: Vendor-Specific Results Webinar</b>	EUR 4,000	

Small businesses (companies with less than €10M annual revenue in the last reported year) are eligible for a 25% discount for the first device class.

"Device Classes" are counted as families with almost identical hardware.

## Deadlines

Note that registration closes October 1, 2018. Contract and NDA forms are available on request.

Contacts	
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## 2018 Milestones

September 4	Kick-off conference call
October 1	Contract/ NDA deadline
October 26	Inbound shipping deadline for Berlin testing
November 2	Payment deadline
November 5–16	Hot Staging
November 15	Workshop Day
November 19	Devices ready to be picked up at EANTC
December 6	White Paper Publication

## Participants Are Asked To ...

### ... Co-market the event

- Announce the event to customers and partners
- Issue a press release if deemed appropriate

### ... Provide technical support

- Attend conference calls
- Contribute to the test plan
- Send at least one skilled support engineer or developer to hot staging
- Provide systems under test hardware (if applicable)

### ... Administratively support the event

- Register all involved staff for our mailing list
- Organize hotel and flights for hot staging

## About EANTC



EANTC (European Advanced Networking Test Center) is internationally recognized as one of the world's leading independent test centers for telecommunication technologies. Based in Berlin, Germany, the company offers vendor-neutral consultancy and realistic, reproducible high-quality testing services since 1991. Customers include leading network equipment manufacturers, tier-1 service providers, large enterprises and governments worldwide. EANTC's proof of concept, acceptance tests and network audits cover established and next-generation fixed and mobile network technologies. <http://www.eantc.com>