Benchmarking SDN Controller Performance

draft-ietf-bmwg-sdn-controller-benchmark-term-02

draft-ietf-bmwg-sdn-controller-benchmark-meth-02

96th IETF, Berlin

SDN

Software Defined Networking

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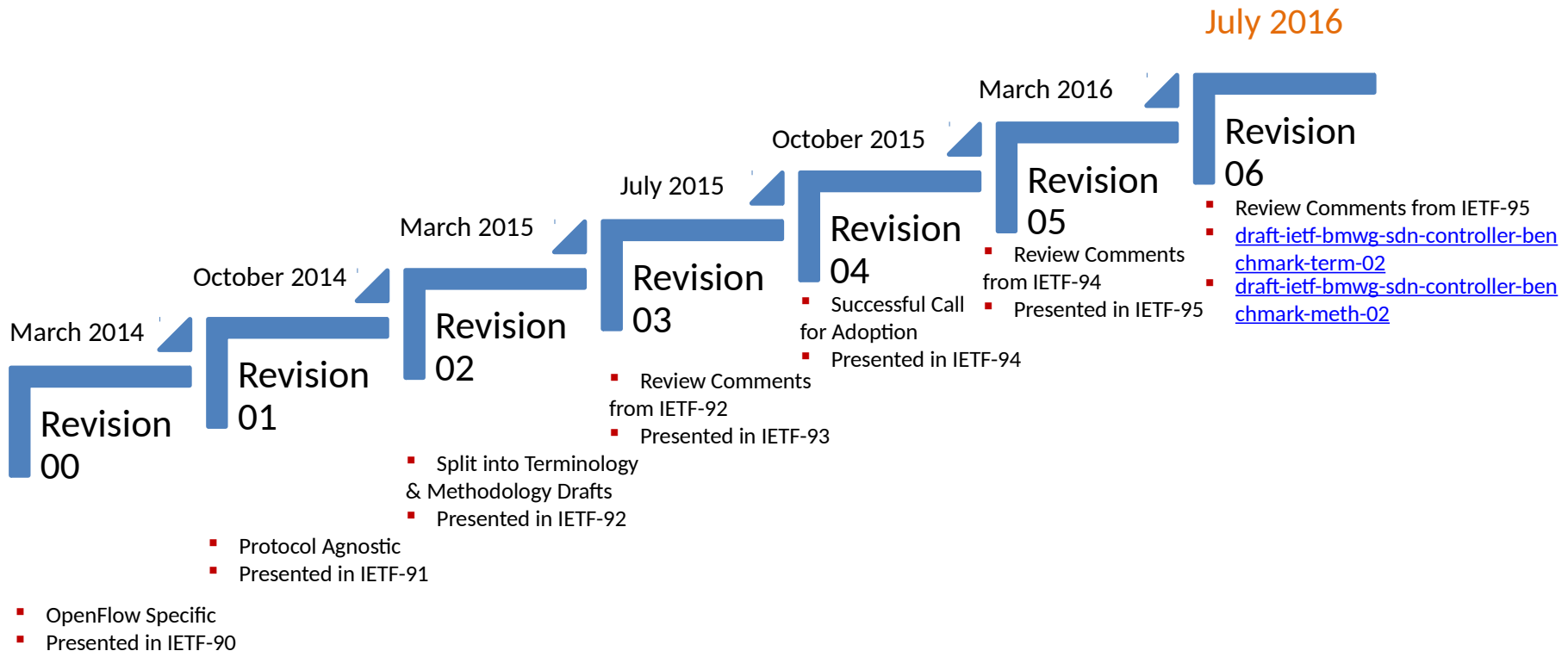
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Objective

- Develop a comprehensive set of tests for benchmarking SDN controllers for

    - ✓ Performance

    - ✓ Scalability

    - ✓ Reliability and

    - ✓ Security

- Define metrics and methodology to assess/evaluate SDN controllers

- Provide a standard mechanism to measure and compare the performance of various controller implementations

History

July 2016

March 2016

October 2015

July 2015

March 2015

October 2014

March 2014

Revision 00
- OpenFlow Specific
- Presented in IETF-90

Revision 01
- Protocol Agnostic
- Presented in IETF-91

Revision 02
- Split into Terminology & Methodology Drafts
- Presented in IETF-92

Revision 03
- Review Comments from IETF-92
- Presented in IETF-93

Revision 04
- Successful Call for Adoption
- Presented in IETF-94

Revision 05
- Review Comments from IETF-94
- Presented in IETF-95

Revision 06
- Review Comments from IETF-95
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Revision 06 - Updates

- **Thank you everyone for the support and feedback on this draft**

- **Changes Highlight**
  ### Terminology Document:
  - Revised the following test metrics definition to include measurement start and stop criteria as per Al Morton's feedback

Performance	- Network Topology Discovery Time - Asynchronous Message Processing Time - Asynchronous Message Processing Rate - Reactive Path Provisioning Time	Performance	- Proactive Path Provisioning Time - Reactive Path Provisioning Rate - Proactive Path Provisioning Rate - Network Topology Change Detection Time
Scalability	- Control Sessions Capacity - Network Discovery Size	Reliability	- Controller Failover Time - Network Re-Provisioning Time

  ### Methodology Document:
  - Reflected the changes made for test metrics definition in the terminology document.

Need to Discuss

- Need to address AI's feedback on the test methodology – Asynchronous Message Processing Rate (draft-ietf-bmwg-sdn-controller-benchmark-meth-02)
  - Current Methodology – Measures the response rate with/without packet loss
  - Proposed Methodology - Measure the response rate without any packet loss like RFC 2544 Throughput Test

Next Steps

- Other Comments?

- Consider for IESG Review??

Thank You!!!

The authors of

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