**Title – Solving the Fabric Management Gordian Knot**

**Abstract –** 100 words

The OpenFabrics Alliance (OFA), together with its partner the Gen-Z Consortium, is beginning an investigation into developing a new, open source, fabric management ‘framework’ to accelerate the development, deployment, and usage of complex computing system. The new framework would simplify the development of network fabric management applications and tools in a world of increasingly diverse fabrics and complex computational tasks posed by e.g. machine learning applications, cloud-based deployments, enterprise challenges, modern HPC problems, and more.

This BoF seeks requirements and inputs from the affected communities as well as participation in a prospective working group being formed by the OFA.

**Long Description** – 500 words

The emergence of multiple high-performance fabrics, (InfiniBand, Gen-Z, Slingshot, others), together with the increasingly complex problems being tackled today, is creating diverse requirements for an array of fabric management tools and applications needed to operate modern computing systems. Developers of such tools and management applications, in turn, are faced with a complex permutation of fabrics, but with no common way of querying or manipulating such fabrics. The victims of this conundrum are system administrators and others who design, deploy, maintain, and use any sort of fabric-based computing system and must supply their users with reliable, high performance systems. This includes systems for machine learning, cloud-based systems, enterprise environments, and high-performance computing.

The OpenFabrics Alliance is launching an effort to design and develop an open, fabric management framework designed to help slice through this gordian knot. This so-called fabric management framework consists of a set of common models describing the underlying fabric in an abstract way along with APIs and methods to manipulate the models and hence affect the fabric. The resulting framework is intended to be used by providers to deliver services such as security services, switch and end point inventories, route management, telemetry, performance and diagnostics services, and more.

This BoF is targeting communities of:

* Fabric developers and providers,
* Developers of fabric management solutions and tools such as automation, composition, and orchestration tools,
* Those developing solutions that rely on accurate, easy access to fabric information such as workload managers, task brokers, telemetry services, operations management and performance tuning applications

This BoF is a Call to Action for those communities to discuss fabric management use cases, provide feedback on the most urgent set of problems facing them and to collect initial requirements.

We are also trolling for members to join a prospective new OpenFabrics Alliance working group, tentatively called the OpenFabrics Management Framework Working Group (OFMF WG) to participate in the design and development of the proposed framework.

**Session Format Information** – 150 words

The session format will be modeled on a similar BoF hosted by the OpenFabrics Alliance at its 2020 Virtual Workshop. The format consists of

* A pre-recorded video (10-15 minutes) illustrating both the problem and the proposed solution.
* A guided discussion (45-50 minutes) led by members of the emerging OFMWG consisting of a series of questions put to the audience and facilitation designed to stimulate discussion in specific areas.

**Panelists** –

Michael Aguilar, Russ Herrell, Jeff Hilland, Paul Grun, Forest Godfrey