OpenFog Consortium

The Technology of OpenFog Computing and Networking
Why this open approach?

Proprietary or single vendor solutions slows down adoption and innovation.

An open architecture will:

- Provide a robust new platform for product development
- Increased quality and innovation through competition in the open environment
- Lead to a vibrant, growing supplier ecosystem
- Accelerate market adoption
- Lower system costs
Unified framework & roadmap to help software developers and system architects create the first generation of open fog computing systems develop compute, network, storage and control technologies for the cloud-to-things continuum.

First step in creating standards to enable interoperability in IoT, 5G, Artificial Intelligence and other complex data and network intensive applications.

Creates a common language for fog computing and will help unify the edge/fog ecosystem under a single, interoperable, testable set of hardware and software standards.
The pillars describe requirements to every part of the fog supply chain: component manufacturers, system vendors, software providers, application developers.
OpenFog RA description with perspectives
A closer look at fog nodes

- They form a mesh to provide load balancing, resilience, fault tolerance, and minimization of cloud communication.
- They communicate laterally (peer to peer, east to west) and communicate up and down (north to south).
- Are able to discover, trust, and utilize the services of another node in order to sustain reliability-availability-serviceability.

Fog nodes in a Smart City: Buildings, neighborhoods & regions are connected to provide an infrastructure that may be optimized for service delivery.
The RA Enables **SCALE**

The OpenFog RA enables fog-cloud and fog-fog interfaces that provide these advantages:

- **Security**: Additional security to ensure safe, trusted transactions
- **Cognition**: Awareness of client-centric objectives to enable autonomy
- **Agility**: Rapid innovation and affordable scaling under a common infrastructure
- **Latency**: Real-time processing and cyber-physical system control
- **Efficiency**: Dynamic pooling of local unused resources from participating end-user devices
Summary

- **What it is**: The OpenFog RA provides a high to medium-level cross-industry framework designed to help software developers and system architects create the first generation of open fog nodes and networks.

- **Why it works**: The OpenFog RA will help unify the edge/fog ecosystem under a single, interoperable, testable set of hardware and software standards.

- **Why it matters**: The OpenFog RA represents a game-changing, unified vision for providing computing, networking and storage in the continuum between the cloud and billions of things – *where there currently are no viable solutions or standards.*
Thank you!

Download the OpenFog RA at

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