

ECOMP (Enhanced Control, Orchestration, Management & Policy) Architecture White Paper FAQ's

1. What does the acronym ECOMP stand for?

Enhanced Control, Orchestration, Management, and Policy (ECOMP). The ECOMP framework is the part of the larger Domain 2.0 (D2) ecosystem that is responsible for the efficient control, operation and management of D2 capabilities and functions. It specifies standardized abstractions and interfaces that enable efficient interoperation of the D2 ecosystem. ECOMP encompasses the instantiation and life cycle management of Virtual Functions (VF) and the cloud platform the VFs reside on – hypervisor, container or bare metal based. We view ECOMP as a more comprehensive solution to what the standards and even open source communities have stitched together.

2. What does ECOMP achieve?

ECOMP is critical in achieving AT&T's D2 imperatives: increase the value of our network to customers by rapidly on-boarding of new services (created by AT&T or 3rd parties), reduce CapEx and OpEx, and provide Operations efficiencies. The goal of ECOMP is to support full automation in this new paradigm and reduce dependencies on our Legacy Operations Support Systems (OSS).

3. Why is AT&T releasing the whitepaper now?

AT&T originally introduced ECOMP as part of our overall SDN strategy as documented in the [D2 Whitepaper](#), released in February 2014. We have made significant advancement to all of the key technical domains outlined as part of that strategy and will be preparing a series of papers for possible future release that document our progress and learnings. We have chosen to release the ECOMP paper as it represents the “intelligence” of how network functions are on-boarded and lifecycle managed on carrier optimized cloud infrastructure.

4. What is “carrier optimized cloud infrastructure”?

We cannot simply flip a switch and have network functions traditionally packaged with proprietary hardware become cloud-native applications. Additionally, especially in the forwarding plane, we face unique challenges that cannot be solved at the performance, reliability, and security scale needed. Therefore, AT&T has introduced various normalized designs that span HW and SW based on a classification of workload type. It is this normalization combined with SW and high volume common off the shelf (COTS) HW that is accelerating our 30 percent goal of our targeted network on an SDN enabled cloud by the end of 2016.

5. How many VNF's/workloads are managed through ECOMP?

We have identified over 200 network functions that we plan to have virtualized and controlled on our target architecture by 2020. Our goal for 2016 is to have 30% of network virtualized and under SDN control. There are more than enough VNF opportunities to allow that to happen.

6. What service functionality does ECOMP currently support?

ECOMP Platform components support early D2 projects such as Network Function on Demand (NFoD), AT&T Collaborate (Hosted BVoIP platform consolidation), Mobility Call Recording (MCR), Virtual Universal Service Platforms (vUSP) and IP Interconnect.

7. **Can you release any detail on the metamodel framework underlying technology that was used in ECOMP? Do you use an open framework such as EMF or is it reliant on some existing third party product?**

Our initial implementation of ECOMP is with models created in several domain-specific languages, such as YANG, TOSCA, and Heat templates; we are assessing whether it makes sense to rationalize these models in the Eclipse Modeling Framework (EMF), and the aspiration is to drive the evolution of these varied models from EMF.