Open Source MANO

1st Multi-vendor NFV Showcase

Proof of the "Horizontal" NFV concept
Fortinet, ng4t, Mobileum, Open Air Interface, Whitestack

ETSI

Introduction

The multi-vendor NFV Showcase is an effort to bring together a number of reputed vendors and organizations, to demonstrate that building production-ready multi-vendor network services is possible, on top of open technologies.

Being submitted as an OSM POC, it highlights OSM's role on facilitating such vision of achieving automated, horizontal NFV deployments.
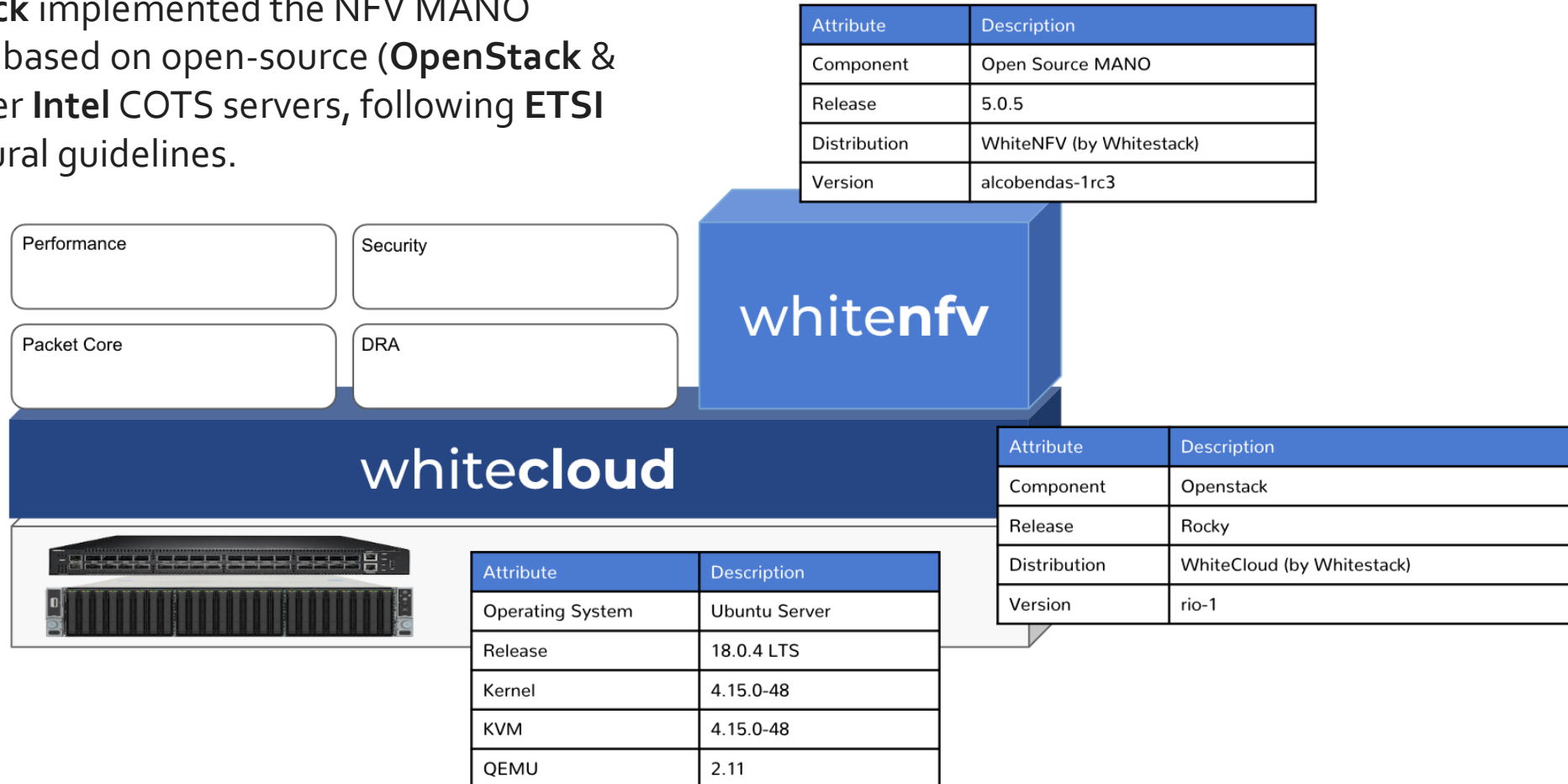
This first edition's objective was to implement a completely automated, secured, virtualized Evolved Packet Core (vEPC) with value-added services, by integrating VNFs from different vendors.

Team members

- Fortinet

- Mobileum

- ng4t
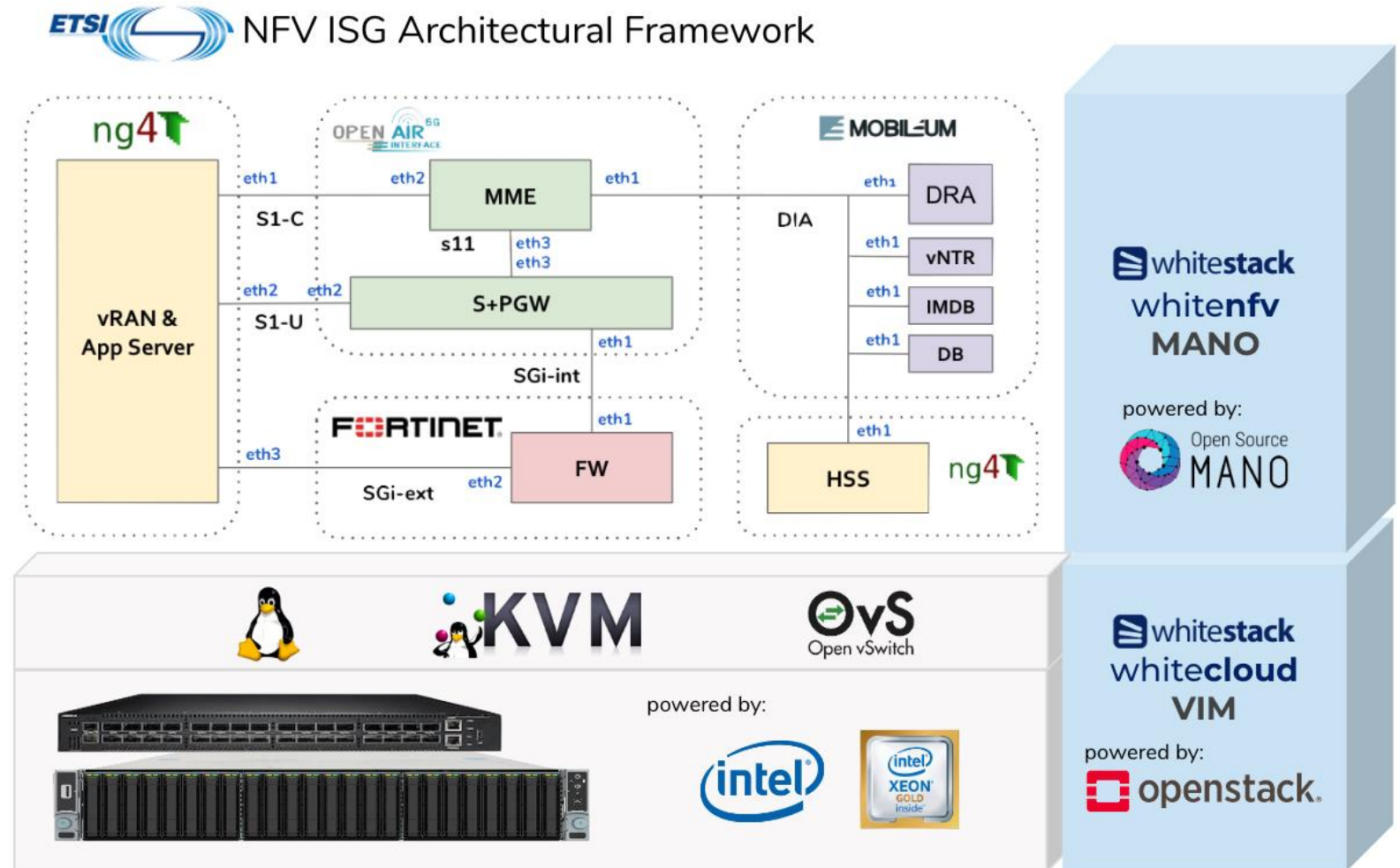
- Open Air Interface

- Whitestack

Software for NFVI & MANO

Whitestack implemented the NFV MANO platforms based on open-source (**OpenStack** & **OSM**), over **Intel** COTS servers, following **ETSI** Architectural guidelines.

Attribute	Description
Component	Open Source MANO
Release	5.0.5
Distribution	WhiteNFV (by Whitestack)
Version	alcobendas-1rc3

Performance	Security

Packet Core	DRA

whitenfv

whitecloud

Attribute	Description
Component	Openstack
Release	Rocky
Distribution	WhiteCloud (by Whitestack)
Version	rio-1

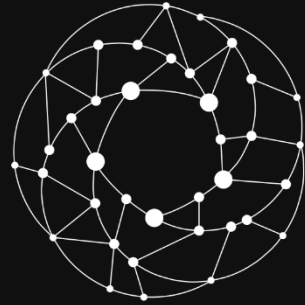| Attribute	Description
Operating System	Ubuntu Server
Release	18.0.4 LTS
Kernel	4.15.0-48
KVM	4.15.0-48
QEMU	2.11

The Network Service

- **Ng4t** : Emulates the vRAN and provides the vHSS

- **OpenAir Interface**: Implements the vEPC (MME, SGW, PGW)

- **Fortinet**: implements security at the SGi interface

- **Mobileum**: implements DRA and NTR (Roaming Steering)

Key Takeaways

- It is possible to deploy real services under a standardized NVF architecture. In this first edition, we launched a fully-functional multi-vendor virtualized EPC within minutes, on top of open source VIM (Openstack), Commercial-of-the-Shelf Servers, and orchestrated by Open Source MANO.

- ETSI Standardization efforts are going in the right direction, helping operators move away from single-vendor, vertical NFV deployments which are not leveraging the real advantages of NFV.

- Most of the challenges slowing down NFV deployments are not related to technology but to the use of good practices.

Reference materials

- Main results publication with link to report.

  https://whitestack.com/posts/results-multivendor-nfv-showcase/

- Article at OpenStack SuperUser blog

  [To be posted soon]

- Session at the Open Infrastructure Summit (Denver, May 2019)
  - Slides:
    https://docs.google.com/presentation/d/1JKaPaATP8MYVNXF2fQ2Sop9L3VAuVYMu6PkKAe2LpsY
  - Video with **live demo**:

    [To be posted soon]

Open Source
MANO

Thanks!