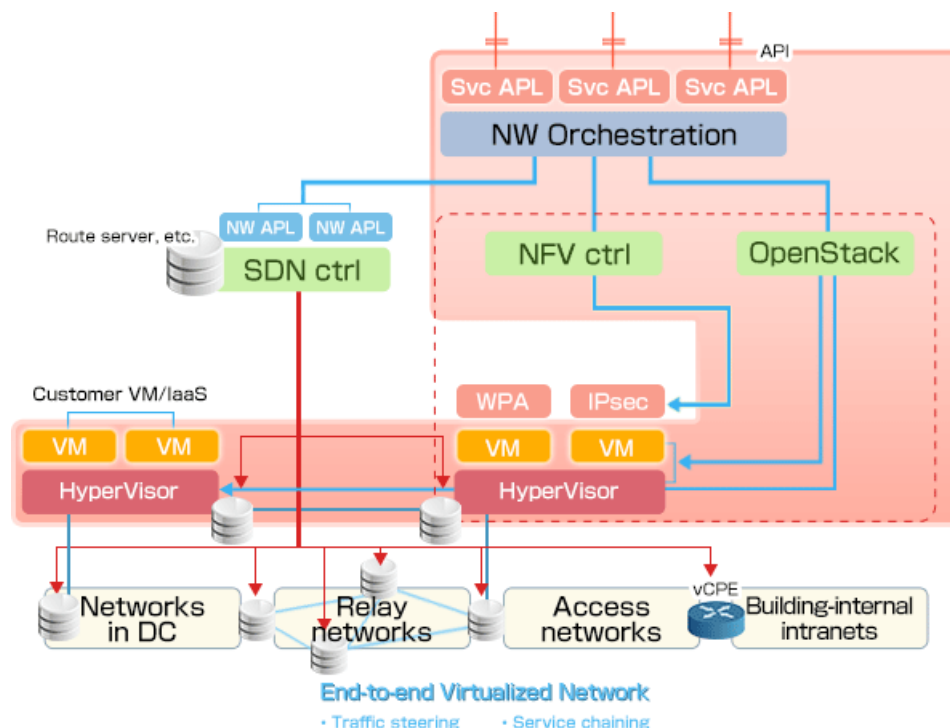


Operational Efficiency

Research Themes
Operational Efficiency
Working Groups

The Operational Efficiency Working Group builds technologies and frameworks that enable the efficient and automatic operation of SDN and cloud computing and publishes them in open-source, documented forms.



Overview of Activities

In the domain of SDN and cloud computing, substantial progress has been made in research and development regarding elemental technologies and enhancement of OSS. Operations, however, remain dependent on the knowledge of each systems-operation department and even individual operators, posing formidable barriers to the adoption of open technologies. Users want rapid implementation in their services of new features made possible by the latest technologies, yet because operational procedures are not firmly established, the risks of adoption remain high. To solve these problems, and to expand the use of SDN and cloud computing, the Operational Efficiency Working Group builds platforms and technologies that support the efficient and automated operation of SDN and cloud computing, makes these solutions available on an open-source basis, and publishes them in documentary form.

Below we describe some of the details of the verification, research and development efforts of the Working Group, their methods, and the results expected.

Details of Verification, Research and Development

(A) Drafting of Operational Scenarios

Based on the results of use-case surveys, the Operational Efficiency Working Group drafts operational scenarios according to the life cycle and events associated with SDN and cloud computing. The Working Group clarifies the requirements for the common platform needed to streamline and automate these operational scenarios, based on OpenStack, the de facto standard in cloud-platform software. These operational scenarios consist of multiple patterns of operational scenarios and include scenarios for migration among networks and among clouds.

(B)Verification and Documentation of OSS for Construction of Automation

The Operational Efficiency Working Group performs verification of a variety of OSS applications, packages them, and publishes and documents them as OSS, to provide a platform for the streamlining and automation of operations.

Methods of Verification, Research and Development

(A)Drafting Operational Scenarios

The Working Group flushes out scenarios from the interviews on use cases and defines the conditions for those scenarios. After flushing out scenarios from initial construction to operational scenarios, expansions and version upgrades, the Working Group defines the requirements and restrictions that apply in realizing each scenario.

(B)Technology Verification and Documentation

The Operational Efficiency Working Group verifies automatic-construction software and orchestration software and verifies the automatic construction of networks and storage.

Expected Results

- Definitions of Requirements for SDN and Cloud Computing Operational Platforms
- Verification Report on SDN and Cloud Computing Technologies