

# VENUS-C Interoperable Toolkit v2.0

*Wednesday, 19 September 2012 16:30 (30 minutes)*

## Description of the work

The objective of the OVF4ONE tool is to render the Opennebula cloud inter-operable and open and to enable horizontal scaling and migration of infrastructure services across heterogeneous cloud environments.

OVF4ONE tool provides an OCCI standard interface on top of Opennebula cloud with the OCCI rendering defined in OVF service description format.

In detail, OVF4ONE converts the OCCI Restful calls to Opennebula OCA(OpenNebula Cloud API) calls and the OVF service descriptions to the Opennebula Virtual machine descriptions. The work involves mapping of the Opennebula template parameters to the OVF service Descriptor and thus allowing the Opennebula VM template to be defined in OVF packaging format. OVF is extensible and thus the OpenNebula template values that could not be mapped to OVF are placed in the "Product properties" section of the OVF file.

OVF4ONE enables infrastructure services migration and scaling between Opennebula and other cloud providers.

This project has been realised as part of Venus-C EU project focused on easing migration across heterogeneous target platforms.

## Link for further information

<http://opennebula.org/software/ecosystem:ovf4one>

## Wider impact of this work

Provides a standard interface for accessing infrastructure as a service offerings for the Opennebula cloud and thus facilitates scaling, migration of services across Opennebula and other cloud infrastructures. Integrates cloud standards OCCI and OVF thus enhancing the advantages of OCCI interface by providing OVF service descriptions for packaging, configuration and distribution of virtual machines, that in turn helps in rendering the virtual resources portable across various cloud infrastructures.

## Printable Summary

With the rapid adoption of virtualization in the arena of cloud a need for an open and inter-operable cloud and a standard way to package and distribute virtual machines is imminent. Open Cloud Computing Interface (OCCI) provides an API that allows for the runtime management of infrastructure as service offerings. Open Virtualization Format (OVF) was created in order to provide a platform independent, efficient, extensible, and open packaging and distribution format for virtual machines.

The idea behind OVF4ONE is to render the Opennebula cloud interoperable with other cloud offerings by providing an OCCI interface that allows OVF service descriptions.

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**Session Classification:** Cloud Management Solutions

**Track Classification:** Virtualised Resources: challenges and opportunities (Michel Drescher: track leader)