

# vMRF Network Impact Report

## Virtual Multimedia Resource Function

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### NETWORK IMPACT REPORT

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# 1 Introduction

The Network Impact Report (NIR) describes how the current release of Virtual Multimedia Resource Function (vMRF) with new and changed features affects the previous release of vMRF and the operator's overall network, including all affected products and functions.

## 1.1 Purpose

The purpose of this document is to provide sufficient information at an early stage to Ericsson system operators to help them plan the introduction of new products and upgrades to their networks.

This document is a living document and is subject to change during the development of the new release. Therefore, part of the information may be incomplete or unavailable until General Availability (GA) of the new vMRF release.

# 2 General Impact

## 2.1 From vMRF 1.0 to vMRF 1.1

### 2.1.1 Capacity and Performance

In vMRF 1.1 hyperthreading support has been introduced. When hyperthreading is in use, vMRF VMs are deployed by allocating two vCPUs per each physical CPU core. The use of hyperthreading increases the capacity of a single physical CPU core up to 20%. It is recommended to use hyperthreading, in which case only even VM flavor sizes are supported.

#### 2.1.1.1 Subscriber Capacity

No impact.

#### 2.1.1.2 Network Performance

No impact.



## **2.1.2 Hardware**

No impact.

## **2.1.3 Implementation**

The following port number changes are introduced in vMRF 1.1 due to alignment with other IMS nodes:

- Cluster internal network port is moved to eth0
- O&M port is moved to eth1
- Signaling port is moved to eth2

## **2.1.4 Interface**

### **2.1.4.1 Inter-Node Interface**

No impact.

### **2.1.4.2 Man-Machine Interface**

No impact.

## **2.1.5 Memory**

No impact.

## **2.1.6 Operation**

In vMRF 1.1 the following new alarms have been introduced:

- MRF IP Auto-Configuration Failure
- MRF Next Hop Router Unreachable

In vMRF 1.1 the following alarms have been converted into events:

- COM SA, AMF SI Unassigned
- COM SA, CLM Cluster Node Unavailable

## **2.1.7 Obsolete Features**

No impact.



## 2.1.8 Other Network Elements

### 2.1.8.1 General

The lowest interoperable releases for vMRF 1.1 are described in Table 1.

*Table 1 Lowest Interoperable Releases for vMRF 1.1*

MTAS	15B
vMTAS	16A
OSS-RC	17B

### 2.1.8.2 Multimedia Telephony Application Server (MTAS)

vMRF 1.1 is compatible with the following MTAS releases: 4.1, 4.2, 4.3, and 4.4.

### 2.1.8.3 Virtual Multimedia Telephony Application Server (vMTAS)

vMRF 1.1 is compatible with the following vMTAS release: 16A.

### 2.1.8.4 OSS-RC

vMRF 1.1 is compatible with the following OSS-RC release: 17B.

## 2.1.9 Other Impacts

No impact.

## 2.1.10 Additional Information

No impact.



## 3 Impact on vMRF Features

### 3.1 Impact on vMRF Features from vMRF 1.0 to vMRF 1.1

#### 3.1.1 Media Stream Processing Enhancements

##### 3.1.1.1 Description

In vMRF 1.1 the G.722 audio codec has been introduced. The G.722 codec operates at a sampling rate of 16 kHz and offers audio bandwidth ranging from 50 Hz up to 7 kHz. The G.722 codec supports Packet Loss Concealment (PLC).

In vMRF 1.1 adaptive jitter service has been introduced. In the beginning of the call the jitter buffer size is always the configured initial jitter buffer size, but during the call the jitter buffer size adapts to the measured jitter. Static jitter service is not supported in vMRF 1.1.

#### 3.1.2 Troubleshooting Enhancements

##### 3.1.2.1 Description

In vMRF 1.1 the h.248 error codes are now expanded with descriptive text strings.

In vMRF 1.1 hanging termination notification towards the controlling server has been introduced.