

NGN Interconnect – IP Address Allocation

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Foreword

This NICC Document (ND) has been produced by NICC

Introduction

This specification forms part of the Next Generation Network, Multi-Service Interconnect (MSI) Release Structure and ought to be read in conjunction with the associated releases of the standard 'Multi-Service Interconnect of UK Next Generation Networks' [1].

In line with the four level documentation structure defined in the release document ND1610 [1], this is a NICC layer 3 document.

This specification defines generic Address Allocation issues relating to interconnect architecture for services between UK NGNs using IP technology.

1 Scope

The present document defines the allocation of IP addresses for the interconnection of services between NGNs. These IP addresses **may** be used only over the interconnect and the address schemes used within an NGN are out of scope.

Where reference is made to Common Transport Functions these refer to Figure 1 in ND1612 [2]

2 References

For the particular version of a document applicable to this release see [ND1610](#) [1].

2.1 Normative references

- [1] ND1610: Multi-Service Interconnect of UK Next Generation Networks
- [2] ND1612: Generic IP Connectivity for PSTN / ISDN Services between Next Generation Networks

2.2 Informative references

- [3] SR 001 262 ETSI drafting rules Section 23:- Verbal Forms For The Expression Of Provisions

3 Definitions and Abbreviations

3.1 Definitions

The key words “**shall**”, “**shall not**”, “**must**”, “**must not**”, “**should**”, “**should not**”, “**may**”, “**need not**”, “**can**” and “**cannot**” in this document are to be interpreted as defined in the ETSI Drafting Rules [3].

3.2 Abbreviations

CP	Communications Provider
ETSI	European Telecommunication Standards Institute
IP	Internet Protocol
ISDN	Integrated Services Digital Network*
MSI	Multi-Service Interconnect
NAT	Network Address Translation
NGN	Next Generation Network
PSTN	Public Switched Telephone Network*
RIPE	Regional Internet Registry (RIR) for Europe, the Middle East, and Central Asia
RIR	Regional Internet Registry

* PSTN and ISDN when used with the term ‘service’ defines the replication of the service set applied to NGNs rather than the legacy networks in themselves.

4 Version of Internet Protocol

IPv4 **shall** be used across interconnects.

5 IP Address Ranges

Public IP addresses (assigned by a relevant RIR such as RIPE, and not used for any other purpose or link) **shall** be used for IP interconnect unless the interconnecting CPs mutually elect to use some other arrangement (e.g. private IP addresses). In the latter case, they will be responsible for resolving any incompatibilities which arise.

Each CP **shall** be responsible for obtaining addresses for use within its own network and for informing the other CP of the addresses used to reach interconnection functions.

Addresses for the shared network segment between CP network edges (i.e. between media or signalling border functions) **should** be provided by one of the two parties. In the absence of any other agreement, the requesting CP **shall** provide the addresses.

The CP providing addresses **shall** allocate a least a /30 subnet but **may** allocate any larger subnet that they deem suitable.

In the absence of any other agreement, the address space **shall** be divided equally between the two CPs, with the CP providing the addresses using the lower half and the other CP the upper half. Disregarding the 'any host' (all zeros) and 'every host' (all ones) sub-net addresses, it is recommended that addresses be used starting from the outside and working towards the middle.

6 Network Address Translation

Network Address Translation (NAT) **may** be implemented by an interconnecting network. However, neither party **may** require or forbid the other to use NAT.

History

Document history		
1.1.1	Jun 2008	Initial issue