


AS-Numbers in European HAMNET

Every  **Autonomous System (AS)** must have an unambiguously single number which is called **AS-number (ASN)**. An Autonomous System is a network or a group of networks with a common routing policy. They often have one group of administrators. Main parts of an Autonomous System are the existing core-routers.

16-bit-AS-Numbers

16-bit-AS-Numbers (ASN) have an integer-range of 0-65536. That corresponds to 65536 possible AS-numbers. The range of 1 to 64511 is used within the internet. Private AS-numbers are only allowed to be used within an organization in separated private networks). Their range has to be within 64512 to 65534. The European HAMNET is such a separated network. In the year 2009 there has been an agreement between the participating European Countries for the use of 16-bit AS-numbers in the European HAMNET. The private range 64512-65534 was coordinated as follows (*source: [OEVSV:Digitaler Backbone \(german\)](#)*):

Country	16-bit-AS-Range	Last Update
Austria	64512 - 64599	24.06.2016
Italy	64600 - 64619	01.10.2009
Germany	64620 - 64683	01.10.2009
Luxemburg	64684 - 64685	01.10.2009
Netherlands	64686 - 64704	27.02.2016
Hungary	64705 - 64707	01.10.2009
Spain	64708 - 64719	01.10.2009
Switzerland	64720 - 64739	24.06.2012
Liechtenstein	64740 - 64741	25.06.2012
France	64742 - 64777	13.04.2013
Belgium	64778 - 64788	26.09.2013
Turkey	64789 - 64799	26.09.2013
Poland	64800 - 64839	04.11.2013
Romania	64840 - 64849	09.02.2014
Portugal	64850 - 64854	04.03.2015
Slovenia	64855 - 64864	07.12.2015
Croatia	64865 - 64873	27.02.2016

In German HAMNET these 16-Bit-as-numbers are not used primarily for technical BGP-routing but for optimizing regional structuring.

32-bit-AS-Numbers

32-bit AS-Numbers are used in German HAMNET since end of 2015. In 2015 after some discussion in the Net-44 mailinglist there was a **proposal** and international agreement for using private **32-bit AS-Numbers in whole AMPRNet**. Splitting up the available range to individual countries depends on

the „International Numbering Plan for Public Data Networks“ (X.121 Document) and the „List of Mobile Country Codes“ (E.212 Document) of the ITU. This is a list of assignments of local 32-bit-AS-Numbers in the European HAMNET (abstract):

	Country	32bit-ASN Block	Country Codes X.121	Status
OE	Austria	4223200000-4223399999	232-233	HamnetDB
I	Italy	4222200000-4222499999	222-224	HamnetDB
DL	Germany	4226200000-4226599999	262-265	HamnetDB
LX	Luxemburg	4227000000-4227099999	270	HamnetDB
CR	Croatia	4221900000-4221999999	219	HamnetDB
PA	Netherlands	4220400000-4220599999	204-205	HamnetDB
HA	Hungary	4221600000-4221699999	216	HamnetDB
EA	Spain	4221400000-4221599999	214-215	HamnetDB
HB	Switzerland	4222800000-4222999999	228-229	HamnetDB
HBO	Liechtenstein	4229500000-4229599999	295	HamnetDB
F	France	4220800000-4221199999	208-211	HamnetDB
ON	Belgium	4220600000-4220699999	206	HamnetDB
TA	Turkey	4228600000-4228699999	286	to be generated
SP	Poland	4226000000-4226199999	260-261	HamnetDB
YO	Romania	4222600000-4222699999	226	HamnetDB
CT	Portugal	4226800000-4226999999	268-269	HamnetDB
S5	Slovenia	4229300000-4229399999	293	HamnetDB

In European HAMNET 16-bit and 32-bit as-numbers are used in parallel. Every country may have its own policies for deploying 32-bit-as-numbers out of their own as-range..

more Informations:

- [Proposal for deployment of private 32-bit AS-numbers in the worldwide 44er AMPRNet](#)
- [Policy for deployment of 32-bit AS-numbers in the German HAMNET](#)

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