Internal IP Address Plan

Autonomous systems

```
AS65534       AS-PRG
AS65533       AS-BRQ
AS65532       AS-B48
AS65531       AS-B48-2
```

Internal ASNs and connect prefixes

```
AS4294967294    [MAX INTERNAL ASN]

AS42**------    Location
    00              Prague
    01              Brno
AS42--***---    Rack
      000           PRG-R-4-7
      001           PRG-R-14-7
AS42-----***    Node / switch #
        [000-899 nodes]
        [900-999 switches]

AS4200001900 MAI-PRG-R-4-7-EDGE1                                172.16.248.0/24
2a03:3b40:42:128::/64
AS4200000901 MAI-PRG-R-4-7-1                                    172.16.253.0/24
2a03:3b40:42:0::/64
AS4200000902 MAI-PRG-R-4-7-2                                    172.16.252.0/24
2a03:3b40:42:1::/64

AS4200001900 MAI-PRG-R-14-7-EDGE2                               172.16.249.0/24
2a03:3b40:42:129::/64
AS4200001901 MAI-PRG-R-14-7-1                                   172.16.251.0/24
2a03:3b40:42:2::/64
AS4200001902 MAI-PRG-R-14-7-2                                   172.16.250.0/24
2a03:3b40:42:2::/64

AS4200001001 node1.stg
AS4200001002 node2.stg

??4201000900 MAI-BRQ-R-????-1                                   172.19.253.0/24
2a03:3b40:42:2::/64???
??4201000901 MAI-BRQ-R-????-2                                   172.19.252.0/24
2a03:3b40:42:2::/64???

??4201000001 node?.brq
```

```
=[MAI-PRG-
R-4-7-1]=========================================================================
================

--INTERFACE---PEER-ASN---------TARGET-----------------------IPv4-----------
-----IPv6-----------------
Port 10G 07  4200000007   <-> node2.prg                      172.16.253.25/30
2a03:3b40:42:0:07::1/80
Port 10G 08  4200000008   <-> node7.prg                      172.16.253.29/30
2a03:3b40:42:0:08::1/80
Port 10G 09  4200000009   <-> node4.prg                      172.16.253.33/30
2a03:3b40:42:0:09::1/80
Port 10G 10  4200000010   <-> node1.pgnd                     172.16.253.37/30
2a03:3b40:42:0:10::1/80
Port 10G 11  4200000011   <-> node1.prg                      172.16.253.41/30
2a03:3b40:42:0:11::1/80
Port 10G 12  4200000012   <-> node8.prg                      172.16.253.45/30
2a03:3b40:42:0:12::1/80
Port 10G 13  4200000013   <-> node3.prg                      172.16.253.49/30
2a03:3b40:42:0:13::1/80
Port 10G 14  4200000014   <-> node13.prg                     172.16.253.53/30
2a03:3b40:42:0:14::1/80
Port 10G 15  4200000015   <-> node12.prg                     172.16.253.57/30
2a03:3b40:42:0:15::1/80
Port 10G 16  4200000016   <-> node10.prg                     172.16.253.61/30
2a03:3b40:42:0:16::1/80
Port 10G 17  4200000017   <-> node9.prg                      172.16.253.65/30
2a03:3b40:42:0:17::1/80
Port 10G 18  4200000018   <-> node5.prg                      172.16.253.69/30
2a03:3b40:42:0:18::1/80
Port 10G 19  4200000019   <-> node6.prg                      172.16.253.73/30
2a03:3b40:42:0:19::1/80
Port 10G 20  4200000020   <-> node11.prg                     172.16.253.77/30
2a03:3b40:42:0:20::1/80
Port 10G 21  4200000021   <-> node14.prg                     172.16.253.81/30
2a03:3b40:42:0:21::1/80
Port 40G 49  4200000902   <-> MAI-PRG-R-4-7-2  Port 40G 49
172.16.253.193/30   2a03:3b40:42:0:49::1/80
Port 40G 51  4200001901   <-> MAI-PRG-R-14-7-1 Port 40G 51
172.16.253.201/30   2a03:3b40:42:0:51::1/80
Port 40G 53  4200001902   <-> MAI-PRG-R-14-7-2 Port 40G 53
172.16.253.209/30   2a03:3b40:42:0:53::1/80
```

```
=[MAI-PRG-
R-4-7-2]=========================================================================
================

--INTERFACE---PEER-ASN---------TARGET-----------------------IPv4-----------
-----IPv6-----------------
Port 10G 07  4200000007   <-> node2.prg                      172.16.252.25/30
2a03:3b40:42:1:07::1/80
```

```
Port 10G 08  4200000008   <-> node7.prg                      172.16.252.29/30
2a03:3b40:42:1:08::1/80
Port 10G 09  4200000009   <-> node4.prg                      172.16.252.33/30
2a03:3b40:42:1:09::1/80
Port 10G 10  4200000010   <-> node1.pgnd                     172.16.252.37/30
2a03:3b40:42:1:10::1/80
Port 10G 11  4200000011   <-> node1.prg                      172.16.252.41/30
2a03:3b40:42:1:11::1/80
Port 10G 12  4200000012   <-> node8.prg                      172.16.252.45/30
2a03:3b40:42:1:12::1/80
Port 10G 13  4200000013   <-> node3.prg                      172.16.252.49/30
2a03:3b40:42:1:13::1/80
Port 10G 14  4200000014   <-> node13.prg                     172.16.252.53/30
2a03:3b40:42:1:14::1/80
Port 10G 15  4200000015   <-> node12.prg                     172.16.252.57/30
2a03:3b40:42:1:15::1/80
Port 10G 16  4200000016   <-> node10.prg                     172.16.252.61/30
2a03:3b40:42:1:16::1/80
Port 10G 17  4200000017   <-> node9.prg                      172.16.252.65/30
2a03:3b40:42:1:17::1/80
Port 10G 18  4200000018   <-> node5.prg                      172.16.252.69/30
2a03:3b40:42:1:18::1/80
Port 10G 19  4200000019   <-> node6.prg                      172.16.252.73/30
2a03:3b40:42:1:19::1/80
Port 10G 20  4200000020   <-> node11.prg                     172.16.252.77/30
2a03:3b40:42:1:20::1/80
Port 10G 21  4200000021   <-> node14.prg                     172.16.252.81/30
2a03:3b40:42:1:21::1/80
Port 40G 49  4200000901   <-> MAI-PRG-R-4-7-1  Port 40G 49
172.16.253.194/30   2a03:3b40:42:0:49::2/80
Port 40G 51  4200001902   <-> MAI-PRG-R-14-7-2 Port 40G 51
172.16.252.201/30   2a03:3b40:42:1:51::1/80
Port 40G 53  4200001901   <-> MAI-PRG-R-14-7-1 Port 40G 53
172.16.252.209/30   2a03:3b40:42:1:53::1/80
```

```
=[MAI-PRG-
R-14-7-1]=======================================================================
================

--INTERFACE---PEER-ASN---------TARGET-----------------------IPv4-----------
-----IPv6-----------------
Port 10G 01  4200001001   <-> node1.stg                      172.16.251.1/30
2a03:3b40:42:2:01::1/80
Port 10G 02  4200001002   <-> node2.stg                      172.16.251.5/30
2a03:3b40:42:2:02::1/80
Port 10G 03  4200001003   <-> node18.prg                     172.16.251.9/30
2a03:3b40:42:2:03::1/80
Port 10G 04  4200001004   <-> node17.prg                     172.16.251.13/30
2a03:3b40:42:2:04::1/80
Port 10G 05  4200001005   <-> node15.prg                     172.16.251.17/30
2a03:3b40:42:2:05::1/80
```

```
Port 10G 06  4200001006   <-> build.prg                      172.16.251.21/30
2a03:3b40:42:2:06::1/80
Port 10G 07  4200001007   <-> nasbox.prg                     172.16.251.25/30
2a03:3b40:42:2:07::1/80
Port 10G 08  4200001008   <-> node3.stg                      172.16.251.29/30
2a03:3b40:42:2:08::1/80
Port 10G 09  4200001009   <-> node4.stg                      172.16.251.33/30
2a03:3b40:42:2:09::1/80
Port 10G 46  4200001046   <-> backuper.prg
172.16.251.181/30   2a03:3b40:42:2:46::1/80
Port 10G 48  65534        <-> edgertr1.prg
172.16.251.189/30   2a03:3b40:42:2:48::1/80
Port 40G 49  4200001902   <-> MAI-PRG-R-14-7-2 Port 40G 49
172.16.251.197/30   2a03:3b40:42:2:49::1/80
Port 40G 51  4200000901   <-> MAI-PRG-R-4-7-1  Port 40G 51
172.16.253.202/30   2a03:3b40:42:0:51::2/80
Port 40G 53  4200000902   <-> MAI-PRG-R-4-7-2  Port 40G 53
172.16.252.210/30   2a03:3b40:42:1:53::2/80
```

```
=[MAI-PRG-
R-14-7-2]=======================================================================
================

--INTERFACE---PEER-ASN---------TARGET-----------------------IPv4-----------
-----IPv6-----------------
Port 10G 01  4200001001   <-> node1.stg                      172.16.250.1/30
2a03:3b40:42:3:01::1/80
Port 10G 02  4200001002   <-> node2.stg                      172.16.250.5/30
2a03:3b40:42:3:02::1/80
Port 10G 03  4200001003   <-> node18.prg                     172.16.250.9/30
2a03:3b40:42:3:03::1/80
Port 10G 04  4200001004   <-> node17.prg                     172.16.250.13/30
2a03:3b40:42:3:04::1/80
Port 10G 05  4200001005   <-> node15.prg                     172.16.250.17/30
2a03:3b40:42:3:05::1/80
Port 10G 06  4200001006   <-> build.prg                      172.16.250.21/30
2a03:3b40:42:3:06::1/80
Port 10G 07  4200001007   <-> nasbox.prg                     172.16.250.25/30
2a03:3b40:42:3:07::1/80
Port 10G 08  4200001008   <-> node3.stg                      172.16.250.29/30
2a03:3b40:42:3:08::1/80
Port 10G 09  4200001009   <-> node4.stg                      172.16.250.33/30
2a03:3b40:42:3:09::1/80
Port 10G 46  4200001046   <-> backuper.prg
172.16.250.181/30   2a03:3b40:42:3:46::1/80
Port 10G 48  65534        <-> edgertr2.prg
172.16.250.189/30   2a03:3b40:42:3:48::1/80
Port 40G 49  4200001901   <-> MAI-PRG-R-14-7-2 Port 40G 49
172.16.251.198/30   2a03:3b40:42:2:49::2/80
Port 40G 51  4200000902   <-> MAI-PRG-R-4-7-2  Port 40G 51
172.16.252.202/30   2a03:3b40:42:1:51::2/80
```

```
Port 40G 53  4200000901   <-> MAI-PRG-R-4-7-1  Port 40G 53
172.16.253.210/30   2a03:3b40:42:0:53::2/80
```

IP Summary

```
GLOBAL ALLOCATION:    172.16.0.0 - 172.31.255.255
```

```
172.16.0.0 - 172.16.255.255 VPSFREE-PRG
172.17.0.0 - 172.17.255.255 BASE48-BRQ
172.18.0.0 - 172.30.255.255 [RESERVED-LEGACY]
172.19.0.0 - 172.19.255.255 VPSFREE-BRQ
172.20.0.0 - 172.30.255.255 [UNALLOCATED]
172.31.0.0 - 172.31.255.255 MNT-SUBNET
```

VPSFREE-PRG

Allocation:

```
172.16.0.0/16     VPSFREE-PRG
```

Assignments:

```
NETWORK           ALLOCATION NAME       VLAN #
================================================================================
===
172.16.0.0/23     VPSFREE-PRG-PROD      200
172.16.2.0/23     VPSFREE-PRG-PGND      210
172.16.4.0/23     VPSFREE-PRG-STG-INT   BGP
172.16.8.0/21     VPSFREE-PRG-PROD-INT  200
172.16.100.0/24   VPSFREE-PRG-LEGACY    100
172.16.101.0/24   VPSFREE-PRG-MGMT      101
172.16.103.0/24   VPSFREE-PRG-SWITCHES  103
172.16.107.0/24   VPSFREE-PRG-VPN       220
172.16.107.0/24   VPSFREE-PRG-VPN       220
```

BASE48-BRQ

Allocation:

```
172.17.0.0/16     BASE48-BRQ
```

Assignments:

```
NETWORK           ALLOCATION NAME       VLAN #
================================================================================
===
172.17.0.0/24     BASE48-MGMT           100
-dhcp-            BASE48-UPC            200
172.17.1.0/24     BASE48-LAN            201
172.17.2.0/24     BASE48-WLAN           202
172.17.3.0/24     BASE48-IOT            203
172.17.4.0/23     BASE48-RACKBASE       300
172.17.6.0/23     BASE48-RACKVPSF       301
```

VPSFREE-BRQ

Allocation:

```
172.19.0.0/16     VPSFREE-BRQ
```

Assignments:

```
NETWORK           ALLOCATION NAME       VLAN #
================================================================================
===
172.19.0.0/23     VPSFREE-PRG-PROD      ---
172.19.8.0/21     VPSFREE-BRQ-PROD-INT  ---
172.19.101.0/24   VPSFREE-PRG-MGMT      101
```

MNT-SUBNET

Allocation:

```
172.31.0.0/16     MNT-SUBNET
```

Assignments:

```
NETWORK           ALLOCATION NAME       COMMENT
================================================================================
===
172.31.0.0/24     PEERING               IPSec /30 tunnels
  172.31.0.0/30   PEER-PRG-BRQ-1-1      edge-rtr1.prg <-> edge-rtr1.brq
  172.31.0.4/30   PEER-PRG-BRQ-1-2      edge-rtr1.prg <-> edge-rtr2.brq
  172.31.0.8/30   PEER-PRG-BRQ-2-1      edge-rtr2.prg <-> edge-rtr1.brq
  172.31.0.12/30  PEER-PRG-BRQ-2-2      edge-rtr2.prg <-> edge-rtr2.brq
  172.31.0.16/30  PEER-PRG-B48-1-1      edge-rtr1.prg <-> edge-rtr1.b48
  172.31.0.20/30  PEER-PRG-B48-2-1      edge-rtr2.prg <-> edge-rtr1.b48
```

```
  172.31.0.24/30  PEER-PRG-B48-2-1-1    edge-rtr1.prg <-> edge-rtr1.b48-2
  172.31.0.28/30  PEER-PRG-B48-2-2-1    edge-rtr2.prg <-> edge-rtr1.b48-2
```

IPv6 address plan

```
2a03:3b40::/32
2a03:3b40::/40     PRG
2a03:3b40:00::/44  PRG-INFRA
2a03:3b40:20::/44  PRG-VPS
2a03:3b40:F0::/44  PRG-INFRA
2a03:3b40:100::/40 BRQ
2a03:3b40:200::/39 IPV6-TUN
```