Networking: How are network addresses assigned?

The following (logical) network address spaces exist within a {avatar_b} environment

- **the external network** (public).
    - only the {avatar_b} server is directly connected to this network.
    - The external NIC on the {avatar_b} server is managed by the network admin according to local site conventions.
- **the server network** (semi-private)
    - All the physical servers on the {avatar_b} sub-system are connected together on this network.
    - Addresses on this network are managed by the {avatar_b} sub-system.
    - If external access to machine consoles are desired, the external network needs to have routing entries for this network pointing to the (external NIC of the) {avatar_b} server as a gateway.
- **the machine network** (semi-private)
    - dynamically deployed machines are part of this network
    - addresses on this network are managed by the {avatar_b} sub-system as well.
- **virtual private networks** (private)
    - {avatar_b} also supports VPNs that can be used at will by the user.
    - Addresses on this network are **not** managed and the user is free to setup any *ad hoc* scheme within it.

Often, the server network and the machine network are the same physical segment and are served by the same DHCP server. By convention, we reserve the lower addresses for the server network.

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