



High-availability macmon NAC scenarios

When using a network access control solution, the availability requirements will differ depending on how the solution is used and the technologies employed. macmon meets these requirements by enabling you to implement a distributed server structure that can be used in different architectures or design variants. How it is used depends largely on your requirements and objectives. macmon NAC offers a number of options for ensuring the necessary availability, including the “Hidden Master” principle, simple failover and compensation for WAN connection failures. For each macmon server, you can choose whether to use a physical or a virtual appliance.

Within a cluster of macmon servers, there is always a master server that is responsible for central administration and reporting. The master can also perform RADIUS NAC, SNMP NAC and SNMP monitoring tasks, or these can be distributed to any of the slave servers. Encrypted communication between the servers ensures that all slave servers always have the complete policies so that they can act independently. It also ensures that all rele-

vant data is available on the master to provide a central overview. As a result, backups and other centralized tasks need only apply to the master, while each slave server can act independently even if the master fails or the connection to the master is interrupted. If required, additional slave servers can be added to an existing cluster at any time.

Out of the many possible architectures, the following have been established as proven concepts:

1. “Hidden Master”
2. Distributed Architecture
3. Distributed Architecture with “Hidden Master”

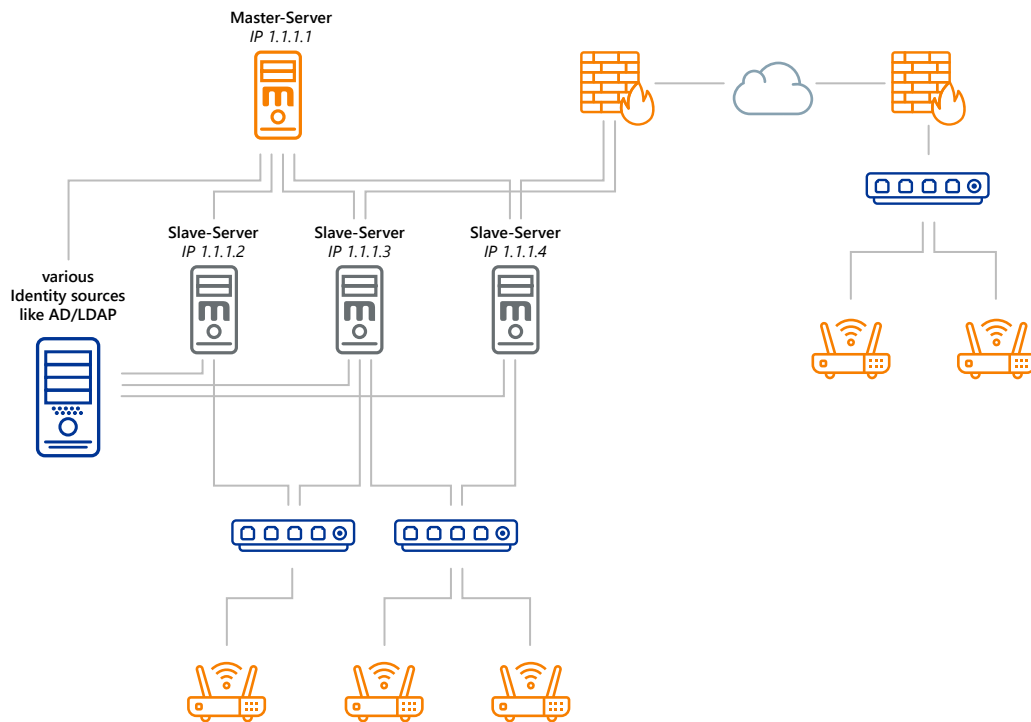
The macmon scalability option is licensed based on the number of servers, with license packages offered for 3, 6, 10, 15 or more servers. Hardware can be purchased for an additional charge according to your needs – virtual appliances do not have to be purchased separately. Scalability is always an add-on to Network Bundle or Premium Bundle licenses.



macmon Scalability

Maximum reliability through flexible high-availability options for local or distributed infrastructures including central management and reporting.

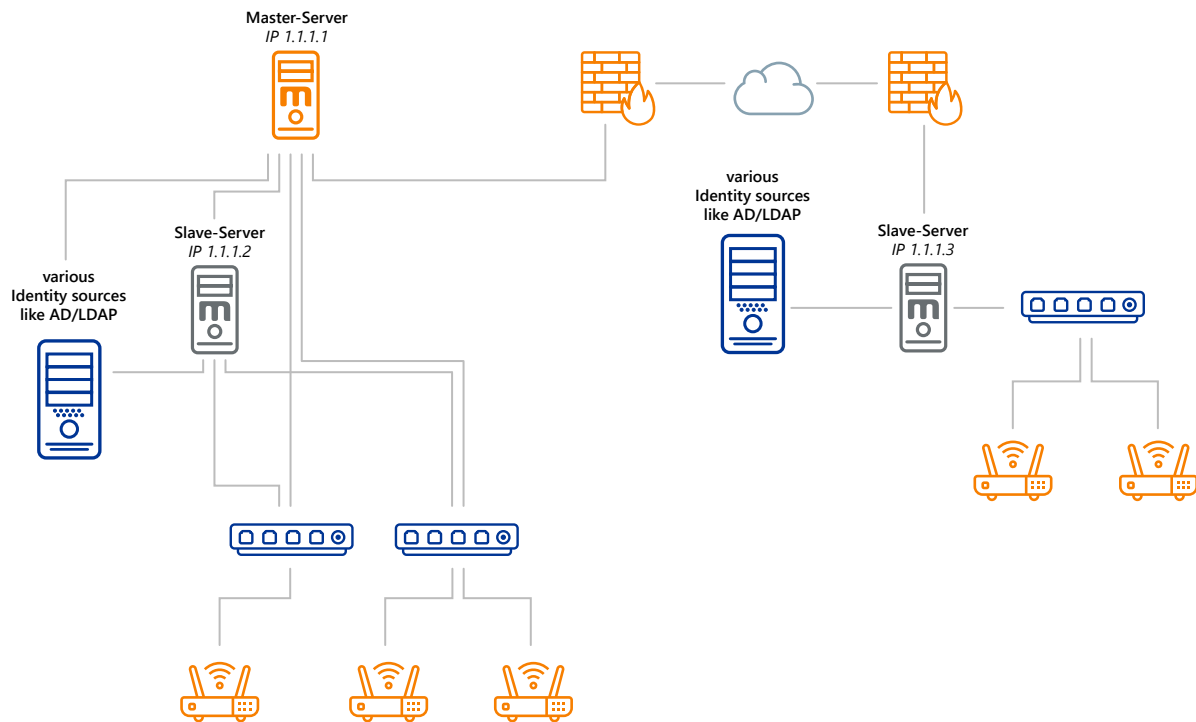
1. "Hidden Master"



macmon's "Hidden Master" strategy:

- The master server is only used for administering policies and central reporting and is not accessible to non-administrative endpoints ("hidden").
- Active tasks such as monitoring, SNMP NAC or RADIUS NAC are performed by any number of slave servers.
- To ensure high availability of the RADIUS service, this architecture uses multiple slave servers that each have all the information needed to authenticate and authorize.
- The required availability of the master server is low, as it does not perform any active tasks.

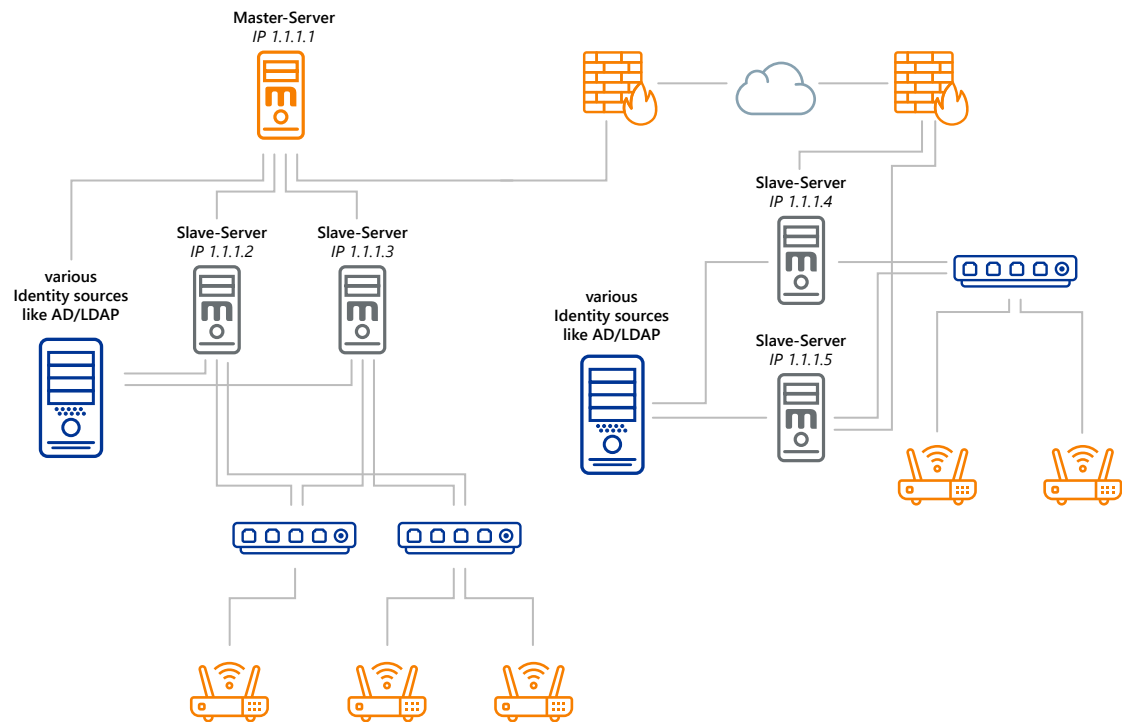
2. Distributed Architecture



macmons verteilte Architektur:

- Both the slave servers and the master perform active tasks such as monitoring, SNMP NAC and RADIUS NAC.
- The policies are managed by the master server and are available in full on all slave servers.
- Encrypted communication between the servers can also occur via WAN links to support multiple physical locations – if the connection is lost, all servers remain able to act independently.
- Exceptionally high availability is guaranteed, since one or more servers ensure constant availability at the locations where this is required.

3. Distributed Architecture with “Hidden Master”



macmon’s distributed architecture with “Hidden Master”:

- The master server is only used for administering policies and central reporting and is not accessible to nonadministrative endpoints (“hidden”).
- Active tasks such as monitoring, SNMP NAC or RADIUS NAC are performed by any number of slave servers.
- To ensure high availability of the RADIUS service, this architecture uses multiple slave servers that each have all the information needed to authenticate and authorize.
- The required availability of the master is low, as it does not perform any active tasks.
- Encrypted communication between the servers can also occur via WAN links to support multiple physical locations – if the connection is lost, all servers remain able to act independently.
- Exceptionally high availability is guaranteed, since one or more servers ensure constant availability at the locations where this is required.
- The distribution of responsibilities for infrastructure to the slave servers with administrative accesses takes place via the satellites.