# IP Address Management

This playbook outlines the process for managing the allocation, classification, and tracking of IP addresses within large-scale networks to ensure organized and efficient network operation.

### Step 1: Preparation

Gather all necessary documentation and tools required for IP address management. This includes access to the IPAM tool, network diagrams, and existing IP address allocations.

### Step 2: Audit

Conduct an audit of current IP address usage across the network. Identify all allocated, reserved, and unused IP addresses.

### Step 3: Classification

Classify IP addresses based on purpose, like dynamic allocation (DHCP), static allocation, infrastructure, virtual interfaces, and services.

### Step 4: Allocation

Allocate new IP addresses based on classification needs and availability. Ensure that no IP addresses are duplicated and that they fit into the proper subnet architecture.

### Step 5: Documentation

Document the allocation and classification of IP addresses in the IPAM tool or system. Include details such as device names, locations, and purpose.

### Step 6: Monitoring

Set up monitoring systems to track the usage and status of IP addresses. Use this data to identify trends and anticipate future needs.

### Step 7: Review

Regularly review and update the IP address management records to reflect any changes in the network, such as new devices, decommissioned devices, or reconfigured networks.

### Step 8: Policy Update

Update organizational policies and procedures to reflect any changes in IP address management practices and ensure compliance with current network standards.

## General Notes

### IPAM Software

Consider using dedicated IPAM software to automate many of the tasks associated with IP address management for efficiency and accuracy.