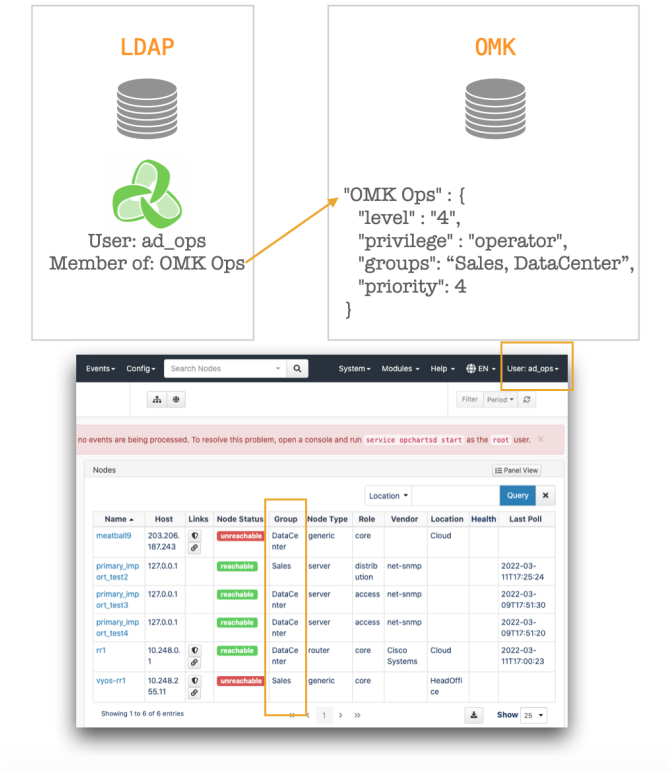
# User Authorisation with Active Directory and LDAP

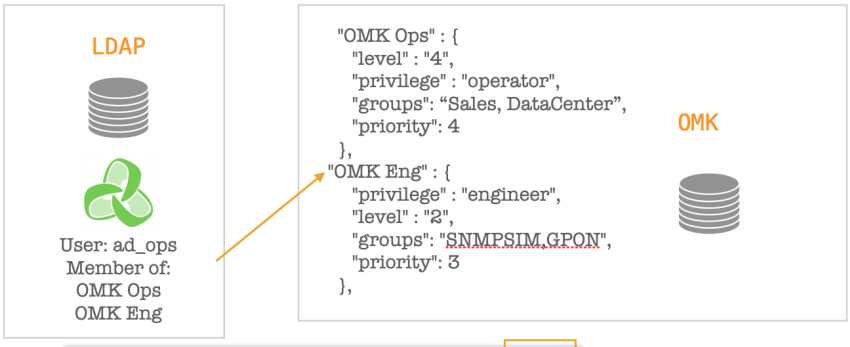


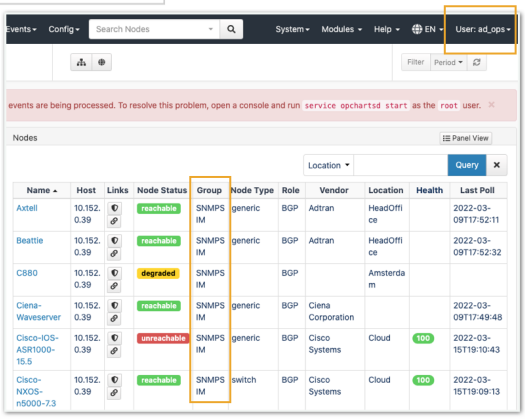
## Introduction

Authorisation with LDAP allow users to get privileges and groups assigned based on a LDAP group.




If a user belongs to more than one group, the privilege will be selected based on the priority (1 is higher priority than 10):




## Prerequisites

- LDAP authentication must be set. See Configuring NMIS to use Active Directory Authentication (ms-ldap or ms-ldaps) and OMK Authentication Methods for further details.

## Caveats

- Before opEvents 4.3.2 using this feature disables the use of the NMIS User Table completely.
- From opEvents 4.3.2, opCharts 4.5.5, this feature has been enhanced to allow local user privileges when auth_ldap_privs is enabled.

    a. If local user exists, use privilege and groups for that local user from Users.nmis
    b. If local user does **not** exist **and** we're using auth_ldap_privs, retrieve LDAP groups, match them to privilege and groups in AuthLdapPrivs.json
    c. If we do **not** have a local user **and** we are **not** using LDAP **and** we have auth_default_privilege set, use that from opCommon.json. If we have auth_default_groups set, use that.

    **auth_default_privilege** and **auth_default_groups**

    When accessing NMIS, you have a choice on how to handle authenticated users who do not have authorisations defined, you can reject them, or you can allow them default access. This is so that you do not have to define every user in the system if the authentication system is providing a reduced list of users, to have the users become an operator or guest by default and be able to see all groups of devices, the following would apply: 'auth_default_privilege' => 'guest', 'auth_default_groups' => 'all'. To prevent default authorisation, simply define them as blank, which is the default in the NMIS Install configuration.

## Configuration

Configuration items in opCommon.json

| Item | Example Value | Description | Default |
|---|---|---|---|
| auth_ldap_privs | 0/1 | Set to 1 to enable the feature | 0 |
| auth_ldap_server | server.domain.com:389 | The LDAP server | No defaults. Entry must be created. |
| auth_ldap_acc | administrator@domain.local | The LDAP account to be able to search | No defaults. Entry must be created. |
| auth_ldap_psw | Password | The password for being able to search | No defaults. Entry must be created. |
| auth_ldap_context | CN=Users,DC=opmantek,DC=local | The base search | No defaults. Entry must be created. |

| | | | |
|---|---|---|---|
| auth_ldap_group | memberOf | The attribute to lookup the group values. | memberOf |

### The mapping file

The mapping file by default, is named AuthLdapPrivs.json and it should be placed in <omk_dir>/conf.

It should contain a list of groups containing:

- privilege
- level
- groups
- priority

As an example:

```
{
   "OMK Admin" : {
      "privilege" : "administrator",
      "level" : "0",
      "groups": "all",
      "priority": 1
   },
   "OMK Eng" : {
      "privilege" : "engineer",
      "level" : "2",
      "groups": "SNMPSIM,GPON",
      "priority": 3
   }
}
```

You can find an example in <omk_dir>/install.

It is possible to change the default location/name in the configuration file opCommon.json:

**auth_ldap_privs_file**

## Integrating with MS-LDAP

You need to use both auth_ms_ldap and auth_ldap attributes for this to be a successful integration, this is so we can query both our user and group base and then apply the correct RBAC roles.

For this to be successful with ms-ldap authentication, the following example below will guide you through the process. Note that in this example the LDAP base and context search has been set for the whole domain, *you can tune as you need to be more tightly integrated*.

**/usr/local/omk/conf/opCommon.json**

```
...
  "authentication" : {
        ...
    "auth_method_1" : "ms-ldap",
# First let's define the ms-ldap specific requirements
    "auth_ms_ldap_server" : "IP_ADDRESS_OF_YOUR_MS_LDAP_SERVER", #eg. 192.168.1.22
    "auth_ms_ldap_dn_acc" : "svc_omk_admin", # you should only need to use the username here, but if this is
not successful, you can use username@domain as well.
    "auth_ms_ldap_dn_psw" : "password_of_the_dn_acc_above",
    "auth_ms_ldap_base" : "dc=contoso,dc=local",
    "auth_ms_ldap_attr" : "sAMAccountName",
 # Now we add in the ldap specific requirements, including enabling auth_ldap_privs
    "auth_ldap_privs" : 1,
    "auth_ldap_server" : "the_fqdn_of_your_ad_server:389", # you could also use an IP address here, but you
need to ensure that the LDAP/LDAPS port is added in the value, eg. 192.168.1.22:389
    "auth_ldap_acc" : "svc_omk_admin@contoso.local",
    "auth_ldap_psw" : "password_of_the_auth_ldap_acc_above",
    "auth_ldap_context" : "dc=contoso,dc=local",
    "auth_ldap_group" : "memberOf",
      ...
  },
...
```

Once saved, you will then need to restart the omkd daemon for this to take affect.

If your organisation uses ms-ldaps authentication, the process is very similar. You will need to replace the following:

"auth_ms_ldap_server" to "auth_ms_ldaps_server"
"auth_ldap_server" to "auth_ldaps_server"

Examples of integrating ms-ldap, ms-ldaps, ldap, ldaps and other authentication methods can be found here: OMK Authentication Methods