PROJECT
INFO-8461-23W.
WINDOWS INFRASTRUCTURE
NAME: IKEM MERCY OGECHI
STUDENT ID: 8859960
PROFESSOR NAME: BASHORUN WAREEZ
DUE DATE: 12th April 2023

Contents

PROJECT FOR WINDOWS INFRASTRUCTURE

PREPARATION

- I connected to Conestoga VPN so that I will be able to connect to my vSphere.
- I logged in to vSphere with my credentials and created a virtual machine.
- I created three VM, the two we were asked to create and one to test my permission.
- **8859960-A2DC-10.174.15.61/24** configured it to **ADD** With domain name - **8859960-8461A2.local**
- **8859960-A2MS-10.174.15.62/24**
- **CLIENT-8859960-10.174.15.20/24**
- **DEFAULT GATEWAY-10.174.15.**
- **DNS SERVER-10.174.15.61 for 8859960-A2MS and Client-8859960**
- **DNS SERVER-10.144.6.41 for the 8859960-A2DC**

TASK 1- JOB FUNCTION AD OBJECTS

DESCRIPTION:

In this task, I am going to set up a directory structure for my team members and assign them to their job roles within my organization. I will be creating an OU called **Job function users and groups** that will contain my different users and groups. Doing this will make me have better control over the security and management of my team member accounts and access right as an administrator.

SCREENSHOT

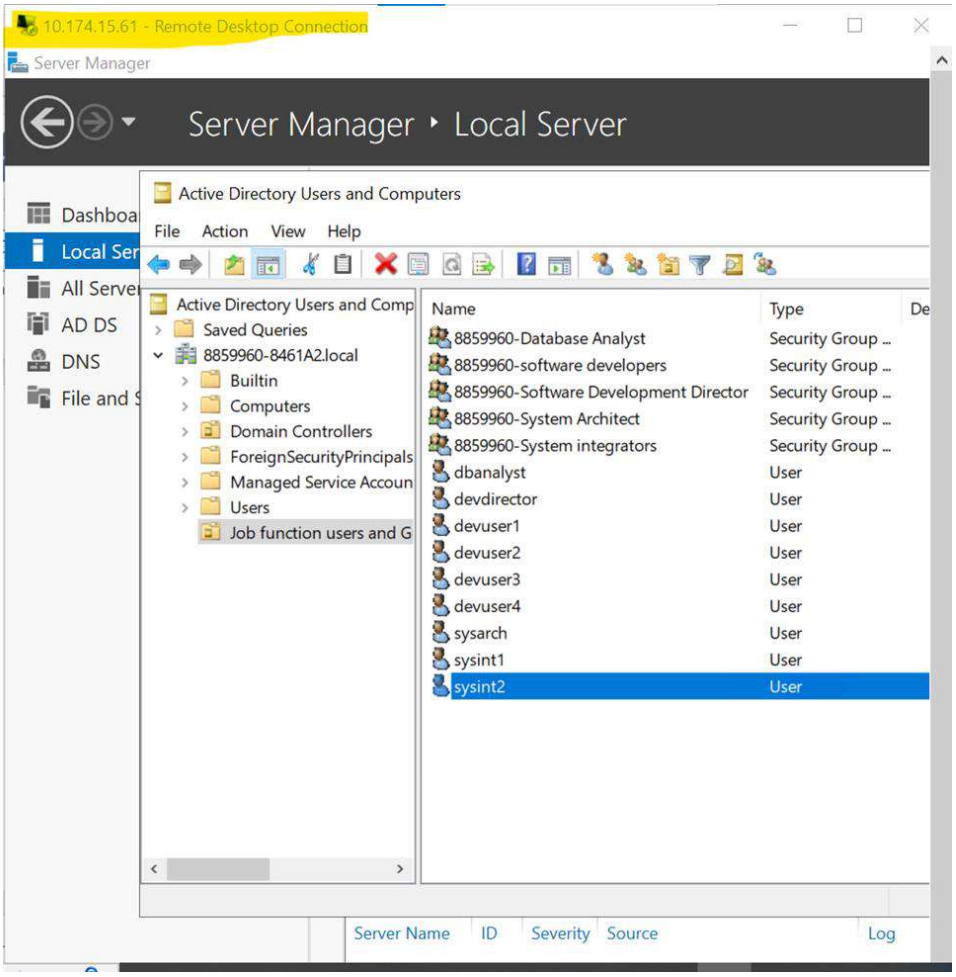


Fig 1 showing the OU Structure, users, and groups I created.

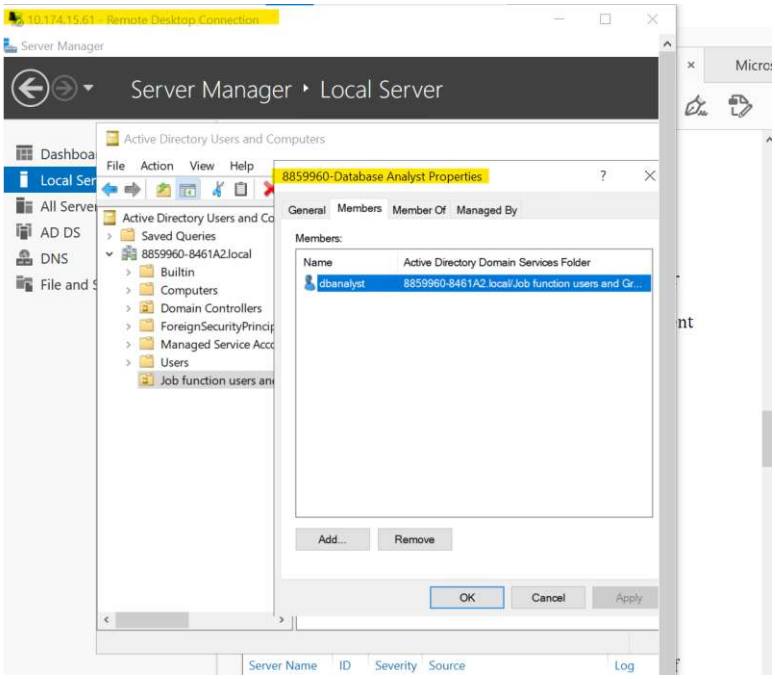


Fig 2 shows that I assigned dbanalyst to 8859960-database analyst.

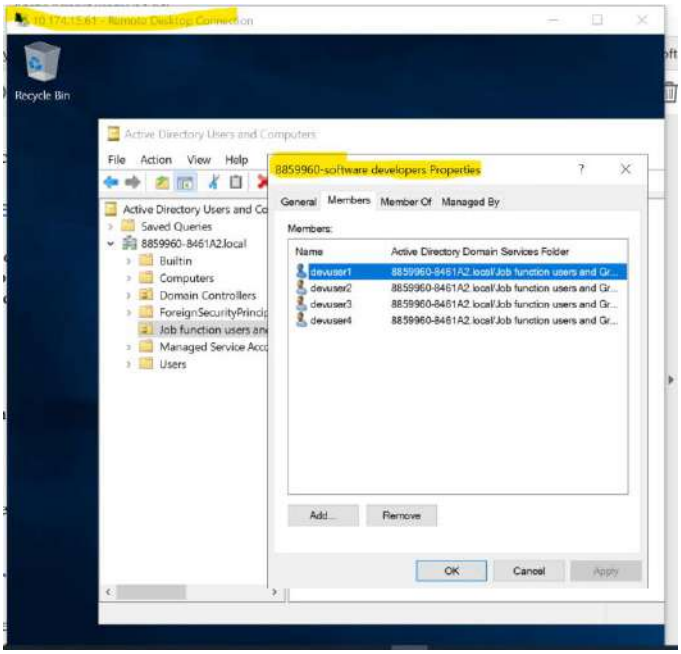


Fig 3 shows that I added devuser1-4 to 8859960-software developers.

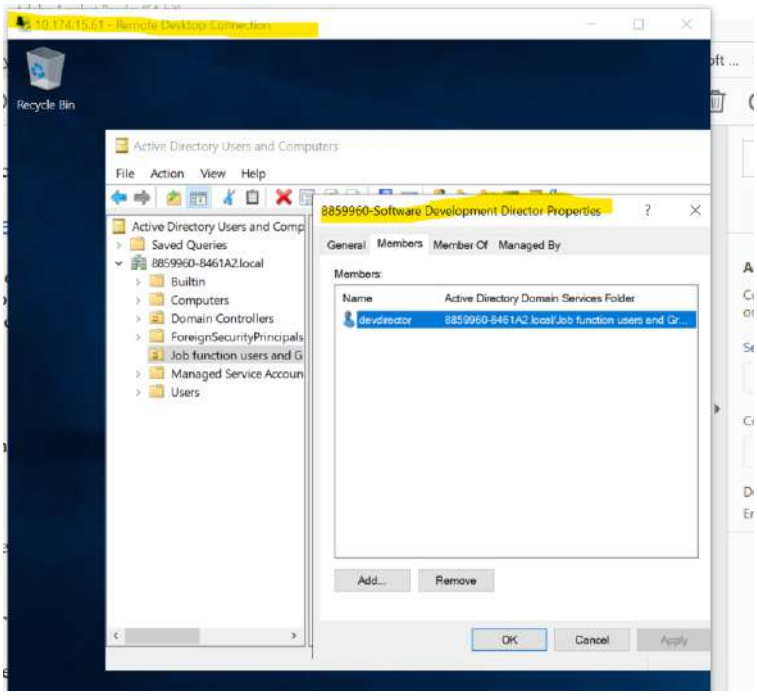


Fig 4 shows that I made devdirector a member of 8859960-software development director.

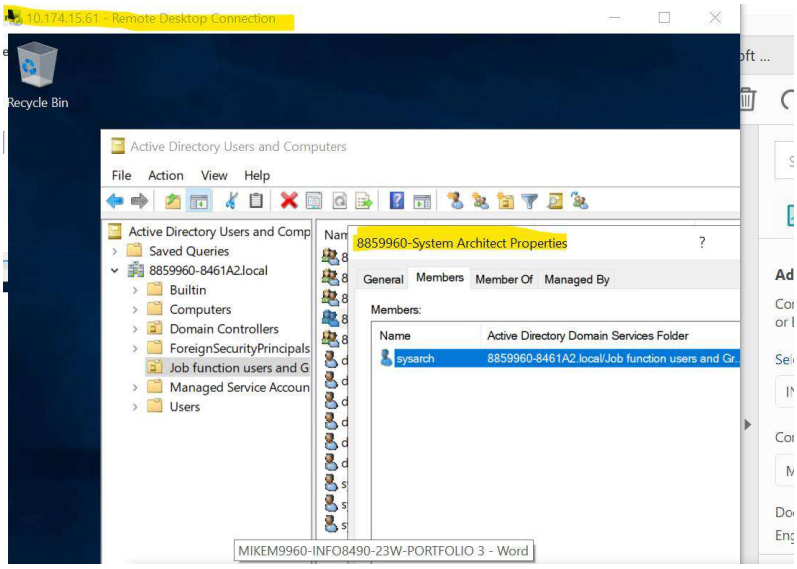


Fig 5 shows that I made sysarch a member of 8859960-system architect.

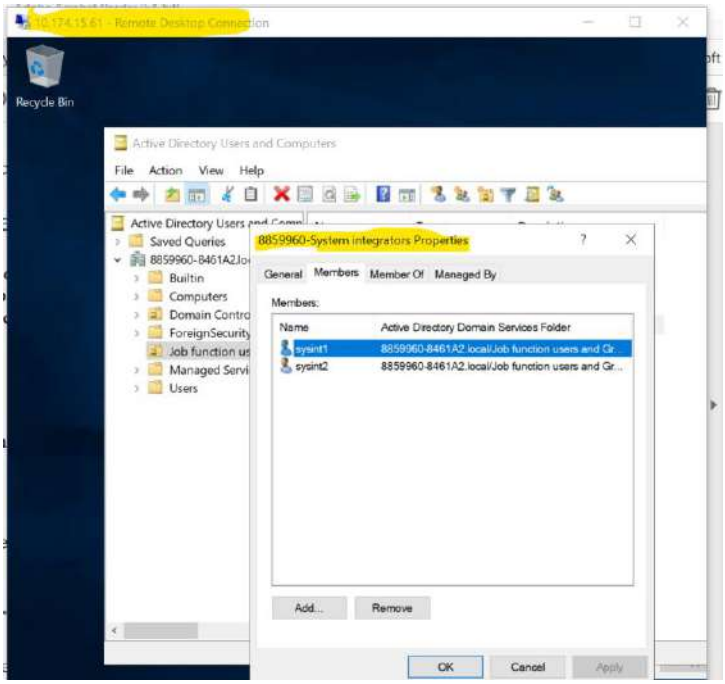


Fig 6 shows that I made systint a member of system integrator.

REFLECTION/DISCUSSION

Discuss what OUs and groups you created and why.

I created an OU called Job function users and groups to have all the users and role groups that are related to my OU because it allows me to organize team members and role groups within the Active directory domain in a logical and organized manner. I then created the job functions into four role groups "**8859960-System developers, 8859960-System integrator, 8859960-System Architect, 8859960-System Analyst".** The purpose of creating this group is to allocate users with similar jobs, duties to specific groups, allowing for better permissions and access control administration. For clear understanding, in task 2 I assigned devusers1-4 to 8859960-software developers and by doing that, they are able to share resources assigned to them and manage permissions.

TASK 2- PROJECT AD OBJECTS

DESCRIPTION

In this task, I will create two OU and assign different users to their respective OU group so that everyone will know which project they are working on and who else is on their team.

SCREENSHOT

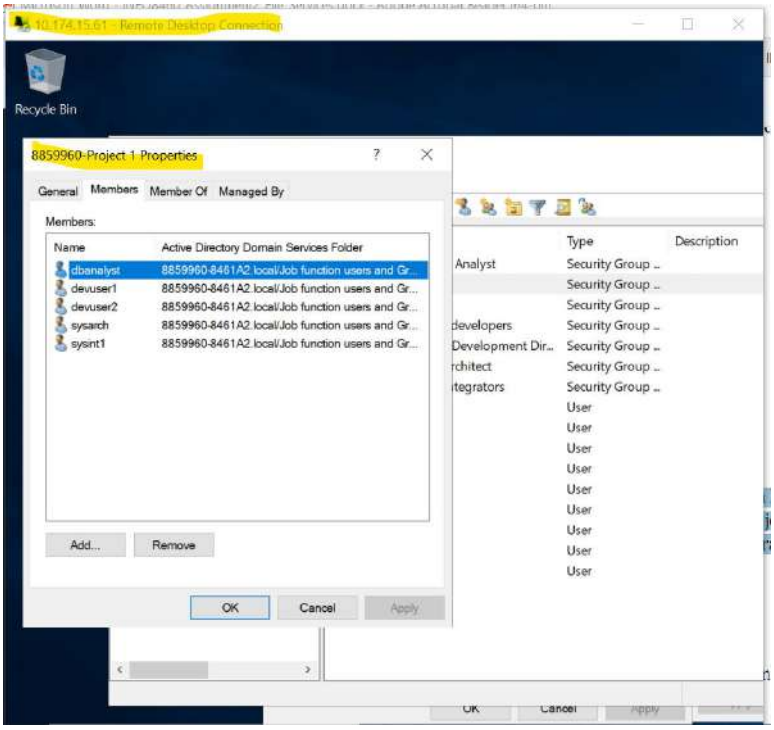


Fig 7 shows that I made two of my developers, integrator, architect and analyst members of group 1.

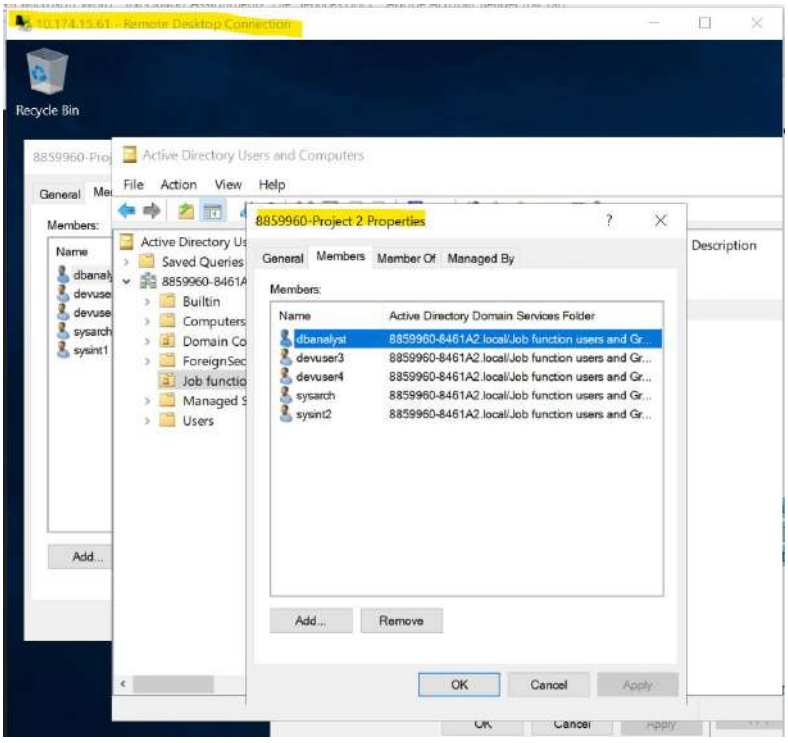


Fig 8 shows that I also made dbanalyst, syarch a member of project 2, I also made devuser3 and 4 and sysint2 a member also.

REFLECTION/DISCUSSION

Discuss what AD objects you created and why.

I created role groups for each software project that the users will be working on in Task 2. To make it easier for me to identify each role group, I labelled them with the project name with my student ID. Creating these groups is to provide a simple and efficient way for each project permissions to be managed. I gave each project two developers, a system integrator, a system architect, and a database administrator for this purpose. The users are allocated according to their jobs and the requirements of the project. The important role groups are to make it easy to manage rights across several users and projects and ensure that only authorized users have access to the project's resources. It will also help to keep everything organized and ensure that everyone is working well together.

TASK 3- FOLDER STRUCTURE AND SHARES

DESCRIPTION

In this task, my objective is to create a folder structure for two software as well as subfolder within each of these projects. I will create this in the E drive I created in the member server, then I will share this folder using best practices. I will also prevent unauthorized access to other folders by users and allow them see folders they have permission to access.

SCREENSHOT

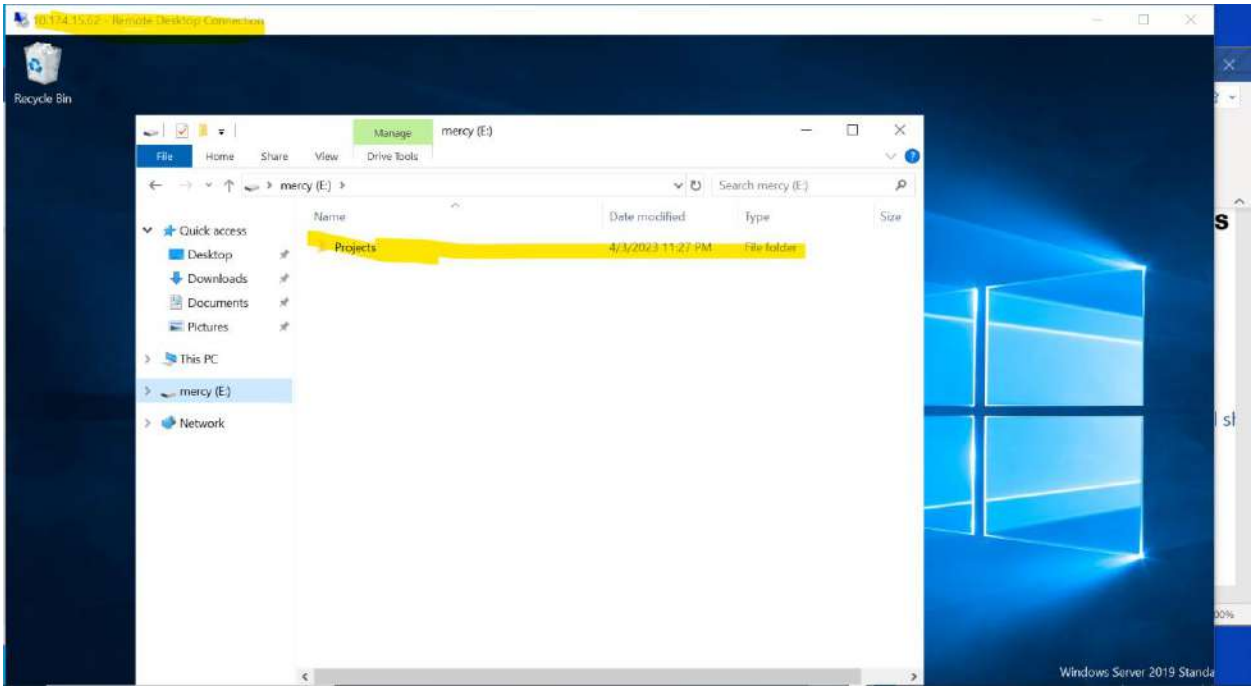


Fig 9 showing that I have created a folder under the E drive.

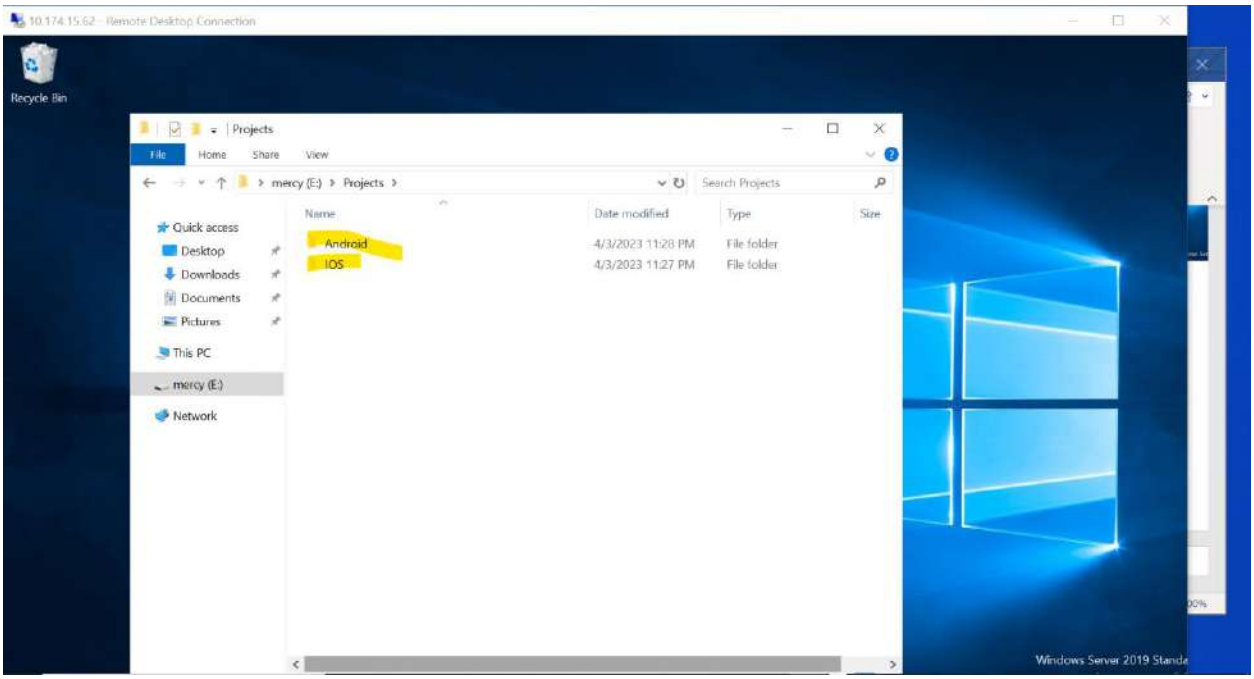
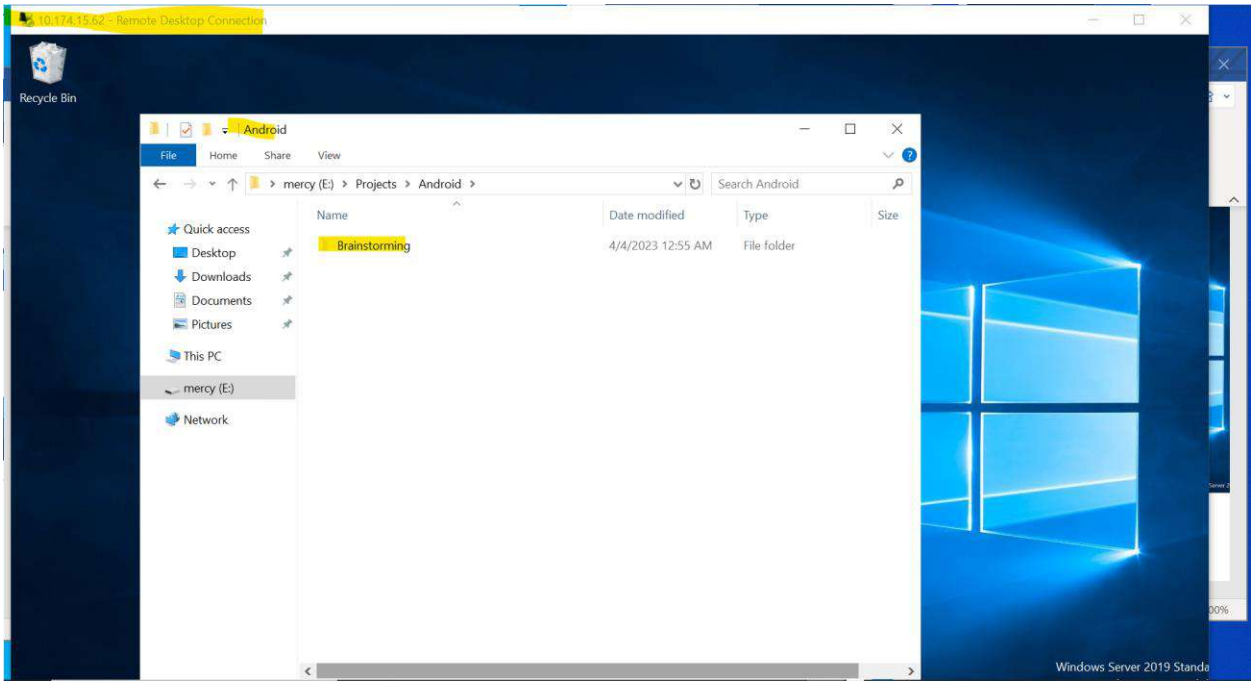


Fig 10 showing that I also created a folder under the project folder.



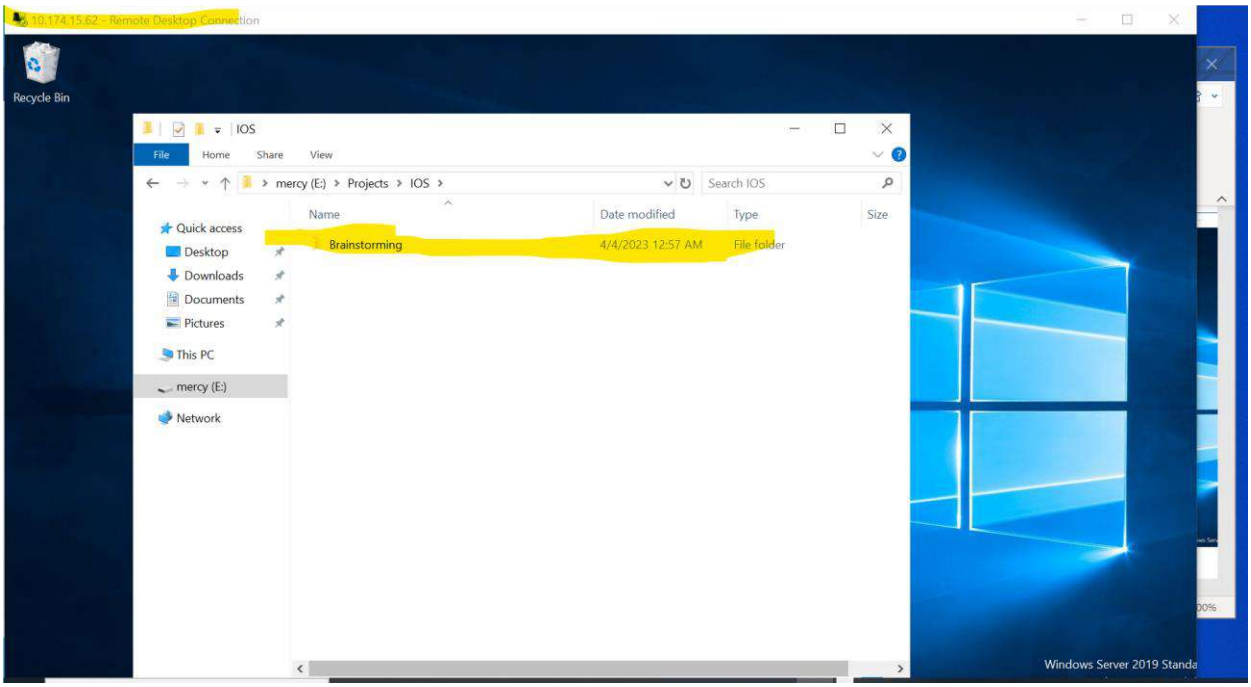


Fig 11 showing I created a brainstorming folder in the different project folder I created.

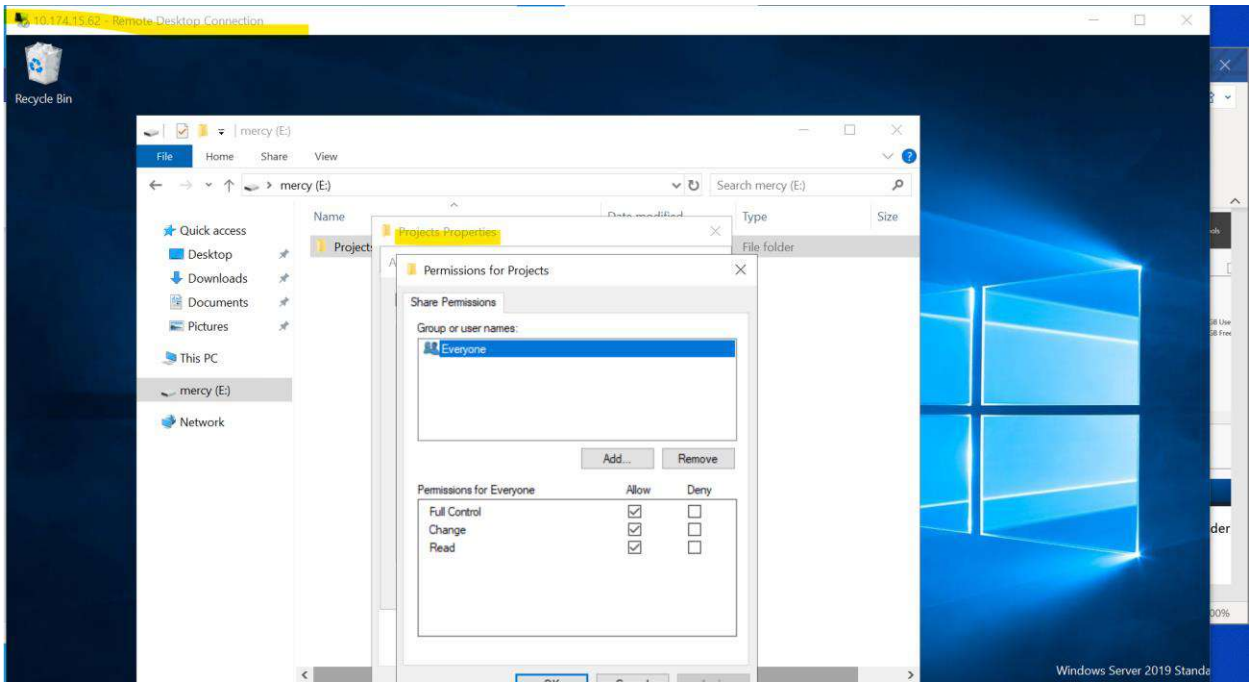


Fig 12 shows I have shared the project folder with best practices.

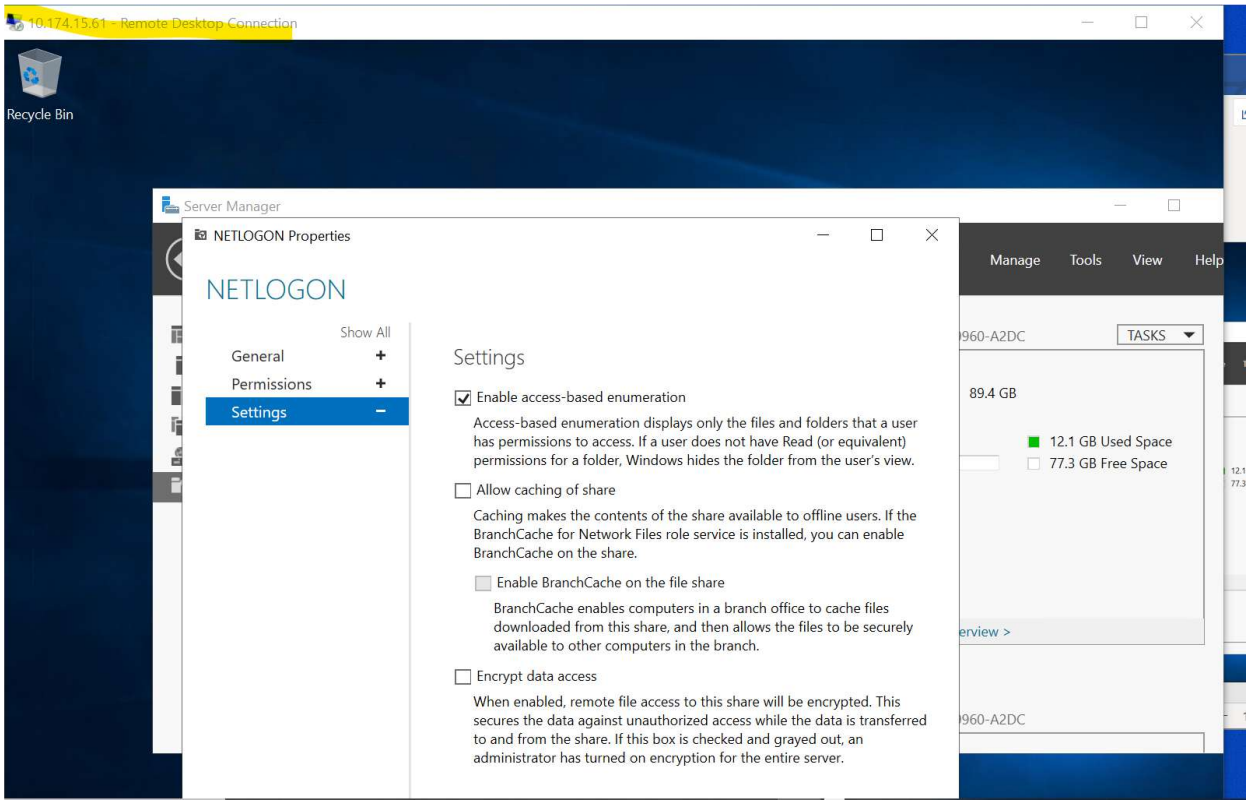


Fig 13 shows that I have applied enable access-based enumeration to prevent users from seeing folders which they have no permission.

REFLECTION/DISCUSSION

Discuss what folders you created, what you shared, and all share properties configured.

Project folder: This will serve as the main folder for all software projects, I also created this folder in the E drive I created.

IOS and Android folder: under the project folder I created a sub folder, one for every software project. The files for the appropriate Android and IOS development projects will be kept in these folders.

Brainstorming folder: I created a sub folder under each of the software projects called brainstorming. This folder will store brainstorming documents and ideas for the various projects.

I shared the project folder using the best practices I was taught for everyone, and I applied enable access-based enumeration to prevent users from seeing folders they don't have permission.

TASK 4- NTFS PERMISSIONS

DESCRIPTION

In this task 4, involves NTFS permissions to secure folders related to my project. I am going to assign certain permissions to users and groups to limit access to some users.

SCREENSHOT

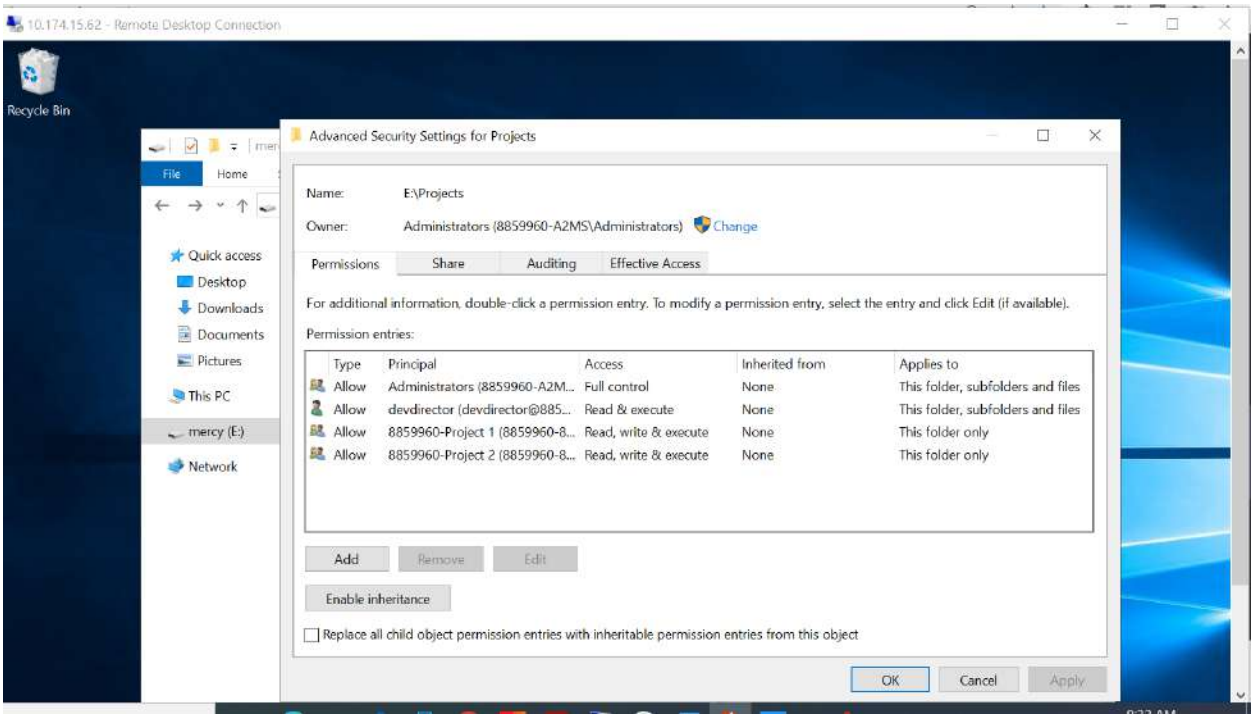


Fig 14 showing that nobody has access to the project folder apart from users working on a project.

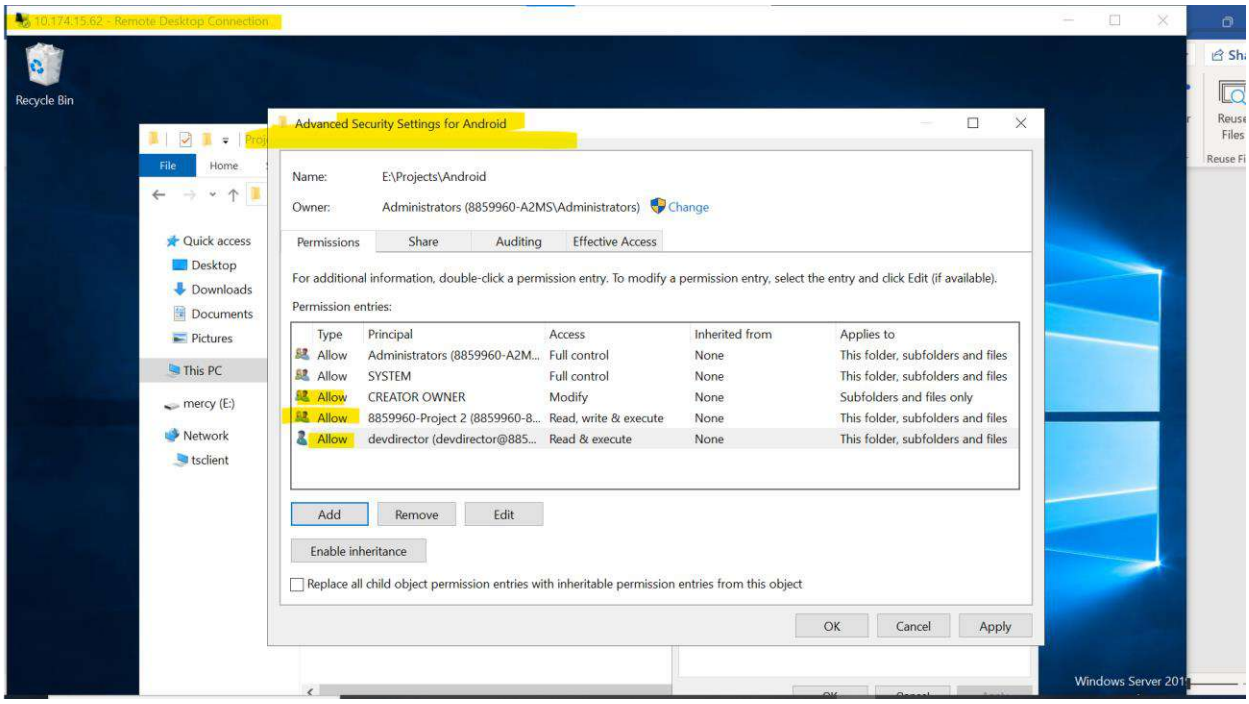


Fig 15 shows users working on android project can create contents, read and modify only contents they create, and it's also shows that devdirector have read access to this project.

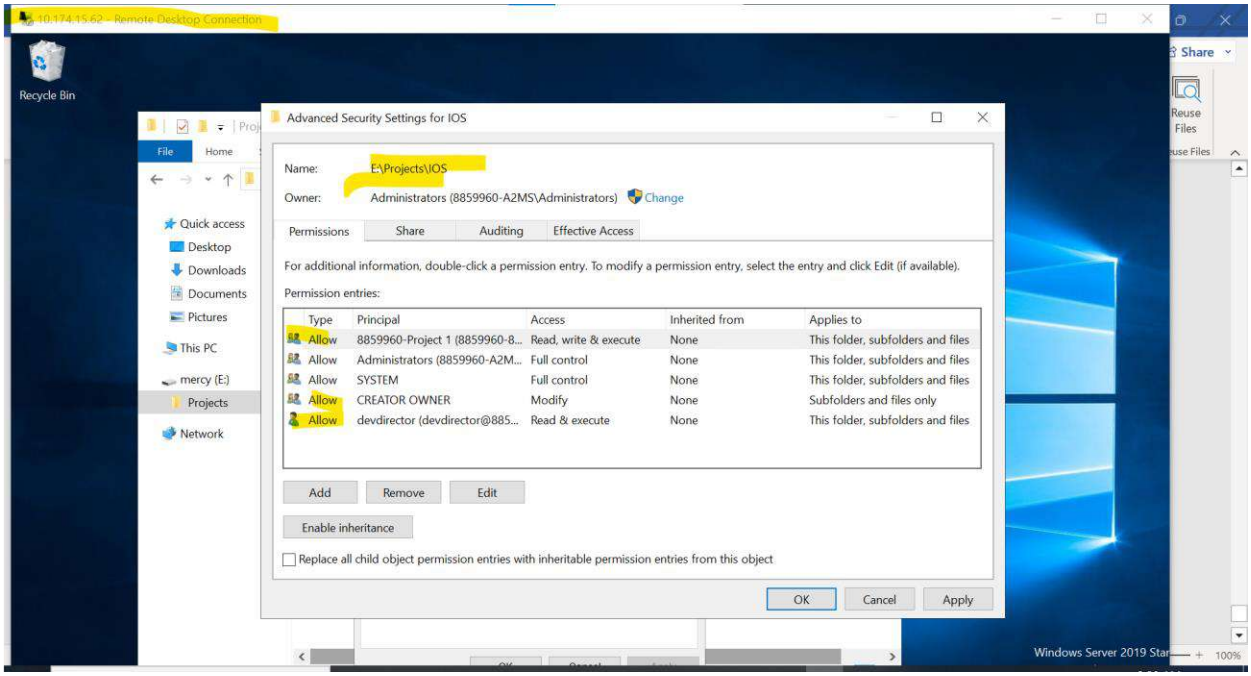


Fig 15 shows users working on IOS project can create contents, read and modify only contents they create, and it's also shows that devdirector have read access to this project.

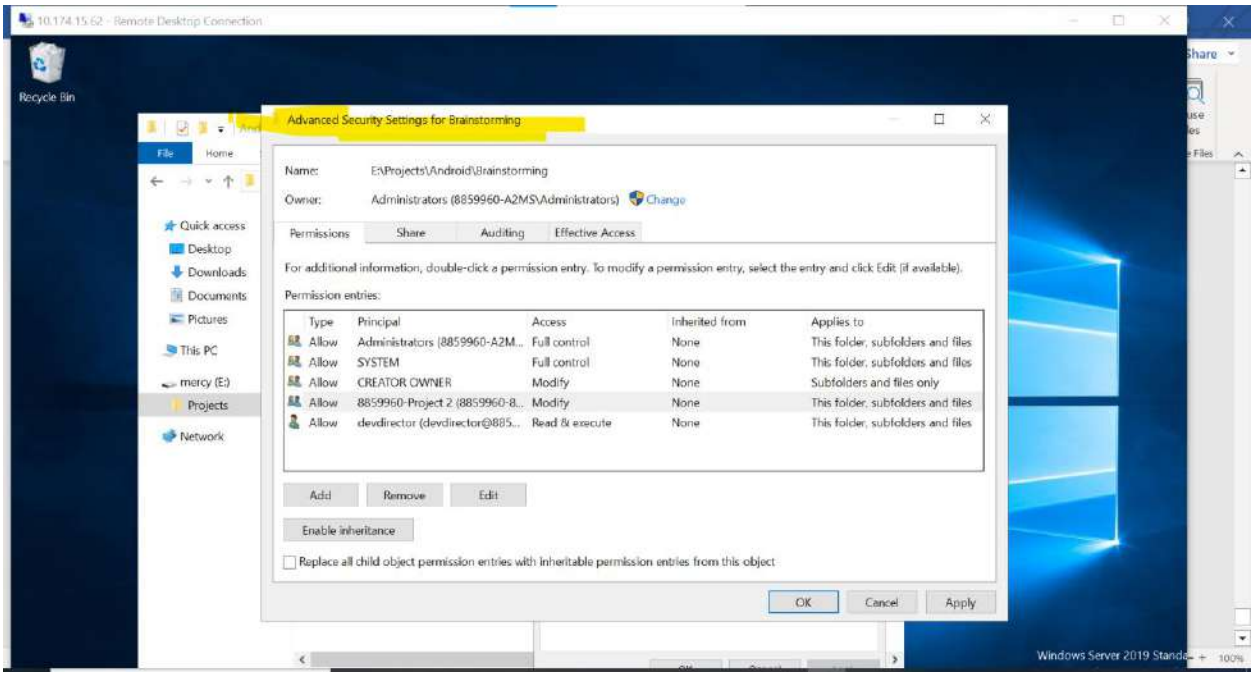


Fig 16 showing that users working on brainstorming in Android folder can modify all contents.

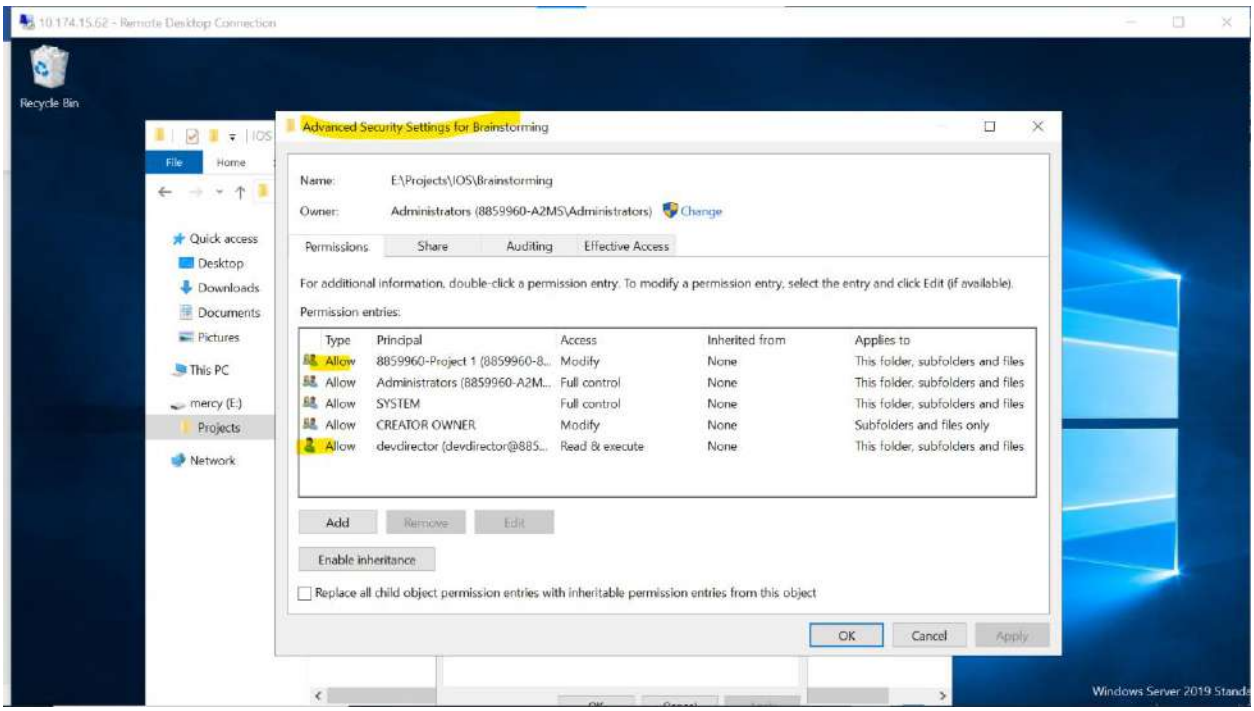


Fig 17 showing that users working on brainstorming in IOS folder can modify all contents.

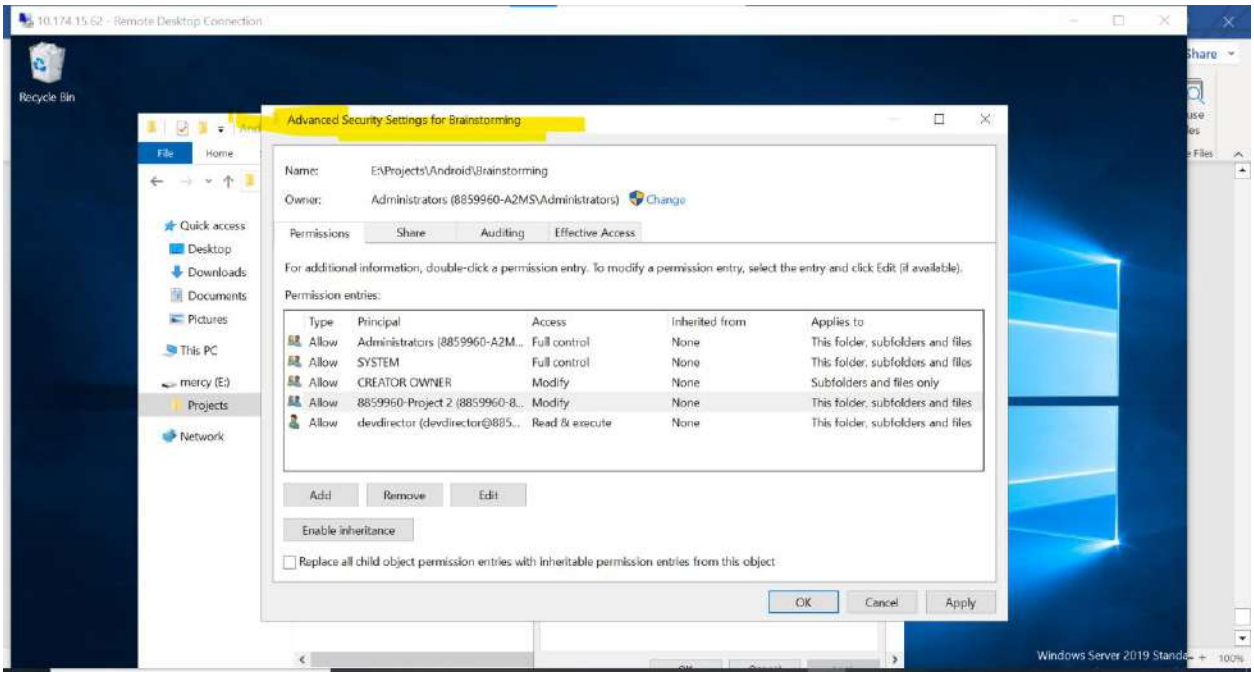


Fig 18 showing that users working on brainstorming in Android folder can modify all contents.

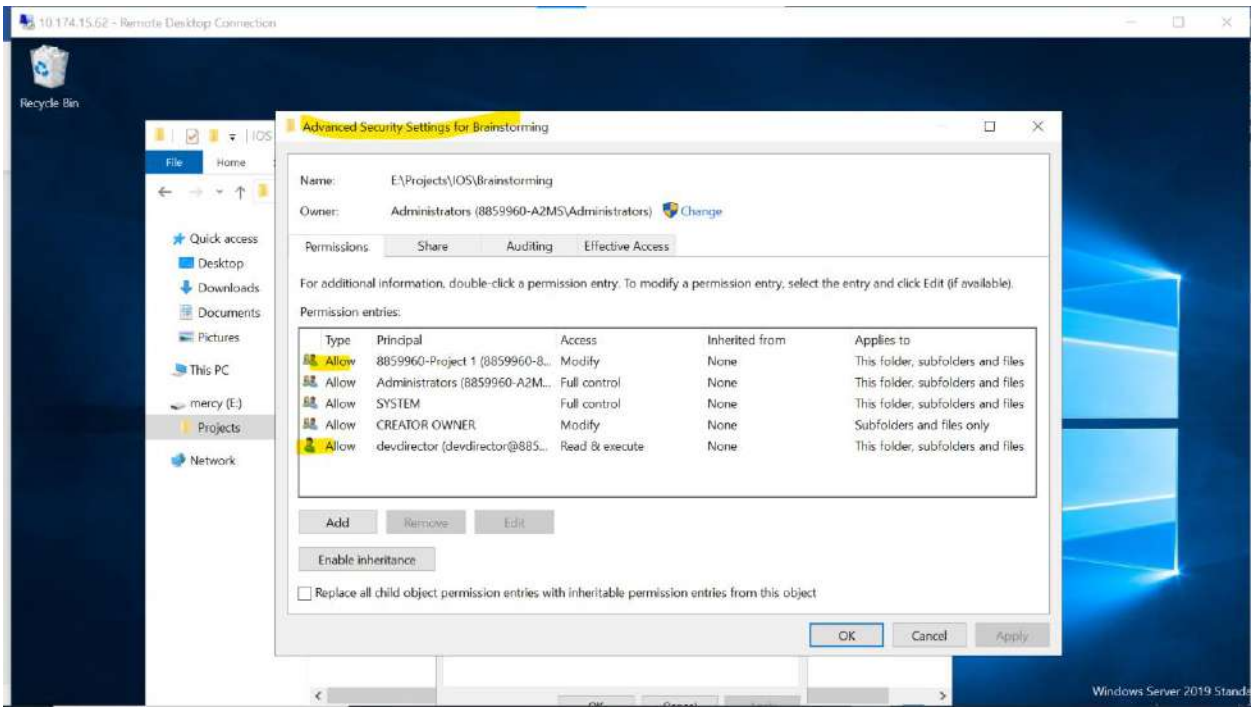


Fig 19 showing that users working on brainstorming in IOS folder can modify all contents.

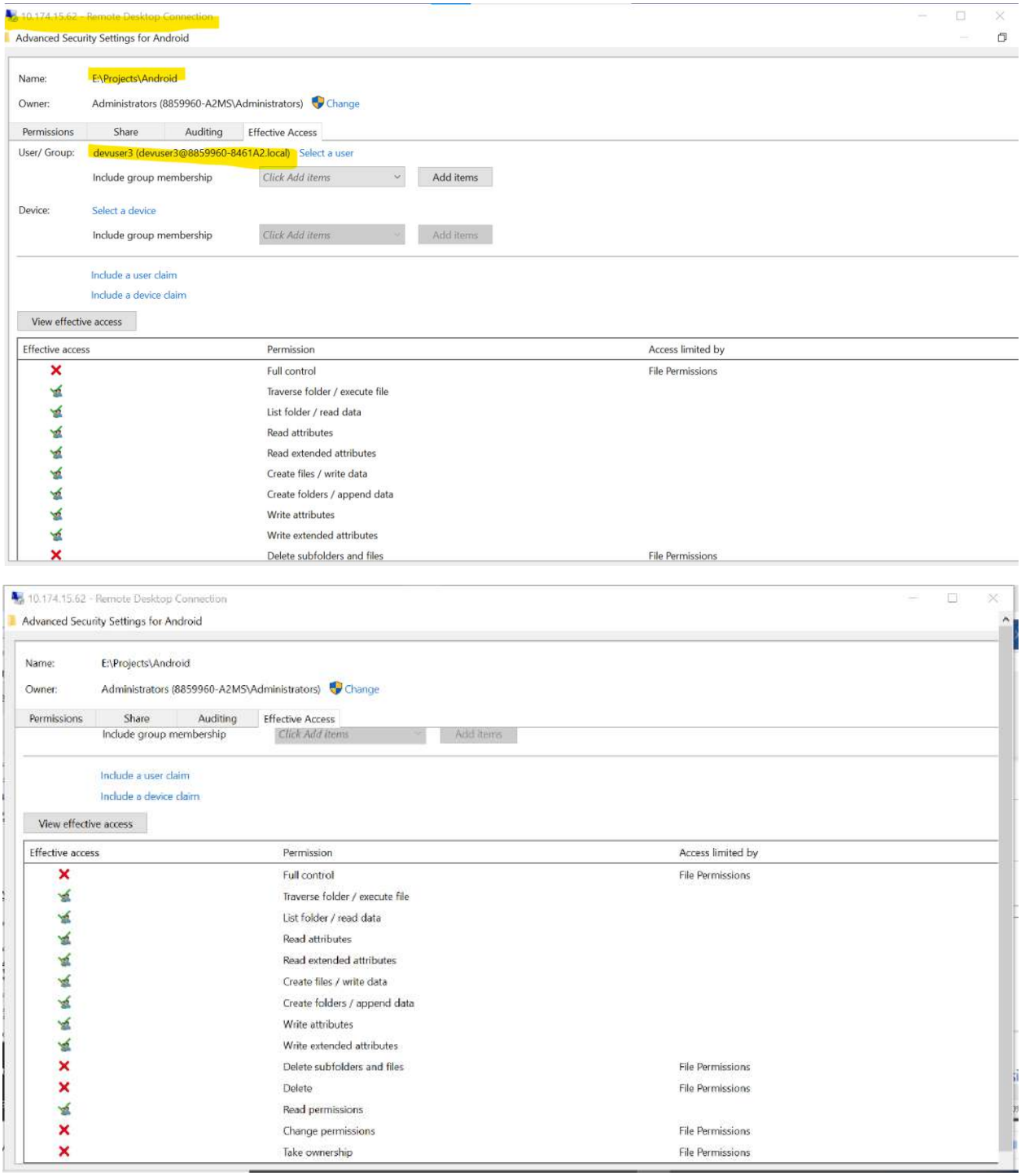


Fig 20 devuser 3 permissions in the android folder.

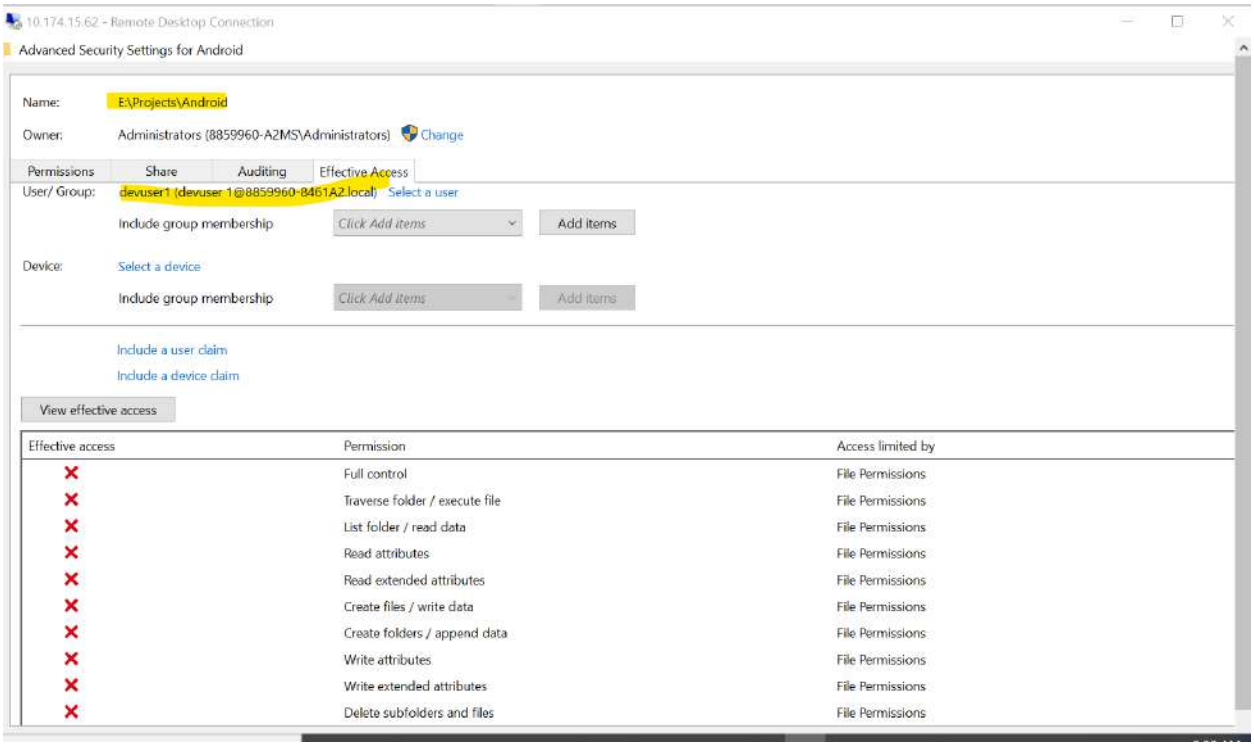


Fig 21 devuser 1 doesn’t have any permission in Android folder because he’s not a user.

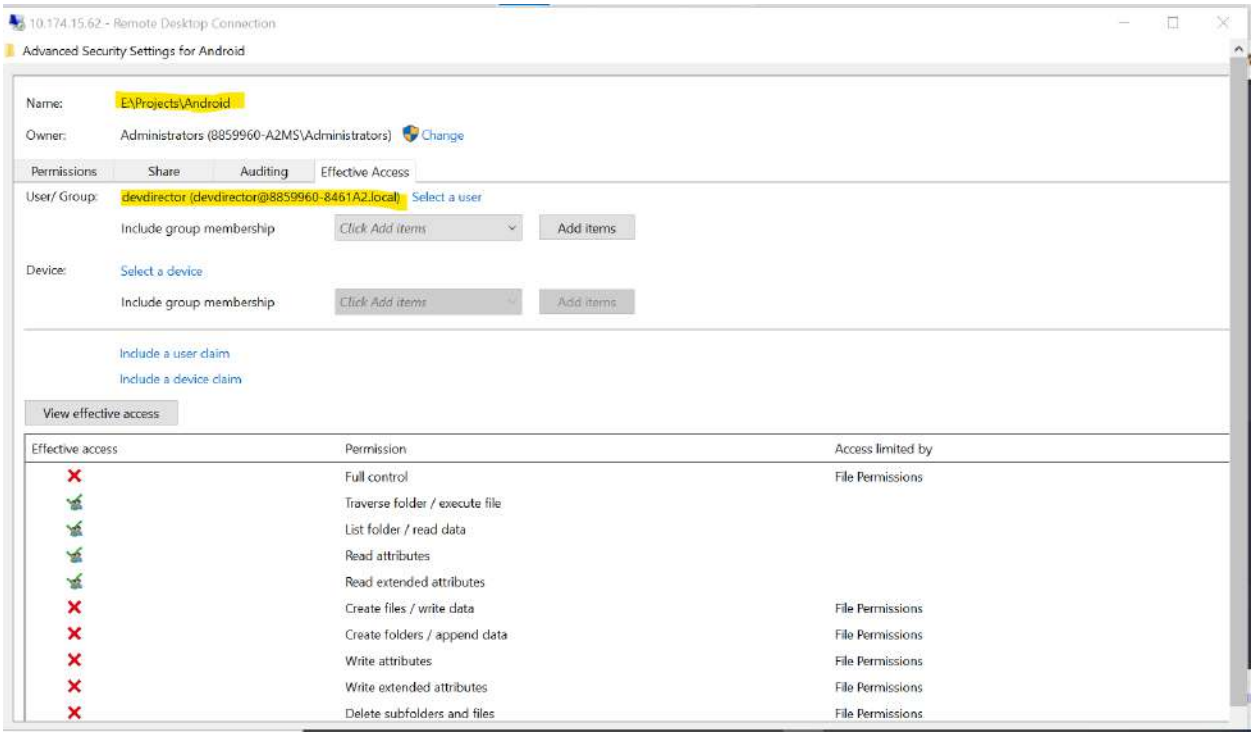


Fig 22 devdirector has read permission in the android folder.

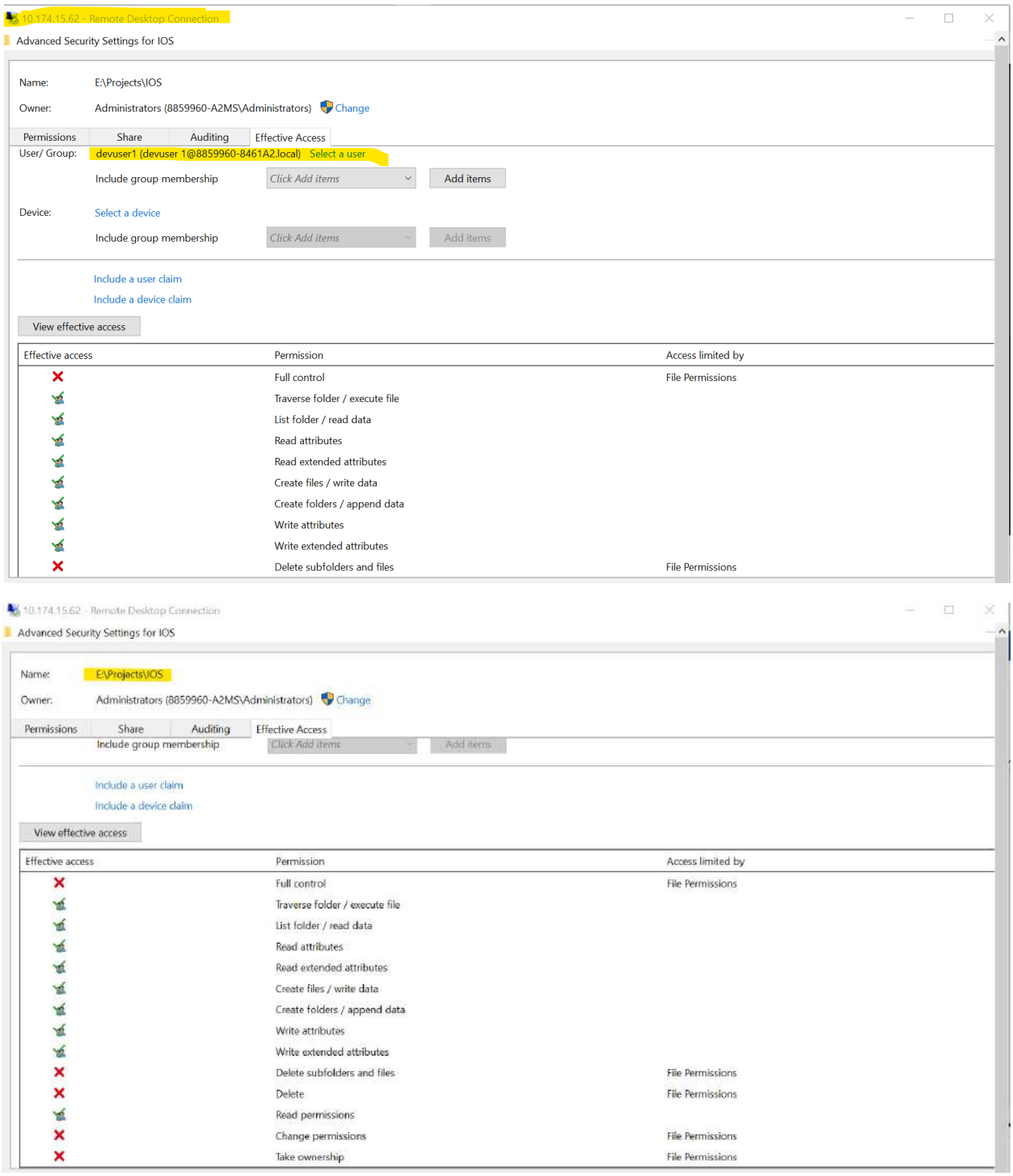


Fig 23 devuser 1 permission in the IOS folder.

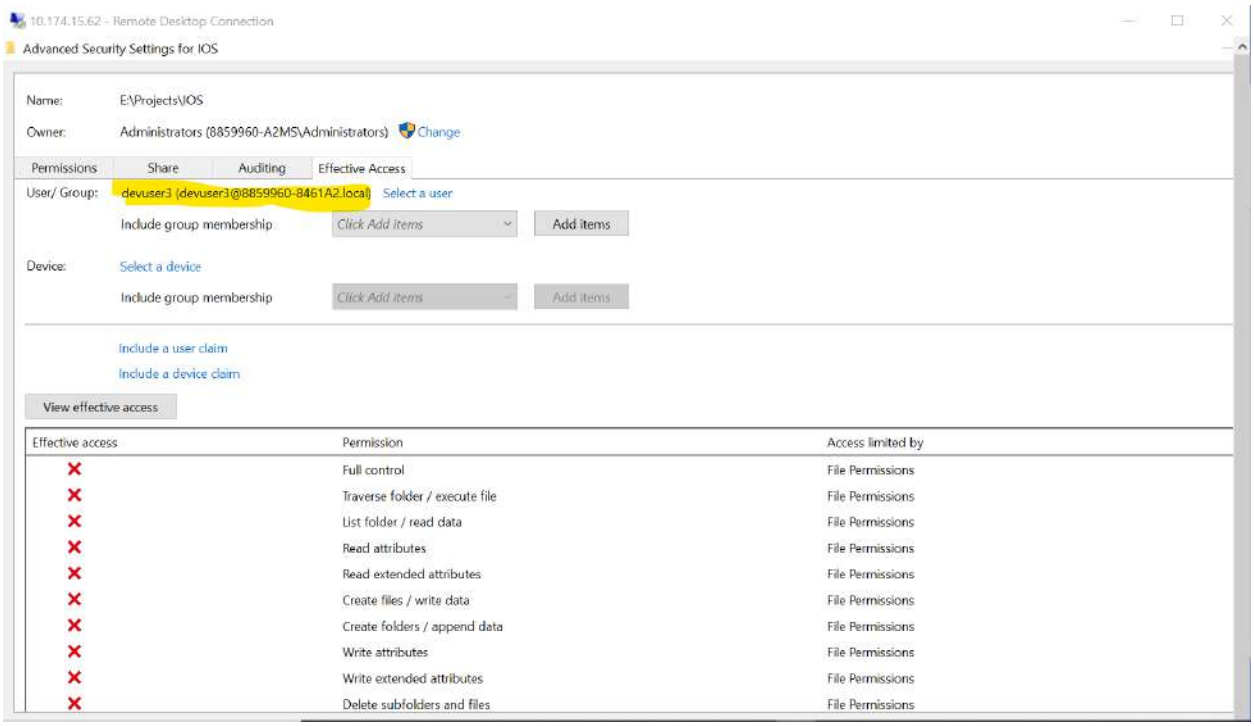


Fig 24 devuser 3 doesn't have any permission in IOS folder because he's not a user.

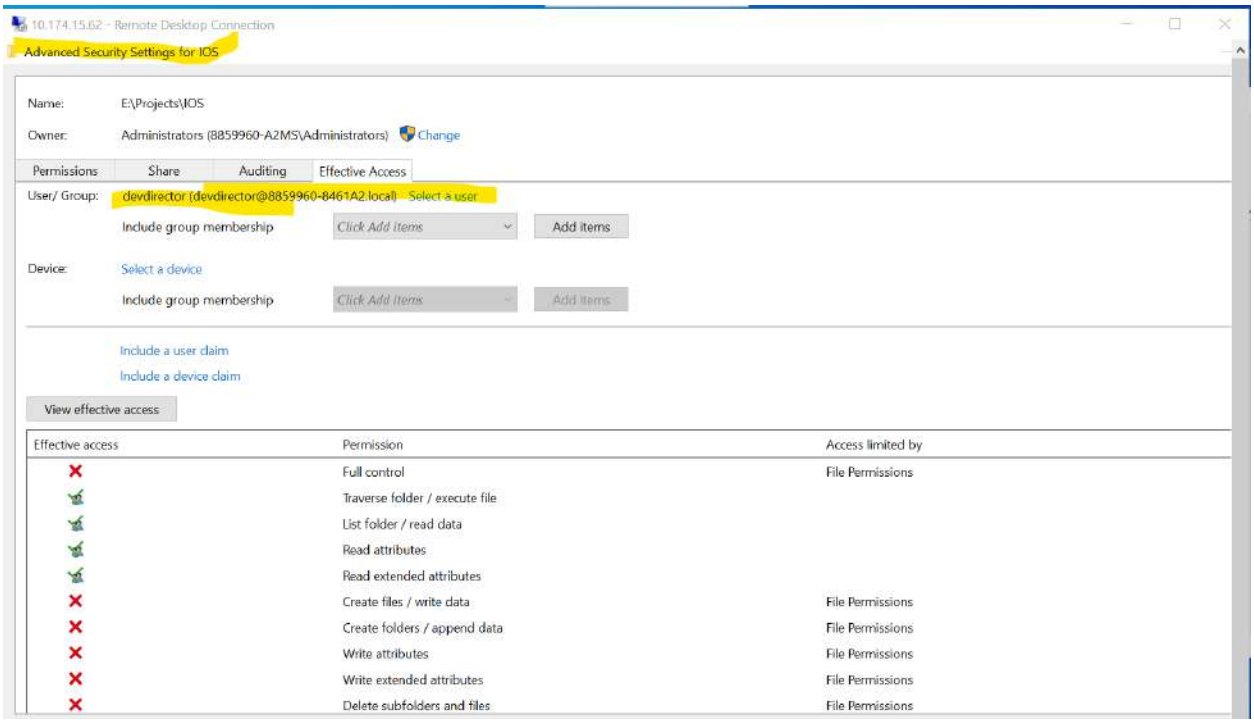


Fig 25 devdirector has read permission in the IOS folder.

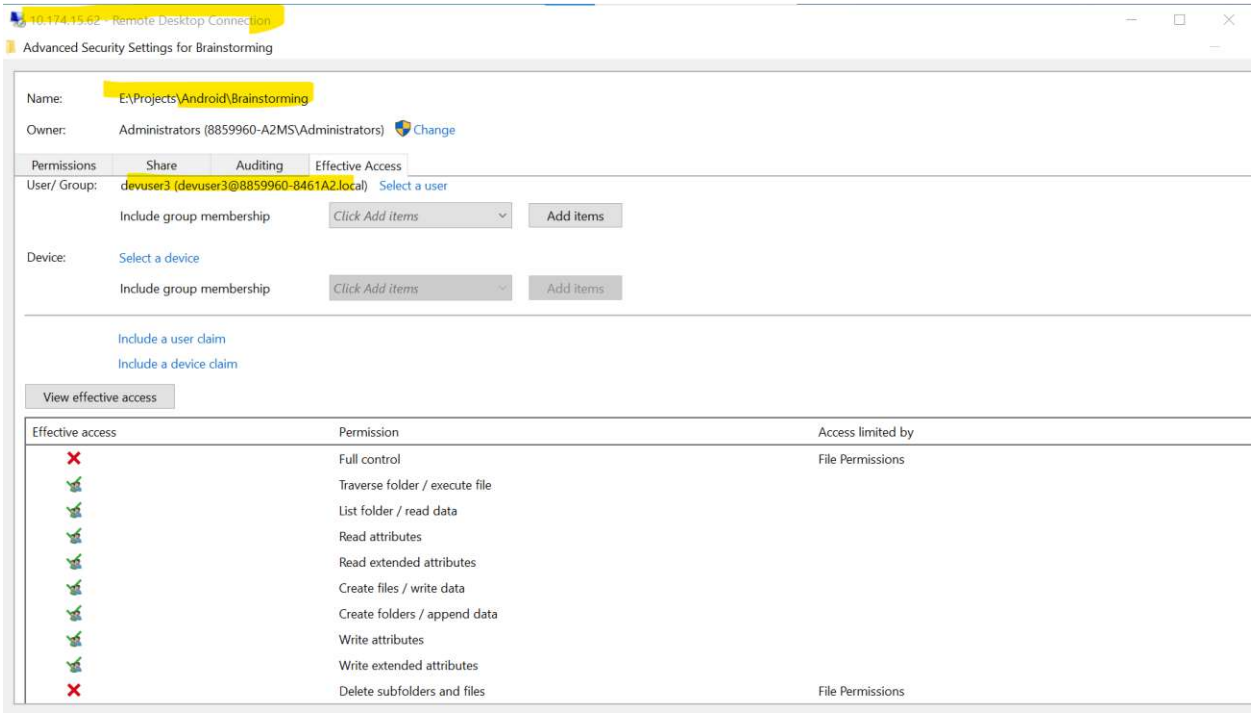


Fig 26 devuser 3 permissions in the brainstorming android folder.

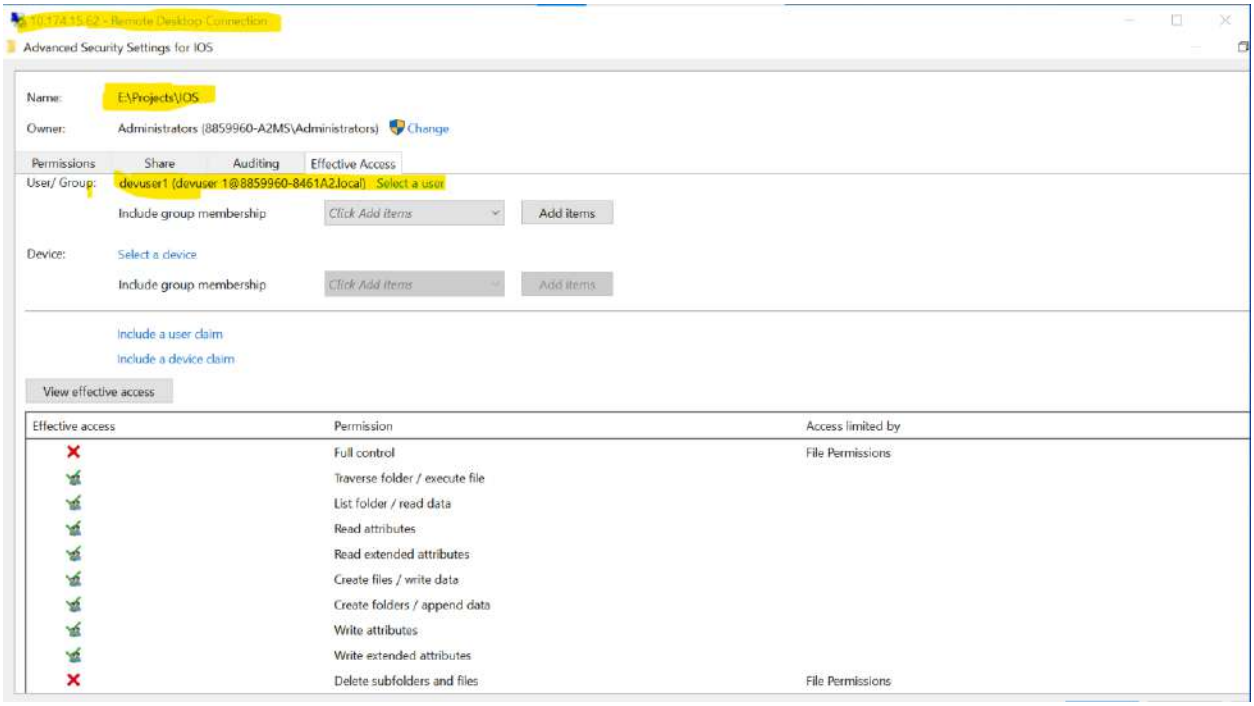


Fig 27 devuser 1 permission in the brainstorming IOS folder.

REFLECTION/DISCUSSION

Discuss your basic philosophy in the design of your NTFS permissions. Note that you do not need to describe every permission in detail.

In designing NTFS permissions, my basic philosophy is to follow the principle of least privilege, which means granting users only the level of access required to perform their tasks. This helps to increase security by limiting the potential damage that may occur such as accidental deletion of important files or unauthorized access to sensitive data. To do this, I issued rights in the project folder and utilized role-based access control to ease permissions management. I set permissions to allow users to create and modify content within their own project folders but prevent them from accessing folders or files outside of their project. I also gave the software development director read access to all project materials to enable him to manage and control the project. I also set up appropriate share permissions to prevent unauthorized users from seeing folders they do not have access to and permission.