

Role-Based Access Control: Administrator Guide

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Role-Based Access Control for Subaccounts

Previously, customers with a multi-tenant structure (with subaccounts) in the Admin Panel had to manage admins in a way that left usability and security to be desired. The most common workarounds for providing admin access included:

- Blanket permission and access to all subaccounts. This may also have included access to the internal Duo implementation, which may not have been desirable.
- Subaccount access with unique credentials to manage or juggle. This could be cumbersome (must log in and out, no easy switch) and may have led to less than desirable security outcomes.

Duo is addressing this problem for multi-tenant customers through role-based access control for subaccounts. The chief goals and future outcomes of RBAC include:

- Better security hygiene
- Improved overall user experience
- Better control with scoped access and permissions

What's Included?

This release includes two capabilities:

1. Subaccount Roles: non-owner admins can be assigned distinct roles at the account and subaccount levels. For instance, an admin can have full 'administrator' access to subaccounts but limited 'read-only' access at the account level.

2. Access Tags: non-owner admins can be given access to specific subaccounts and denied access to others without having to manage multiple logins. For example, all administrators with the tag "Government Restricted" will be able to access any subaccounts associated with that tag, but administrators without it will not.



Documentation and Technical Setup

These images are all shown from the account level (not the subaccount level). This feature introduces the following:

An admin's subaccount role is distinct and can differ from their account role. When the feature is turned on, existing administrators, or administrators created through AD Sync, will inherit a subaccount role that defaults to their existing role. This can be changed at any time on the individual administrator's page or selected while adding a new administrator.

Access tags specify which subaccounts an administrator will have access to. An administrator can access a subaccount if:

- The administrator has an Owner role at the account level
- The subaccount does not have any access tags assigned to it
- The administrator shares at least one tag in common with the subaccount

Note that access tags are case-sensitive!

Access tags do not have to be a one-to-one assignment. A single subaccount or single admin can have multiple tags assigned depending on how the organization would like to segment access. An admin can access a subaccount if they share at least one tag in common with the subaccount.



Adding Accounts

Access tags can be created or assigned during account creation from the **Add Account** page. These can later be added or removed through the Accounts page.

[Dashboard](#) > [Accounts](#) > [Add Account](#)

Add Account

Account Information

Enter the account name and assign tags to specify which admins can access this account. Subaccounts can be accessed by admins they share at least one tag with. Subaccounts without tags can be accessed by all admins. To add or remove tags for this account later, open the **Accounts** page, navigate to the account, then select **Edit**.

You can also add admins for subaccounts from the **Accounts** page. First, select the subaccount name, which will open the **Dashboard** for that subaccount. Next, open the **Administrators** page, then select **Add Administrators**.

Account Name *	<input type="text"/>
Access tags	<input type="text" value="Assign access tags"/> + Add Access Tag

The **Edit Account** page will look the same as the Add Account page, with assigned access tags pre-populated. Access tags can be added or removed from an account on this page at any time.

Adding an administrator directly to the subaccount has been removed from this page. This action can still be performed by navigating to the individual subaccount > Add Administrator. This is recommended if an end customer needs admin access to their subaccount. Admins utilizing the RBAC feature will be added at the account level only.

Adding Access Tags

The following modal will display when the **Add Access Tag** link is clicked on the Add Account of Edit Account page. This creates a new access tag that is added to the drop-down list of access tags that can be assigned to subaccounts and admins. The access tag is automatically added to the input field when the Add Access Tag button in the modal is clicked. Exiting out of the modal will not create a new access tag.

Add Access Tag ✕

After the access tag is added, it will also be added to the list of access tags that can be assigned to accounts.

If you decide not to add this account, the tag also will not be added.

Access Tag Name

Accounts Page

The Accounts page will now show access tags assigned to each subaccount. Access tags are searchable using the search feature associated with the table. The Edit button has been moved to the far-right side of the table to show that it edits full account details and not just the edition.

Admins with restricted subaccount access will still see all subaccounts listed in this view by design. If they click on a subaccount that they don't share at least one tag with, they will see a banner message at the top of the page that states they don't have access to the subaccount.

Name	Edition	Access Tags	Users	Telephony Credits			
AlphaBuild Manufacturing	Duo Essentials	EMEA, Field Team	0	0	Add	Edit	
DeltaDynamics Group	Duo Essentials	Gov Restricted	0	0	Add	Edit	
GlobalGrowth Partners	Duo Essentials	EMEA, Field Team	0	0	Add	Edit	
MetaMakers Ltd.	Duo Essentials	Field Team	0	0	Add	Edit	
NexaCraft Solutions	Duo Essentials		0	0	Add	Edit	
Pioneer University of Science and Arts	Duo Essentials	.EDU	0	0	Add	Edit	

Show accounts 1-11 of 11 total

Search for users, groups, applications, or devices

MSP RBAC Demo | ID: [redacted] | Sam Non-Owner

You don't have access to this subaccount. Contact an account owner for help with accessing it.

Dashboard

Users	Endpoints	Administrators
0	0	2
0%	0%	

Adding an Administrator

For new non-owner administrators, the role and subaccount **role** can be explicitly selected at the time of creation. The **role** defines what actions the administrator can perform on the account level; the **subaccount role** defines what actions the administrator can perform on any subaccounts they have access to.

Role * ⓘ

- Owner**
Can create, view, modify and delete anything, including other administrators
- Administrator**
Can create, view, modify and delete almost anything; cannot create, modify or delete other administrators; cannot access or modify billing information
- Application Manager**
Can create, view, modify and delete applications
- User Manager**
Can create, view, modify and delete users, phones, tokens, and bypass codes
- Help Desk**
Can create, view, modify and delete phones, tokens, bypass codes; can view and modify user information (except for usernames); cannot create or delete users
- Billing**
Can view and modify only billing information
- Read-only**
Can view all settings except billing, but cannot make any modifications

[Learn more about Duo Administrative Roles.](#) ↗

Subaccount role * ⓘ

- Owner**
Can create, view, modify and delete anything, including other administrators
- Administrator**
Can create, view, modify and delete almost anything; cannot create, modify or delete other administrators; cannot access or modify billing information
- Application Manager**
Can create, view, modify and delete applications
- User Manager**
Can create, view, modify and delete users, phones, tokens, and bypass codes
- Help Desk**
Can create, view, modify and delete phones, tokens, bypass codes; can view and modify user information (except for usernames); cannot create or delete users
- Billing**
Can view and modify only billing information
- Read-only**
Can view all settings except billing, but cannot make any modifications



This page also now includes access tags, which can be assigned to non-owner administrators to specify which subaccounts they'll have access to.

An administrator can access a subaccount if:

- The administrator has an **Owner** role at the account level
- The subaccount does not have any access tags
- The administrator shares **at least one** tag in common with the subaccount

The access tags component allows the user to search through a drop-down list of existing tags; new tags can be added from the Accounts page. Once an access tag is chosen from the search list, it will show in the input field.

Owner administrators at the account level can only have the Owner subaccount role. In addition, Owner administrators at the account level have access to all subaccounts.

(As a reminder, it's a good best practice to have at least two administrators with the Owner role on each account.)

Access tags

You can assign tags to admins to specify which subaccounts they'll have access to. Admins can access subaccounts they share at least one tag with.

Assign access tags ▼

Role * ⓘ

Owner

Can create, view, modify and delete anything, including other administrators

[Learn more about Duo Administrative Roles.](#) ↗

Subaccount role ⓘ

Administrators with the **Owner** role can only have the **Owner** subaccount role.

Owner

Can create, view, modify and delete anything, including other administrators

Access tags

Administrators with the **Owner** role have access to all subaccounts.

Individual Administrator Page

Clicking into an individual administrator's page from the Administrators page will look the same as the images from the Add Administrators page, reflecting the selected admin's role, subaccount role, and assigned access tag(s). These can be changed from this page at any time and saved at the bottom of the page.

Administrators Page

The Administrators page now shows two new columns for Subaccount Role and Access Tags. Subaccount roles and access tags are now searchable using the search feature associated with the table.

Administrators

Administrator Access Summary [±] | Admin Login Settings [Add Administrator](#)

Name ^	Role ◇	Subaccount Role ◇	Access Tags ◇	Email ◇	Status ◇	Last Login (UTC) <
Ava G	Read-only	Application Manager		avag@company.com	Pending Activation	Never authenticated
Dominic H	Read-only	User Manager	Field Team	dominich@company.com	Pending Activation	Never authenticated
Ethan T	Owner	Owner		ethant@company.com	Pending Activation	Never authenticated
Kevin A	Billing	Read-only	EMEA	kevina@company.com	Pending Activation	Never authenticated
Lily T	Read-only	Administrator	Gov Restricted, Finance Restricted	lilyt@company.com	Pending Activation	Never authenticated
Mia H	Owner	Owner		miah@company.com	Pending Activation	Never authenticated

Show administrators 1-15 of 15 total < 1 >

Reporting

An administrator access summary can be downloaded from the Administrators page. This will be a CSV export that maps administrators (Column A), subaccounts (Row 1), and subaccount roles at their intersection to summarize access.

When a subaccount role is present at the intersection of an admin and a subaccount, the admin has access to that subaccount with the subaccount role listed. When the cell is blank, this indicates that the admin does not have access to that subaccount.

	A	B	C	D	E	F
1		AlphaBuild Manufacturing	DeltaDynamics Group	GlobalGrowth Partners	MetaMakers Ltd.	NexaCraft Solutions
2	Ava G					Application Manager
3	Dominic H	User Manager		User Manager	User Manager	
4	Ethan T	Owner	Owner	Owner	Owner	Owner
5	Kevin A	Read-only		Read-only		
6	Lily T		Administrator			
7	Mia H	Owner	Owner	Owner	Owner	Owner
8	Olivia C		Read-only			
9	Oscar W	Application Manager		Application Manager	Application Manager	
10	Sophia M					Read-only
11	Victor B	Help Desk		Help Desk		

Account Switcher

The account switcher is the preferred way to switch to a subaccount. With the RBAC feature, admins will only be able to switch to the subaccounts they have access to. They will see an error message if they attempt to switch to a subaccount they do not have access to.

The screenshot displays the Cisco Duo Account Switcher interface. At the top, there is a search bar labeled "Search" and a dropdown menu for the current account, "Account MSP RBAC Demo". To the right of the search bar is a blue "Add New..." button. Below the search bar is a list of subaccounts, with "MSP RBAC Demo" selected and labeled "Viewing". Other subaccounts listed include AlphaBuild Manufacturing, DeltaDynamics Group, GlobalGrowth Partners, MetaMakers Ltd., NexaCraft Solutions, and Pioneer University of Science and Arts. On the left side, there is a sidebar with "Endpoints" statistics, showing "0 Out of Date OS" and "0 Total Endpoints". At the bottom, it says "No Activity".

FAQ

Enabling the Feature

- **Who will have access to role-based access control?**
This feature is available for all managed service providers. This feature is also available to other multi-tenant customers through Duo Support (support@duo.com or duo.com/support).
- **Will adopting role-based access control nullify other features/functionality I'm utilizing in the Admin Panel?**
Not at all. This feature will not take away any functionality that's available in the Admin Panel today.
- **How should I add an end customer as an admin on their subaccount?**
This action can be performed by navigating to the individual account > Add Administrator. RBAC does not apply to admins added directly to subaccounts.

Subaccount Roles

- **Does the same subaccount role apply to all subaccounts the admin has access to or is it specific to a single subaccount?**
The current functionality is such that the subaccount role will apply to all subaccounts the admin has access to.
- **Who can edit subaccount roles?**
Administrators with the Owner role at the account level.
- **What subaccount role will Owner administrators have?**
Administrators with the owner role at the account level can only be assigned the Owner role at the subaccount level.
- **What subaccount role do admins take on when they are created via AD Sync?**
When admins are created via AD Sync, they will inherit the admin role as the subaccount role. If a different subaccount role is desired this selection can be changed on the Administrator page.
- **Is there an API that I can use to bulk assign subaccount roles to each admin?**
The current functionality is such that the subaccount role will be inherited from the admin role. If a different subaccount role is desired this selection can be changed on the Administrator page.

FAQ (continued)

Access Tags

- **Who can edit access tags?**
Administrators with the Owner role at the account level.
- **How do access tags apply to Owner admins?**
Administrators with the owner role at the account level have access to all subaccounts.
- **When can an administrator access a subaccount?**
An administrator can access a subaccount if:
 - The administrator has an Owner role at the account level
 - The subaccount does not have any access tags assigned to it
 - The administrator shares at least one tag in common with the subaccount
- **Are access tags a one-to-one assignment?**
No. A single subaccount, or a single admin, can have multiple tags assigned depending on how the organization would like to segment access. An admin can access a subaccount if they share any tag in common with the subaccount.
- **Is there an API that I can use to bulk assign access tags?**
Bulk assignments are not included in the first release of this feature.
- **Where can I see all my access tags?**
Any tag that is assigned to an admin or a subaccount can be seen from the drop-down list of access tags on the Add Account, Edit Account, Add Administrator, or Individual Administrator pages.
- **How can I delete an access tag?**
If a tag is no longer assigned (to any admin or any subaccount) it will no longer appear as an option in the drop-down list of access tags on the Add Account, Edit Account, Add Administrator, or Individual Administrator pages.
- **Why can an admin see subaccounts they do not share tags with on the Accounts page and Account Switcher?**
This is by design. They will receive an error message and will not be able to switch to the subaccount unless they share a tag.
- **Where can I see a summary of which administrators have access to which subaccounts?**
See the Reporting section above for more details.