DFengage Setup & Admin Guide

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DFengage Release 2.6.0

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DFengage Introduction

DFengage is an application that allows research participants to complete electronic patient-reported outcomes (ePRO) and other study activities (such as questionnaires, surveys, and diaries) assigned to them by the research team. This guide describes instructions and considerations for DFengage setup, administration, and management.

DFengage is fully integrated with **DFdiscover**, using the setup definition defined in DFsetup and the role permissions and user accounts defined in DFadmin.

DFengage is accessed through a web browser or installed as a mobile app from the Google Play Store (for Android™) or Apple App Store (for iOS® and iPadOS®) on smartphones and tablets. Study participants login to DFengage with their unique user credentials and complete assigned activities based on the study schedule. DFengage users receive reminders when new activities are available or overdue, as push notifications for mobile app users or as emails for web app users.

Refer to the *DFengage User Guide* and specifically *Differences Between Mobile and Web* for details about the use of the DFengage web and mobile app by study participants. DFengage is compatible with DFdiscover version 5.4 and later, however some features are only compatible with newer DFdiscover versions.

Access Links for DFengage

DFengage access links are provided to simplify the registration and login process for study participants, whether they are using DFengage web or DFengage mobile. Most study participants will receive these links in their invitation email, reminder emails, or via a link or QR code provided to them by site staff via DFweb's **ePRO Management** page. This section explains the different types of access links available and how they work.

The following subject-specific links are available:

- **Invite Link:** Prompts the user to confirm the email address for the specified username. The confirmation triggers a password reset email so the user can set their password and login to DFengage. The DFdiscover server, API, and username are all pre-defined.
    - Example web link: https://dfengage.dfdiscover.com/?server=explore.dfdiscover.com&api=dfws.dfdiscover.com&username=s1p1001&invite where server = explore.dfdiscover.com, API = dfws.dfdiscover.com, and username = s1p1001.
    - Example mobile link: https://dfengage.dfdiscover.com/open?server=explore.dfdiscover.com&api=dfws.dfdiscover.com&username=s1p1001&invite where server = explore.dfdiscover.com, API = dfws.dfdiscover.com, and username = s1p1001.
        - For the mobile app, the invite link must be clicked/scanned twice: first, to go to the DFengage page in the app store where the user installs it; second, to open the DFengage mobile app on the device and pre-fill the server, API, and username.
- **Login Link**: Prompts the user to enter their password for the specified username. The DFdiscover server, API, and username are all pre-defined.
    - Example web link: https://dfengage.dfdiscover.com/?server=explore.dfdiscover.com&api=dfws.dfdiscover.com&username=s1p1001 where server = explore.dfdiscover.com, API = dfws.dfdiscover.com, and username = s1p1001.
    - Example mobile link: https://dfengage.dfdiscover.com/open?server=explore.dfdiscover.com&api=dfws.dfdiscover.com&username=s1p1001 where server =

explore.dfdiscover.com, API = dfws.dfdiscover.com, and username = s1p1001.

- Generally this link is not needed for DFengage mobile users, since they have already logged in with their password and only require their PIN to open DFengage, however it may be useful if the participant has a new device but still remembers their password and therefore does not require the invite link.

In addition, a server-specific link may be created which prompts the user to provide both their username and password:

- Example web link: https://dfengage.dfdiscover.com/?server=explore.dfdiscover.com&api=dfws.dfdiscover.com where the server = explore.dfdiscover.com and API = dfws.dfdiscover.com.
- Example mobile link: https://dfengage.dfdiscover.com/open?server=explore.dfdiscover.com&api=dfws.dfdiscover.com where the server = explore.dfdiscover.com and API = dfws.dfdiscover.com.

The inclusion of open in the above URLs will open DFengage mobile, if already installed, or go to the DFengage page on the app store to install the DFengage mobile app when on a supported device. If not on a supported device, the link will open the DFengage web app. Excluding open from the URL will open the DFengage mobile app if already installed and otherwise go to the DFengage web app.

Adapt the URL to include the server and API values for your study before sharing it manually with DFengage participants, or use the invite/login link or QR code provided via DFweb's **ePRO Management** page. We do not recommend sharing the DFengage web base URL, https://dfengage.dfdiscover.com/, as it will prompt the user to specify the DFdiscover server and, if required, API before entering their username and password.

Study Setup for ePRO

DFengage uses the plate definition, visit map, conditional maps, page map, and translations defined in DFsetup. The below sections outline how DFdiscover setup and configuration apply to DFengage and considerations for ePRO form design. See the *Study Setup User Guide* for general details on using DFsetup.

Activity Definition

Refer to *Study Setup User Guide, Defining Data Fields* for complete details on creating plates and defining fields in DFsetup.

Plate Setup

A plate defined in DFsetup is presented as an activity in DFengage. Forms to be completed in DFengage may be set up as plates with or without CRF backgrounds, but will always be displayed in DFengage with one field or group per screen.

Fields in DFengage are displayed in field order. The visit number (field 6) and subject ID (field 7) are not displayed in DFengage, so field 8 is the first question displayed for an activity in DFengage.

For each field or field group, the Prompt text is displayed in DFengage as the question text above the data field. If no Prompt is defined, the Description will be shown in DFengage. In DFengage version 2.0 and later, fields of any data type may be grouped to display them on a single screen with one prompt in DFengage. Screens and tables are not supported in DFengage.

Field and Plate Property Considerations

- **Legal ranges:** Legal ranges are supported in DFengage version 2.0 and later. When an illegal value is entered in DFengage, a warning message will appear: “The response you entered might be incorrect. Please double-check it before continuing.” The user will be able to proceed to the next question after the warning is displayed.

- **Required and essential fields:** Fields defined as required or essential must be completed by the DFengage user to continue or complete an activity. The “Next” button in DFengage is disabled and the user cannot proceed to the next question until they provide a response. Subjects may click “Next” for fields that are defined as optional without providing a response.

- **Baseline visit date fields:** Visit dates are defined by the Use field property of “Visit Date” and selected as the visit date field for the B visit type in the visit map. In DFdiscover version 5.8 or later, visit dates may use any date format that includes day, month, and year.

  In DFdiscover version 5.7 or earlier, baseline visit dates, used by DFengage to determine the schedule of ePRO activities, must use the DD/MM/YYYY format. If the visit date at the baseline visit is captured using a different date format (e.g., DD-MMM-YYYY), use a separate hidden field and edit check to convert the visit date at the baseline visit to the correct date format required for DFengage. Only baseline visit dates require the DD/MM/YYYY format in version 5.7 or earlier; all other dates may be in any format.

- **Formats:** DFengage version 2.0 and later displays the defined format in the input field as a guide and warns the user if a response is entered that does not match the defined format. Only values matching the defined format will be accepted by the DFdiscover server, so a warning is displayed and the “Next” button is disabled if the value does not match the required format. Provide additional instructions for users if a complicated or restricted data format is required.

- **Skip patterns:** Skips defined in the field properties are followed when the user clicks the “Next” or “Finish” button, to skip the number of fields defined based on the value selected or entered. Note that a group of fields were considered 1 field for DFengage in version 1.0, but in version 2.0 and later fields within a group are counted individually, as they are in other DFdiscover applications.

- **Instructions:** The Instruction field property is supported in DFengage version 2.0 and later. Instructions can be displayed in DFengage above the prompt, above the field, or below the field. The field right, below field, and below prompt positions defined in DFsetup all display below the field in DFengage.

- **Plate and field help:** Both plate help and field help are supported in DFengage 2.0 and later. Defined plate help is available in DFengage via the “?” icon next to the activity name. Defined field help will be available in DFengage via the “i” icon next to the field prompt within an activity.

- **Edit checks:** Edit checks are not currently supported in DFengage.

- **Hidden fields:** Hidden fields are supported in DFengage. Hidden fields are not displayed when the ‘Show hidden fields’ permission is disabled in the ePRO role definition.

- **Text-only screens:** To display text only with no data field (for example, a questionnaire title and instructions), use a special custom property to hide the field input area. First, add the **ePRO_HideField** custom property tag to Custom Properties in the DFVAR section. Then, in the field properties, add *Yes* as the value for that property under the Custom tab. DFengage will display the prompt and instructions defined for the field, but not the field input area. Note that the field input area will not be hidden on the plate shown in DFsetup, but in the DFengage interface only.

- **Plate footnotes:** Some surveys or questionnaires may require a footnote on each page, for example a copyright statement. If using the Instructions field property in the Below Prompt position on each field on the plate isn’t an option, there is a special custom plate property to support this. First, add the **ePRO_Footnote** custom property tag to Custom Properties in the DFPLATE section. Then, in the plate properties, add the footnote as the value for that property under the Custom tab. Use HTML to apply any required formatting. DFengage will display the footnote at the bottom of each screen in the activity, above the Previous and Next

buttons. Plate footnotes are not represented on the plate shown in DFsetup, but applied to the DFengage interface only.

- **Use:** To capture local language used by the subject entering data, assign the Use property **Language** to a string field. This will allow DFengage to autofill the language of the device (to verify data was captured as intended). This field will be hidden in DFengage and View-Only in **DFexplore** and **DFweb**.

  To capture local creation and modification timestamps, assign the Use properties **Local Creation Timestamp** and **Local Modification Timestamps** accordingly. **Local Creation Timestamp** reflects when the user opens an activity. **Local Modification Timestamp** reflects when the user submits the activity. If the user is offline, the modification timestamp will indicate when they completed the activity on the device, not when it is submitted to the server. The local time stamp will be in ISO format including the user's local time zone in UTC offset. Like the **Language** Use property, these fields will be auto filled. They will also be hidden in DFengage and View-Only in **DFexplore** and **DFweb**.

Data Type Considerations

- **Date and time fields:** When capturing dates or times in DFengage, a calendar widget or 24-hour clock widget are provided showing the current date or time. The DFengage user can change the date/time if appropriate for the question. Date fields support all defined date formats but does not support partial dates. Time fields support hh:mm 24-hour clock time only.

- **Choice and check fields:** Both choice and check field option buttons are displayed as circles, whether it's "select one response" or "select all that apply". Add instructions to the prompt to clarify this as needed. Up to 98 choices can be defined in a choice field, and choices may be represented in a list or in a dropdown menu according to the Show As field property. The longer the text or the higher the number of choices, the more scrolling needed.

- **Number fields:** DFengage limits the number of characters that can be entered in numeric fields (including decimal places) according to the Store field property. If a format is defined, DFengage displays it in the input field as a guide and warns the user if the response entered does not match the defined format. Only values matching the defined format will be accepted by the DFdiscover server when the activity is saved. For complex number formats, provide instructions for the user to avoid confusion or data loss.

- **VAS fields:** Use the VAS data type to collect numeric responses on a scale (e.g., pain scale of 0-10) and numbers within specific limits (e.g., temperature) to restrict data to allowable values only. Use in place of number fields where feasible or practical. You can set up VAS fields with as much precision as needed, in the field properties.

  VAS displays as a horizontal scale by default, but vertical scales may be implemented using a special custom field property. First, add the **ePRO_VAS_Layout** custom property tag to Custom Properties in the DFVAR section. Then, in the VAS field properties, add *Vertical* as the value for that property under the Custom tab. DFengage will display the scale vertically, with the left value on the bottom of the scale and the right value at the top of the scale.

  Where possible, the vertical scale is sized to display on the screen without scrolling. Scrolling may be required if there are more than a few lines of text above the scale, or if the scale includes too many values for the user to be able to select with precision on the given screen size. Be sure to test your scale on expected device sizes.

  Additional VAS customizations are available with special custom properties as follows:

  - **ePRO_VAS_ShowEveryXValues**: The scale always shows the left and right values. Use this property to display additional values in specified increments. For example, if your scale is 0-100 and you want to display 10, 20, 30, etc., the value of this property is *10*. If your scale is 1-10 and you want to display all whole numbers, the value is *1*. Where possible all specified values are displayed on the scale (whether horizontal or vertical), however if space does not allow, only the middle value is displayed. Be sure to

test your scale on expected device sizes.

- **ePRO_VAS_LeftText**: Show a label for the left value on the scale. For horizontal scales, this is displayed on the right side above the scale. For vertical scales, this is displayed below the scale. By default, text is left-aligned and line breaks are added automatically. Use HTML to apply any required formatting. For vertical scales, we recommend centering the text and adding line breaks where needed (e.g.,Left Label
Second Line).
- **ePRO_VAS_RightText**: Show a label for the right value on the scale. For horizontal scales, this is displayed on the right side above the scale. For vertical scales, this is displayed above the scale. By default, text is left-aligned and line breaks are added automatically. Use HTML to apply any required formatting. For vertical scales, we recommend centering the text and adding line breaks where needed (e.g.,Right Label
Second Line). For horizontal scales, we recommend right-aligning the text.
- **ePRO_VAS_LeftRightTextPosition**: For horizontal scales, set the value of this property to *Below* to show the left and right value labels below the scale instead of above it. This property is ignored for vertical scales.
- **ePRO_VAS_CurrentText**: Show a label for the current selected value. This is displayed above the current value inside the box. Note that the space available for this label is restricted by the size of the box. By default, the text is left-aligned and no line break is added. Use HTML to apply any required formatting, including line breaks.

Note that VAS customizations using custom properties are not represented on the plate shown in DFsetup, but applied to the DFengage interface only.

- **String fields:** Use the string data type to collect text. The store length field property defines how many characters may be entered in that field. In DFengage, the total number of characters allowed is displayed below the input field, along with the count of the characters entered so far.

Page Map

By default, the plate label is used as the activity name in DFengage. To change the activity name per visit, use the Page Map. Refer to *Study Setup User Guide, Page Map*.

Activity Timing

Activities in DFengage become available based on the visit schedule defined in DFsetup. With DFdiscover version 5.8 and later, DFengage supports enhanced visit scheduling including conditional scheduling, termination visit dates, early termination plates, and missed visit plates. In DFdiscover version 5.7 and earlier, only specific visit types are supported.

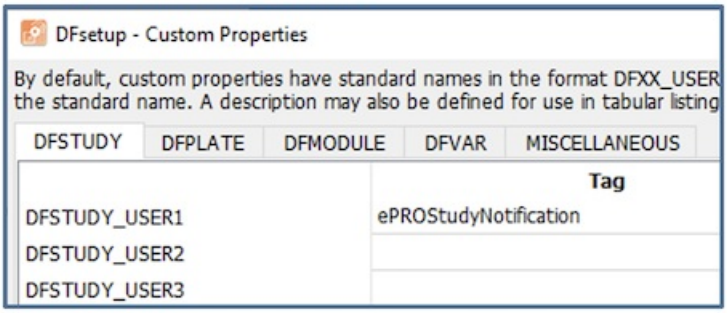
The timing of activities in DFengage refers to the time when a new activity becomes available in the app. In DFdiscover version 5.10 or earlier, the activity timing also defines when a notification is sent for a new activity, and when a notification is sent for an overdue activity. In DFdiscover version 5.11.0 or later, this timing is used along with the ePRO notification configuration to determine when due and overdue notifications will be sent. Timing uses the time zone of the device on which DFengage is installed.

The default timing is 8:00am. Timing can be customized for all activities in a study and/or for individual visits in a study if the 8:00am timing does not align with study requirements. Customizing the timing for individual visits allows for multiple activities at different times per day.

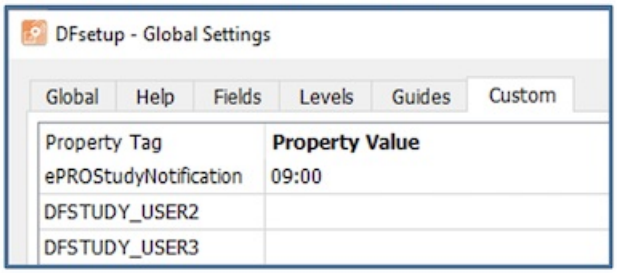
Custom Timing

To change the default 8:00am study timing for all visits, use a special custom study property. First, add the **ePROStudyNotification** custom study property tag in Custom Properties under the DFSTUDY section. Then, in Global Settings under the Custom section define the value for that property as the 24-hour clock time (e.g., “18:00”) to be used for this study.

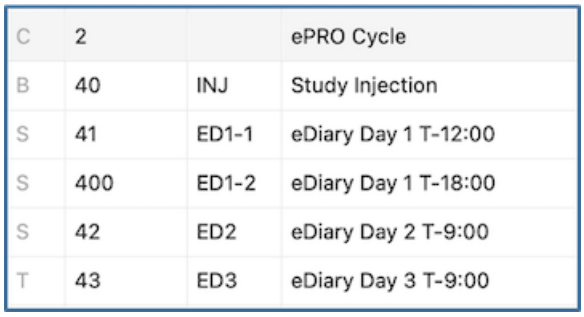
Study > Custom Properties



Study > Global Settings > Custom



To change the timing for a specific visit, add “T-XX:XX” to the end of the visit label in the visit map, where XX:XX is the 24-hour clock time to be used for this visit. The timing notation must be added to the end of the visit label or DFengage will not be able to read it.



C	2		ePRO Cycle
B	40	INJ	Study Injection
S	41	ED1-1	eDiary Day 1 T-12:00
S	400	ED1-2	eDiary Day 1 T-18:00
S	42	ED2	eDiary Day 2 T-9:00
T	43	ED3	eDiary Day 3 T-9:00

If no timing is defined for a visit, the custom study timing is used for the visit. If no custom study timing is defined, the default 8:00am time is used.

Visit Scheduling

The visit map and conditional maps define the schedule for when activities become available in DFengage. The Visit Map is described in *Study Setup User Guide, Visit Map*, with further detail about visit scheduling in *Study Setup User Guide, Subject Visit Scheduling*.

In DFdiscover 5.7 and earlier, only S (Scheduled) and T (Termination) visit types and required plates are supported in DFengage. Termination visit dates, optional visits, missed plates and visits, early termination plates, and conditional plates, visits, cycles, and terminations are not supported. Visits to be completed in DFengage must be scheduled from a baseline visit date entered on a non-ePRO plate using the DD/MM/YYYY date format.

In DFdiscover 5.8 and later, all visit and plate types are supported in DFengage as long as the visit is required with a schedule date and the plate is required at one of those visits. All conditional maps as well as missed visit

plates, early termination plates, and termination visit dates are now supported. DFengage uses the *Cycle Visits* report to determine which visits are required and when they are due.

Visit number ranges may be used to collect repeating forms, for example to collect multiple dosage administrations on a specific day or to capture ad hoc events that may occur at different times within a given period. Each time an activity is completed for a visit number within a range defined using "-", the next activity will become available, until the highest visit number in the range is completed. Activities for a visit number within a range using "~" will only appear when a plate within that visit is manually created in **DFexplore** or **DFweb**.

Notifications for new activities are sent on the day the visit becomes due according to the "Due" property in the Visit Map (in DFdiscover version 5.8 and later, see the Schedule Date in the Cycle Visits report), at the time defined as described above or as configured in the notification setup. If an activity is not completed and becomes overdue according to the "Overdue" property in the Visit Map, an overdue notification is sent on that day at the same time as the initial notification or as configured in the notification setup. All plates within a visit become due and overdue at the same time.

If custom timing is required for a specific activity, include the "T-XX:XX" notation at the end of the visit label in the Visit Map where needed, as described above. This also allows for scheduling of multiple activities in a day.

Activity Expiry

By default, if a subject does not complete an activity in DFengage, the activity remains available for completion in the app until the record is completed in DFengage or another application (e.g., DFweb, DFcollect, or DFexplore). Records set as missed are excluded from DFengage in DFdiscover 5.6 and later.

To automate the removal of activities that have not been completed in DFengage within a specific time window, consider including a hidden field on each ePRO plate to function as the "expiry" indicator. Using edit checks run in batch, identify which records have expired based on the study schedule and mark the hidden field. This will remove the activity from DFengage, once the app syncs with the DFdiscover server. If the participant completed the activity offline and later syncs the data with the server after the records has "expired", the data will still be received.

Notification Configuration

Activity Reminders by Push Notification

In DFdiscover version 5.10.0 and earlier, ePRO notifications for mobile apps are sent when an activity becomes due and if not completed another notification is sent when the activity becomes overdue.

In DFdiscover version 5.11.0 and later, ePRO notifications for mobile apps are defined for the study in **DFsetup** in the ePRO Notifications configuration. By default their behavior matches the 5.10.0 notifications. Refer to *Study Setup User Guide, ePRO Notifications* for complete details on configuring notifications.

Activity Reminders by Email

For users of the DFengage web app, due and overdue reminders are sent via email to the address registered to the participant on the DFweb ePRO Management page. For users of the DFengage mobile app, email notifications are not necessary since these reminders are sent as push notifications on their device.

The DFeproreminders script is used to process these emails based on activity timing at the time the script is run, either manually or scheduled via cron job. See *Programmer Guide, DFeproreminders* for details. Default reminder templates are provided for these email notifications which may be customized per study, including translations for multi-language support, by creating a DFmsgtemplates file. See *Programmer Guide, DFmsgtemplates*.

Email notifications are sent when the DFeproreminders script is run, which does not take individual participant's time zones into account. For studies with sites across multiple time zones, DFeproreminders may be scheduled to run at multiple times of day for different subsets of sites to align with the time zones in used. By comparison, notifications in the DFengage mobile app are sent based on the user's time zone on their device (see *DFengage User Guide, Notifications on DFengage Mobile* and *DFengage User Guide, Frequently Asked Questions* for details).

Translations

Use the Translations configuration in DFsetup to define study languages and provide translations of the page labels, field prompt, instructions, choice and check field labels, units, and help. Note that ePRO custom properties such as plate footnotes and additional VAS text are not supported at this time. Refer to *Study Setup User Guide, Translations* for details. Translations for push notifications are defined in the ePRO Notifications configuration; see *Study Setup User Guide, ePRO Notifications*.

In DFdiscover 5.10 or earlier, DFengage sent push notifications in English, French, or Spanish based on the user's device language. In DFdiscover 5.11.0 or later, DFengage sends push notifications based on the user's study language and the translation defined in **DFsetup**. Ongoing studies upgrading to DFdiscover 5.11 or later with participants requiring French or Spanish notifications must define the notification translations to the ePRO Notification configuration in **DFsetup**.

The DFengage app interface is available in English, Spanish, and French. DFengage updates the app interface language based on the user's device language setting. Where possible, during app setup after login, DFengage will automatically select the study language that matches the device language, when the study language is defined in DFsetup as "English", "Spanish", or "French". If no match is found, the DFengage user is prompted to select a language from the list defined for the study.

If the user's device language changes after login, the DFengage interface language is updated, but the study language remains the same. To change the study language, the user must log out of DFengage and log back in. The study language selected during app setup (automatically or manually by the user) is shown on the **Settings** page in DFengage.

Mid-study Changes

If any setup changes are made after data collection begins, those changes are available to DFengage users the next time they open the app while online.

Changes to the study setup such as typo corrections in the prompt, description, instruction, or code labels; field or plate help updates; visit, plate, or plate label changes; store length increases; field grouping changes; or changes to legal range, need, units, and skip do not impact the data structure and can be implemented without risk of data loss.

However, **structural changes to the database must be taken with care** since these may lead to data loss. These include changing data type, changing data format, reducing store length, changing code numbers, and adding, removing, or reordering fields. If study participants are completing activities in DFengage using an older database structure, data may be lost when it is synced with the DFdiscover server where the database structure has been changed.

If database structure changes are required for your study after data collection begins, consider creating a new plate (and visit, if appropriate) for this data and decommissioning the old plate (by changing role permissions) once all data has been received.

Refer to *Study Setup User Guide, Modifying Plates that Contain Data* for more details on making mid-study changes.

Study Administration for ePRO

DFengage relies on the role permissions and user accounts defined in DFadmin. This section describes the configuration required in DFadmin to support DFengage use.

Role Definition

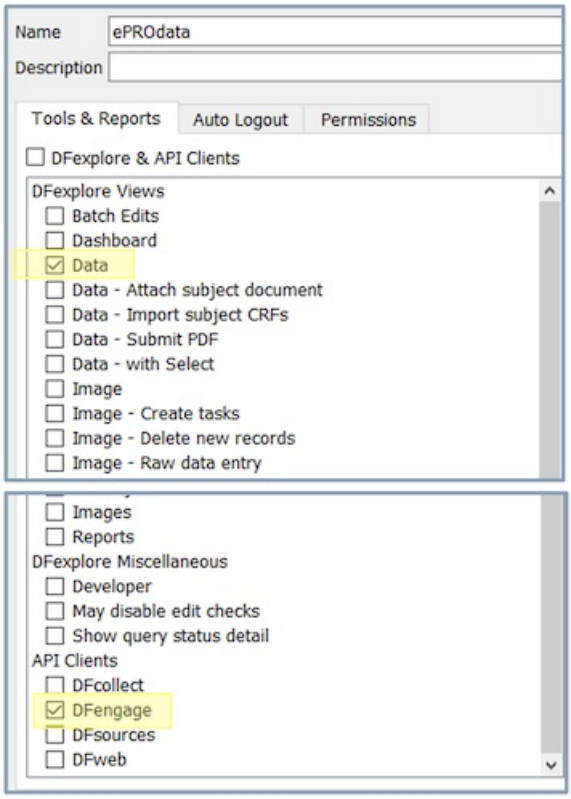
The definition of the role assigned to DFengage users has specific requirements outlined below.

Role Name

- Role name must be **ePROdata** (case-sensitive).

Tools & Reports

- Under DFexplore, check Data.
- Under API Clients, check DFengage.



Permissions

- View only access is required to the visit and plate where the baseline visit date is captured. In DFdiscover 5.8 or later, view only access is also required to any visits and plates that determine ePRO visit schedules and plate requirements, including data referenced in conditional maps, cycle scheduling, termination visits and plates, and missed visit plates.

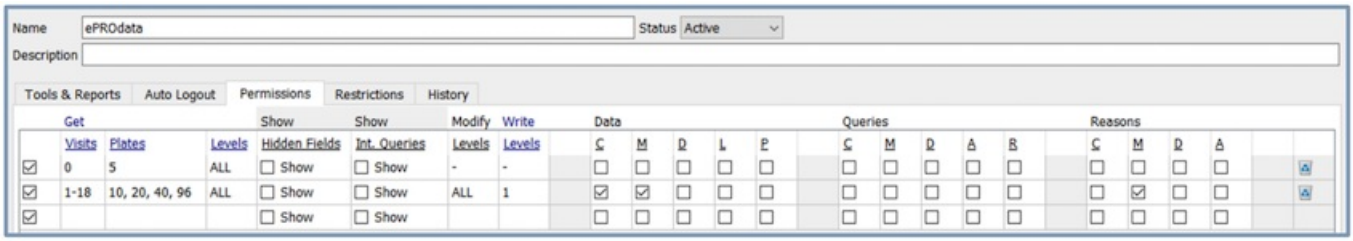
  For view only access, leave Modify, Write, Data, Queries, and Reasons permissions blank. View only records are not displayed in DFengage.

- Write access is required for scheduled ePRO visits and plates. For details about which visit and plate types

are supported in DFengage, see *Visit Scheduling*.

Under Modify Levels, include all workflow levels in use to allow DFengage to overwrite any existing data (for example, if an activity is completed offline in DFengage and only synced after the same record was completed in DFweb). Write Level must be 1. Data – C (Create) and M (Modify) and Reasons – M (Modify) permissions are required.

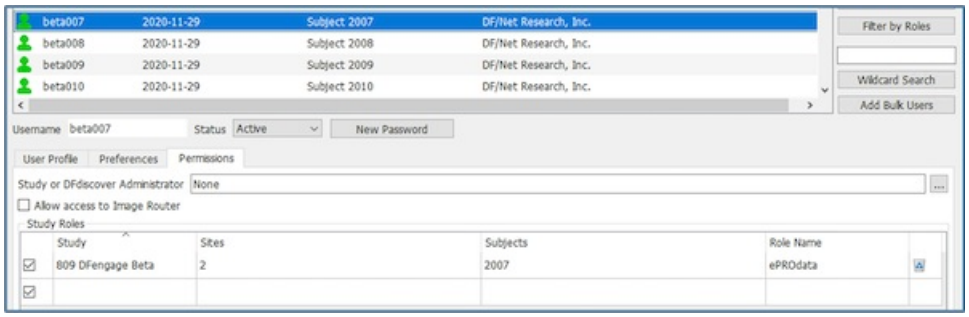
Example database permissions for the ePROdata role are shown below:



Refer to *System Administrator User Guide, Roles* for complete details about defining and managing roles.

User Access

Each DFengage user requires a DFdiscover user account with access to one study, one site, one subject ID, and the **ePROdata** role defined as described above. **DFengage will not work if the user has permissions for more than one study or subject ID.** An example DFengage user account is shown below.



In DFdiscover 5.10 and later, ePRO user profile details, including name and email address, are hidden and may not be updated in DFadmin. Instead, personal details are entered, updated, and viewed only by authorized users through DFweb's **ePRO Management** page. See *DFweb User Guide, ePRO Management* and *System Administrator User Guide, ePRO Admin Permissions* for details.

DFengage supports forgot password functionality for ePRO users with a registered email address. DFengage users will be required to provide a verification code after login with their password if 'Two-factor authentication required' is enabled in their profile and they have a registered email address. Single sign on is not supported in DFengage at this time.

Refer to *System Administrator User Guide, Users* for complete details about managing users and assigning study permissions. DFengage users may be added in bulk (up to 100 user accounts at one time) using the *Add Bulk Users* feature in DFadmin.

Study Configuration

The DFdiscover server and API used by DFengage may be different versions. For example, your DFdiscover server version may be 5.5 but the DFws API version is 5.7. In this scenario, your study configuration **Version Strict** setting must be set to "All minor versions supported". This will enable the different API and server versions to connect to each other.

Refer to *System Administrator User Guide, Software Version* for complete details about the **Version Strict** setting.

ePRO Scheduling Permissions

A special system user *dfeproagent* is required to determine the subject ePRO statuses on the DFweb ePRO Management page and identify due and overdue activities for reminders sent by DFeproreminders. See *System Administrator User Guide, ePRO Scheduling Permissions* for details.

Troubleshooting

Common Problems

The following sections outline a few basic troubleshooting scenarios. Knowing the error code and message displayed to the user in DFengage will help resolve issues more quickly. Ask DFengage users to report error codes and share screenshots where possible to help with diagnosing any issues. For technical support, contact the DFnet software support team at *help@dfnetresearch.com*.

Unable to log in

Ensure the user has the correct username, password, server, and API. Contact the DFdiscover system administrator to check for any problems with the DFdiscover server or API, including the server configuration to allow the DFengage app to connect to your DFdiscover server.

Login errors may also occur on the Set New Password page if the user uses a different browser or device, or switches to a private or incognito browser window, to set their new password from the one they used to confirm their email address or request the password reset. To login, the user may repeat the invite or forgot password process without switching their browser or device.

Able to log in, but unable to proceed past PIN setup

In DFadmin, double-check the user account, user permissions, and role definition. The user may have access to only one subject ID in one study with the ePROdata role. Check that the study configuration setting “Version Strict” is set to “All minor versions supported” if your server and API are not the same version.

Able to log in, but expected activities do not appear on Today screen

In DFadmin, double-check the user permissions, role definition, and database permissions. In DFsetup, double-check the visit map definition and the baseline visit date format. In DFexplore, double-check the baseline visit date.

Activities completed in DFengage not received in DFdiscover

The user must not uninstall or delete DFengage or delete its app data, since this will delete all data stored locally, including partially completed activities and completed activities not yet synced with DFdiscover.

Check that the subject is not locked in DFexplore and that the data record is not locked in DFweb or DFcollect. With the DFengage user, check that they are connected to the internet. Navigate to the History screen in DFengage and check the sync status. If the activity is Pending, click the cloud icon at the top right to send data to the DFdiscover server.

Notifications stop working for DFengage activities

If the user does not open DFengage on their device, their device may stop sending notifications for new or overdue activities. DFengage schedules notifications on the device for the next 72 hours or at least 32 notifications after the app was last accessed. After 72 hours of notifications or 32 total notifications without the user opening the app, the background processes that schedule new notifications on the device may stop working and the user may stop receiving notifications.

We recommend study teams make a plan to follow up with participants if ePRO activities are not received, to avoid missing data and ensure participants are accessing DFengage as expected.

Error Codes

Most error messages in DFengage will include an error code that can be used to help diagnose and resolve the issue. The table below lists all error codes, the error message, the issue, and instructions to resolve the issue.

Code	Error message	Issue	Instructions
01	Can't receive study info. We're having trouble receiving your study info. Please close the app and try again later.	Server could not retrieve the study that the user was trying to access.	Check if user has access to the correct site and subject in DFadmin. Check for any errors in DFsetup.
02	Study is currently being edited. We can't receive/send study info since your study is currently being edited. Please close the app and try again later.	Another user has the subject binder locked in DFexplore or the record locked in DFweb or DFcollect. Another user may have DFsetup open in exclusive or developer mode.	Ask other users to close binder (check DFexplore Status View to see who is connected) or exit DFsetup.
03	Can't receive study info. We're having trouble receiving your study info. Please close the app and try again later.	The data returned from the server was an unrecognized format.	Check for incorrect format of fields and variables in DFsetup.
04	Can't receive study info. We're having trouble receiving your study info. Please close the app and try again later.	The server could not respond with relevant site data. Possible internal server error retrieving data.	Check if user has access to the correct site in DFadmin.
05	Can't receive study info. We're having trouble receiving your study info. Please close the app and try again later.	The server could not respond with relevant subject data. Possible internal server error retrieving data.	Check if user has access to the correct subject in DFadmin.
06	Can't receive study info. We're having trouble receiving your study info. Please close the app and try again later.	The server could not respond with relevant binder data. Possible internal server error retrieving data.	Check if user has access to the correct subject in DFadmin.

Code	Error message	Issue	Instructions
07	Can't receive study info. We're having trouble receiving your study info. Please close the app and try again later.	The server could not respond with relevant visit map data. Possible internal server error retrieving data.	Check visit permissions in DFadmin. Check for any errors in DFsetup.
08	Can't receive study info. We're having trouble receiving your study info. Please close the app and try again later.	The server could not respond with relevant baseline data. Possible internal server error retrieving data.	Check that baseline visit date has been entered. Baseline visit date must be in DD/MM/YYYY format. Review visit map in DFsetup. Review role permissions for view access to visit and plate with baseline visit date in DFadmin.
09	Can't finalise questions. We're having trouble sending data to the server. Please make sure you have internet access.	User was trying to submit the answers to the server and an error occurred (other than study currently being edited).	User may have to redo questionnaire. Ask user to retry.
10	Can't receive study info. We're having trouble receiving your study info. Please make sure you have internet access.	This error will only occur if the user has no internet access and has not saved any local data yet for them to work offline.	Ask the DFengage user to close the app, connect the device to the internet, and open the app again to retrieve data from the server.
11	Can't receive study info. We couldn't retrieve one of your questionnaires. Please close the app and try again later.	The server could not respond with relevant plate data. Possible internal server error retrieving data.	Check plate permissions in DFadmin. Check for any errors in DFsetup.
12	Invalid credentials. The username or password you have entered is invalid. Please check and try again.	Incorrect username or password.	Confirm correct username and password. Ask DFengage user to use eye icon in password field to check for typing errors in the password.
13	Sync failed: We're having trouble syncing your data. Please make sure you have internet access, close the app and try again later. If this issue persists, please contact support	The app cannot sync data to the server.	Similar to error code 02. Ask other DFdiscover users to close binder (check Status View in DFexplore) or exit DFsetup.
14	Can't retrieve languages. We're having trouble receiving the languages of your study. Please close the app and try again later.	The app cannot retrieve languages.	Check translation map in DFsetup.
15	Connection timeout. Please check your connection and try again. If this issue persists, please contact support.	VPN or IP has no access.	Contact your DFdiscover server administrator.

Code	Error message	Issue	Instructions
16	The server or API you have entered is invalid. Please check and try again	Incorrect server or API.	Confirm correct server and API. Contact your DFdiscover server administrator if the problem persists.
17	The server you have entered is invalid. Please check and try again	Received ‘Host not found’ error (status 600) from the server.	Confirm correct server and API. Contact your DFdiscover server administrator if the problem persists.
18	Can’t receive study info. We’re having trouble receiving your study info. Please close the app and try again later.	Session timeout due to some reason.	Contact your DFdiscover server administrator.
19	The app could not access the server or API you have entered. Please contact support.	Invalid authorization token.	Server is not configured to allow DFengage to connect. Contact your DFdiscover server administrator.
20	Activity is currently locked.	Another user has the subject binder locked in DFexplore or the record locked in DFweb or DFcollect.	Ask other users to close subject binder. App will automatically retry when opened later.
21	Your password has expired. Please set a new password.	The user’s password has expired.	The DFengage user must set a new password to continue using the app.
99	An error has occurred. We have encountered an unknown error. Please close the app and try again later.	Generic error. May occur if more than one of the above errors exists.	Review user permissions and role definition in DFadmin. Review baseline visit date entered for the subject. Check for visit map or plate definition errors in DFsetup. Contact your DFdiscover server administrator if the problem persists.