Important Deployment Tasks

Key tasks related to deployment include configuration, reviewing and saving the Pending Changes report, notifying users, deployment and testing. It is recommended to perform these steps for all deployments.

Saving the Data Dictionary and Pending Changes Report

The Data Dictionary provides a record of configuration work completed and is used as a reference to identify any impact to live data caused by the changes to variables, forms, range checks and custom queries. During the first deployment, it is recommended that the Data Dictionary be downloaded instead of generating the Pending Changes report.

The Pending Changes report is intended to be run after first deployment, when configuration changes and updates are being deployed.

The Pending Changes report provides a summary of the changes made to the Dev instance since the last deployment. This report cannot be run after deployment and is the sole record of configuration changes over time. It is recommended that the Pending Changes report be run, reviewed and archived as part of each deployment process. Saved Pending Changes reports are an important record and troubleshooting tool in the event that deployment issues arise.

Medrio Recommends Staged Roll Out

1. Configure forms and form prerequisites (Groups, Sites, General, etc).
2. Deploy forms to Test instance.
3. Spot check that forms appear at appropriate visits, accept expected data.
4. Configure form dynamics (skip logic, form rules) and edit checks.

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5. Deploy #4 to Test.
6. Conduct validation testing.
7. Deploy to Live after system passes all validation and user acceptance testing.

Medrio highly recommends scheduling the deployment to Live to take place five business days before subject enrollment.

Deployment Considerations

1. Deployment in Medrio can only push changes, not retract them.
    a. After the deployment request has been submitted, Medrio deploys all pending changes.
    b. Medrio does not allow selective deployment of a subset of changes made since the last deployment.
        i. For example, if a new form is in development and a new site must be added immediately, the deployment of the new site also pushes the new form in its current stage of completion.

Recommended Deployment Best Practices

1. Identify the test plan in advance.
    a. Know the test data to be entered.
    b. Include a plan to test user experience and that queries are firing when expected in addition to any UAT testing required by the Sponsor.

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   c. Test each user role to ensure appropriate permissions.

2. Know how variables are used.
   a. Download and review the data dictionary to identify how variables are used in calculated variables, form rules, skip logic rules, and custom queries.
   b. If relevant, update all instances where the variable is referenced.
3. Deploy early and outside of peak working hours.
   a. Plan to deploy three to five business days in advance of when the study needs to be available.
   b. Include extra time to troubleshoot deployment issues if they arise.
   c. Deploy during a time of day when no users are working in the study.
4. Know what is being deployed.
   a. Run and review the Excel Data Dictionary for the first deployment and the Pending Changes report for subsequent deployments.
   b. Save the documents on a local computer for archival purposes.
5. Notify Users.
   a. Users working in the study may be locked out of Medrio.
   b. Email all Users with a "downtime" notification.
   c. Notify users after deployment is complete.
6. Click once.
   a. Click Deploy Changes to Select Study once.

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   b. Multiple clicks submit multiple requests and slow down deployment.

7. Do not make changes during deployment.
   a. Instances should be considered "locked" during deployment.
   b. Changes made during deployment cause database synchronization errors that require assistance by the Medrio Support team.

Deployment Errors / Conflicts

The vast majority of deployment errors are caused by changes to configuration that are in conflict with previously-collected data.

Examples include overwriting categorical select categories after data has been saved using the original category.

Common Deployment Errors and Resolutions

1. Changing category names after data has been collected for the original category.
   a. Why: Medrio does not allow saved data to be overwritten with new values during deployment.
   b. Solution:
      i. Restore all categories to their original values.
      ii. Disable categories that are misspelled or need to be changed.
      iii. Add new categories to replace the disabled ones.

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2. Changing a variable's data type after data has been saved in the Test or Dev instances.
    a. Why: Medrio does not allow saved data to be overwritten during deployment.
    b. Solution:
        i. If data is saved in the Dev or Test instance, and permanent data deletion is enabled and it is permitted to permanently delete data, permanently delete the subjects for which data has been collected on the variable to be changed.
        ii. Make the change to the variable type and deploy.
3. Variable has been deployed to the Live instance
    a. The variable must be "retired" and a new one created with the correct variable type.
        i. Option 1: Delete the variable and create a new one.
            1. Previously-collected data must be re-entered or those forms will contain variables without data.
            2. Note that deleted variables must be restored in order for the data to be exported.
        ii. Option 2: Mark the variable as read-only and create a new one.
            1. This option may avoid the need to re-enter data.
            2. Variables must be merged after data export, which can be done more easily if the data export name is the same across the two variables.

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4. Ungrouping or Removing Variables from a Grid
    a. Why: After variables are grouped in a grid and deployed, the variables cannot be ungrouped from that grid nor can a variable be removed from the grid.
    b. Work-around:
        i. Recreate the form by creating a new form and selecting Copy Existing Variables from the Add drop down menu.
        ii. Note: Data will now be collected under two different variable and form names.
5. Changing date variable Month/Day/Year requirements after data is selected.
    a. Why: If unknown dates were entered and saved, requiring the month/day/year is in conflict with the previously-collected data.
    b. Solution: Resolve the unknown dates to known dates prior to changing the date variable requirements and deploying.
6. Group Enrollment Numbers, Enrollment Goals, and Deleted Subjects.
    a. Why: Anticipated enrollment, enrollment limit and enrollment goal must be higher than the number of enrolled subjects. Changes to the enrollment numbers cause deployment errors when in conflict with the number of currently-enrolled subjects.
    b. Solution:
        i. Increase enrollment numbers to reflect the total of current plus additional subjects.

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