




Canarys Copy Project

Microsoft Partner 	Gold DevOps
	Gold Cloud Platform
	Gold Application Development
	Silver Security

 <small>URS is a member of Registrar of Standards (Holdings) Ltd.</small>	 <small>UKAS MANAGEMENT SYSTEMS 043</small>
--	---

Microsoft Partner 	2018 Partner of the Year Finalist
	DevOps Award

GitHub Verified Partner

Canarys Automations Private Limited

566 & 567, 30th Main, Attimabbe Road, Banagirinagara, Banashankari 3rd Stage.
Bengaluru, Karnataka 560085, India. | Web: www.ecanarys.com

Table of Contents

Introduction	3
Pre-requisites	3
Steps to Follow	4
Workflow-Diagram	6
Authorized Scopes	7
Limitations (will not migrate/copy)	10
Marketplace Link	11
Custom Hosting Options	11
Amendments	11

Introduction

Canary's Copy Project is a SaaS application which migrates a project within or across the Azure DevOps Organizations. The tool is currently hosted on an Azure Web App and is published in the Azure DevOps marketplace. The application does not use any back-end database and transfers data to destination as it receives.

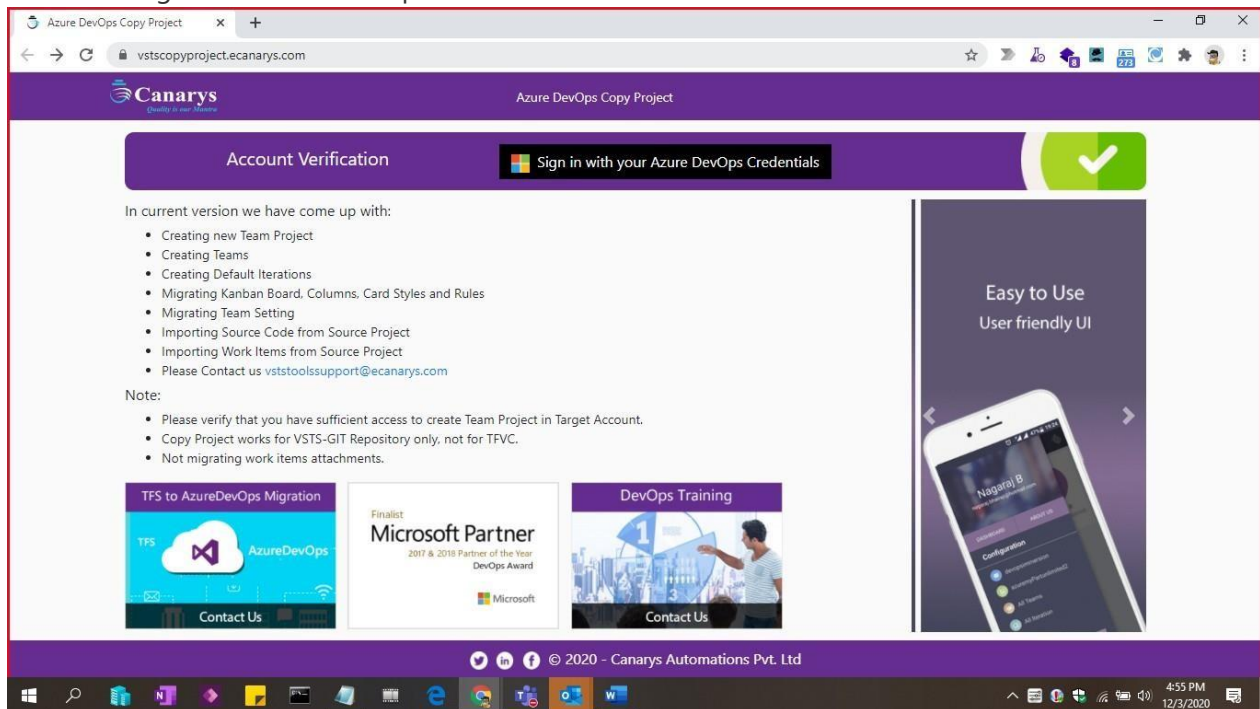
The tool maintains the history intact of the work items, restores most of the artifacts of work items in the destination. GIT repositories' structures are restored and Azure Pipelines with out-of-the-box tasks are migrated. Any third-party extensions used in the Azure Pipelines needs to be installed in the destination project before-hand for a successful migration.

Pre-requisites

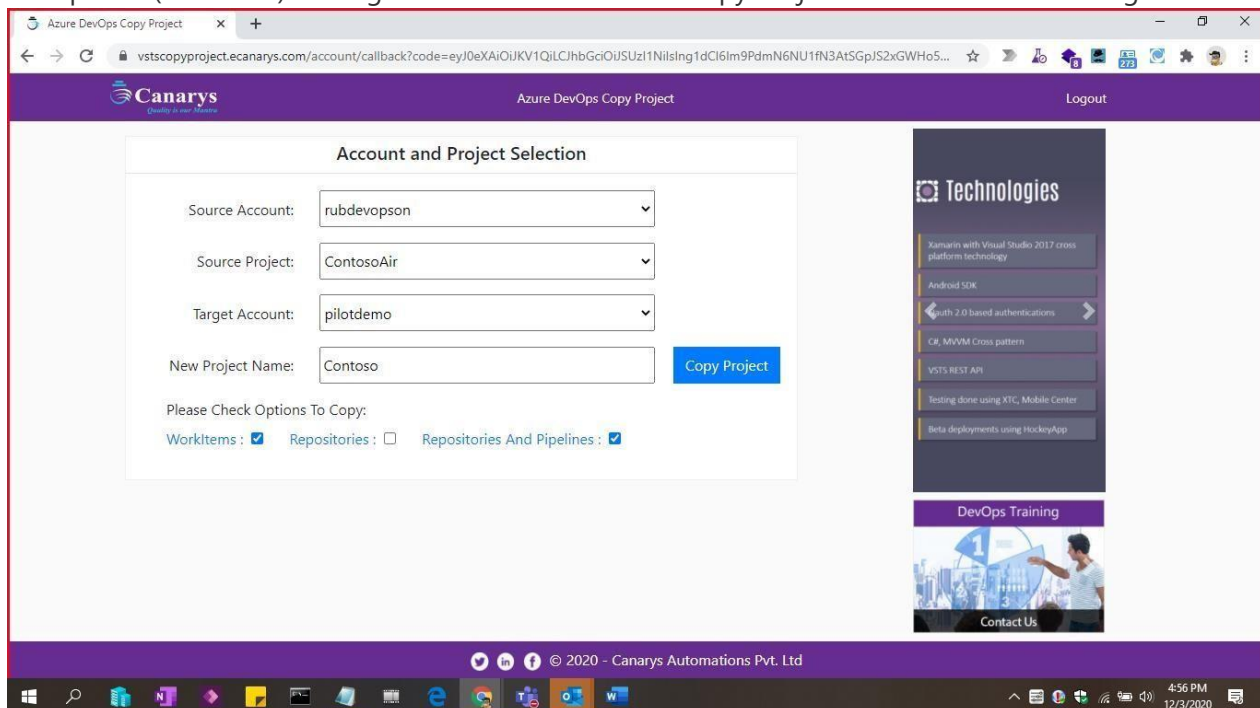
1. The user must have *Project Collection Administrator* access to both source and destination organization/team projects.
2. Provide the process template name
 - a. If the template used by source project is different from the template used by target project within DevOps Organization OR
 - b. If you are copying across DevOps organizations and using custom process template, that process template should be present in destination Org and you must provide the process template name.

Steps to Follow

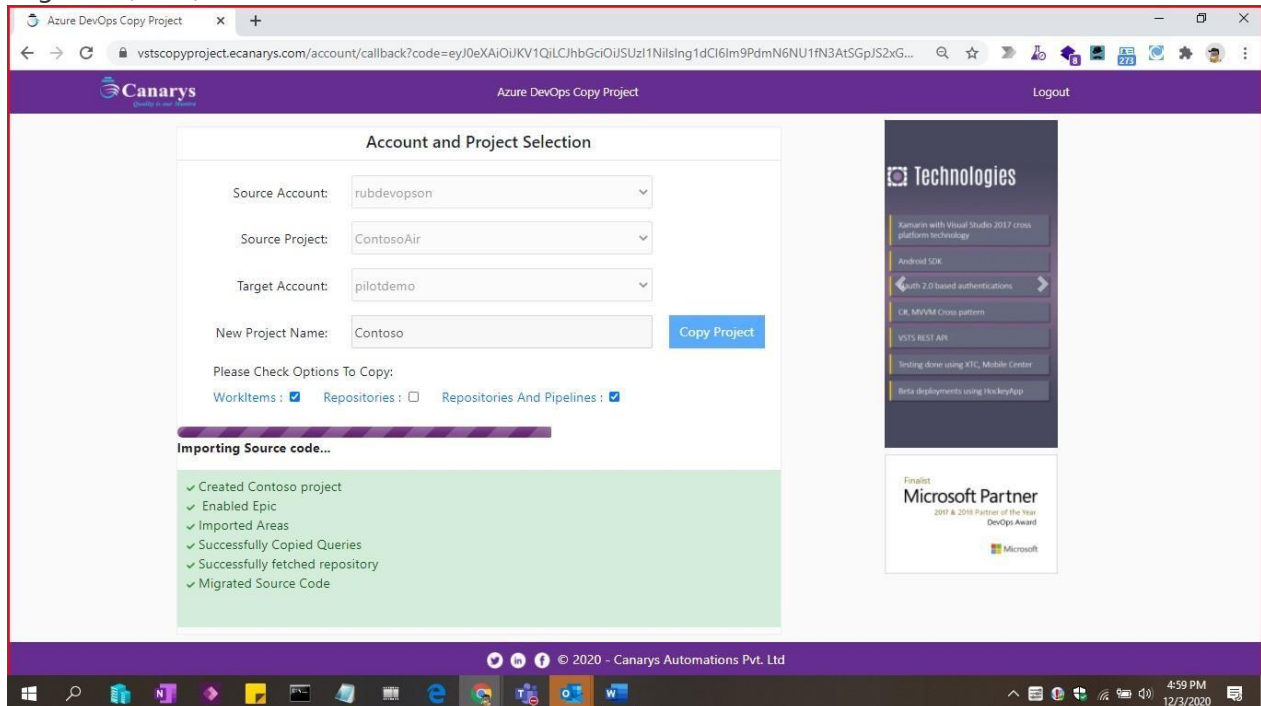
User must sign with Azure DevOps credentials. OAuth 2.0 authentication mechanism is used here.



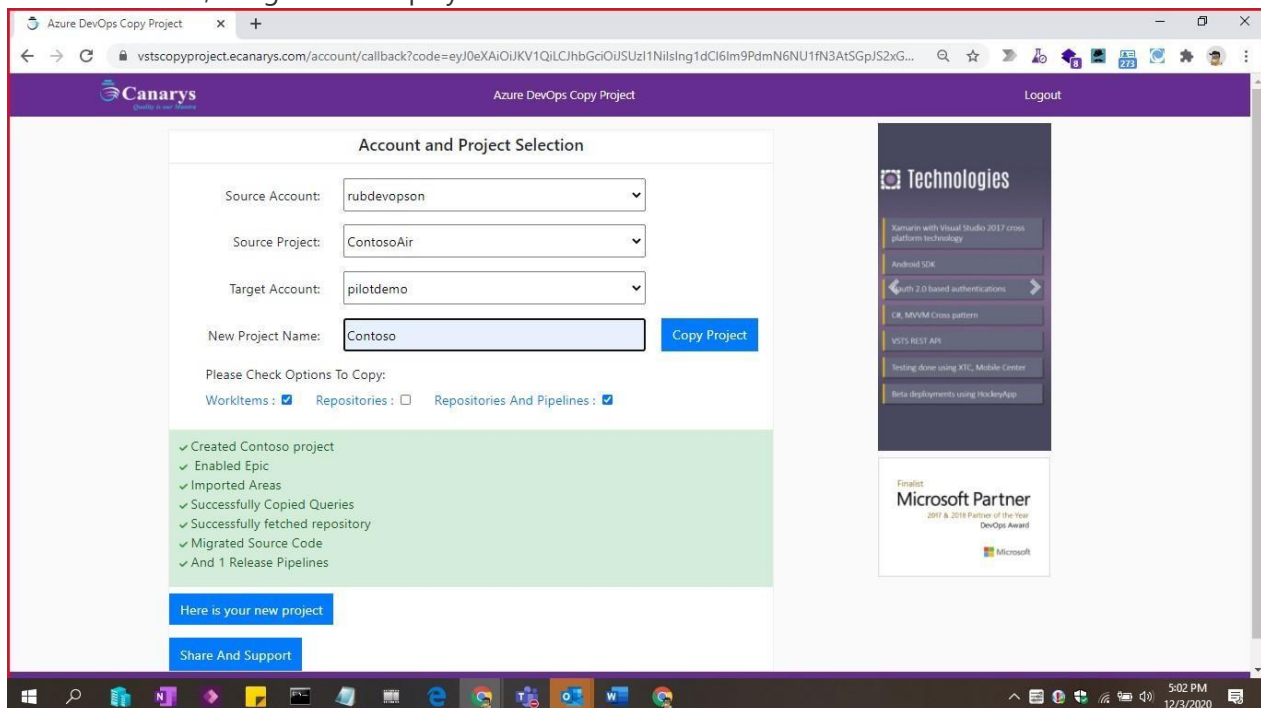
Select the Source Account (DevOps organization) that you are member/owner, then Source Project which needs to be migrated. Then, choose the Target Account and provide New Project name. Pick the options (checkbox) for migration of data. Click the "Copy Project" button to start the migration.



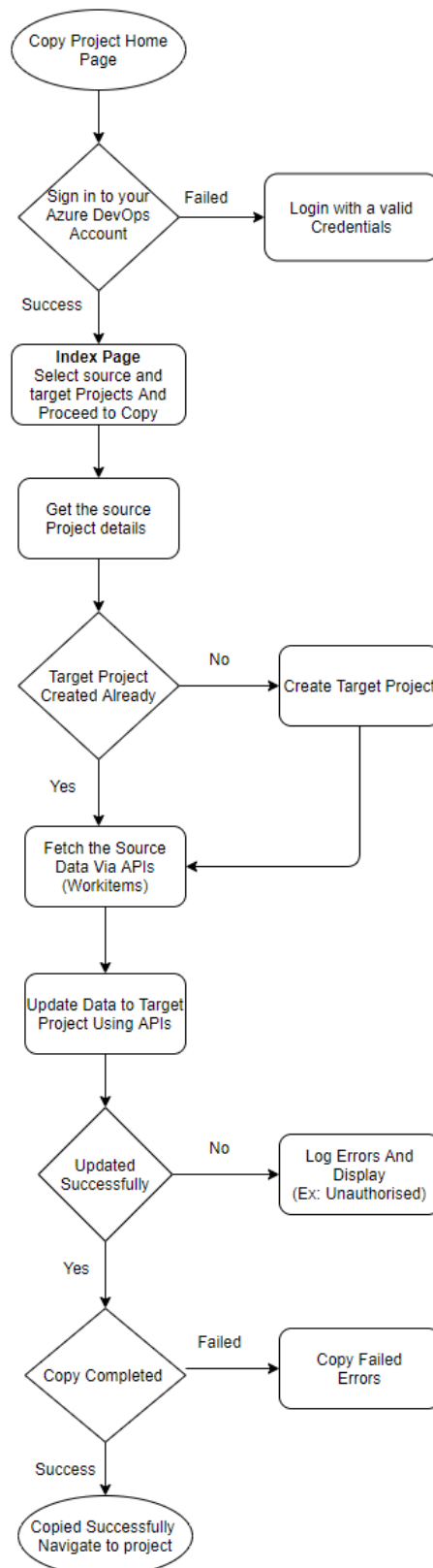
That will create a new project in the destination Org. Based on the option that is picked earlier, the source project's work items/repositories/pipelines are fetched (read) using the REST APIs and are migrated (write) in the destination.



A success message is displayed along with a button to navigate to the migrated project. If Migration is not successful, a log will be displayed with details.



Workflow-Diagram



Authorized Scopes

vso.analytics	Analytics (read)	Grants the ability to query analytics data.
vso.auditlog	Audit Log (read)	Grants the ability to read the auditing log to users.
vso.build_execute	Build (read and execute)	Grants the ability to access build artifacts, including build results, definitions, and requests, and the ability to queue a build, update build properties, and the ability to receive notifications about build events via service hooks.
vso.code_full	Code (full)	Grants full access to source code, metadata about commits, changesets, branches, and other version control artifacts. Also grants the ability to create and manage code repositories, create and manage pull requests and code reviews, and to receive notifications about version control events via service hooks. Also includes limited support for Client OM APIs.
vso.code_status	Code (status)	Grants the ability to read and write commit and pull request status.
vso.memberentitlementmanagement_write	MemberEntitlement Management (write)	Grants the ability to manage users, their licenses as well as projects and extensions they can access.
vso.extension_manage	Extensions (read and manage)	Grants the ability to install, uninstall, and perform other administrative actions on installed extensions.
vso.extension.data_write	Extension data (read and write)	Grants the ability to read and write data (settings and documents) stored by installed extensions.
vso.graph_manage	Graph (manage)	Grants the ability to read user, group, scope and group membership information, and to add

		users, groups, and manage group memberships.
vso.identity_manage	Identity (manage)	Grants the ability to read, write, and manage identities and groups.
vso.gallery_acquire	Marketplace (acquire)	Grants read access and the ability to acquire items.
vso.gallery_manage	Marketplace (manage)	Grants read access and the ability to publish and manage items and publishers.
vso.notification_manage	Notifications (manage)	Provides read, write, and management access to subscriptions and read access to event metadata, including filterable field values.
vso.packaging_manage	Packaging (read, write, and manage)	Grants the ability to create, read, update, and delete feeds and packages.
vso.project_manage	Project and team (read, write and manage)	Grants the ability to create, read, update, and delete projects and teams.
vso.release_manage	Release (read, write, execute and manage)	Grants the ability to read, update, and delete release artifacts, including releases, release definitions and release environment, and the ability to queue and approve a new release.
vso.security_manage	Security (manage)	Grants the ability to read, write, and manage security permissions.
vso.serviceendpoint_manage	Service Endpoints (read, query and manage)	Grants the ability to read, query, and manage service endpoints.
vso.symbols_manage	Symbols (read, write and manage)	Grants the ability to read, write, and manage symbols.
vso.taskgroups_manage	Task Groups (read, create and manage)	Grants the ability to read, create and manage task groups.
vso.dashboards_manage	Team dashboards (manage)	Grants the ability to manage team dashboard information.

vso.test_write	Test management (read and write)	Grants the ability to read, create, and update test plans, cases, results and other test management related artifacts.
vso.tokens	Delegated Authorization Tokens	Grants the ability to manage delegated authorization tokens to users.
vso.tokenadministration	Token Administration	Grants the ability to manage (view and revoke) existing tokens to organization administrators.
vso.profile	User profile (read)	Grants the ability to read your profile, accounts, collections, projects, teams, and other top-level organizational artifacts.
vso.variablegroups_read	Variable Groups (read)	Grants the ability to read variable groups.
vso.wiki_write	Wiki (read and write)	Grants the ability to read, create and updates wikis, wiki pages and wiki attachments.
vso.work_full	Work items (full)	Grants full access to work items, queries, backlogs, plans, and work item tracking metadata. Also provides the ability to receive notifications about work item events via service hooks.

Limitations (cannot be migrated)

- Copy Project works for VSTS-Git repository only, not for TFVC.
- Work Item IDs in the source will not be carried over to destination (A mapping field can be included in the destination to have the source Work Item IDs for reference).
- Cross Project/Cross Organization Work Items Links cannot be migrated.
- If a work item type is changed after its creation, the changed work item type information and history cannot be migrated. The migrated item will have all information about the old work item type.
- Attachments and links in the work Item discussion, Wikis and Description fields
- User permissions at various nested group and feature levels.
- Charts in queries
- More than 20K work items in the Recycle bin
- All Pipelines run summary/results and generated artifacts from a pipeline run cannot be migrated.
- Test suite and test case run details & results cannot be migrated.
- Can't copy pipelines which are referring other source control tools, apart from Azure Repos.
- Azure Artifacts cannot be migrated.
- Team capacity can only be imported if the user or team member is present in the target organization.
- History for the Links added in a work item cannot be migrated with the actual name (who added the link); it takes the name of the user logged into the Copy Project tool for migration.
- For the field changes we'll be getting as < OriginalUserId > Via < UserIdrunningthetool > in history.
- Fields (reference names should be same), States which are not in destination project will not be migrated.
- Pull requests cannot be migrated.
- Pipelines which are migrated to destination organization will require extra steps before execution. i.e. to configure some of the entities like agent pools, agents, and subscriptions (if it uses any), or custom tasks configuration.
- Work Item templates for team cannot be migrated.
- Cross-Project Linking is not possible.
- Attachments in work item discussion fields, work item description fields, and in wikis
- Work item ID numbers will change.
- Links pointing to source will be pointing to the old location in the target (eventually broken when old system decommissioned).
- Pipeline run summary/results, and generated artifacts from a pipeline run, will not be migrated. They will be available at the old location for comparison, will require a new pipeline run in the new location to populate the artifact prior to deploying.
- History for the links added in a work item will not be migrated with the actual name of who added the link. Instead, the name of the user id the migration occurs under will appear as having created the link.
- User ids that have been removed from AAD don't appear as in source
- Work item attachments will migrated but will appear as added the day of migration
- Artifact feeds will not be migrated
- Environments will not be migrated

- Delivery Plans will not be migrated
-
- Portfolio Plans will not be migrated
- Retros will not be migrated
- Test Runs results will not be migrated (Unit and Functional Tests)
- Pull Requests will not be migrated
-

Marketplace Link

<https://marketplace.visualstudio.com/items?itemName=canaryautomationspvtltd.vstscopyproject>

Custom Hosting Options

Either the Canarys hosted SaaS tool can be used or if the Client desires to use the custom tool in their environment, we can follow either of the below 2 options –

1. To host on Azure Web App - requires a publish profile of the web app where the application will be deployed.
2. To host on a local machine (Azure VM/on-premise) - IIS needs to be enabled, user needs to be an admin, internet with very minimum restrictions to be provided

An OAuth application needs to be created and the following to be shared with us –

- APP ID
- CLIENT SECRET
- AUTHORIZED SCOPES
- CALLBACK URL

We will use these values in the application and share the application with the organization for hosting. We will not share the source code at any point in time.

Amendments

- Copy Project Tool can be customized to migrate data to an existing Team Project along with history.
- After analyzing the requirements and feasibility, strategy with estimation for migration will be provided
- The data migration requirement by the Client can be accommodated if Microsoft has exposed the respective Azure DevOps REST APIs.