ActiveControl - Administration Guide

9.20 — Last update: 18 February 2024

Basis Technologies

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1. Introduction

Document Audience

The ActiveControl Administration Guide is aimed at the designated Administrators within Basis Technologies' customer organisations who are responsible for maintaining ActiveControl.

Document Contents

This ActiveControl Administration Guide is divided into the following sections:

1. Key Technical Concepts
2. Key Functional Concepts
3. Installing ActiveControl
4. Core Configuration – Web Platform
5. Core Configuration – SAPGUI
6. Other Common Configuration Topics
7. Advanced Configuration Topics
8. Deployment Considerations
9. Reports
10. Housekeeping Activities
11. Upgrading ActiveControl
12. Support Information
13. Legal Statement

Other Documentation

Most standard Basis Technologies documentation is available via https://docs.basistechnologies.com/.

> ✱ The ActiveControl 'Quick Setup Guide' summarises all the key installation and configuration steps required to setup ActiveControl. This Administration Guide provides more detail and context to the summarised steps documented in the Quick Setup Guide.

1.1. Introduction to ActiveControl

ActiveControl has been helping SAP customers and their partners deliver SAP change safely, quickly and efficiently for more than 25 years.

ActiveControl helps SAP customers in several fundamental ways:

- Enforces process, control, automation and audit in SAP change & release processes.
- Manage SAP change and transformation to drive business innovation.
- Evolve to Agile, DevOps and Continuous Delivery within SAP, bringing together speed, quality and stability.

Key Benefits

Value of ActiveControl

Automate cross-system deployments

Minimize manual interventions

Combine SAP / Non-SAP deployments

Speed up cloud migrations

Avoid manual email-based processes

Speed up S/4Hana migrations

Support Hybrid SAP

Deliver business innovation quicker

Avoid manual imports

Facilitate Agile development

Facilitate DevOps

Deliver high quality SAP change safely, quickly and efficiently

Minimize testing defects

Single version of truth

Simplified Audits

Minimize development rework

Avoid tooling dual-keying

Avoid spreadsheets

Minimize Sequencing issues and Import Errors

Minimize manual checks

Ensure Audit / Regulation compliance

Automated N+n Dual Maintenance (avoid manual retrofit)

Minimize human-error prone processes

Minimize business impacting Production Issues

Figure: Key benefits of ActiveControl.

1.2. New UI5-based User Interface

For more than 25 years, SAP customers around the world have been using ActiveControl to help deliver change to their SAP applications in a safe and efficient manner.

Over this time, ActiveControl has evolved in many ways – but always on top of the core underlying technology and the long-standing Windows GUI and bsp-based Web UI.

During early 2021, Basis Technologies initiated a 2-year 'Web Platform' project to replace the existing Windows GUI and Web UI with a single new UI5-based User Interface.

Web Platform – Objectives

The key objectives of this project were as follows:

1. To modernise the ActiveControl front-end.
2. To deprecate the Windows GUI (and legacy bsp-based Web UI), to help facilitate easier Customer implementations and upgrades of ActiveControl.
3. To deliver many historical Features that were difficult to deliver on the legacy Windows GUI and Web UI, such as the enablement of mobile device access to ActiveControl.
4. To introduce more internal automated regression testing, to enable more stable ActiveControl releases and cumulative patches, and facilitate Basis Technologies to increase the frequency of ActiveControl releases in the future.

> ✳ Please note that most of the key concepts of ActiveControl and existing configuration of ActiveControl do NOT change as a result of the Web Platform. As such, existing Basis Technologies' customers should not be overly concerned that they will need to perform a migration exercise to move from current ActiveControl over to the Web Platform, above and beyond the change management element of training existing users on the new User Interface. All new configuration options introduced with the ActiveControl Web Platform will generally only be required because the new ActiveControl Web Platform introduces many new features that have been requested by customers over the years.

Web Platform – Phases & Timeline

Basis Technologies have delivered the new ActiveControl Web Platform UI in a 2-phase approach, as follows:

Phase	Release	Timeline
Phase 1	AC9.00 (November 2022)	Replacement for current Web UI – available to all customers.

Phase 2	AC9.10 (July 2023)	Replacement for Windows GUI.
	AC9.20 (Planned for late 2023)	Deprecation of the legacy WebUI and Windows GUI from the product.

Deprecation of legacy UIs

Further details of when the current Windows GUI and WebUI will be deprecated and removed from ActiveControl can be found in End of Maintenance Support section of the Administration Guide.

2. Key Technical Concepts

This section of the Administration Guide details some of the key technical concepts of ActiveControl:

- [Architecture of ActiveControl](#)
- [Accessing ActiveControl – User Interfaces](#)
- [Accessing ActiveControl – Authorisations Concept](#)
- [Email Notifications](#)
- [Integration Frameworks](#)

2.1. Architecture of ActiveControl

The architecture of ActiveControl Web Platform can be broken down into several core components:

1) Domain Controller – the SAP system in which most ActiveControl data/configuration is stored.
2) Web Platform Server – server on which the Web Platform docker image is hosted.
3) Satellite SAP systems – the customer SAP landscapes being managed by ActiveControl.
4) Access methods – the UIs via which ActiveControl can be accessed.
5) Integration Frameworks
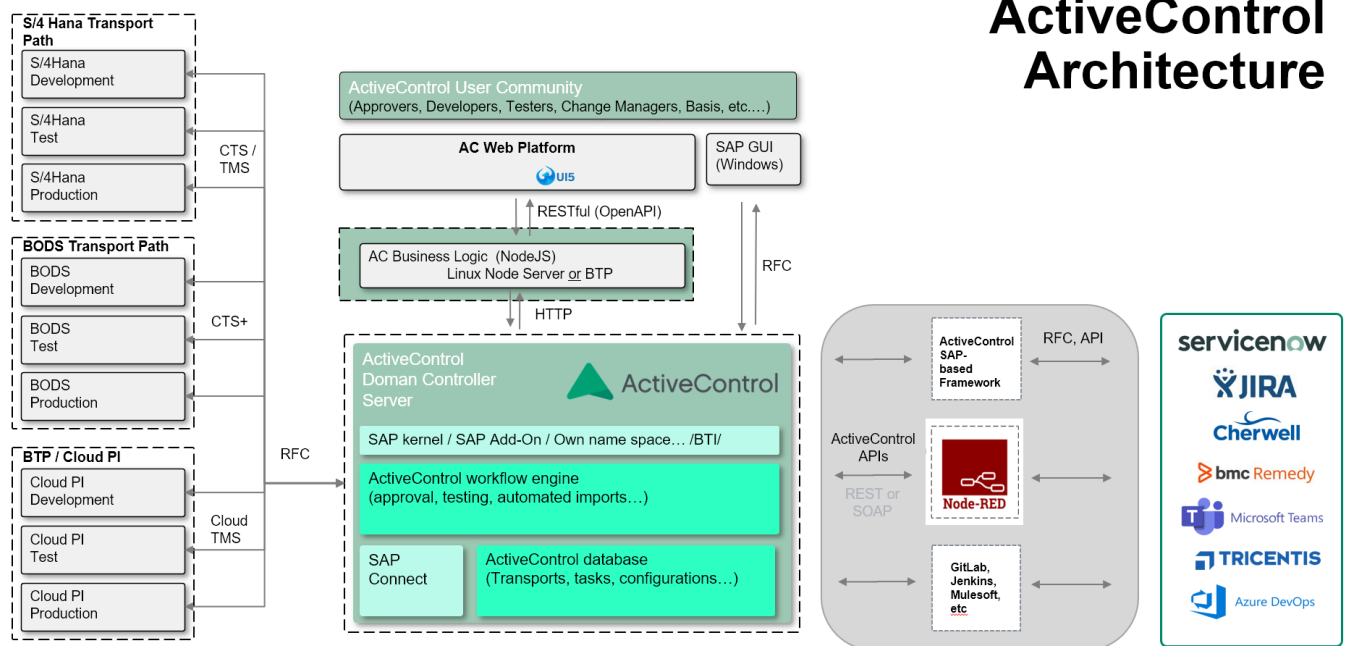
Figure: The ActiveControl architecture as of ActiveControl Web Platform 9.10

2.1.1. Domain Controller

Like the SAP Transport Management System (TMS) , ActiveControl has the concept of a **Domain Controller**.

The Domain Controller does not need to be configured in any special way, it is simply the SAP system that the ActiveControl client software connects to, and is where the majority of ActiveControl configuration and application data is stored. The server software runs mostly within the ActiveControl domain controller. When necessary, the domain controller connects to the Satellite SAP systems (ie the systems to be managed via ActiveControl) to gather transport request information and to perform transports. These connections are made using SAP's remote function call (RFC) protocol.
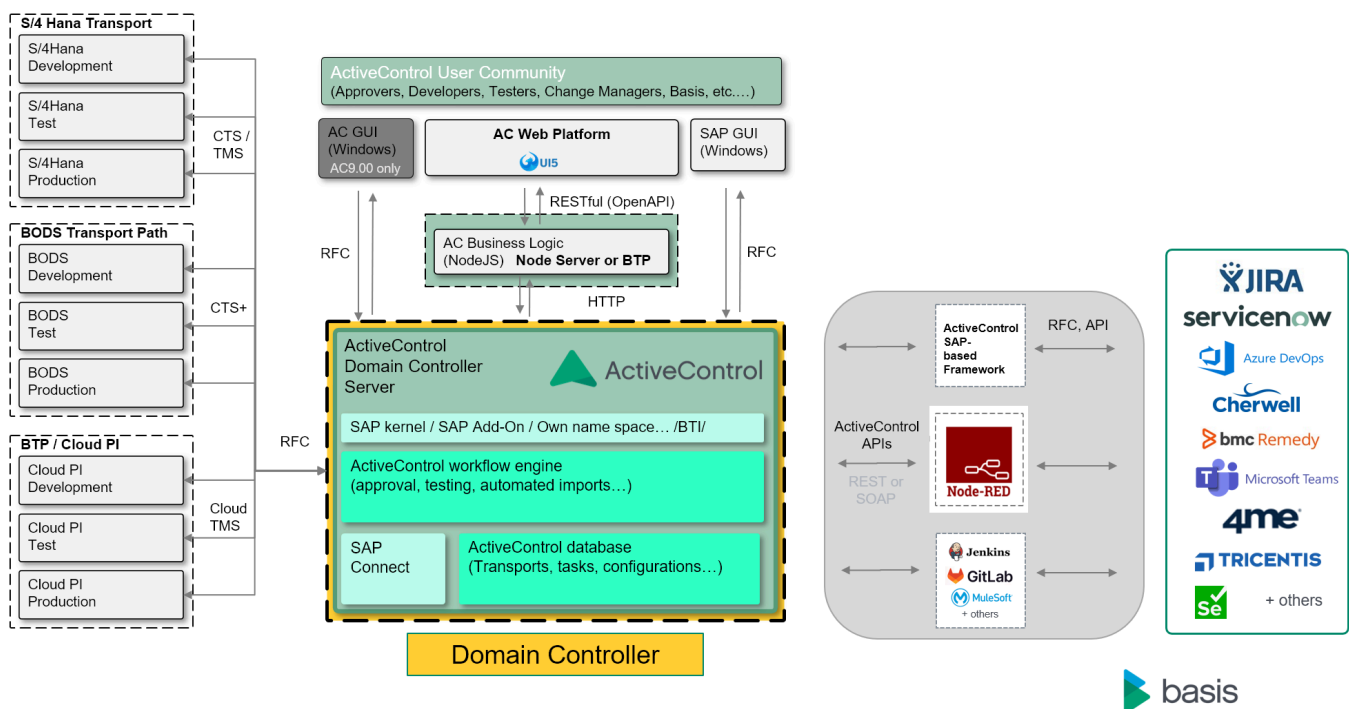
Figure: ActiveControl Domain Controller.

> ✱ It is common within many Basis Technologies customers for their **Solution Manager system** to be used as the ActiveControl domain controller, however this is not mandatory; the reality is the ActiveControl domain controller can be any ABAP system with high availability and in which all the ActiveControl users have an SAP user account. Increasing numbers of customers are using other systems like S/4HANA or GRC as their ActiveControl Domain Controller.

> ✱ There is no requirement for the ActiveControl domain controller and TMS domain controller to be the same SAP system. In fact, a single ActiveControl domain controller can manage transports for multiple TMS domains.

> ❗ SAP Note 1965180 might need to be applied in the Domain Controller system as part of a Web Platform deployment – where this was not previously required in the legacy WebUI. Please refer here for further information.

User Accounts

All ActiveControl users will require a user account in the domain controller system with a valid email address in order to receive email notifications. Each user must also be assigned with the relevant ActiveControl single or composite role(s) to reflect their job function and the access they need to the various functionality within ActiveControl. This is described in more detail in the Security Authorisation Concept section of this Administration Guide. A seperate Security Roles Matrix is available on request from Basis Technologies, this details the out-of-the-box roles and the underlying authorization activities included in each role.

2.1.2. Web Platform

Unlike previous versions of ActiveControl, the new SAP-UI5 based ActiveControl has a web front-end which requires a docker image to be hosted by the customer. This is in addition to the existing Domain Controller backend requirement.
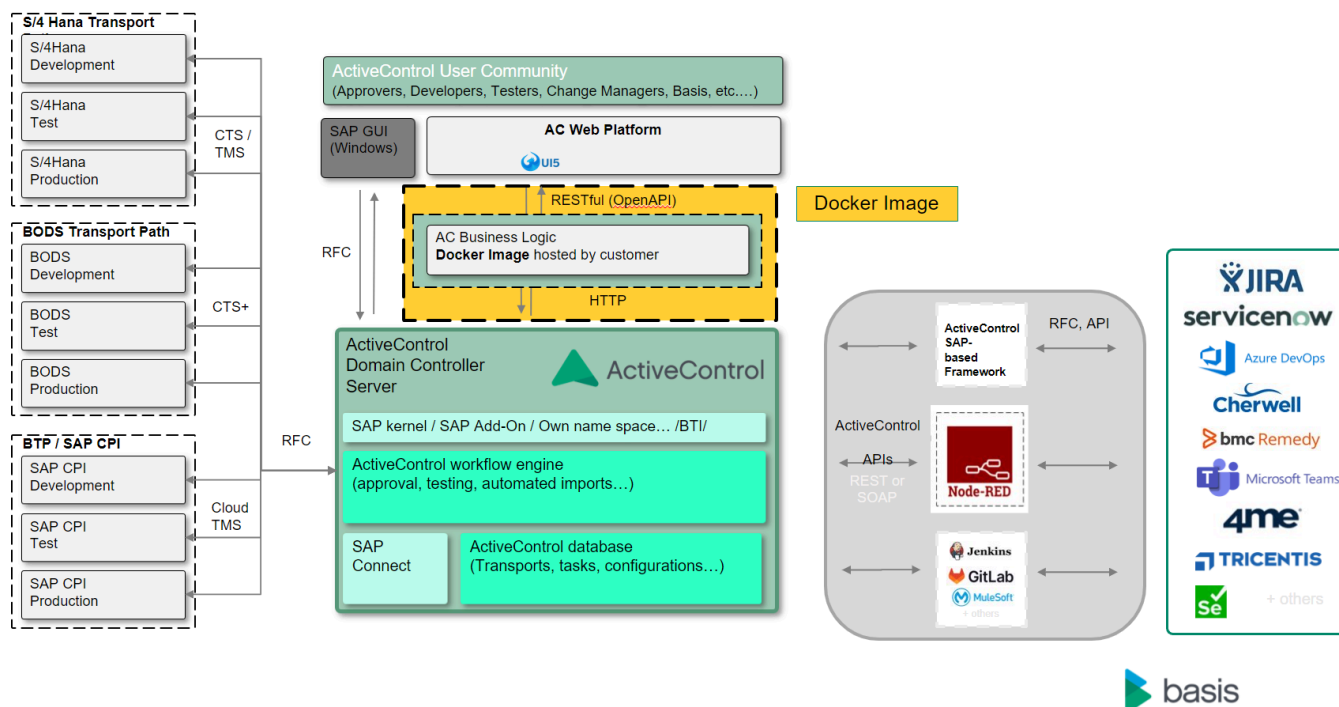
Figure: ActiveControl Docker Image.

The ActiveControl docker image can either be hosted on a standalone Linux server (eg on AWS, Azure, on-premise server) or to SAP Business Technology Platform (BTP). A BTP deployment requires Cloud Foundry (not Neo) based environment.

As our customers have different deployment requirements (eg some are already using SAP BTP, some are not) and different levels of integration with Fiori LaunchPad, the ActiveControl Web Platform can be deployed using various alternative deployment options, as described below.

	SAP BTP	Standalone Server
BTI Dashboard	Possible	Possible
Fiori Launchpad	Possible	Not available in AC9.10

Table: Deployment Options for the ActiveControl Web Platform.

Each of the Web Platform deployment options, as well as other information and considerations are described in later Installing ActiveControl section of this Administration Guide.

The Basis Technologies recommendation to our customers would be to deploy the ActiveControl Web Platform on SAP BTP where possible, given this is SAP's strategic direction, and other parts of SAP are already becoming well-established there. Additionally, using SAP BTP means that capabilities such as SSO and Mobile access will likely also already be available.

For the vast majority of customers, Basis Technologies believe that the out-of-the-box BTI Dashboard will also suffice. We anticipate that only a few of our very largest enterprise customers would want/need to customise the layout enough to warrant via Fiori launchpad.

2.1.3. Satellite SAP Systems

The Satellite SAP systems are the Customer systems to be managed via ActiveControl.

The ActiveControl server software must also be installed in each of these participating satellite SAP systems. It is not necessary for any participating SAP systems to share transport directories with any of the other SAP systems in the ActiveControl system landscape. If transport files are missing, the ActiveControl Domain Controller automatically requests the transport files, on demand, from the source SAP system and forwards them to the SAP system that the changes are to be imported into.

The only requirement is that the ActiveControl domain controller must be able to connect to each of the participating SAP systems via the remote function call (RFC) protocol. This RFC connectivity is required to gather transport request information, release transport requests or to perform import actions.
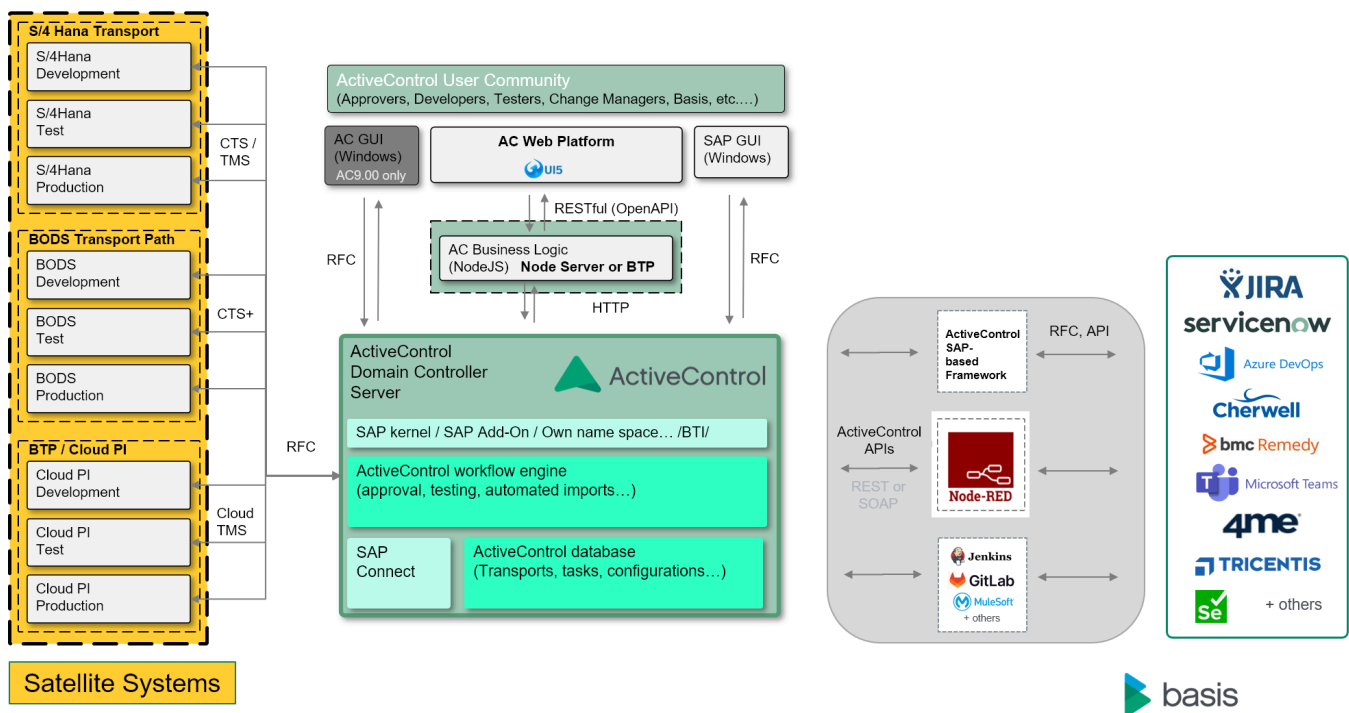
Figure: Satellite systems managed by ActiveControl.

Example 1: Multiple Development Streams with Separate Transport Directories

ActiveControl can support a system landscape with three development streams (such as ERP, CRM and BW), where each development stream has its own transport directories. That is, the development, test, production (etc.) ERP systems share a common set of transport directories, however these transport directories are not shared with any of the CRM or BW systems.

In this example, the ERP development system might be acting as the ActiveControl domain controller for all three development streams, even though none of the SAP systems in the ERP stream share transport directories with either the CRM or BW systems (and vice versa).

Example 2: *Single Development Stream with Multiple Transport Directories*

ActiveControl also supports a system landscape where the SAP systems of a single development stream do not share the same set of transport directories. It might be that the development and test systems share a common set of transport directories, but for security reasons, the production system has its own set of transport directories.

2.2. Accessing ActiveControl – the User Interfaces

As of ActiveControl 9.10, there are two ways of accessing ActiveControl:

1) **SAP GUI screens**, normally used by 'transport owners' (ie Developers, Functionals, Securities teams) to log their changes within ActiveControl.

2) **Web Platform**, used also by all other ActiveControl users to perform their respective activities relating to ActiveControl.
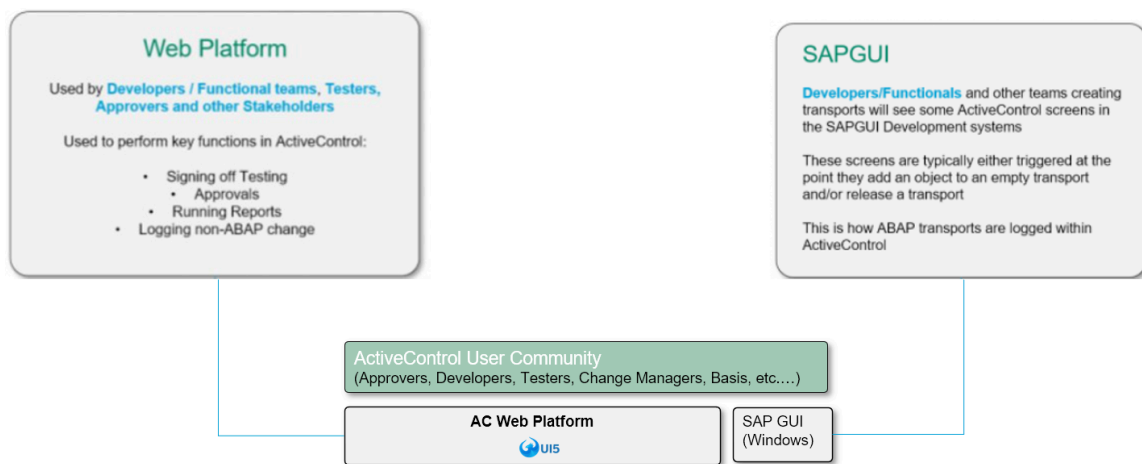
Figure: The two ways of accessing ActiveControl

> ❗ Existing customers will be aware of the ActiveControl Windows GUI and also the legacy ActiveControl WebUI. Both of these are included in ActiveControl 9.10, but should only be used by existing customers for migration purposes during an ActiveControl 9.10 upgrade. New customers should only implement the new Web Platform, to avoid having to migrate/re-train users later. Please refer to the Upgrading ActiveControl and End of Maintenance Support sections of this Administration Guide for more information on these topics.

2.2.1. SAP GUI

Transport Owners (ie Developers, Functional, Securities and Basis Teams and anybody else creating SAP transport requests) will typically see some ActiveControl screens within the SAPGUI of the Development satellite system in which the transports are being created.

The ActiveControl screens in the SAPGUI are triggered at one or both of two points:

1) at the point an object is first added to a transport via standard SAP transactions such as SE16, SE38, PFCG etc, and/or

2) at the point a transport is released via SE01/SE09/SE10.

The point at which these SAPGUI screens are triggered is controlled by configuration detailed in the ActiveControl Active Functions section of this Administration Guide.
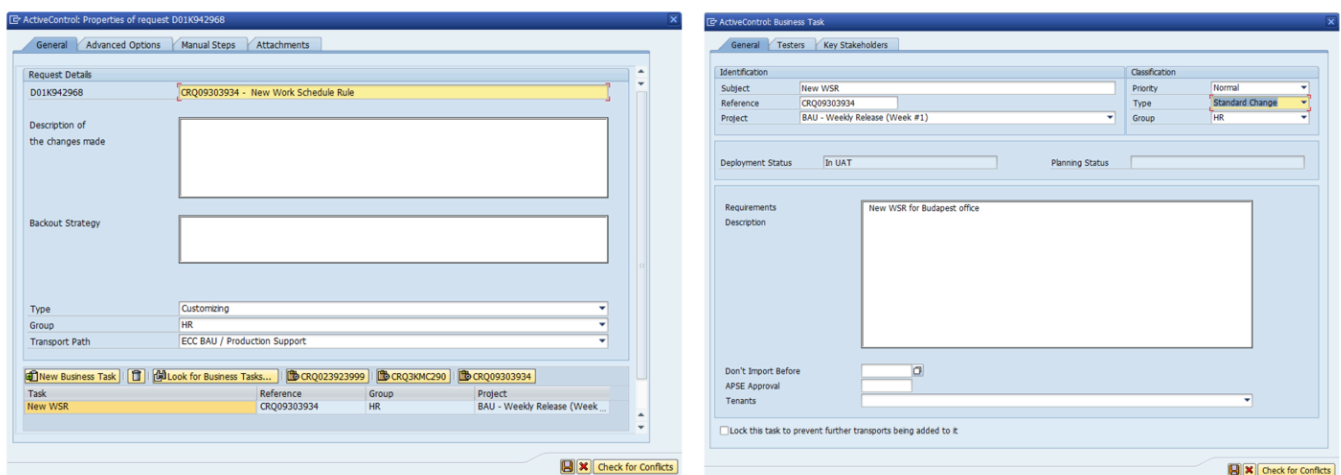
Figure: Example ActiveControl screens seen within the SAPGUI of the Development systems being managed by ActiveControl.

Transport Form Organizer

The ActiveControl **Transport Form Organizer** screen can used to access and maintain Transport Forms of any released or modifiable transports. This is accessed in the SAPGUI of the ABAP Development system via transaction **/n/BTI/TE_TR_FORM**. The Transport Form Organizer can be used to update a Transport Form after the transport is released, for example if a Developer wants to add a Manual Step or Dependency to a Transport Form they completed earlier, or to update the previously populated information.

Figure: The Transport Form Organizer

Double clicking a transport in the result view of the Transport Form Organizer opens the existing Transport Form. If no Transport Form assignment already exists, an empty Transport Form can be maintained.

> ✱ Use of /n/BTI/TE_TR_FORM will require an ActiveControl authorization role in the Development system to be assigned to the person wanting to run it. The authorisation to access is included in the standard role /BTI/TE:CTS_USER.

2.2.2. Web Platform

The ActiveControl Web Platform is developed on UI5 / Typescript on ABAP backend. This decision was made after consultation with a range of our existing Customers, and also due to Basis Technologies' current strategic direction to continue focussing on the SAP marketplace.

The ActiveControl Home Web Platform has a Fiori app tile based layout, each tile of which provides access to the various key functionalities of ActiveControl.

Different users will see certain tiles, depending on their user persona and authorizations. (Eg an ActiveControl Administrator will see certain tiles that most other users will not, via a seperate Administration screen).
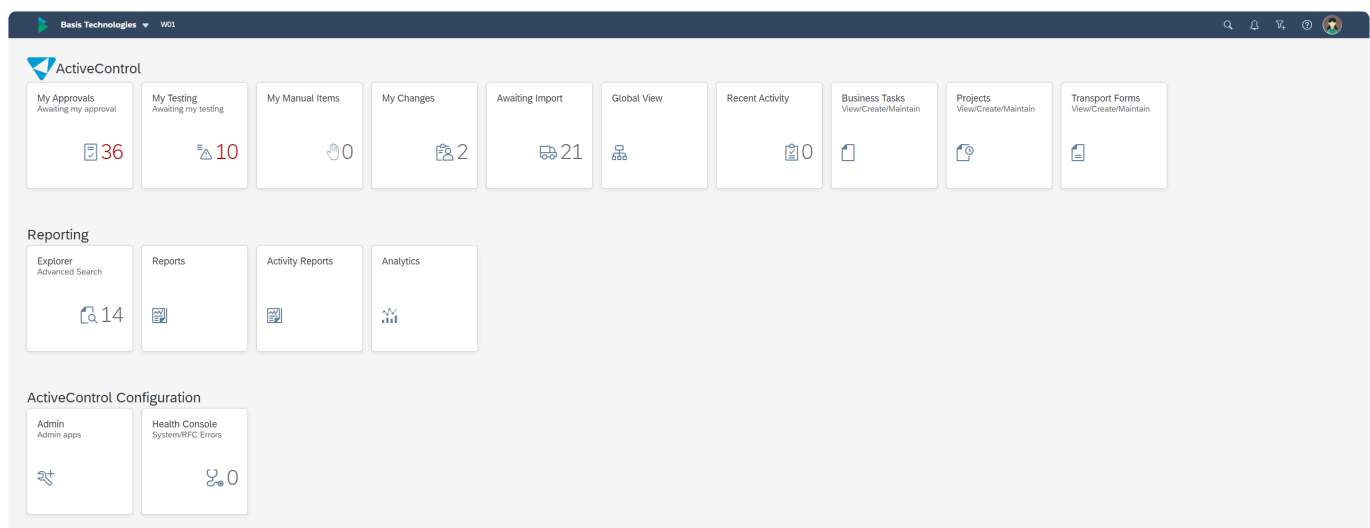
Figure: The Web Platform home screen
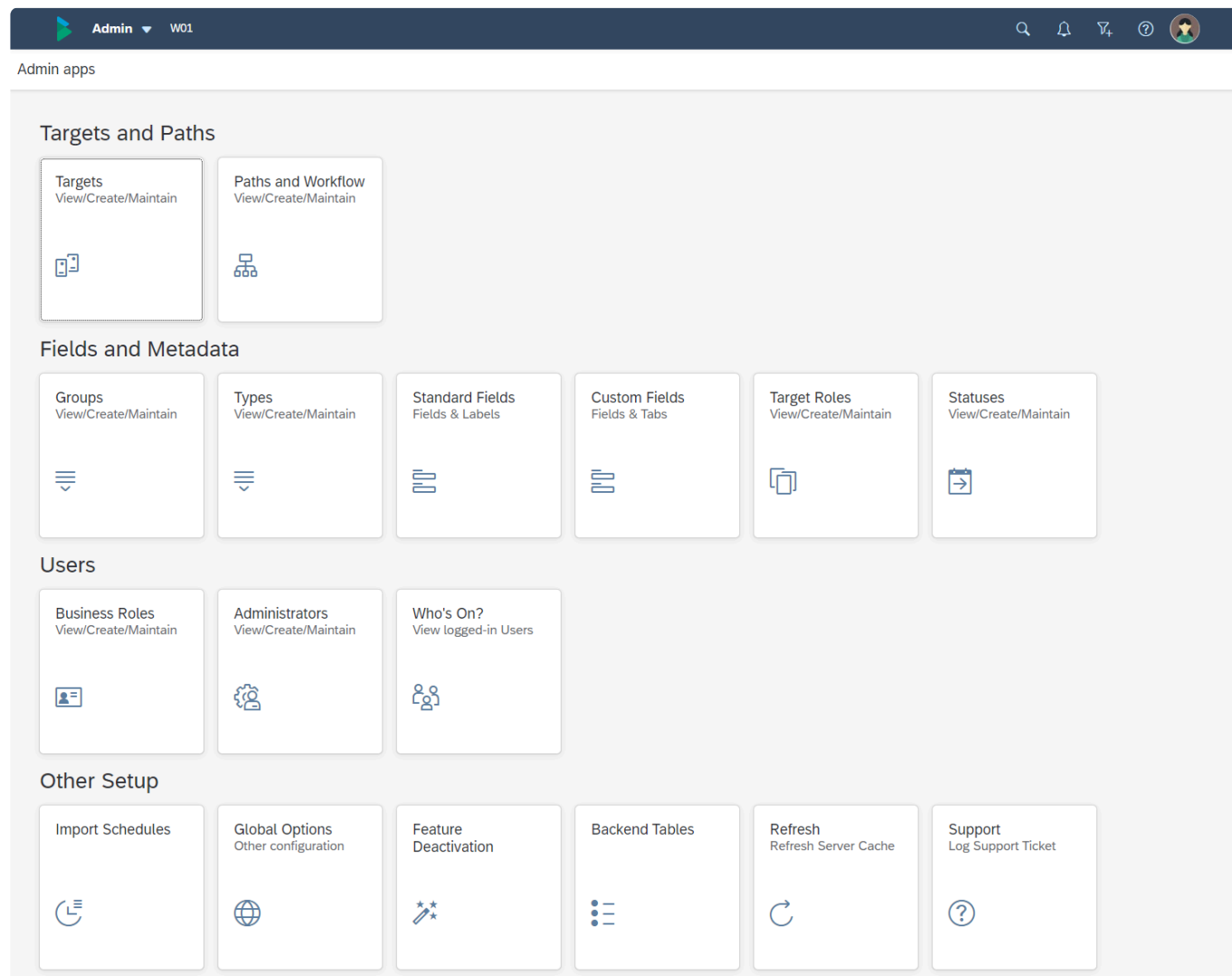
Figure: The Web Platform Administration screen

Supported Browsers

As a general rule of thumb, the ActiveControl Web Platform is supported on any browser (and versions of that browser) that is supported by SAP. Therefore the following browsers are expected to work:

- Microsoft Edge
- Google Chrome
- Safari

Please refer to online Basis Technologies ActiveControl Support matrix at http://docs.basistechnologies.com/ for further details.

Triggering the Web Platform via the SAPGUI

As well as accessing the Web Platform directly via a browser, it is possible to trigger the Web Platform from within the SAPGUI of the Domain Controller system, via transaction /n/BTI/WP_LAUNCH.

Note that this requires configuration via table /BTI/TE_CONSTT (again in the SAPGUI backend of the ActiveControl Domain Controller system). More details (and screenshots) can be found in this online Knowledge Article.

2.3. Security Authorisation Concept

As mentioned in earlier Accessing ActiveControl section, there are now two ways in which end-users access ActiveControl, namely:

- SAPGUI
- Web Platform

To access both User Interfaces, some sort of ActiveControl authorisations are required. These authorisations are assigned to users soley in the Domain Controller. No authorisations are required by end-users in the managed Satellite SAP Systems.

The rest of this section describes the Authorization concept within ActiveControl:

- Security Architecture
- User Authorizations
- Activity Authorizations
- Single-Sign On
- View Authorizations

2.3.1. Security Architecture

The following diagram summarises the Security Architecture of ActiveControl Web Platform:
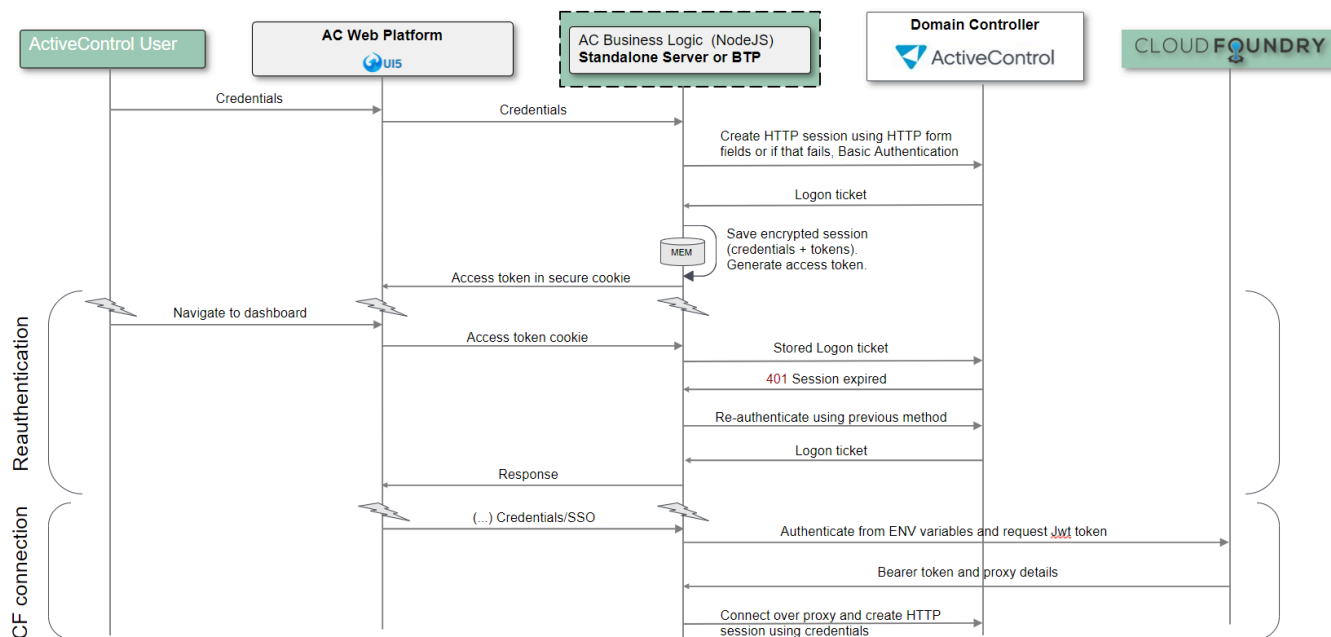
Figure: Security Architecture of the ActiveControl.

2.3.2. User Authorizations

Basic authorisations

Basic access to the ActiveControl application for all users requires one of the following ActiveControl roles to be assigned in the Domain Controller:

Role Name	Description
/BTI/TE:CTS_USER	This role contains all of the basic authorisations that are required to log into ActiveControl application and needs to be assigned to every ActiveControl user.
/BTI/TE:CTS_ADMIN_USER	This role contains all of the basic authorisations that are required to use the application, plus some ActiveControl and SAP standard authorisations required for actions aimed more at Basis and Configuration users of ActiveControl.

Standard Single/Composite Roles

In addition to the aforementioned basic authorisations, ActiveControl includes a set of standard out-of-the-box single and composite roles that can be assigned to users in the domain controller. A separate Roles Matrix describing each of these standard roles in detail is available on request, but in summary:

Composite Role	Description
/BTI/TE:STD_VIEW_ROLE	The standard role for view only access to ActiveControl. This contains: • /BTI/TE:CTS_USER • /BTI/TE:STD_VIEW_AUTHS
/BTI/TE:STD_DEVELOPER_ROLE	The standard developer role for creating and maintaining Transport Forms and tasks. This contains: • /BTI/TE:CTS_USER • /BTI/TE:STD_DEVELOPER_AUTHS • /BTI/TE:STD_VIEW_AUTHS
/BTI/TE:STD_TEAM_LEAD_ROLE	The standard role for team leaders and approvers in ActiveControl. This contains: • /BTI/TE:CTS_USER • /BTI/TE:STD_DEVELOPER_AUTHS • /BTI/TE:STD_PLANNER_AUTHS • /BTI/TE:STD_TEAM_LEAD_AUTHS • /BTI/TE:STD_VIEW_AUTHS
/BTI/TE:STD_TESTER_ROLE	The standard role for testers in ActiveControl. This contains: • /BTI/TE:CTS_USER

	• /BTI/TE:STD_TESTER_AUTHS • /BTI/TE:STD_VIEW_AUTHS
/BTI/ TE:STD_CHANGE_TEAM_ROLE	The standard role for change teams. This contains: • /BTI/TE:CTS_USER • /BTI/TE:STD_CHANGE_TEAM_AUTHS • /BTI/TE:STD_VIEW_AUTHS
/BTI/ TE:STD_PROJECT_MGR_ROLE	The standard role for project managers. This contains: • /BTI/TE:CTS_USER • /BTI/TE:STD_PROJECT_MGR_AUTHS • /BTI/TE:STD_VIEW_AUTHS
/BTI/TE:STD_BASIS_ROLE	The standard role for transport maintenance, import and error handling. This contains: • /BTI/TE:CTS_ADMIN_USER • /BTI/TE:STD_BASIS_AUTHS • /BTI/TE:STD_DEVELOPER_AUTHS • /BTI/TE:STD_TEAM_LEAD_AUTHS • /BTI/TE:STD_VIEW_AUTHS
/BTI/TE:STD_ADMIN_ROLE	The standard role for configuration and administration access to ActiveControl. This contains: • /BTI/TE:CTS_ADMIN_USER • /BTI/TE:STD_ADMIN_AUTHS • /BTI/TE:STD_BASIS_AUTHS • /BTI/TE:STD_DEVELOPER_AUTHS • /BTI/TE:STD_TEAM_LEAD_AUTHS • /BTI/TE:STD_VIEW_AUTHS

❗ Most customers choose to use the standard 'out-of-the-box' ActiveControl roles, but if
changes are required, it is important that the customer creates Z copies of the roles, as
the standard roles may be updated during subsequent upgrades or other ActiveControl
application updates.

Read-Only Access

In the Web Platform, a user must have some sort of ActiveControl related authorisation activity to be
able to access and view the Web Platform.

At most customers this is normally given in the form of /BTI/TE:STD_VIEW_AUTHS single role.
(however the reality could it be any customer Z role with any ActiveControl authorisation activity).

Approvals and Test Results Entry Authorisations

To control approvals and test results entry / approval for non-administrators the following activities can be allocated to users.

Activity	Authorisation Object	Description
APPROVEALL	Y_TEUSER	Allows approvals to be processed in all locations in ActiveControl. Overrides the approvers configured in the [Rules Engine approvers consumer](#), or the [legacy target-based Approvers configuration](#).
TESTALL	Y_TEUSER	Allows test results entry and "Save and Approve" to be processed in all locations in ActiveControl. Overrides the testers allocated to the tasks.
TESTAPPROVE	Y_TE_TASK	Must be allocated to users needing to perform a "Save and Approve" during test results entry.

> ✱ There is no Approver specific authorisation in ActiveControl. Approvals are based solely on configuration done in the Rules Engine or legacy target configuration.

Legacy Authorisation concept

In very early versions of ActiveControl, user authorisations were far less granular. For clients that wish to continue using the legacy authorisations concept, which broadly grouped users into Administrators and non-administrators, ActiveControl still comes with the following two compatibility roles:

/BTI/TE:COMP_ADMIN_ROLE	This role should be assigned to all users that currently have Administrator access
/BTI/ TE:COMP_STD_USER_ROLE	This role should be assigned to all other users

Once assigned to users, these roles will give people the same Activity Authorisations as they had in earlier versions of ActiveControl. It is recommended that all customers use the more granular, persona-based Single / Composite Roles concept.

2.3.3. Single Sign-On (SSO)

It is possible to access the ActiveControl Web Platform via Single Sign-On (SSO), for SAP customers that want to use SSO.

SSO on standalone Node server.

For customers deploying the Web Platform to NodeJS Server, please review to these online Knowledge Articles:

- [SAML](#)
- [SPNego / Kerberos](#)

SSO on BTP

For customers deploying the Web on BTP, please refer to the [BTP deployment](#) Knowledge Article.

Please note that for customers wanting to deploy to Fiori Launchpad on BTP, SSO is a pre-requisite, as otherwise the tile counts will not work on Launchpad.

2.3.4. View Authorisations

View authorisations can be set up so that different groups of users only see the data objects relevant to them when using ActiveControl. For example, if you have completely different teams delivering projects and/or performing Production support activities, each team member only sees the transport paths, transports and configuration relevant to their area.

The main concept in view authorisations is the Authorisation Group. An Authorisation Group can be allocated to each ActiveControl object (Path, Project, Group etc.). Each user is then allocated a SAP Role giving them access to certain Authorisation Groups. A user will therefore only see the objects allocated to an Authorisation Group they have access to.

Authorisation Groups can be assigned to the following Objects in ActiveControl:

- Paths – If there are multiple teams, such as Production Support and Project teams, each team member only sees the transport paths relevant to them. So a Production support team member would only see the Production Support paths in ActiveControl and could only allocate a transport to those paths
- Projects – Different teams may only be able to allocate Tasks to certain projects
- Groups – The valid Groups can be restricted on Tasks and Transport forms
- Types – The valid Types can be restricted on the Tasks and Transport Forms
- Change Paths – The change paths can be restricted when creating Tasks
- User Roles – The user roles can be restricted when creating Tasks
- Custom Fields – Whether a custom field is visible to a user
- Import Methods – Import methods available can be restricted
- Targets – The Targets visible to a user can be restricted

Currently, all View Authorisations configuration is done in the SAPGUI.

Note: If an object (Path, Project, etc.) is not allocated to any Authorisation Group, all users will have view access to it by default so if this is not required please ensure that all object values are allocated to at least one authorisation group.

- Authorisation groups can be maintained in table /BTI/TE_AUTHGRPS.
- To allocate an Authorisation Group to a ActiveControl object an entry needs to be maintained in the table /BTI/TE_AUTHOBJS on the domain controller.

Table fields for /BTI/TE_AUTHOBJS

Field Name	Label	Description
OBJECT_TYPE	Object Type	This is the ActiveControl object type. Allowed types are in table /BTI/TE_AUTHOTYP. These table includes all of the objects that can be assigned to Authorisation Groups, including Paths, Projects, Groups, Types and custom fields

OBJECT_KEY	Internal ID	The internal ID of the ActiveControl Object. This will be the numeric ID used as the object key in ActiveControl: • Path: Field PATH from table /BTI/TE_PATH • Project: Field ID from table /BTI/TE_PROJ • Group: Field GROUPID from table /BTI/TE_GROUPS • Type: Field ID from table /BTI/TE_TYPE • Change Path: Field PATH from table /BTI/TE_CPATH • User Roles: Field ROLEID from table /BTI/TE_ROLEU • Custom Fields: Field FIELDID from table /BTI/TE_CUSTF • Import Methods: Field METHOD from table /BTI/TE_IMPMET
AUTH_GROUP	Authorisation Group	The authorisation group that is to be associated with this object. The valid list of authorisation groups should be maintained in table /BTI/TE_AUTHGRPS
CUSTOMFIELD_VAL	Custom Field Value	(Reserved for future use)

Once entries in the authorisation objects table have been maintained, roles will need to be created and allocated to users so that ActiveControl can determine which authorisation groups each user has access to. The authorisation object that controls this access is Y_TEAUTH_V.

Authorisation Object Y_TEAUTH_V fields.

Field Name	Label	Description
/BTI/ TE_AG	Authorisation Group	This is the authorisation group (or groups) the user has access to. An * in this field indicates the user has access to ALL authorisation groups
/BTI/ TE_C1	Path Category 1	A category can be allocated to a path. This could be to indicate all paths that are BW or XI, for example. And these entries can be used to allow access only to certain categories. The categories a user has access to should be put in this field. An * indicates the user has access to ALL categories.
/BTI/ TE_C2	Path Category 2	(Reserved for future use)
/BTI/ TE_TA	Target Dev System	This is the development system (or systems) for which the user is able to see transports without a Transport Form. This access restriction should only be required if there are multiple 'source' development systems. The SID of the development system(s) should be entered here. An * in this field indicates the user has access to all configured source systems.

Once the required roles for View Authorisations have been created, they should be allocated to the appropriate users.

Important Restrictions Regarding View Authorisations

> **!** It should be noted that although View Authorisations allow for a very granular way of restricting the objects that are displayed to users when they log into ActiveControl, the complexity and ongoing overhead of the role and user maintenance should be taken into account. The vast majority of Basis Technologies' customers do not implement these as part of their setup of ActiveControl.

It is also important to understand that assigning Authorisation Groups can have unintended consequences if not all objects within the object hierarchy are allocated to the same set of groups. For example, the View Authorisations configuration may give a user access to see a particular path, but not access to see Tasks (or Forms) that are part of a particular Project. This means the user will not be aware of all of the transports waiting for approval in a control point, but only those they have authorisation to see. They could therefore inadvertently only approve the transports they have authorisation to see, without knowing the full picture.

In general it is only recommended to use View Authorisations to separate out ActiveControl objects at the highest level, for example, to give separate views to the project delivery and production support teams, or to give separate views to two completely separate project teams using the same ActiveControl Domain Controller.

2.3.5. Activity Authorizations

Activity Authorisations can be configured to further restrict user access in addition to the View Authorisations.

These activity Authorisations allow the actions the user can perform on visible objects can see to be restricted. The activities are broken down into 6 categories, with each category being controlled by a separate authorisation object:

Authorisation Object	Description
Y_TECONF	This authorisation object controls access to the configuration options within ActiveControl, such as creating Target systems and Paths
Y_TEUSER	This authorisation object controls initial access to the ActiveControl GUI and certain activities allowable by user, such as the ability to delegate approval rights to another user.
Y_TE_TASK	This authorisation object controls all activities that can be performed on a Task in ActiveControl, including creating, changing and assigning users.
Y_TEFORM	This authorisation object controls all activities that can be performed on a Transport Form in ActiveControl, including creating, changing, releasing and assigning users.
Y_FORMDEL	This authorisation object controls more granular authorisations relating to the deletion of Transport Form. This optional Authorisation Object is not included in any out-of-the-box BTI roles.
Y_TEIMPORT	This authorisation object controls all activities concerning the import of transports into systems, including marking transports as imported manually and re-importing transports as required.
Y_TEADMIN	This authorisation object controls access to the administrative functions within ActiveControl, including setting UModes on transports and manually changing the process flow of transports as required.

These authorisation objects should be used to create the appropriate roles for each user type.

Activity Authorisation Object Details

Please refer to the ActiveControl Security Roles Matrix for full details of each Authorisation Object detailed in previous section, alongside with each Authorisation Activity included in each Object.

The Roles Matrix details what is included with each of the out-of-the-box ActiveControl single and composite roles.

2.4. E-mail Notifications

ActiveControl can be setup to send various standard and custom email notifications at the appropriate points in the lifecycle of an SAP change, for example when something needs to be tested or approved, or when a transport has had an RC8 import error.

The configuration of these email notifications is detailed in the Email Notifications section of this Administration Guide.

ActiveControl relies upon SAP's support for SMTP integration with e-mail servers to deliver e-mail notifications, such as changes requiring approval, direct to e-mail clients such as Microsoft Outlook.

As e-mail notifications are sent from the ActiveControl domain controller, ActiveControl only requires this SAP system to have a working SMTP mail server connection. SAP systems based on Web Application 6.20 or later will find that the SAPconnect functionality of SAP comes with built-in support for SMTP mail integration. SAPconnect functionality is administered using SAP transaction SCOT.

An ActiveControl end-user must have a valid Internet e-mail address defined against their user account via transaction SU01 in the Domain Controller system.

2.5. Integration Frameworks

ActiveControl offers three main Integration capabilities to allow easy bi-directional communication between ActiveControl and other ITSM, DevOps and Automated Testing tools.

1. SAP Integration framework
2. Node-RED Integration Framework
3. Custom integrations using APIs and/or Webhooks alongside other middleware (eg PI, Mulesoft) and/or CI/CD tools such as GitLab, Jenkins etc.
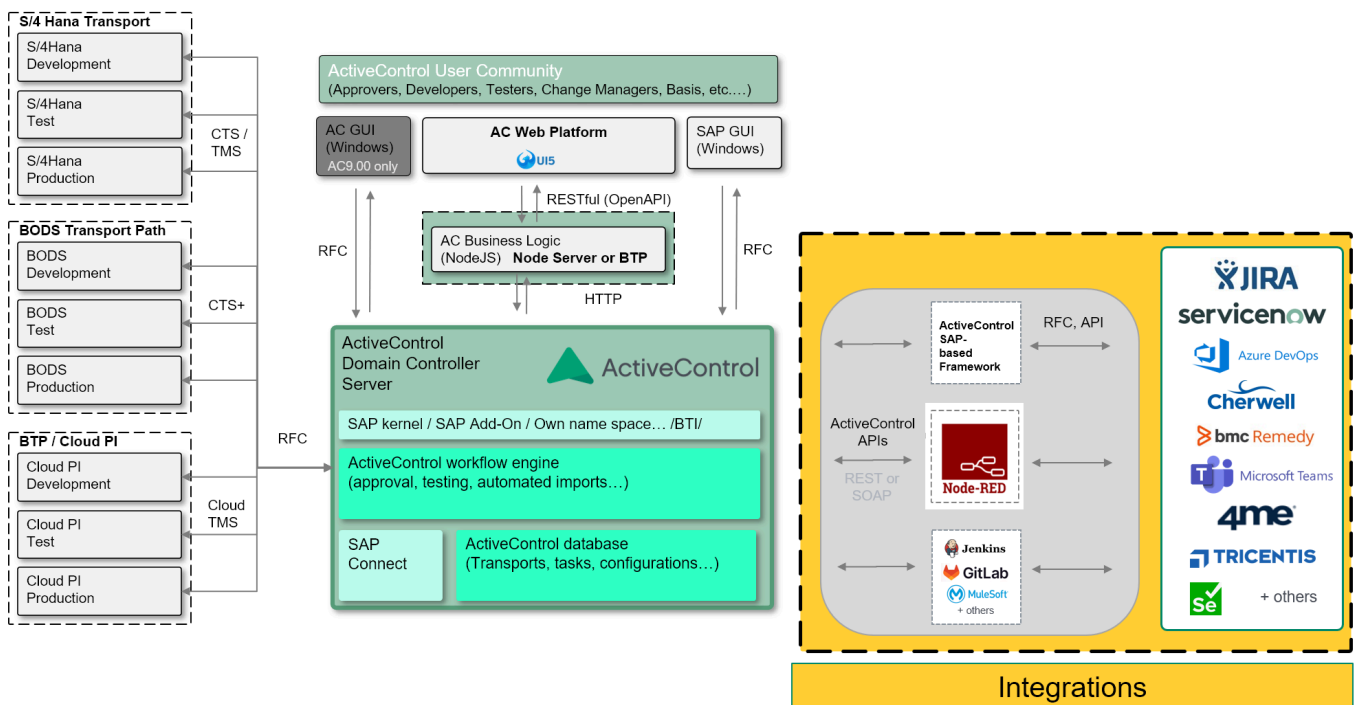
Figure: Integrating ActiveControl with other 3rd Party products.

2.5.1. Typical Integration Scenarios

The aforementioned three integration frameworks are typically used by Basis Technologies' customers to achieve one of the following three main scenarios

1) ITSM tool integrations
2) CI/CD DevOps tool integrations
3) Automated Testing tool integrations

ITSM integrations

The common integration scenario is to combine ActiveControl and a third party ITSM product such as ServiceNow or JIRA, to create an integrated end-to-end process for managing SAP change. This typically requires both inbound and outbound integration to achieve a scenario similar to that described below:

1. Change created in third party ITSM system
2. Change approved for development in ITSM system
3. Change interfaced to ActiveControl (inbound integration)
4. Change managed through ActiveControl for deployment to Test and Pre-Prod with updates sent to ITSM system to reflect progress (outbound integration)
5. Change deployed to production through ActiveControl and ITSM system updated (outbound integration)
6. Change verified and closed in ITSM system

CI/CD DevOps integrations

The typical integration scenario is for customers wanting to use third party pipeline tools to manage both SAP and non-SAP change deployments, whilst still benefitting from ActiveControl functionality such as automated Analysis Checks and Import Schedules.

Automated Testing Integrations

The standard integration scenario is to combine ActiveControl and a third party Automated Testing product to enable testing to be triggered automatically as part of an ActiveControl workflow.

An example Integration might look something like the following:

Step	Summary
1	Transports move to the Test Queue of the Target.

2	Integration will lock the Target Import Queue (unless it is a Virtual Target) so that no subsequent transports are imported.
3	Integration will call the automated test to be performed via tools such as GitLab or Jenkins. (using Test information stored in Custom Fields on either the Transport Form or Business Task.
4	Automated Test will run.
5a	If automated tests PASS – then the following will happen: i) Integration will add a "Testing Successful" test results entry into the Business Task, with details of the Automated Test that was performed. ii) Integration will approve the Business Task(s), and the underlying Transport Form(s) will move forward from the Test Queue – to the next control point in the workflow. iii) .Integration will unlock the QA Import Queue, so that subsequent transports can be imported into QA again.
5b	If automated tests FAIL, then the following will happen: i) Integration will add a "Problem Found" Test Results entry into the Business Task, with details of the Automated Test failure. ii) ActiveControl will send an email notification to the Transport Owner of the failed testing iii) Business Task(s) will remain in the QA Test Queue. iv) Integration will unlock the QA import Queue, so that subsequent transports can be imported again.

2.5.2. Integration Documentation

Details of the three Integration Frameworks, along with our existing out-of-the-box Integrations are detailed in separate Integration Guide documentation, available [here](#).

Direct links are also available via below links.

SAP Integration Framework -based Integrations

Integrating Product	Link
ServiceNow	[Administration Guide](#)
JIRA	[Administration Guide](#)
Solution Manager ChaRM	[Administration Guide](#)
HP Service Manager	[Administration Guide](#)
SmartShift	[Administration Guide](#)
Jenkins	[Administration Guide](#)
GitLab	[Administration Guide](#)
AbapGit	[Proof of Concept Guide](#)

Of the above integrations, the ServiceNow and JIRA integrations are the most mature and well-established at Basis Technologies customers, with more than 15-20 different Basis Technologies customers using each of them. The ChaRM integration is used by 4-5 customers that purchased ActiveControl to complement and enhance their existing Solution Manager ChaRM -based processes. The rest of the Integration above were built to fulfil specific Customer requirements, and are less widely utilised within Basis Technologies customer-base.

Node-RED -based Integrations

Node-RED	I [General Overview Guide](#)

Standalone API/Webhook -based Integrations

SOAP APIs	[General Overview Guide](#)
Webhooks	[General Overview Guide](#)
RESTful APIs	[General Overview Guide](#)

3. Key Functional Concepts

This section of the Administration Guide details some of the key functional concepts of ActiveControl:

- [Paths and Targets](#)
- [Inboxes, Outboxes and Test Queues](#)
- [Transport Forms, Business Tasks and Projects](#)
- [Transport Sequencing and Dependencies](#)
- [Non-Transportable Change](#)
- [Icons within ActiveControl](#)

3.1. Paths and Targets

The ActiveControl workflow is built to simulate the necessary steps (ie approvals, test, signoffs, imports) that need to be performed as part of moving a change through a customer's SAP landscape.

At its core level, this workflow consists of **Paths** and **Targets**.

A Target within ActiveControl is typically an SAP System. Examples of Targets include:
i) S/4HANA Development
ii) S/4HANA Quality Assurance
iii) S/4HANA Production

A Path within ActiveControl is a collection of Targets that maps out the route by which a change (ie SAP transports) move through the landscape. Examples of Paths include:
i) S/4HANA Production Support path
ii) S/4HANA Project path
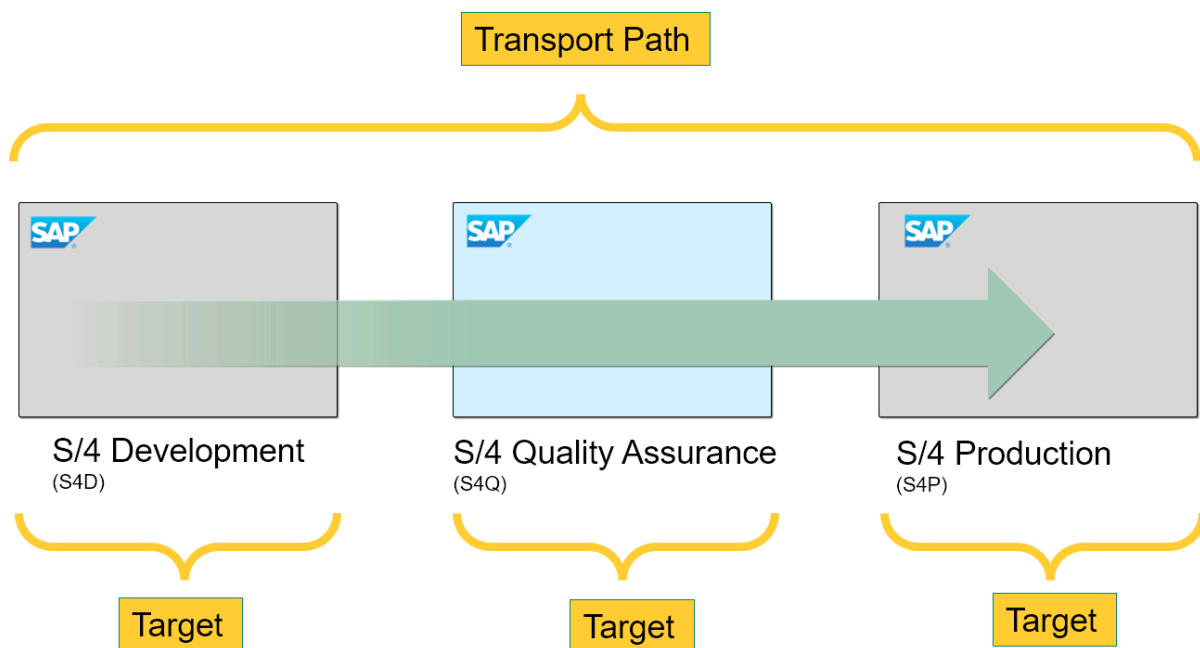
Figure: Targets and Path within ActiveControl.

Details of how to configure ActiveControl Targets and Paths can be found later in this Administration Guide.

TMS Configuration

Existing transport layers, transport groups and transport routes within TMS do not need to be changed as part of implementing ActiveControl. Also please note that there is absolutely no requirement for the ActiveControl domain controller to be the same SAP system as the TMS domain controller – in fact a single ActiveControl domain controller can manage transports for multiple TMS domains.

In order to maintain tidy import queues within TMS, it can be useful to change the transport routes for transportable changes to direct changes to a dummy virtual system. This is not a requirement, however it can prevent confusion caused by standard TMS functionality adding transport requests to the TMS import queue of recipient SAP systems in advance of when ActiveControl determines the changes ready to be imported.

If you wish to import changes into other clients of the same (development) system in which the changes were originally made, then you should enable TMS' extended transport control. This is not a requirement so much of ActiveControl, but is required to avoid the unnecessary attempt to re-import the client independent content (which would usually result in an import error).

3.2. Inboxes, Outboxes and Test Queues

The ActiveControl workflow consists of **Inbox**, **Test Queue** and **Outbox** control points where an approver(s) is responsible for approving the SAP change / transports.

Each Target in the Path can have an Inbox, then Import Queue, then Test Queue, and finally an Outbox.

Until an approval or test signoff is performed, the transports won't move forward in the transport path. These Inbox, Test Queue and Outbox control points are completely configurable, depending on an SAP customer's approval requirements.
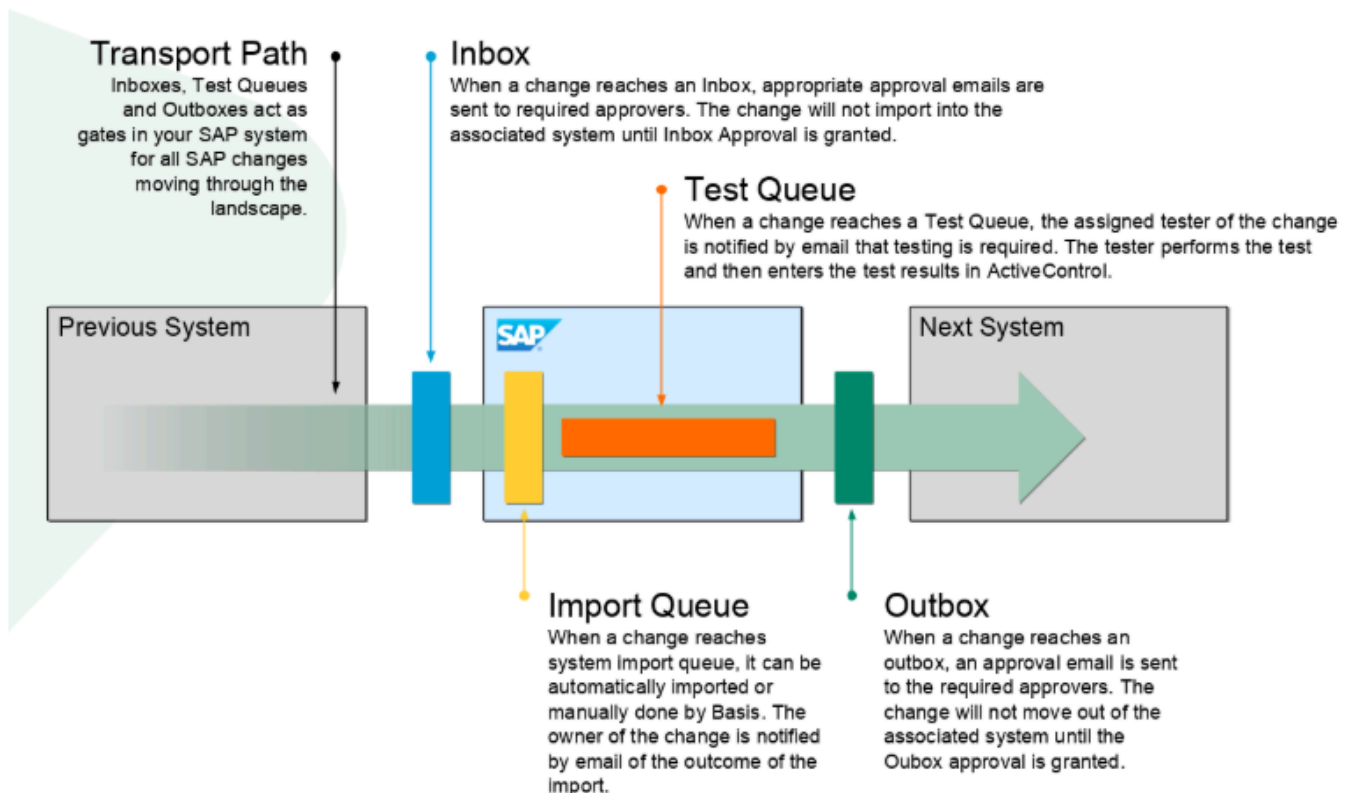
Figure: The ActiveControl workflow: Inboxes, Outboxes and Test Queues.

> ✱ Inbox and Outbox approvers are maintained by Administrators and are driven by configuration in ActiveControl. Test Queue testers on the other hand, are governed by assignments on individual Business Tasks, and can be assigned manually via the Web Platform (or automatically via configuration).

Virtual Targets

It is not possible to have more than one of each control point locations in a Target. Where this is needed to support a Customer workflow, virtual targets can be used. A virtual target is essentially a target without an Import Queue. It does not reflect a real SAP system, but instead is a dummy target that can be used to enable additional approval points (ie additional Inbox, Test Queue, Outbox) as part of the workflow.

3.2.1. Control Point Labelling

As part of the ActiveControl Web Platform, Control Point Labelling has been introduced to allow customers to tailor the standard out-of-the-box control point terminology (ie Inbox, Import Queue, Test Queue, Outbox) to their own local terminology. This is something that many customers requested of Basis Technologies over the years to make it easier for their end-users to relate the ActiveControl workflow to their existing processes.

Control Point Labels are configured via the Target configuration General screen.
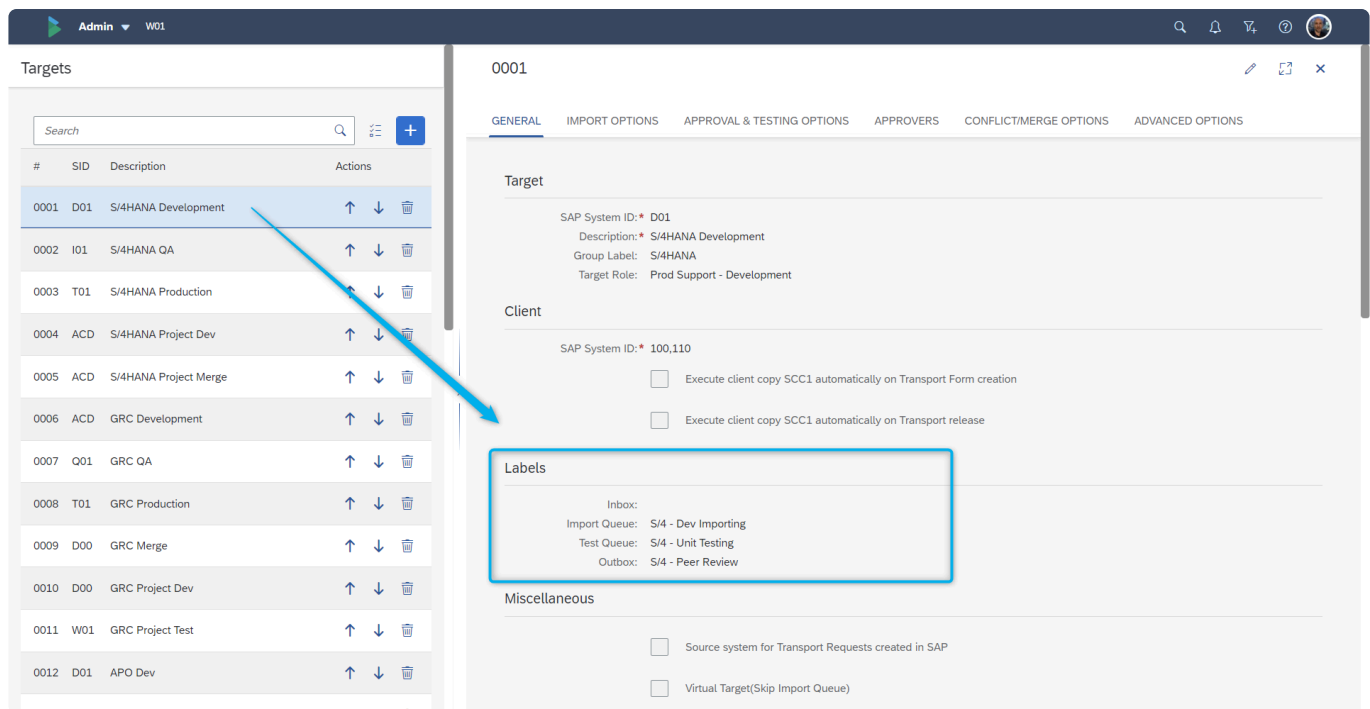
Figure: The Control Point Label configuration screen within the Web Platform.

> ✱ Control Point Labels are only seen within the ActiveControl Web Platform. The capability cannot be configured (or seen) within the the legacy ActiveControl UIs.

3.3. Transport Forms, Business Tasks and Projects

ActiveControl has a 3-level hierarchy, consisting of Transport Forms, Business Tasks and Projects.
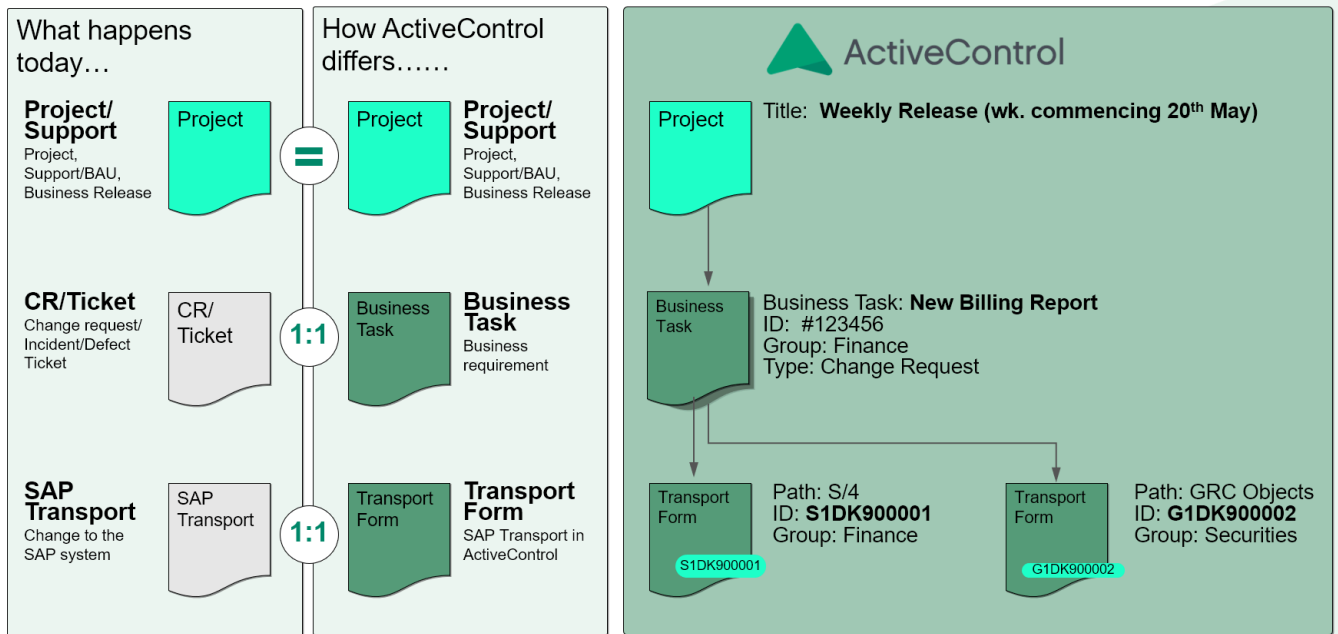
Figure: The ActiveControl 3-level hierarchy: Projects, Business Tasks and Transport Forms

The rest of this section of the Administration Guide details how each of these get used during the delivery of SAP change using ActiveControl

- Transport Forms
- Business Tasks
- Projects

3.3.1. Transport Forms

Before an SAP transport request can be transported using ActiveControl, a **Transport Form** must be created for the SAP transport request.

The Transport Form is a simple form that is used to document and categorise the changes made, so that Approvers, Testers and Auditors can immediately understand what the Transport is for.

Every SAP transport needs to have a corresponding Transport Form within ActiveControl. This is true of both ABAP transports and also non-ABAP changes being managed by ActiveControl using CTS+ or cloudTMS.

The Transport Form consists of several standard tabs, each containing various standard fields and other functionality. It is possible to add custom fields to the Transport Form via configuration. It is also possible to make most of the standard fields or custom fields optional or mandatory via configuration. Mandatory fields will show with a red asterisk *.

Figure: The ActiveControl Transport Form in the Web Platform.

How Transport Forms move through the Path / Workflow.

When a Transport Form is created, the transport request automatically flows to the "root" Target of the Path. Once a transport request finishes processing within a particular target, it flows to the targets that follow on the transport path. For example, if the Production target follows the Test target in the transport path tree, then a transport request that is assigned to the transport path will be imported into Production after it has been imported into the Test target – and potentially after the associated task has been tested and/or the changes approved out of the target (if these transport path options are enabled for the target).

The transport path also specifies whether transport requests need to be approved into, tested in and/or

approved out of a target system (these are the Inbox, Test Queue and Outbox options respectively). Simply enable the desired options using the checkboxes that appear alongside each target system in the transport path tree.
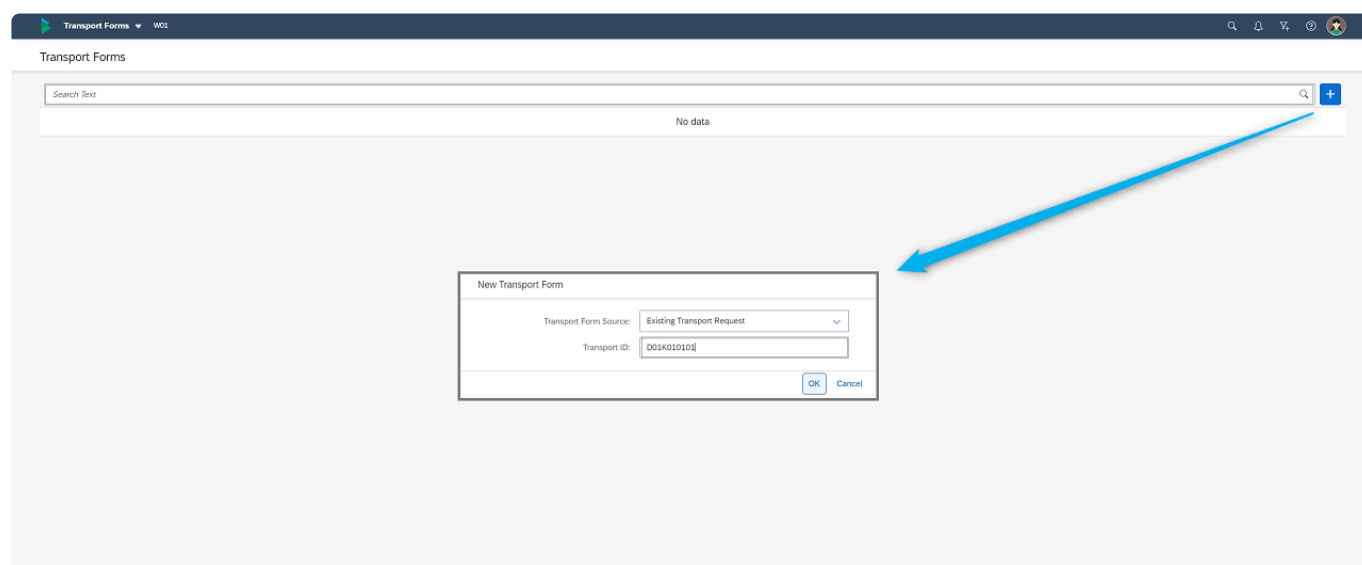
3.3.1.1. Creating a Transport Form

ActiveControl Transport Forms are typically created via one of two ways:

1) Manually in the SAPGUI, by the Transport Owner making the change.
2) Manually in the Web Platform. (this is the required way for non-ABAP systems where there are no ActiveControl screens presented in the system)

Depending on the setup of ActiveControl, Transport Forms are populated in the SAPGUI either at the time of first adding an object to a transport (via SE38, PFCG etc), or at the point of trying to release the transport (via SE09/SE10 etc). This is controlled by the SAPGUI Active Functions detailed later later in this Administration Guide.

ActiveControl Transport Forms are created and maintained by authorised users in the Web Platform, via the **Transport Form** app tile.

Figure: Creating a new ActiveControl Transport Form in the Web Platform.

3.3.2. Business Task

As mentioned, the Transport Form can be used to associate the technically-oriented transport request with the corresponding ticket or requirement to which it relates. Within ActiveControl, this ticket referred to as a **Business Task**.

Although it is optional, it is strongly recommended that all Transport Forms be associated with Business Tasks, as this:

- Groups together technically separate but functionally-related transport requests that collectively implement the changes necessary to add the business requirement or ticket.
- Allows for the progress and testing of the solution to a business issue or requirement throughout the system landscape to be monitored and reconciled as the solution makes its way through one or more development streams (such as in the case of branched development systems).
- Provides the business context for business users and team leaders involved in the change process (for example, from an approval perspective).

Similar to the Transport Form screen, the Business Task screen is a simple screen that can typically be completed in 10-15 seconds in either the SAPGUI or in the Web Platform, or indeed via an Integration with ITSM tools such as Jira or ServiceNow.

The Business Task screen consists of several standard subscreens, each containing various standard fields and other functionality.

It is possible to add custom fields to the Business Task via configuration. Custom tabs can also be defined if required, if there are a lot of custom fields and it is preferred to have them on seperate screens rather than on the default General subscreen where they will otherwise appear.

It is also possible to make most of the standard fields or custom fields optional or mandatory via configuration. Mandatory fields will show with a red asterisk *.
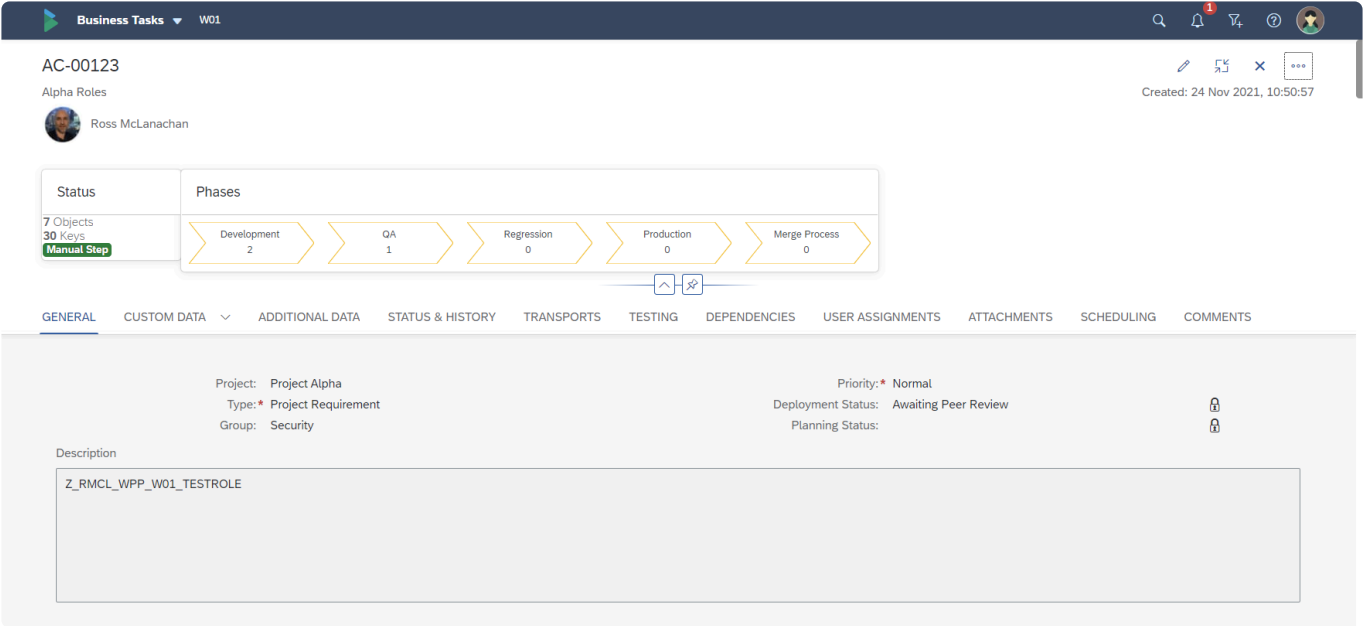
Figure: The ActiveControl Business Task screen in the Web Platform.

3.3.2.1. Creating a Business Task

ActiveControl Business Tasks are typically created via one of three ways:

1) Automatically, via an Integration with an ITSM tool such as ServiceNow or JIRA.
2) Manually in the SAPGUI, by the first person (ie Developer or Functional resource) working on the change.
3) Manually in the Web Platform, via a central resource or team (eg Change Manager, Functional Leads etc).

ActiveControl Business Tasks are created and maintained by authorised users in the Web Platform, via the **Business Task** app tile.

Figure: Creating a new ActiveControl Business Task in the Web Platform.

3.3.2.2. Business Task 'Priority' field

The **Priority** field on Business Task can be used to define the priority/urgency of the associated SAP Change.

The default out-of-the-box Priority values available are:

- Low
- Normal
- High
- Emergency

It is possible to adjust these out-of-the-box Priority text labels via backend table /BTI/TE_TSK_PRTY.

Priorities within ActiveControl do not necessarily drive the workflow (unless specifically configured via the Rules Engine), however High and Emergency priority Business Tasks are giving more visibility within List screens and the Global View, by being presented in amber and red font respectively.

Figure: High and Emergency priority Business Tasks are indicated in amber and red font respectively.

3.3.3. Project

Projects within ActiveControl are used to define a logical grouping of Business Tasks.

Projects are typically used within most customers for grouping Business Tasks and Transport Forms into entities such as:

1) Releases
2) Sprints
3) SAP Projects
4) Upgrade Projects

As with the Transport Form and Business Task screens, the Project screen is a simple screen that can populated very quickly. This can only be done in the Web Platform, it is not possible to create ActiveControl Projects in the SAPGUI.

The Project screen does not contain many standard fields, but it is possible for Customers to add custom fields via configuration if required.
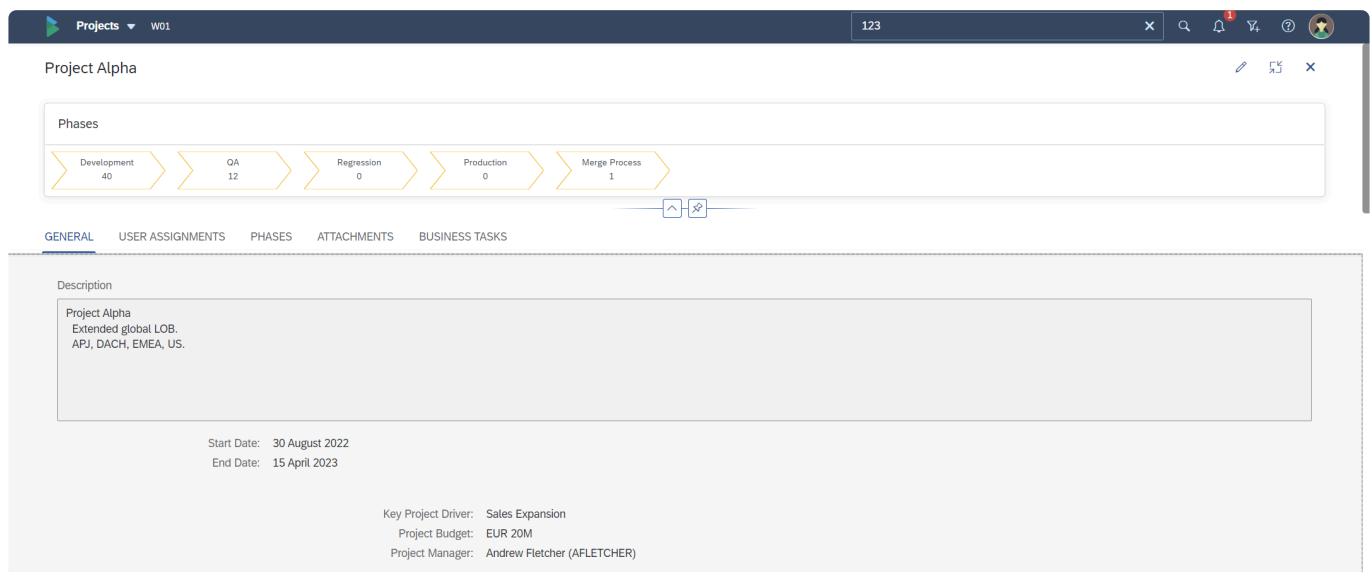
Figure: The ActiveControl Project screen in the Web Platform.

> ✱ A new Phases progress bar is seen as part of the header information on the Project screen within the Web Platform. This bar shows the progress of the Project in the overall process workflow, based on a count of Transport Forms associated with Business Tasks linked to the Project. This count is calculated based on the Project Phases, and location of the Transport Forms in the ActiveControl workflow against these Phases. The Phases progress bar is linked to the phases defined on the Phases subscreen. If Phases are not defined against a Project, then the Phases progress bar will not be seen for that Project.

3.3.3.1. Creating a Project

ActiveControl Projects are created and maintained by authorised users in the Web Platform, via the Projects app tile.

In most organisations, this will be an ActiveControl Administrator, Change Manager or Project Manager responsibility. Users need Y_TECONF-CREATE to be able to create a Project within ActiveControl.
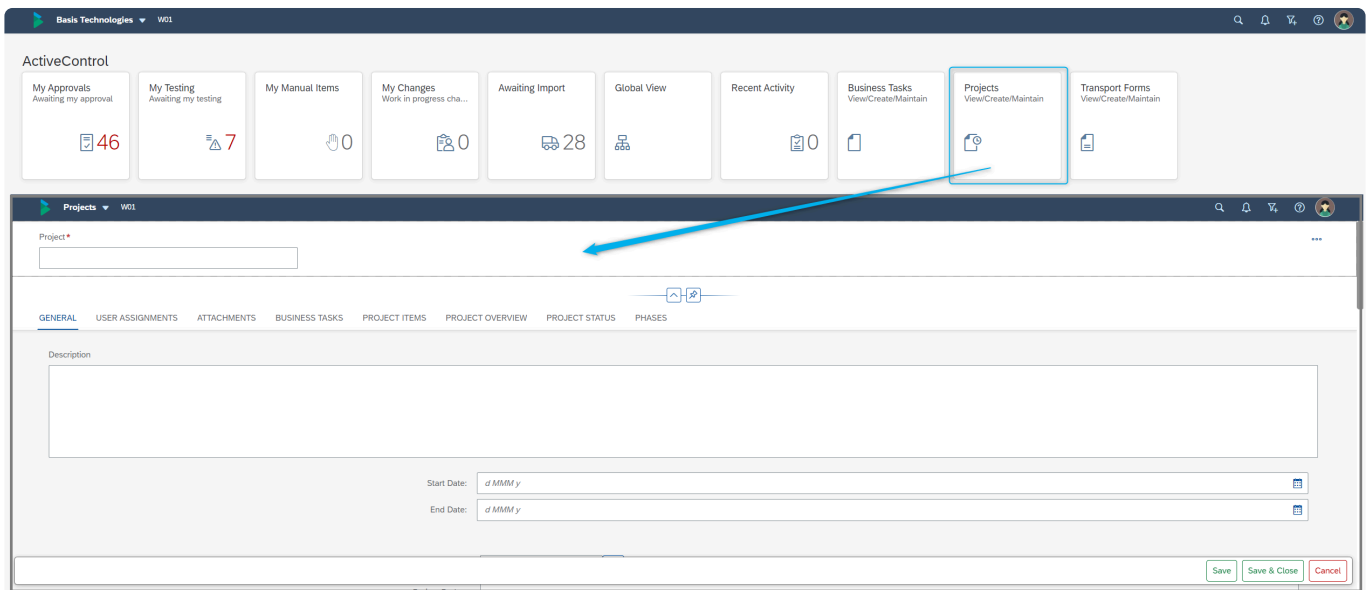
Figure: Creating a new ActiveControl Project.

Projects that are no longer required or finished can be marked as inactive so they no longer appear during the Business Task creation process. Within the ActiveControl Web Platform, this is done by 'locking' the Project. The start/end date fields on the project have no impact on whether a Project is locked / inactive, or indeed whether Business Tasks can be associated to it.

Figure: Locking an existing Project will make the project 'inactive' and prevent further Business Tasks being added to it.

3.4. Transport Sequencing

The default sequencing within ActiveControl is based on the **release date/time of the transports**.

For example, if transport A is released at 15:00 on 1st January 2023, and transport B is released at 16:00 on 1st January 2023, and both transports are sitting in an Import Queue, then ActiveControl would 'order' Transport A to be imported before transport B.

It is possible to change this default sequencing within ActiveControl in several ways:

- Transport Dependencies
- Business Task Dependencies
- Manual Sequencing

3.4.1. Transport Dependencies

ActiveControl allows for inter-dependencies to be defined between transports in the same system (for example, if a functional Customising transport is dependent on a particular Workbench transport), and also for cross-system dependencies between transports being deployed in different SAP development systems (for example, if a BW transport is dependent on a particular ECC transport)

In both cases, these **Transport Dependencies** are defined on the 'Advanced Options' tab of the Transport Form in the Web Platform or in the SAPGUI.

Technically, when ActiveControl checks a dependency where transport A (D01K963789) is dependent on the prior import of transport B (D01K986055), it checks whether transport B has been applied to the SAP system that transport A is being applied to, or that transport B has been applied to at least one other SAP system with the same role as the SAP system that transport A is being applied to.

Figure: Example of a Transport Dependency seen within SAPGUI

D01K986055   AC-09243:AC-092212 - New Billing Report

Created: 3 Jul 2023, 18:29:24

GENERAL   TRANSPORT DETAILS   STATUS & HISTORY   ADVANCED OPTIONS   MANUAL STEPS   ATTACHMENTS   BUSINESS TASKS

ADVANCED OPTIONS

Dependencies

This transport request should not be imported until all of the transport request listed below have been imported.

Request Id	Description	Owner
D01K963789	AC-00001 Billing Report development	Gabor Farkas (GFARKAS)

Unconditional Modes

- ☑ 1. Import requests that have been imported before
- ☐ 2. Overwrite original objects
- ☐ 6. Overwrite objects in unconfirmed repairs
- ☐ 8. Import customer table entries

⚠ Warning.
Unconditional modes 2 and 6 can cause changes to be lost when importing results back into the system they were created in, as newer changes may be made after this request is released and before it is imported

Figure: Example of a Transport Dependency seen in the Web Platform UI.

3.4.2. Business Task Dependencies

Within ActiveControl, it is also possible to create dependencies between Business Tasks. This can be done at two levels within the Dependencies subscreen of the Business Task:

1. **Related Business Tasks**: this is useful where there are no technical dependencies between Transports that necessitate two changes being imported at the same time or in a particular order, but where the Customer wants to ensure two Business Tasks get deployed through the landscape at the same time for other business reasons.

2. **Business Task Dependencies**: this capability was requested by one customer so that they could create sequential dependencies between Business Tasks instead of using Transport Dependencies.

Both these capabilities are only available in the Web Platform UI, they are not available via SAPGUI.

Figure: Dependencies subscreen on the Business Task is only seen in the Web Platform UI.

✱ Feature Deactivation can be used by Administrators to hide the Business Task dependencies subscreen from all users if the functionality is not to be used as part of customer process

3.4.3. Manual Sequencing

Over the years, several of Basis Technologies' customers requested for there to be an easier way of manually sequencing transports to override the default ActiveControl calculation.

The main use case cited for this requirement was mainly around larger SAP projects involving hundreds of transports. Often the transports were released in the wrong order by the Development and Functional teams, and the only solution to this was to either manually hard-code lots of transport dependencies or to make use of a custom field on a Transport Form to drive the import sequence.

Within the Global View, it is possible for authorised uses to manually re-sequence Transport Forms. This Manual Sequencing is performed via the **Manual Resequence** button in an Import Queue.
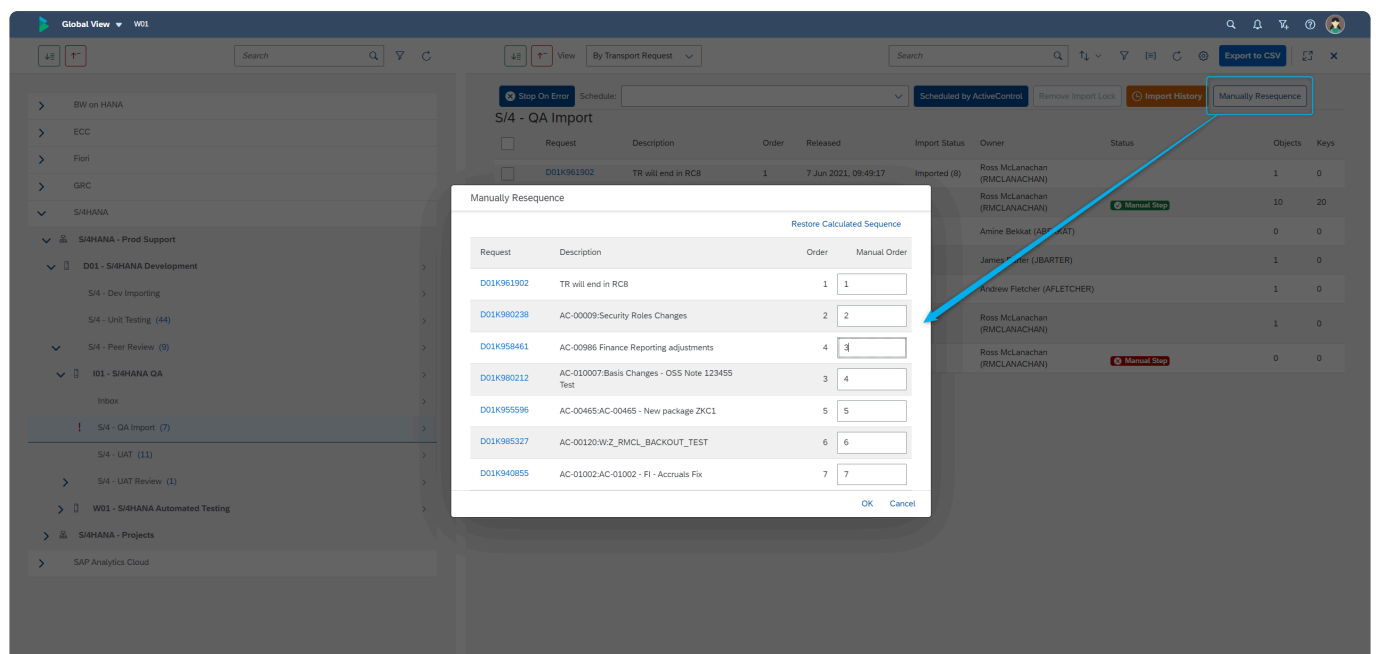
Figure: Manual Resequencing screen within the Global View.
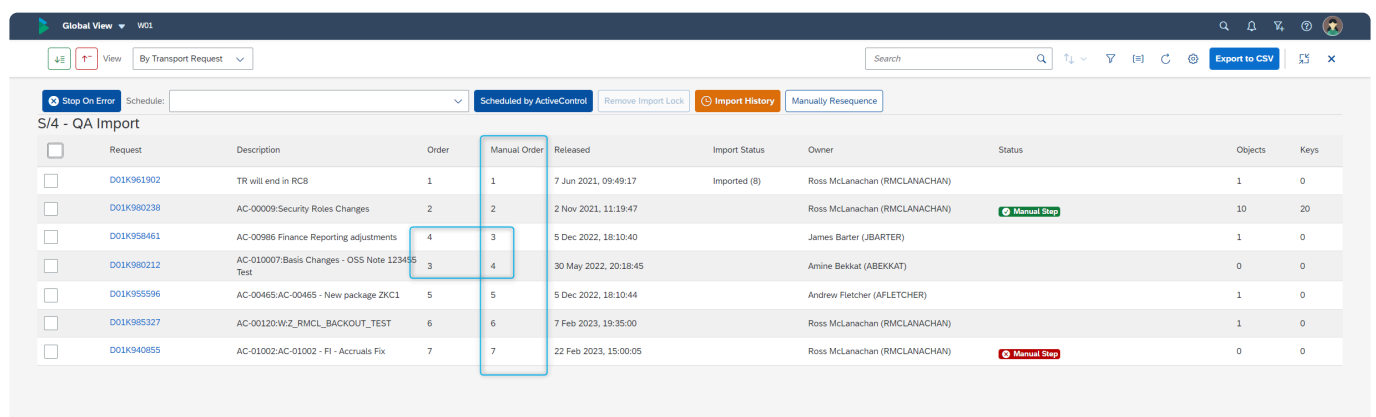
Figure: A manually resequenced Import Queue is seen via the Manual Order column.

> ! To import based on the Manual Order sequence, the screen must be sorted on the Manual Order field, <u>and</u> the 'Import one request at a time' Import Method must be used. The "AC Default Sequence" import methods cannot be used in conjunction with the Manual Sequencing capability, as those import methods use the "Order" sequence and not the "Manual Order" sequence.

Configuration Steps

There is no specific configuration required for customers wanting to use Manual Sequencing capability, however customers *not* wanting to use this new capability can hide the button from the Import Queue screen via Feature Deactivation

3.5. Manual Activities and Non-Transport Deployments

It is possible to manage **Manual Activities** and **Non-SAP changes** within ActiveControl.

These can be used to manage non-transportable changes and activities and still enforce an approval and audit process. These types of changes will still use the concept of transports and paths and so will follow the existing process and logic in ActiveControl. They can either be sent down an existing SAP path or a new path created specifically for each non-SAP system.

When a Transport Form is created via ActiveControl, there are 3 options:

1. Existing Transport Request
2. Manual Activity (SAP or non-SAP system) – For example, creation of a SAP number range or RFC destination or for non-SAP systems, this could be the installation of a printer or any other manual action.
3. Non-Transport Deployment (SAP or non-SAP system) – For example, this could be used to deploy an script or executable to any system

For the Manual Activity and Non-Transport Deployment types, a description will need to be entered and a dummy SAP transport will be created. This transport is just a holder for the change to allow it to be sent down any transport path which can either be an existing SAP systems path or a path that's created for non-SAP systems as well.

Manual Activity type changes automatically create a manual step in the Transport Form. This can be updated to choose the systems the activity is relevant for and then be marked as complete for each system rather than performing an import. Once completed the import queue will be automatically skipped for the relevant system.

Non-Transport Deployment type changes are handled in the same way as normal SAP transports but instead of a transport import a custom import method can be called via a user exit to perform the deployment. The required deployment can be attached to the Transport Form and used by the deployment method to execute the change.

Configuration Steps

In order to support these new change types a dummy transport will be created in a nominated SAP system, as configured on the [Global Options](#) configuration screen.

It is recommended to use the Domain Controller system for this but not essential. A SAP transport target can also be specified if required but using "SAP Default" will allow SAP to determine this automatically.
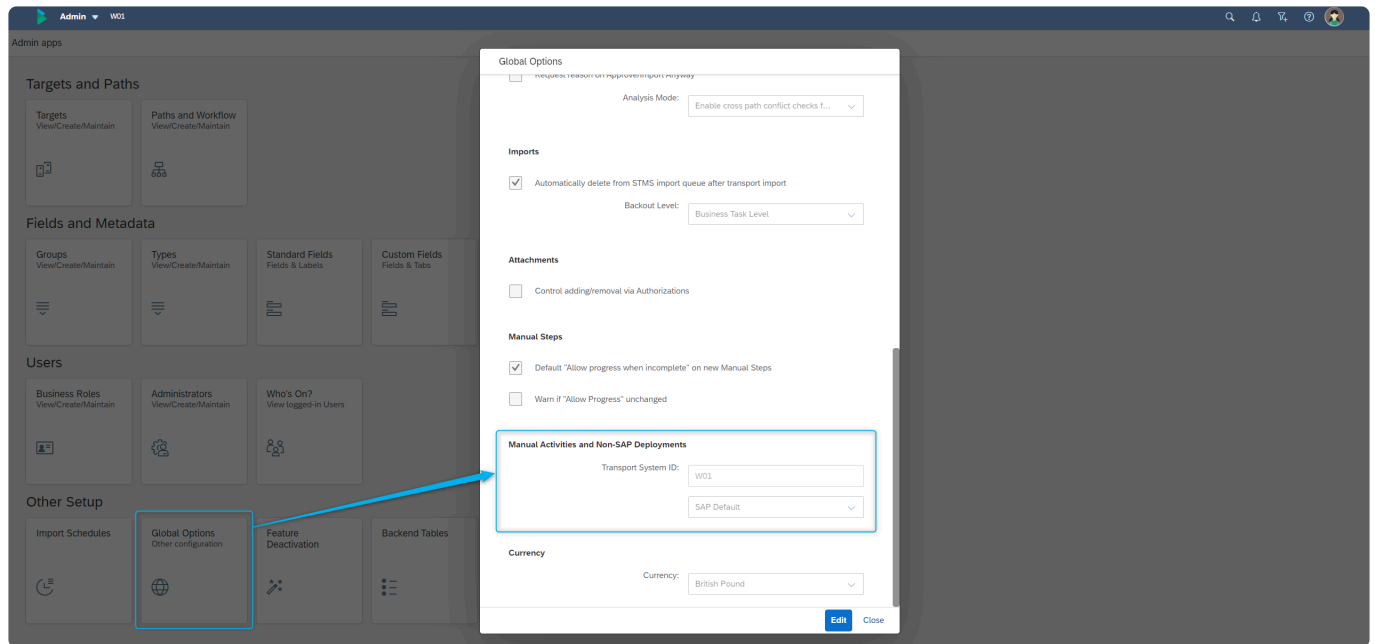
Figure: Configuration options for Manual Activities and Non-SAP Deployments

The transports do not need to be released as there will be no import process for them so if required they could be deleted afterwards as part of a clean-up. In addition, in order for the ActiveControl caching to function correctly the SAP system configured here also needs to be created as a Target system and marked as a source system for transports. (This doesn't need to be added to any transport paths):

> ✱ Note that using this functionality might require additional authorisations, depending on what access the user already has in the system in which the dummy transport is being created. Authorization object S_TRANSPRT with activity 01 (Create) and S_SYS_RWBO may be required.

3.6. Icons within ActiveControl

RAG Icons

Numerous RAG (Red, Amber, Green) status icons are available throughout ActiveControl to give visibility on particular issues and scenarios as part of the delivery of SAP change.

Some of these status Icons were pre-existing in earlier versions of ActiveControl, whilst some are newly introduced as part of the new Web Platform UI.

Where the icon is indicating something that is more informational rather than an actual issue, it is typically shown in Blue or Purple for easier differentiation.

RAG Icon	Icon	Description	Configuration Details	Feature Deactivation possible?	Seen at TF or BT level?
Risk	⊗ Risk / ⚠ Risk	Indicates if a Transport contains SAP objects defined as risky/critical within the Customer organisation.	Please refer to this online Knowledge Article for details on configuring the 0001 Risk Guard analyser which is used for the RAG status calculation.	Yes	Both
Conflict	⊗ Conflict	Indicates if a Transport contains objects that are also being changed in parallel track, via the 0005 Conflict Analysis ShiftLeft analyser.	Please refer to this online Knowledge Article for details on configuring Merge and the 0005 Conflict Analysis analyser which is used for the RAG status calculation.	Yes	Both

DevEnforcer	⊗ Dev Enforcer	Indicates if a Transport has coding, security or performance issues, as defined in the checks against the corresponding DevEnforcer analysers (0004, 0006, 0016)	Please refer to these online Knowledge Articles for details on setting up 0004, 0006, and 0016 analysers which are used as part of the RAG status calculation.	Yes	Both
Aged Transport	⊗ Aged Transport ⚠ Aged Transport	Indicates if a Transport Form is older than a certain (configurable) number of days.	Please refer to this online Knowledge Article for details of the configuration.	Yes	Both
Dormant Transport	⊗ Dormant Transport ⚠ Dormant Transport	Indicates if a Transport Form has been sitting in a particular control point location for more than a certain (configurable) number of days.	Please refer to this online Knowledge Article for details of the configuration.	Yes	Both
Manual Step	⊗ Manual Step ⚠ Manual Step ✓ Manual Step	Indicates if a Transport has an incomplete Manual Step against it. Red means the Manual Step is incomplete and is holding up an import. Amber means	No configuration required. Please refer to this online Knowledge Article for further information on this RAG icon.	No	Both

UModes		the Manual Step is incomplete but is not holding up an Import. Green means that the Manual Step is complete (for the current system).			
Testing	⊗ Testing - Problem ⓘ Testing - Information ✓ Testing - Bypass Testing - Waiting	Indicates if a Business Task has had test results other than "Successfully Tested" logged, and the Business Task left in the Test Queue using "Save and Close". "Testing – Problem" – should be RED "Testing – Information" should be BLUE "Testing – Waiting" – should be PURPLE "Testing – Bypass" – should be GREEN	No configuration required.	No	Business Task only.
UModes	UModes	Indicates if a Transport Form default umodes have	No configuration required.	No	Transport Form only

		been changed on the "Advanced Options" subscreen of the Transport Form.			
Automated Approval	❌ Auto-Approval Auto-Approval	Indicates if a Transport Form is awaiting automated-approval (or if it failed).	No configuration required for the RAG status. Please refer to this [online Knowledge Article](#) for further information on configuring automated approvals.	No	Transport Form only
RC8	❌ RC8	Indicates if latest import of a Transport ended in RC8.	No configuration required.	No	Transport Form only

> ✳ Some of the individual RAG status icons can be switched off via global [Feature Deactivation](#), if a Customer does not want to benefit from it as part of their implementation of ActiveControl, or if the particular functionality is not being used as part of their processes.

> ✳ Some of the RAG status are calculated at Transport / Transport Form level – but also roll up to Business Task level. If there are two Transport Forms against a Business Task, and one of the Transport Forms has a red icon and the other Transport Form has a corresponding amber icon, then the Business Task would be represented as red.
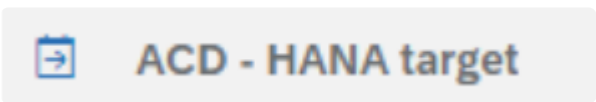
> ✳ Many of the RAG status icons will only show if they are Amber or Red – but they will not show if they are Green. This has by design, to avoid the situation in the legacy

> ActiveControl UIs whereby non-issues tended to dominate the screen.
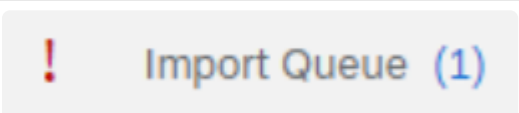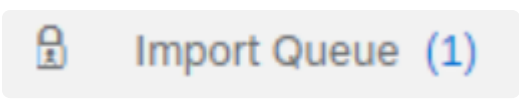
Global View Icons

Some icons are also seen specifically in the Global View to indicate specific issues and situations.

Global View – Target / Path Icons

Summary	Icon	Description
Path icon	品	Indicates the overall Transport Path within the Global View.
Target icon	🔲	Indicates the Target within the Path in the Global View.
Bypassed Target	📅→ ACD - HANA target	Indicates that a Target is being bypassed via Target configuration .

Global View – Import Queue icons

Topic	Icon	Description
Import Issue	! Import Queue (1)	Indicates an Import issue or System Error in an Import Queue.
Padlock	🔒 Import Queue (1)	Indicates that the Import Queue is locked. ActiveControl does this locking / unlocking when Imports are happening via ActiveControl.
System Connectivity Issue	HD3 - S4/Hana DEV	Indicates an RFC connectivity issue that will prevent import to the SAP system via ActiveControl.

4. Installing ActiveControl

ActiveControl is an ABAP add-on, and as such is relatively straightforward to install and upgrade.

This section provides information on how to perform the initial installation of ActiveControl.

4.1. ActiveControl Administrators

An **ActiveControl Administrator** is a resource within the customer organisation who can maintain the ActiveControl configuration and is also able to perform all activities within ActiveControl including approvals, imports and test result entry / approval. Within most of Basis Technologies' customers, the ActiveControl Administrators are typically either Basis resources or Change & Release Managers.

Administration can be defined via the [Administrators] app tile on the ActiveControl Administration screen, or via SAP authorisations. A user with /BTI/TE:STD_ADMIN_AUTHS will be able to maintain the configuration, even if not defined as an Administrator within the app tile.
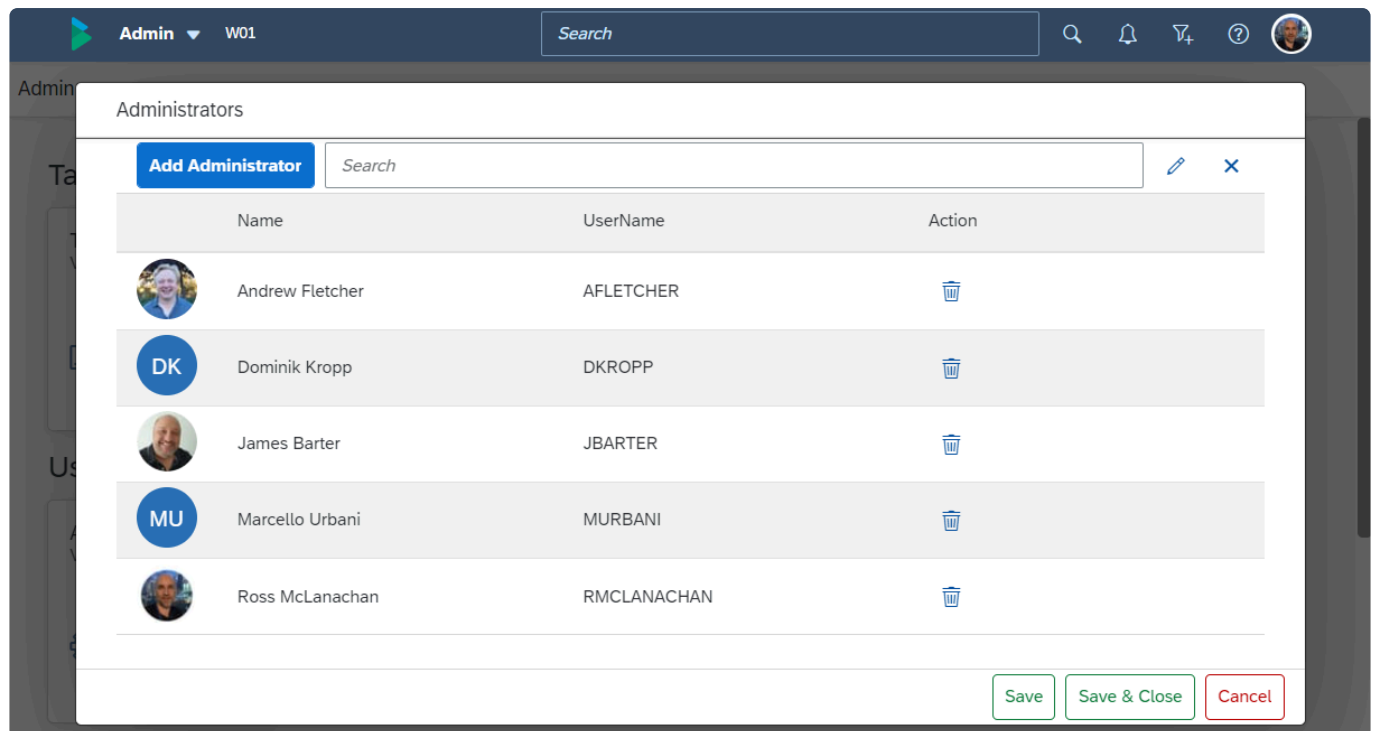
Figure: Administrator app screen within ActiveControl Web Platform.

> ✱ When the first user logs into the ActiveControl Web Platform after the initial installation activities have been performed, they are automatically added as an Administrator on the app tile.

4.2. Installing the Server Software

ActiveControl is an ABAP Add-On. The software comes in the format of some SAP transports that need to be deployed into the intended ActiveControl Domain Controller system, and the satellite SAP systems to be managed by ActiveControl.

Basis Technologies will provide the required transports as part of your original implementation of ActiveControl along with instructions of where each transport needs to be deployed. The same will happen if any Cumulative Patch fixes need to be applied, and also when you decide to upgrade to a newer version of ActiveControl.

> **!** Note that a Remote Transport is also available for ActiveControl, specifically for older pre-NW 7.01 SAP satellite systems. Please inform Basis Technologies if you want to manage an older SAP system via ActiveControl in advance of deploying any of the software transports.

Installing the ActiveControl Software Transports

The following steps summarise the activities involved in installing the ActiveControl software.

The steps assume the system ID of your development SAP system is DEV, and also that the reader is already comfortable with the basics of the SAP Correction and Transport System.

Step	Activity
1.	Copy the transport file K9nnnnn.SID to the cofiles transport directory. As with the following transport files, make sure that the file is copied in binary mode and for UNIX systems ensure that the target filename is in uppercase and is not read-only.
2.	Copy the transport file R9nnnnn.SID to the data transport directory.
3.	Add the transport to the import buffer of the SAP system that you have selected to be the ActiveControl domain controller. *tp addtobuffer SIDK9nnnnn DEV*
4.	Import the transport into the ActiveControl domain controller SAP system (note the use of unconditional modes 1 and 8). *tp import SIDK9nnnnn DEV client=000 U18*
5.	Repeat steps 3 and 4 for the other participating SAP systems in your system landscape.

Removing the Service Software

SAP does not provide a simple method for removing the contents of a transport from a system. To mitigate this, Basis Technologies can provide you with a deletion transport to remove the contents of ActiveControl from your SAP systems in the unlikely event that you no longer want to use the product. This deletion transport has been created using ActiveControl's innovative backup capability, a powerful feature described in a later section of this Administration Guide. Please contact the Basis Technologies support team if you require a backup transport to remove ActiveControl from your SAP systems.

4.3. Installing the Web Platform

Unlike previous versions of ActiveControl, the ActiveControl Web Platform includes a container image that needs to be hosted, in addition to the pre-existing requirement for a backend ActiveControl Domain Controller SAP system.

ActiveControl Web Platform offers various deployment options, based on customer's pre-existing use of SAP BTP (Business Technology Platform) and SAP FLP (Fiori Launchpad).

The rest of this section of the Administration Guide details each of the deployment options

- Deploying to standalone Node Server
- Deploying to BTP
- Deploying the BTI Dashboard or on Fiori Launchpad?

Minimum of 1GB of RAM and 2GB of storage will be required for both options.

> ✳ The Basis Technologies recommendation to our customers would be to deploy on BTP whereever possible, given that is SAP's strategic direction, and parts of SAP are already becoming well-established there.

4.3.1. Deployment to BTP

ActiveControl can be deployed to SAP BTP (Business Technology Platform). This deployment option is likely to be favoured by Basis Technologies' customers that are already utilising other parts of SAP BTP (e.g. SAP CPI (Cloud Integration Platform)).

Deploying the Web Platform to BTP is done via a docker image, to minimise the steps and effort involved for Basis Technologies' customers.

Please refer to this online Knowledge article for the pre-requisites and steps for installing Web Platform to a Node server.

4.3.2. Deployment to standalone Node server

ActiveControl Web Platform can be deployed to a standalone Node (Node.js) server, which could be hosted on-prem or with a cloud hyperscaler such as AWS, Azure etc. This deployment option is likely to be favoured by customers that are not using other parts of SAP BTP.

This server must be Linux-based server. It is not recommended to run NodeJS on a productive Windows server.

Deploying the Web Platform is done via a docker image, to minimise the steps and effort involved for Basis Technologies' customers. Please refer to this online Knowledge article for the pre-requisites and steps for installing Web Platform to a Node server.

- How to install ActiveControl Web Platform on BTP

4.3.3. Deployment Options

ActiveControl offers two main UI alternatives for accessing the Web Platform, namely

1. Standard BTI Dashboard
2. Fiori Launchpad (FLP)

It is anticipated that majority of Basis Technologies customers will utilise the out-of-the-box Dashboard, as that will suffice for the majority of customer needs.

The following Figure illustrates the key benefits of using the out-of-the-box Basis Technologies Dashboard versus a Fiori Launchpad deployment of the Web Platform.

	BTI Dashboard	Fiori Launchpad
Pros	• Out-of-the-box screens = less effort to deploy. • Users see tiles based on standard AC roles • Some features (Search, Path Filtering, Notifications, User Details) seen via top shellbar – will be familiar to users of enterprise apps like JIRA or ServiceNow.	• Customers can customise user access to existing AC tiles. E.g. hide certain tiles that are seen by all users as part of BTI Dashboard. • Customers can create their own custom tiles.
Cons	• Cannot restrict visibility to tiles, beyond what is possible with the AC roles.	• No shellbar – so some Features (e.g. Search, Delegations) are seen via their own tile; as a result, more tiles than BTI Dashboard. • Single-Sign-On is a pre-requisite to using FLP (the tile counts will not work otherwise).
Typical Customer Profile	• Not using Fiori Launchpad. • Want out-of-the-box solution; do not desire or require much customisation. • Anticipated to be used by ~75% of BTI customers.	• Users already accessing SAP via Fiori Launchpad; want to add AC tiles to existing screens. • Want to customise ActiveControl (e.g. additional tiles).

Figure: Pros and Cons of using BTI Dashboard versis Fiori Launchpad

4.4. RFC Destinations

ActiveControl uses SAP's remote function call (RFC) technology for communication. RFCs are required in two places:

1) from the Domain Controller to every participating satellite SAP system being managed by ActiveControl.
2) from the Development satellite systems back to the Domain Controller.

In essence, an RFC destination must be defined for every target SAP system that the ActiveControl Domain Controller communicates with (including the Domain Controller itself), and also from the satellite Development systems back to the Domain Controller. RFCs are NOT required from non-Development satellite systems such as QA and Production back to the Domain Controller.

RFC Destination Settings

RFC destinations are maintained with SAP transaction SM59. An RFC destination contains the technical information required to call a function (program) remotely. When the remote destination is an SAP system, the technical information specifies the target application server and the logon details (client, user ID, password and language).

RFC destination	TRANSPORT EXPRESS [SID]
Connection type	3 – SAP connection
Load balance	No
Target host	Hostname of an application server of the SAP system
System number	The corresponding system number of the application server
Description	Any suitable description (required)
Language	EN for English
Client	The main client of the SAP system
User	User ID in the specified SAP client – see more information below
Password	Password of the specified SAP user ID

RFC Destinations in the ActiveControl Domain Controller

Each RFC destination required by ActiveControl has the name 'TRANSPORT EXPRESS SID' where SID is the system ID of the system you are connecting to from the Domain Controller. For example, if your implementation has development, test and production SAP systems called DEV, TST and PRD; then the following RFC destinations must be created in the domain controller:

- TRANSPORT EXPRESS DEV
- TRANSPORT EXPRESS TST
- TRANSPORT EXPRESS PRD

In addition, an RFC destination should be created on the ActiveControl Domain Controller, pointing back to itself. So if your Domain Controller system SID is SOL, then an RFC Destination called TRANSPORT EXPRESS SOL should be created, pointing back to the SOL system.

RFC Destinations in the Development Satellite Systems.

An RFC destination is required in each Development satellite systems, pointing back to the Domain Controller. This RFC destination must have the name 'TRANSPORT EXPRESS CONTROLLER'.

RFC Users

When defining RFC destinations, Basis Technologies recommend that you create and assign a special user ID in the satellite system called **AC_RFC**. These users need to be slightly different in the Domain Controller versus the participating satellite systems.

RFC User in the Satellite Systems

In the satellite systems, the AC_RFC user must be a System user. A system user ID is a special type of SAP user ID that cannot be used to access the SAP system via the SAP GUI. Therefore by using a system user ID, potential security holes, such as a remote logon to your production system, are avoided. Another advantage of a system user ID is that the password does not expire.

In the satellite systems, the AC_RFC user must have /BTI/TE:CTS_RFC role assigned to it

RFC User in the Domain Controller

In the ActiveControl domain controller, the AC_RFC user must be setup as a Service user. A system user cannot be used as it does not support popup screens like the Transport Form.

In the domain controller, the AC_RFC user needs to have /BTI/TE:CTS_RFC, /BTI/TE:CTS_ADMIN_USER and /BTI/TE:CTS_ADMIN roles assigned to it.

> ✱ ActiveControl may update the client field of an RFC destination at runtime. This may be necessary when releasing a transport request or creating a backup request as these actions are client-specific. In these situations, the specified user ID and password must be valid for all possible clients.

> **!** Remember, the AC_RFC user must be a System User in the satellite systems, but a Service User in the Domain Controller. Not adhering to these user types is one of the most common reasons for unexpected behaviour during an ActiveControl implementation.

5. Core Configuration – Web Platform

After installing ActiveControl in the Domain Controller and satellite systems and doing the associated preparation steps (deploying Web Platform, creation of RFCs etc), ActiveControl now needs to be configured.

The configuration of ActiveControl is performed by authorised ActiveControl Administrator(s) within the Customer organisation, typically working alongside a Basis Technologies solution consultant during the initial implementation project. The ActiveControl Administrator is a hugely important role within a Customer organisation, both during the initial implementation of ActiveControl and also during ongoing maintenance and support of ActiveControl after the initial go-live.

Configuration of ActiveControl is required in two places:

- Web Platform
- SAPGUI

Web Platform Configuration

The majority of ActiveControl configuration is performed within the Web Platform screens. This configuration is performed within the Administration screen that is accessible by authorised ActiveControl Administrators (and users with view [Y_TEUSER]-CONFIG authorisation activity).
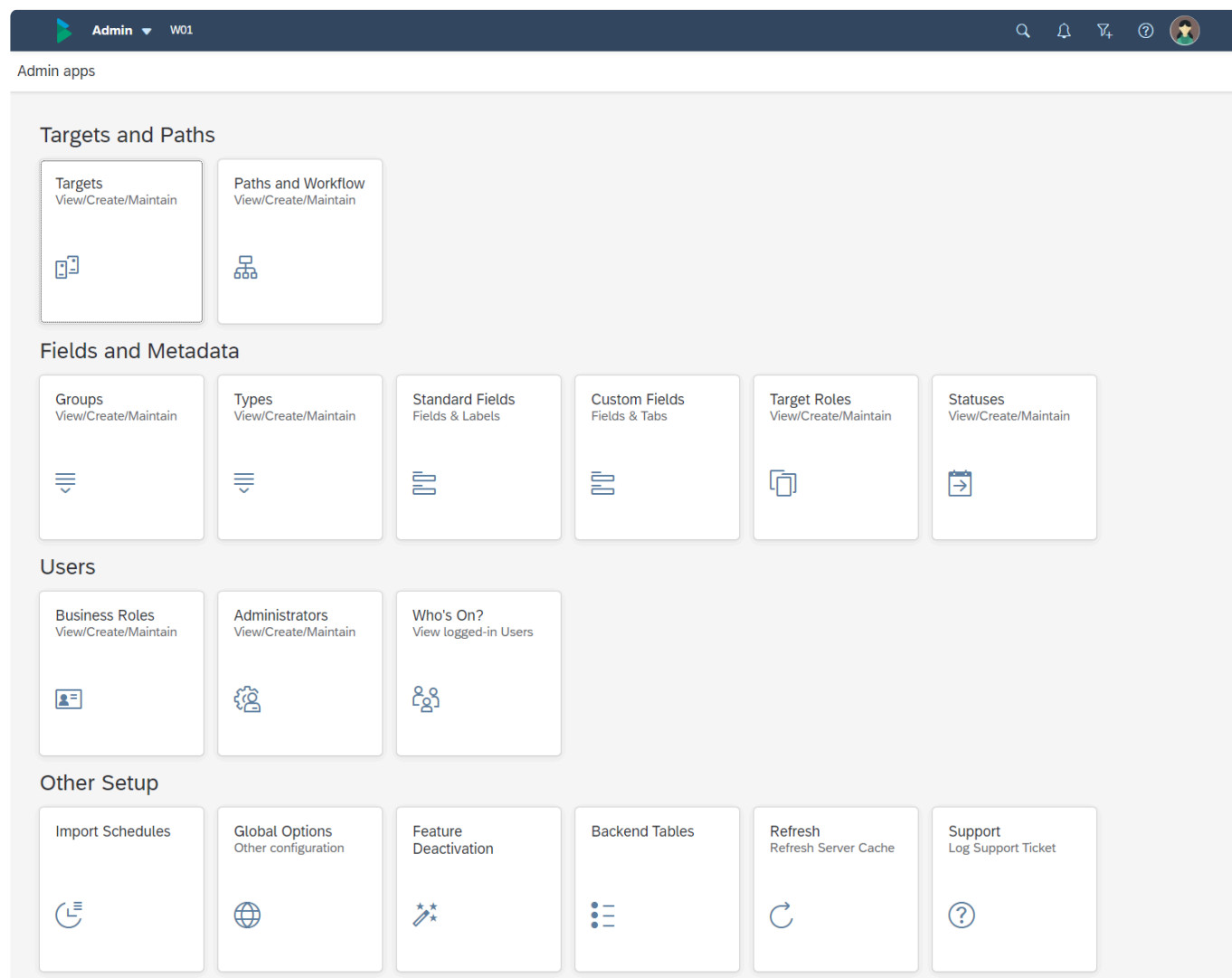
Figure: Administration screen within the Web Platform

The rest of this section of the Administration Guide details the core configuration topics that needs to be performed within the Web Platform front-end:

- Targets
- Transport Paths
- Creating Target/Path workflow
- Target Roles
- Automated Import Schedules
- Groups
- Types
- Custom Fields / Custom Tabs
- Mandatory Fields
- Administrators / Priority Approvers
- Custom Labels
- Business Task Statuses
- Other Configuration Options

✳ ActiveControl Administration screens are only seen on PC devices. It is by Basis Technologies design that the Administration tiles are not seen on mobile devices due to the complexity of some of the screens.

5.1. Targets & Paths

The Targets and Paths section of the Administration screen is used for creating Targets, Paths and Workflow:

- [Targets](#)
- [Paths and Workflow](#)
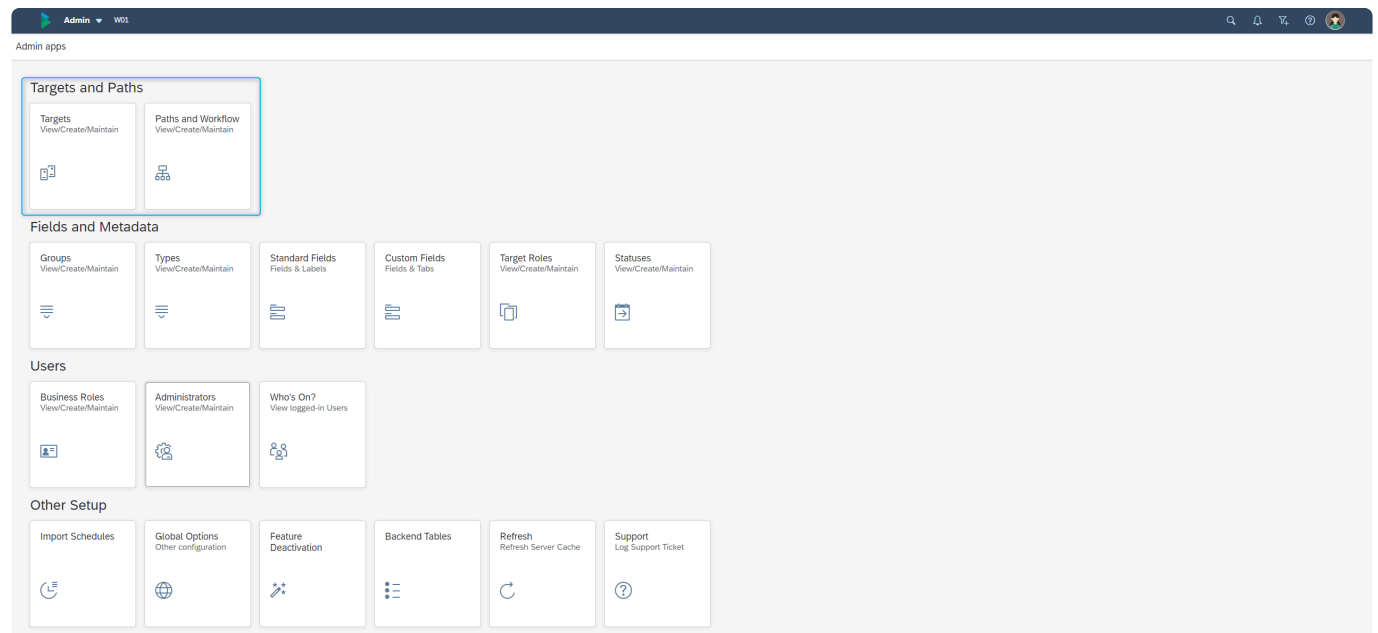
Figure: Targets and Paths tiles.

5.1.1. Targets

ActiveControl is designed to import transport requests into all relevant clients of an SAP system in a single action. In ActiveControl, each group of clients within an SAP system are called a **Target**.

The properties of an ActiveControl Target specify the following:

- The SAP system and clients that changes will be imported into.
- The behaviour of imports into the target.
- The team members who are authorised to approve changes into or out of the target.
- The properties of a target do not determine whether changes must be approved into, approved out of or tested in the target; those settings are made for each transport path. By enabling a target's inbox on a per transport path basis, you have the flexibility (for example) to require your implementation's changes to be approved before they are imported into a target, but to import changes from a central, global SAP development team automatically.
- The automated analysers that will run automatically (or manually) in the configured control points (ie Inboxes, Import Queues, Test Queues, Outboxes) in that target.

Target Configuration

Targets are created and maintained by ActiveControl Administrators via the **Targets** app tile on the Administration screen.
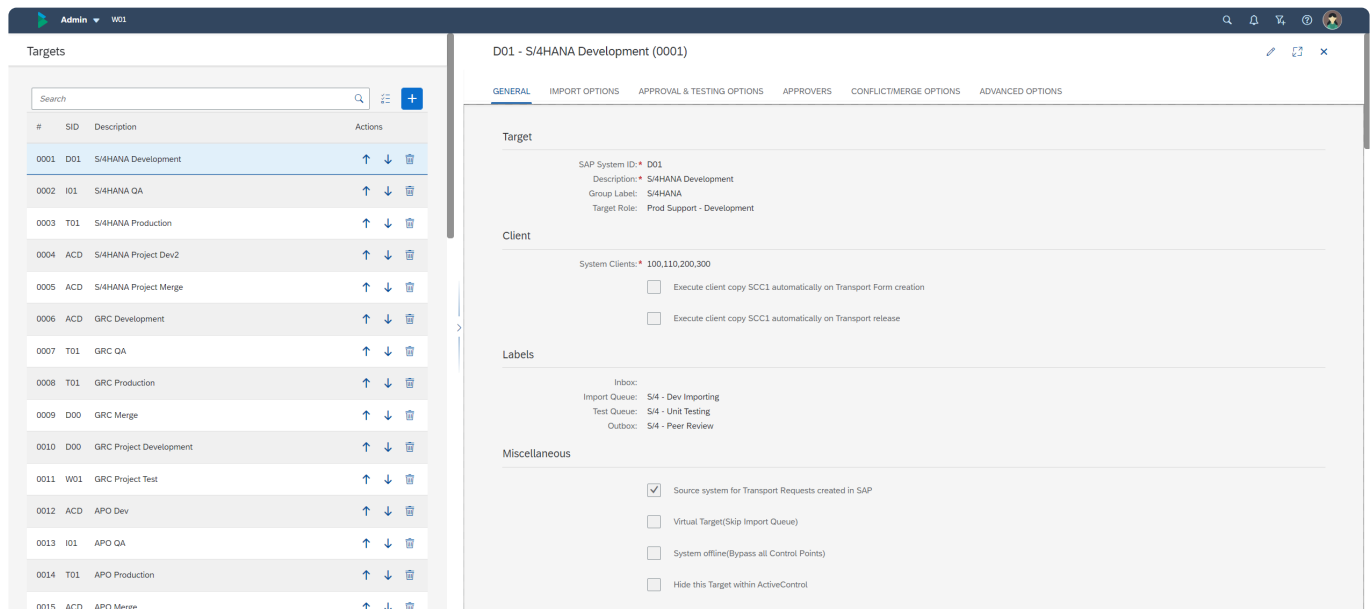
Target configuration screen within ActiveControl Web Platform.

The rest of this section details each subscreen within Target configuration:

- [General](#)
- [Import Options](#)
- [Approval & Testing Options](#)
- Approvers
- Analysers
- Conflict / Merge Options
- Advanced Options

> ✱ The same actual SAP system can be defined as more than one ActiveControl target system. This can allow different processes to be controlled for the same systems.

> ✱ It is not possible to add the same Target to more than one Transport Path.

5.1.1.1. General

General information relating to the Target and its configuration is maintained via the **General** subscreen.
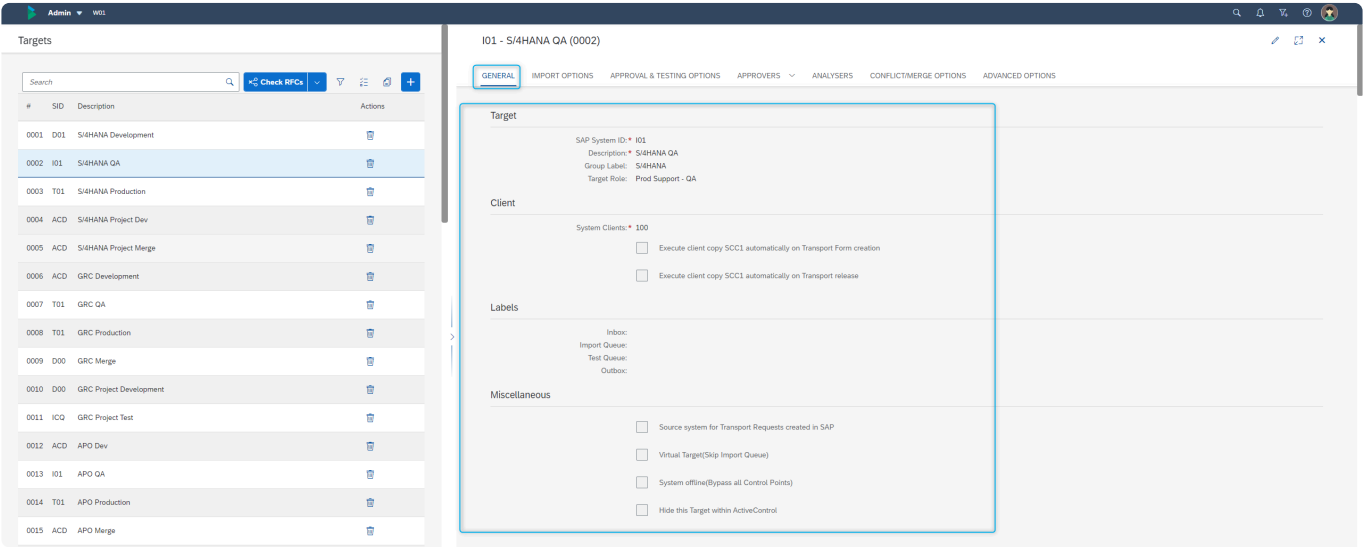
Figure: General subscreen as part of Target configuration.

Target

Property	Description
SAP System ID	System ID of the target SAP system
Description	Short description of the target
Group Label	An optional label to group together common types of systems (e.g. "Business Warehouse")
Role	This option allows you to group together separate SAP systems by their role, for the purpose of creating dependencies between transport requests on separate transport paths to support Release Orchestration. Please refer to section Defining Target Roles to learn how to create a target role.

Client

Property	Description
Clients	The group of clients within the SAP system that transport requests will be imported into. Enter each client separated by a comma and a space (e.g. "100, 200, 300").
Execute client copy SCC1 automatically on Transport Form creation	Check this option if you want SCC1 to be automatically done to other configured clients on Transport Form creation.
Execute client copy SCC1 automatically on transport release	Check this option if you want SCC1 to be automatically done to other configured clients on transport release.

> ! Please note that S_USER_AGR needs to be assigned to the AC_RFC user role in development systems where ActiveControl's SCC1 automation is used. S_USER_GRP and S_USER_PRO are also required for SCC1 of customizing transports that contain security roles. Please refer to this online Knowledge Article for full details on the SCC1 automation capability.

Labels

It is possible for the standard control point terminology (Inbox, Import Queue, Test Queue, Outbox) to be customised into a customer's local terminology. For example, a customer might want to rename a Production Inbox to "CAB Approval" so that it is more relatable to the customers internal processes. When a Label is added, it is propagated through all screens of ActiveControl.

If a Label is not defined against a particular control point location, then the standard control point location terminology will be used.

Miscellaneous

Property	Description
Source system for transport requests created in	Check this option to allow team members to complete Transport Forms for transport requests created in this system. This option must be enabled for each development system in your system landscape. Transport requests without a Transport Form appear in a team member's list of open transport requests, in the main window.

SAP	
Virtual Target	Virtual targets can be used to facilitate additional Approvals (Inboxes, Test Queues, Outboxes) as part of a complex workflow. A Virtual Target has no import queue; Transport Forms moving past that Virtual Target import queue will show as "Mark as Imported" for that location. The Virtual Target can be given the same SID as the Target in which you want the additional approval point(s) – or it can be given a dummy SID to easily identify that particular approval point(s). If the target system is unavailable or is a virtual target system use this option to skip the Import Queue, but still stop in the other control points for approvals.
System offline(Bypass all Control Points)	When enabled, all Transport Forms will skip all of the Import Queue, Test Queue and Inbox/Outbox for the system. In most cases, this is the option to use when a system is offline / unavailable.
Hide this target within ActiveControl.	Check this option to prevent this target from appearing in the main ActiveControl window. You might enable this option when the SAP system no longer exists, or if the system does not exist yet. Hidden targets may still appear on a transport path.

5.1.1.2. Import Options

Import-related information relating to the Target and its configuration is maintained via the **Import Options** subscreen.
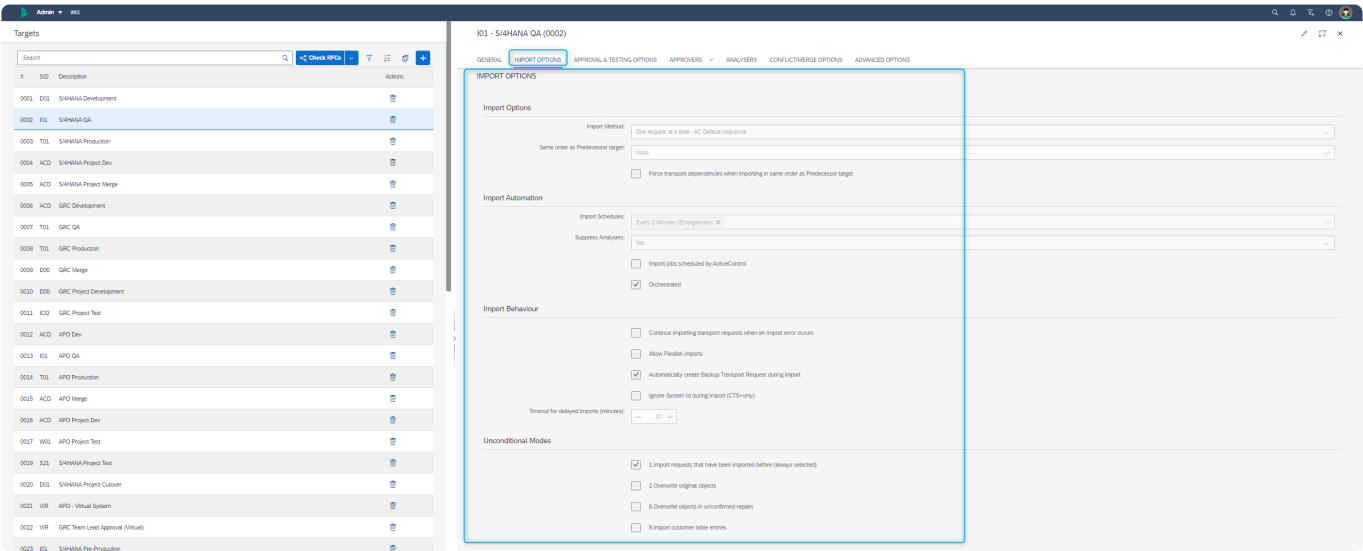
Figure: Import subscreen as part of Target configuration.

Import Options

Property	Description
Import Method	There are four standard Import Methods available with ActiveControl for importing transports i) **Import one request at a time**: this imports in the order that is displayed on screen. ii) **Fast Import (Import All)**: this imports using standard SAP Block import, again based on the order that is displayed on screen iii) **One request at a time – TE default sequence**: will import in the ActiveControl calculated sequence (ie the numerical order detailed in the Order column), regardless of the sequence of transports displayed on the screen. iv) **Fast Import (Import All) – TE default sequence**: will import using standard SAP Block Import in the AC calculated sequence (ie the numerical order detailed in the Order column), regardless of the sequence of transports displayed on the screen. Basis Technologies would generally recommend (iii) and (iv) import methods, with the latter particularly useful for project cutovers involving large numbers of transports. (i) and ii) work fine as long you have your Import History view on "By Transport", and are sorting on the Order column. If you are doing a View by Project and Task, then you could run the risk of importing in an incorrect sequence.

	For Merge Targets where you are doing 1:1 Merge, it is better to set the Import Method to one request at a time.
Try to import transport requests in the order that they were imported into the predecessor target.	When determining the ideal import order of a selection of transport requests, ActiveControl normally considers any dependencies specified on a transport request's Transport Form before sorting the transport requests chronologically according to release date and time. This option tells ActiveControl to consider the order that transport requests were imported into a particular "predecessor" target before applying the standard import order rules.
Force transport dependencies when importing in the same order as predecessor system	If dependencies that are manually set on a Transport Form are to override the predecessor target import order then set this flag

Import Automation

Property	Description
Import Schedules	Assign a transport schedule to a target to automatically import any transport requests in its import queue. Transport requests are imported in their ideal import order (as explained above). A transport schedule defines the times when an automatically scheduled background job will run to import waiting transport requests into the target. They are created via the Import Schedules app tile. Please refer to section Defining Transport Schedules to learn how to create a transport schedule.
Suppress import analysis during scheduled imports	If you enable this option, ActiveControl will not perform its standard import analysis checks when the scheduled import background job runs. You should only enable this option if the checks have already been performed – for example, when the transport requests were approved into the target system.
Import Jobs Scheduled by ActiveControl	This option should be checked where Schedules have been created to automatically import transports
Orchestrated	This option should be selected where you want ActiveControl to automatically continue an import after i) a dependant transport in another system has been imported or ii) a dependant manual step has been performed in the target. Please refer to 'Release Orchestration'

| | section later in this Administration Guide for more information on this functionality. |

Import Behaviour

Property	Description
Continue importing transport requests when an import error occurs	By default ActiveControl stops importing subsequent transports when it detects that an import error has occurred (such as a syntax error). If this option is enabled, ActiveControl will continue importing the selection of transport requests when an import error occurs. Note that even when this option is enabled, ActiveControl will stop the import process if a system error occurs (such as not being able to connect to the target SAP system). For Merge Targets where you are doing 1:1 Merge, it is better to leave this option unchecked.
Continue importing queued transport requests for scheduled imports	When this option is enabled, an automatic import triggered by a Schedule will continue importing subsequent transports.
Allow Parallel Imports	Can be used to enable parallel transport import deployments within ActiveControl. More information on this capability can be found in this online Knowledge Article.
Automatically create backup transport requests	When this option is enabled, ActiveControl will create a backup transport request for the selection of transport requests that are about to be imported into a target SAP system. A backup transport request contains a copy of all things that are about to be updated as they were immediately before the import occurs. If an unexpected error occurs as the result of importing a selection of transport requests, the state of the target system can theoretically be restored by simply importing the backup transport request. However, this is not an automatic guarantee as there are exceptional situations, such as the deletion of content from an application table, from which only a database restore can recover. Use of this option when importing a large selection of transport requests is not recommended, as it can significantly slow the import process. In these situations, it is recommended to rely upon database recovery techniques. Please note that ActiveControl Backout is not relevant for BW or Java systems. It is currently only to be used in ECC/ERP type systems.
Ignore System	For non-ABAP systems being managed in ActiveControl via CTS+, the SAP system ID is

Id during import (CTS+ only)	different to the system that is the CTS+ domain controller. In this case the flag should be set to inform ActiveControl that the target is a CTS+ system.
Timeout for delayed imports (minutes)	Transport imports work in ActiveControl by calling the TP command to import the transport and waits for a response. In some cases (due to a very long running import) the TP command will time out and therefore ActiveControl has no other option but to report a system error as it doesn't know what the actual status is. By setting a timeout for delayed imports ActiveControl will retry every minute for this many minutes and check if the import is now complete. Only after this time has elapsed will it then report a system error if the import is still not complete after that time.

Unconditional Modes

Property	Description
Unconditional Modes	These options allow you to apply various unconditional modes to all transport requests imported into this target system. Note that any Target-specific Umodes will override the Target level Umodes.

5.1.1.3. Approval & Testing Options

Various Target configuration options are available that relate to **Approval and Testing Options**.

Property	Description
Lock Business Task after approval at this target	Select one of the control points if Tasks are to be automatically locked after approval. This will prevent further allocation to Transport Forms.
Release SAP Transport after approval at this target	Select one of the control points if transports are to be automatically released after a specified control point approval.
Automatically run General Analysis on Test Queue approval	Check this option to run the General Analysis automatically as part of the 'Save & Approve Testing' action on a Test Queue
Allow test result entry for my transports on this target	Check this option to facilitate transport-level Test Queue signoff. Eg if you want a Developer to sign off their Unit Testing when there are other transports on the same BT that are not yet tested. Please refer to 'Partial Testing' section later in this Administration Guide for further information.
Automatically approve items where there is no critical analysis in Inbox	Check this option if you want the configured Analysers to run automatically in the Target Inbox, and Transport Forms with no issues to be automatically approved.
Automatically approve items where there is no critical analysis in Outbox	Check this option if you want the configured Analysers to run automatically in the Target Outbox, and Transport Forms with no issues to be automatically approved.

5.1.1.4. Approvers

It is possible to define Approvers for Inboxes and Outboxes via the **Approvers** subscreen of an individual Target configuration.

Please note that this is considered legacy functionality. It is recommended for most ActiveControl customers to instead configure Approvers using the [Rules Engine](), as this affords a lot more power and flexibility in the ActiveControl workflow.

Inbox Approvers

Property	Description
Inbox Approvers	Here you specify those people who can approve changes into the target, from the target's inbox, or approve the transporting of changes from the target's pending queue. Approvers can be authorised to approve any transport request or only those assigned to particular groups. To add an approver, select either a specific group or All Groups and then click the Add button to choose an approver from the list of users in the domain controller SAP system.
Minimum number of approvals required	The number of approvers that must approve a change before the change moves to the next location on the transport path, such as from the target's inbox to its import queue.

Outbox Approvers

Property	Description
Outbox Approvers	Here you specify those people who can approve changes out of the target, from the target's outbox. For example, a test manager may wish to prevent the flow of changes into the production system until satisfied that appropriate levels of testing have been performed. Approvers can be authorised to approve any transport request or only those assigned to particular groups. To add an approver, select either a specific group or All Groups and then click the Add button to choose an approver from the list of users in the domain controller SAP system.
Minimum number of approvals required	The number of approvers that must approve a change before the change moves from the target's outbox to the next targets, as per the transport path configuration.

5.1.1.5. Analysers

ActiveControl includes more than 70 out-of-the-box automated Analysis checks.

Please refer to Automated ShiftLeft Analysis Checks section of this Administration Guide for more detail on the configuration of individual automated Analysers.

The Analyseres are switched on for individual Target control point locations via the **Analyser** subscren in Target configuration.
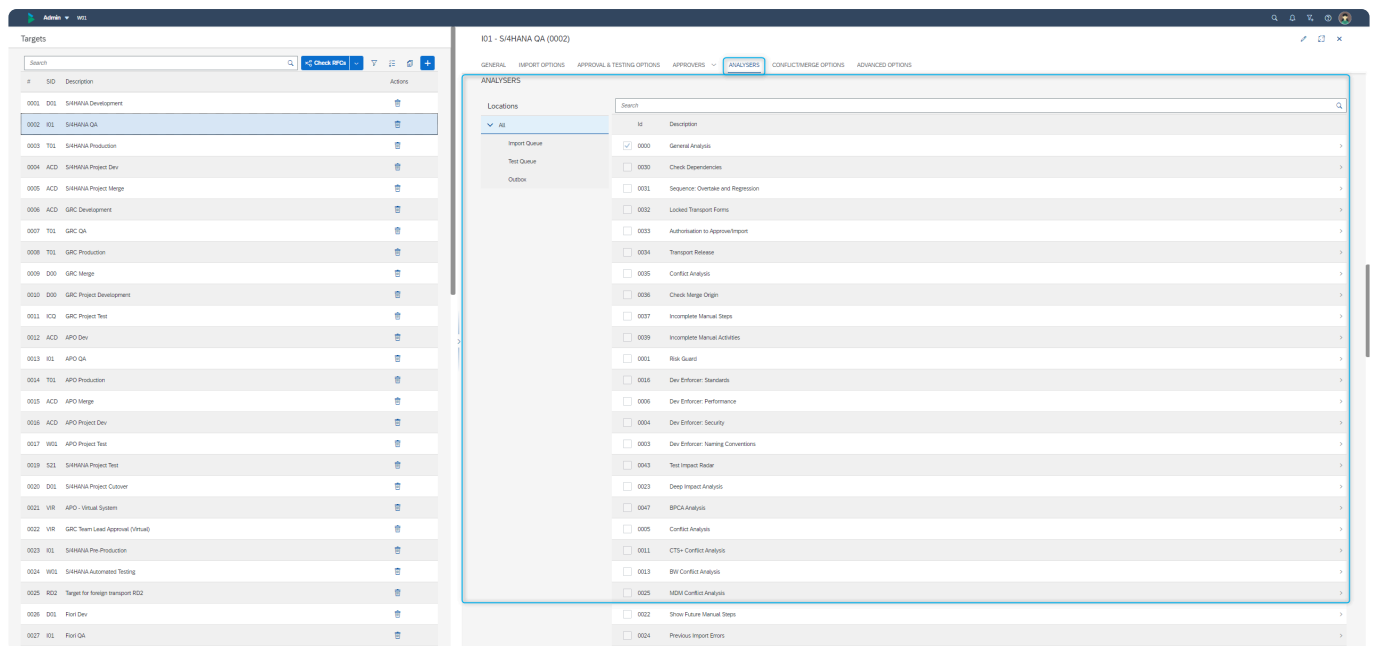
Figure: Analyser subscreen as part of Target configuration.

Property	Description
Location	Here you can maintain the analysis types that are required for the control points of the relevant target system. This allows additional checks and validations to be performed at various points in the process. Select 'All' to switch on / off / update the analysis types for all the control points of the target. Select 'Inbox', 'Import Queue', 'Test Queue', 'Outbox' or any combination of those to switch on / off / update the relevant analysis type for the required target control point(s). Note: This is only available for the control points currently switched on for the target system in the transport path.
Analysis Type	Check the analysis types that are to be switched on for the selected control point(s). These are as defined in table /BTI/TE_ANLTYPE.
Settings	Highlight the relevant Analysis Type to see the attributes.

(Attributes)	Mandatory: Here the analysis type can be set as Mandatory or not. If set as mandatory then it will automatically be called by the General Analysis function and also during Import and Approval. Check Subsequent Target: In some cases for transports that are in a test queue or outbox the analysis might need to be performed on the subsequent system rather than the current system. If this is the case this option should be switched on. To set / unset the attributes, highlight the relevant attribute and choose Yes or No.
Settings (Parameters)	Highlight the relevant Analysis Type to see the attributes. Here the relevant parameters are displayed and can be set if applicable. This is based on what associated parameters have been set up in table /BTI/TE_ANLTYPEP for each analysis type. Table /BTI/TE_ANTYPEPT defines the parameter types. Table /BTI/TE_ANTYPEPV defines the parameter values. Set the parameters that are required for the specific analysis type. When the parameter is highlighted a caption will appear at the bottom of the screen to describe the function of that parameter. To set / unset the parameters, highlight the relevant parameter, right click and choose Add / Remove as required (or use the Add / remove buttons). When adding, select the appropriate value from the drop down or type the value directly if permitted.

✳ No Basis Technologies customer will need to use all (or even nearly all) of the available ActiveControl analysers. On average, a typical customer will use around 15-20 of the available Analysers.

5.1.1.6. Conflict/Merge Options

ActiveControl supports SAP customers that have N+n landscapes involving parallel Development systems, using a combination of features within the Product to avoid time-consuming, error-prone Dual Maintenance rekeying:

- Merge
- Shiftleft: Conflict Analysis
- Inline Conflict Analysis

Each of these capabilities within ActiveControl is described in more detail later in the Administration Guide, along with the backend configuration required.

There are also many Target-level configuration options available to suit individual customer needs, that are configured via the frontend target configuration:

Conflict Analysis Options

Property	Description
Perform conflict analysis against this target	When this option is enabled, ActiveControl will perform an additional remote analysis check for transport requests that are to be imported into this target system. The remote import analysis checks whether the content that is about to be imported has already been changed in the target system. This option is particularly useful for branched SAP development systems, when changes from one development system must be applied to other development systems.
Client to be used during conflict analysis	Client in which to check for changes and in which merge transport requests will be created. For performance reasons, the remote import analysis checks are only performed in one client of the target SAP system. Similarly, merge requests are only created in this client. You should specify the client of this target SAP system in which client-dependent configuration changes are made.

Merge

Property	Description
Create a merge transport request in this SAP system after importing changes	When this option is enabled, ActiveControl creates merge transport requests in this system for each selection of transport requests imported.
Require that transports with changes to SAP	When this option is enabled, ActiveControl will check if a transport to be merged contains changes to SAP standard development objects and if so, require that the

objects be manually merged	transport be manually merged. This option is useful if you have branched development systems that are running different versions or patch levels.
Merge Size	Select whether you want one merge transport for every originating transport (1:1), a big one with everything (Consolidated) or one per import run (By Import Run)
Merge Path	Select which path the Transport Forms for the merges will be created. Leave it blank if you want to create them manually.
Merge Type	Select which Type you want Merge Transport Form to be allocated to. If not set, the merge will get the type of the first transport merged.
Merge Group	Select which Group you want for the Merge Transport Form to be allocated to. If not set, the merge will get the group of the first transport merged.
Merge Task	Select which Task the Transport Form should be associated with. If not set, the merge will get the task of every transport merged.
For 1:1 merges automatically copy over Transport Form manual step details	Check if you want Manual Steps to be added in the Merge Transport Form in 1:1 merge scenario; *it not relevant to the Consolidated Merge scenario*.
For 1:1 merges make the merge transport form owner the same as the original owner	The default behaviour of ActiveControl is to assign Merge TOCs to the AC_RFC user. If this configuration option is switched on, then the Merge TOC will be assigned to the owner of the original source transport in the 1:1 Merge scenario.
For 1:1 merges copy custom fields to merge transport form	Check if you want the custom field values in the source Transport Form to be replicated in the Merge TOC Transport Form during 1:1 merge scenario.
For 1:1 merges, copy over dependencies to merge Transport Form	Check if you want the source transport hardcoded dependecies to be replicated in the new Merge TOC Transport Form during 1:1 merge scenario. Note that it will be the ToC's that will be automatically defined in the Advanced Options tab, and NOT the original source transports.

Merge Errors

Property	Description
On Error	Controls whether ActiveControl Merge should stop, continue or skip any other errors encountered during the Merge process.
Stop on BW post-processing error	This option controls whether Merge process will stop or continue when BW postprocessing fails

Advanced Merge

Property	Description
Transport target for merge requests	This sets the transport target for merge requests created by ActiveControl, allowing merge transports to be handled via a different transport route if required. If not set the default value from TMS will be used.
Default package for merges objects	When BW objects are renamed sometimes they are not assigned with an object directory entry (TADIR). The package specified in here can be used to create this to prevent warnings during merge transport release
Fix renamed objects in merge requests	During import into BW systems some BW objects are automatically renamed. The default behaviour of the merge process is to copy the objects from the original transport into the merge transport but this doesn't work for the affected BW objects. In this case ActiveControl can run a rename process either 'After Import', 'Before Release' or 'After Import & Before Release' to perform the renaming process. This will edit the merge transport and renaming the objects to the new names in the merged system. 'After Import' is the default renaming method.
Add dependant routines and formulae for BW merges	Some BW objects should always be transported in their entirety. If, for example, a transformation was being transported this option would also add in all the dependent routines and formulas into the merge transport.
Inherit merge transport owner from original transport (CTS+ only)	Check for Java systems to ensure Merge transport owner is same person as the original transport (for 1:1 Merge scenario)

5.1.1.7. Advanced Options

The configuration options available in the **Advanced Options** subscreen of Target configuration are generally not used by many Basis Technologies' customers.

These Advanced Options are considered advanced / legacy functionality, and will not be required by the vast majority of our customers.

Consolidated Import Queues

Consolidated Import Queues are explained later in the Administration Guide. The following Target level configuration options are available to support Consolidated Import Queues:

Property	Description
Consolidated Import Queue Options	Does not require consolidated import queue options: Use this option for targets where consolidated import queues are not required Provides consolidated import queue for related targets: Use this option for targets that are to be used as a consolidated target Contributes to a consolidated import queue provided by: Use this option to link a target to a consolidated import queue target so the import queues can be shared. • Target: In this case the consolidated target must be selected • Consolidated queue visible?: This should be switched on to make the queue visible in the normal ActiveControl paths underneath the main import queue. Please refer to the Consolidated Import Queues section for details about how to set this up.

Custom Processing

Property	Description
Pre-import logical command	ActiveControl supports transporting between SAP systems that do not share common underlying transport directories. Before importing a transport request, ActiveControl checks whether the required transport files are available and, if not, automatically copies the files to the target transport directory. If further import pre-processing is required, you may use this option to invoke an SAP logical command (transaction SM69) to call your own script before the import is performed. You can choose whether the script is invoked on the domain controller or the target SAP system.
Post-import logical command	This option is similar to the previous option. It allows for a logical command to be called after a transport request has been imported into a target system. This option might be used for copying transport logs that were created by the import process back to the transport directories of the source SAP development system.

5.1.2. Paths and Workflow

As mentioned earlier in this Administration Guide, a **transport path** is a hierarchy of target SAP systems, determining the systems that a transport request will be imported into and in what order. The transport path also determines whether changes need to be approved and/or tested.

Each transport request is associated with a single transport path when the Transport Form is completed. The transport path is usually selected automatically, according to the default settings made here, and ensures that transport requests are imported into the same systems, keeping the landscape in sync.

Usually only one transport path is necessary per development stream. For example, you might have one transport path for transporting between the development, test and production R/3 systems, and another transport path for transporting between the development, test and production BW systems.

Transport Paths, and the associated Workflow are created and edited by ActiveControl Administrators via the **Paths and Workflow** app tile. The configuration process consists of four steps:

1) Create Path.
2) Drag and Drop Targets into the Path.
3) Switch on the required Control Point workflow.
4) Add Deployment Statuses to each Control Point.
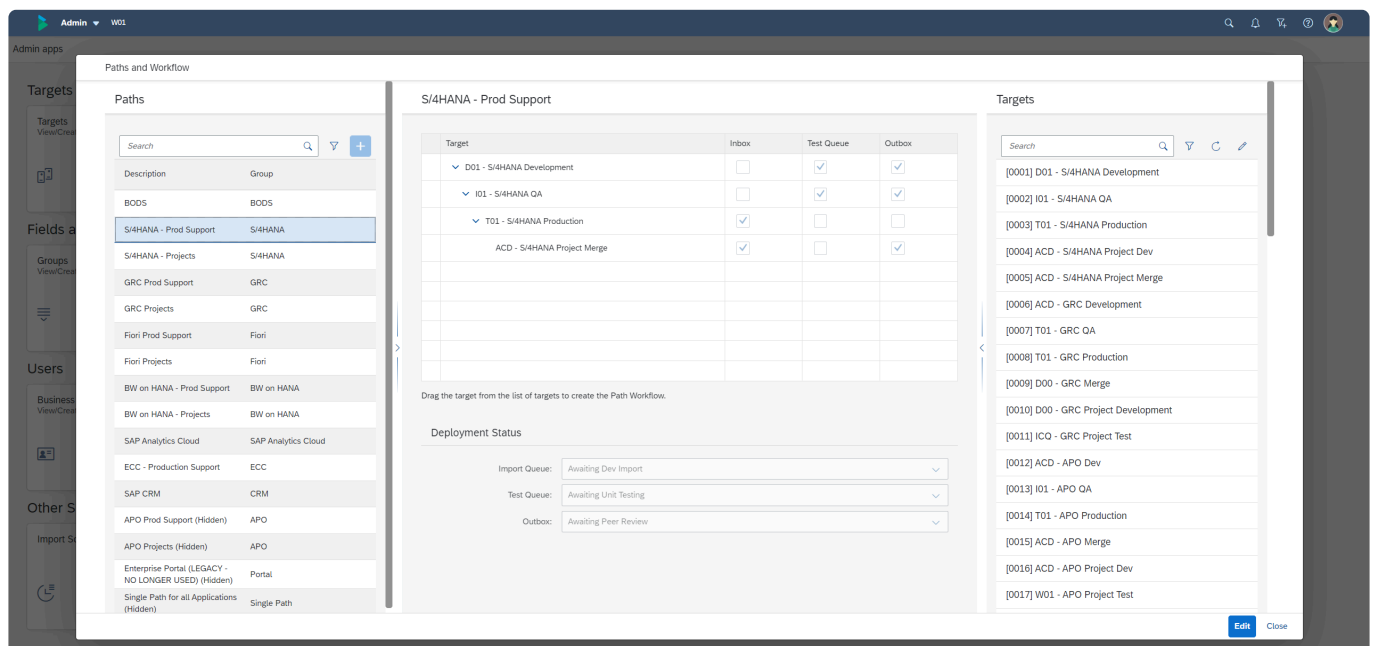
Paths and Workflow configuration screen within the ActiveControl Web Platform.

5.1.2.1. Paths

Paths are created by Administrators and other authorised users via the left hand panel in the **Paths and Workflow** app screen.
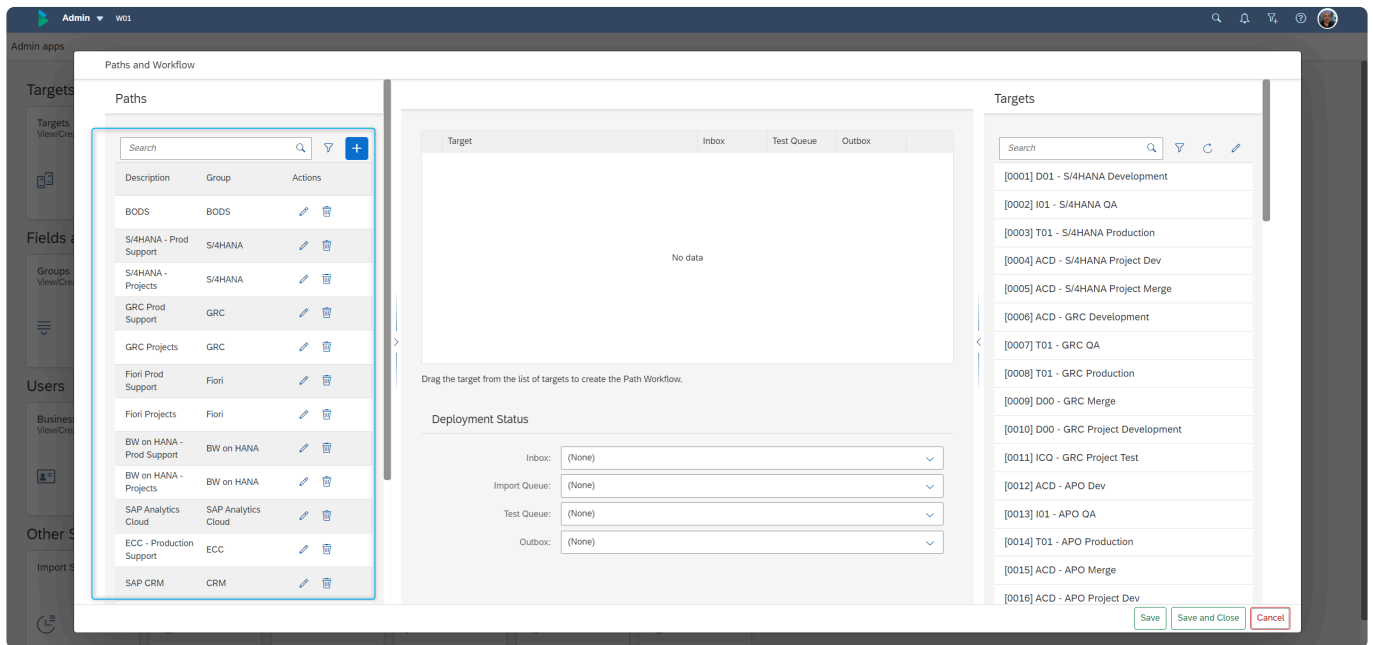
Figure: Paths within Paths and Workflow.
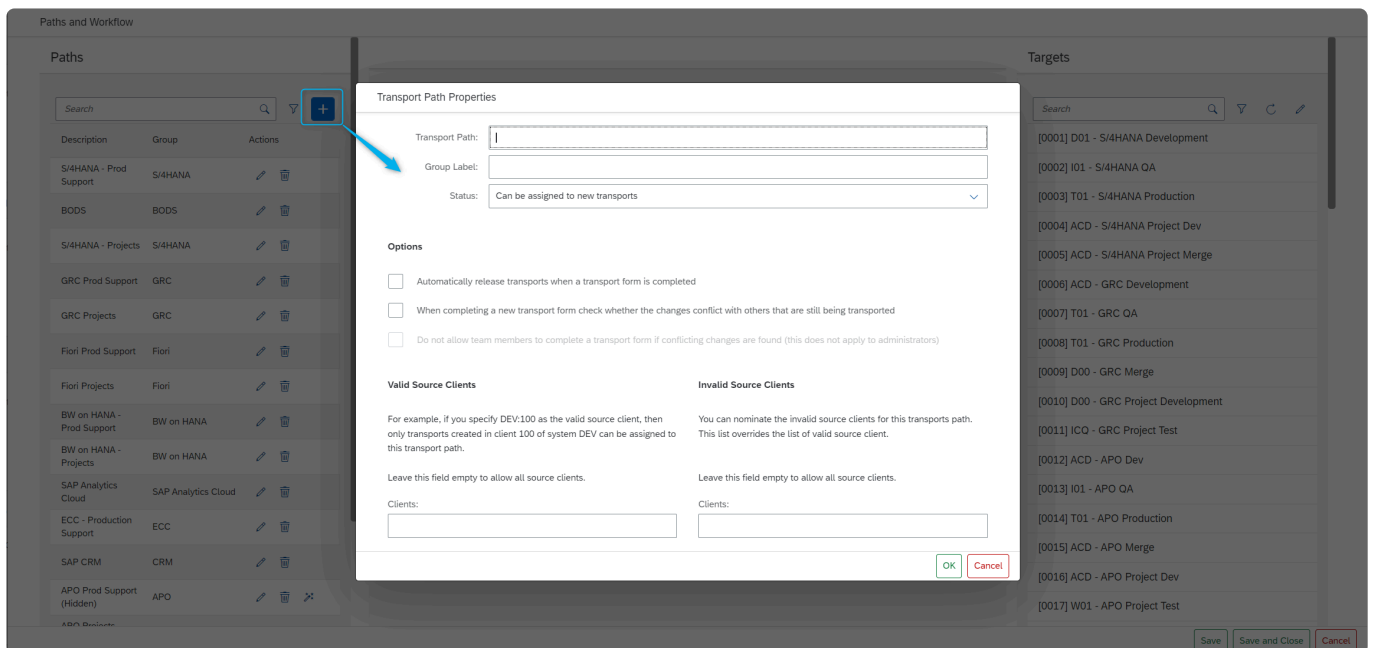
Paths configuration screen within the ActiveControl Web Platform.

The following properties are available as part of the Path configuration screen:

Property	Description
Transport Path	A short description of the transport path.
Group Label	An optional label to group common transport paths together.
Status	This field determines whether the transport path may be assigned to new Transport Forms. It also determines whether an inactive transport path (that can no longer be assigned to new Transport Forms) appear in the ActiveControl main screen
Automatically release transports…	If this option is enabled, ActiveControl will automatically release a transport request when a Transport Form is completed. However, if a pending queue is enabled for the transport path, then the transport request is only released after transporting has been approved.
When completing a Transport Form, check whether the changes conflict with others that are still being transported	When this option is enabled, ActiveControl will automatically check whether there are other transports still being transported on the transport path with changes to the same content. The conflicting transports are displayed in a pop-up window.
Do not allow team members to complete a Transport Form if conflicting changes are found	This option can only be enabled when the previous option is enabled. When enabled, team members may not complete a new Transport Form if other transports with changes to the same content are still being transported on the transport path. This option does not apply to Administrators.

For additional control, ActiveControl allows combinations of valid and/or invalid source systems and clients to be defined for each transport path. When a Transport Form is completed for a transport request, ActiveControl will only allow the transport request to be assigned to a transport path if the source system and client of the transport request satisfies the transport path's source client restrictions

Property	Description
Valid Source Clients	In this field you may specify combinations of source systems and clients for the transport path. For example, if you specify combinations "DEV:100, DEV:200" then only transport requests created in either client 100 or client 200 of SAP system DEV may be assigned this transport path.
Invalid Source Clients	In this field you may specify combinations of source systems and clients that may not be assigned the transport path. For example, if you specify "DEV:300" then transport requests created in client 300 of system DEV cannot have this transport path assigned. The list of invalid source clients overrides the list of valid source clients, though it is not usually used in conjunction with a list of valid source clients.

✳ It is possible to drag Paths up/down on the left hand side of the Paths and Workflow screen. This does not dictate the order that they will be seen in any screens such as the Global View, it is purely to allow Administrators to push all the unused (Hidden) paths to the bottom of the list, and have the most important highest-volume Paths at the top of the list.

5.1.2.2. Creating the Workflow

Once a Path has been created, Targets need to be added to the Path to create the Workflow

An ActiveControl Administrator (or other authorised user) does this by:

1. Selecting the Path on the left hand side of the Paths and Workflow screen. Any targets that are currently assigned will appear in the transport path tree in the middle portion of the screen.

2. Dragging and dropping each required target to the tree from the right hand side, by either 2a. Drop the target system onto an empty space to add the target system as a root node of the transport path, or 2b. Drop the target system directly onto another target system that already appears in the transport path tree to build a hierarchy of targets. 2c. Drop the target in between existing target systems (ie when blue line seen)

3. Switch on the relevant Control Points (ie Inbox, Test Queue, Outbox)

4. Assign a Deployment Status to each enabled Control Point.
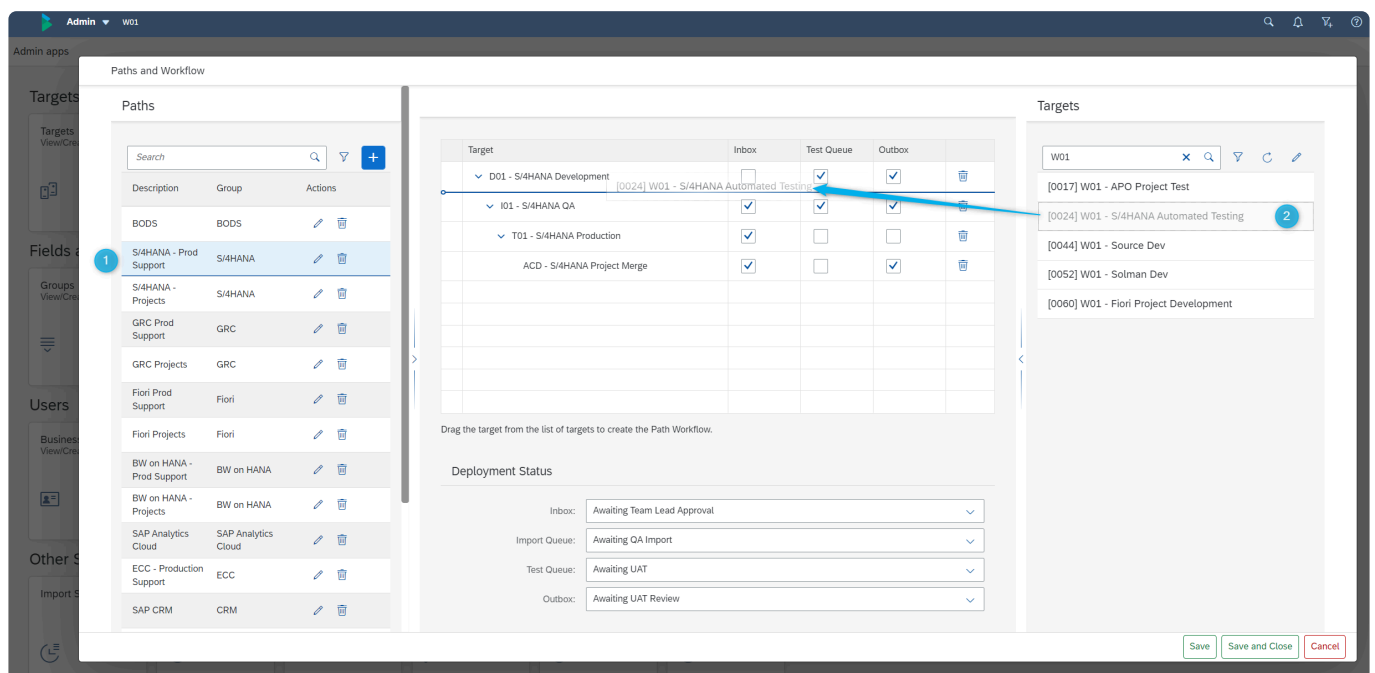
Figure: Drag targets into the Path to create the workflow.

Key Notes:

1) There should only be one target (the Development source system) at the root of the Path.
2) It is not possible to have the same Target on more than one Transport Path. If this is required, you need to create a second copy of the target to use in your second Transport Path.

❋ To prevent control points from being accidentally removed a warning message will be displayed if any transports currently reside in the removed inbox, test queue or outbox. This allows the user to cancel the action.

❋ If a target control point location is subsequently switched off, then transport requests that are currently in that location still need to be approved. The option is only disabled when existing transport requests have been approved (or have had test results entered in the case of the test queue).

5.2. Fields and Metadata

ActiveControl is a highly configurable product, allowing most screens and individual fields to be customised to a particular SAP customer's requirements.

This section of the Administration Guide details some of the key configurable screen/field capabilities:

- Groups
- Types
- Standard Fields
- Custom Fields
- Target Roles
- Statuses
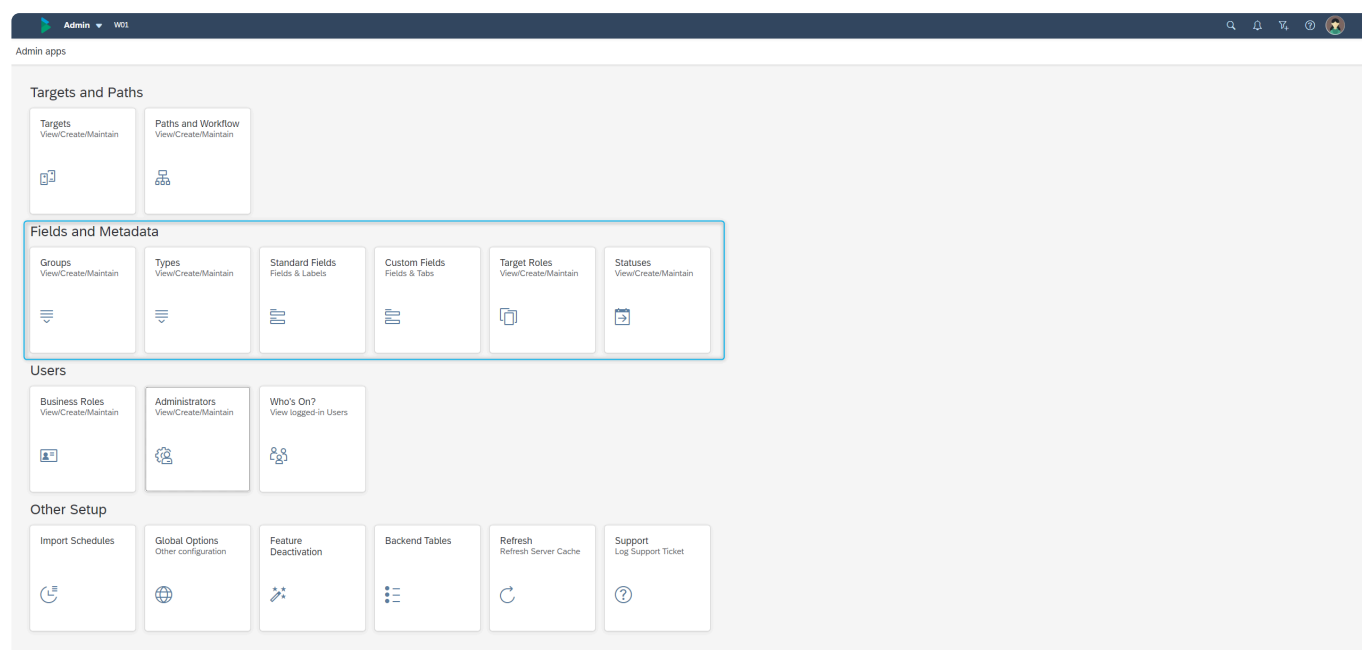
Figure: Fields and Metadata tiles.

5.2.1. Groups

Groups are used to group Transport Forms and Business Tasks into appropriate collections. Typically, groups are used to classify the transport request or task by functional area or team. For example, groups can be used to differentiate Finance changes from Procurement changes.

Groups are primarily used for reporting purposes, but can also in some instances drive the workflow. For example, 'Groups' are often the basis for assigning approvers for Inboxes and Outboxes. For example, an approver may be authorised to approve Finance changes into a target system, but not Logistics changes.

Configuration

Groups are created and maintained via the **Groups** app tile on the Administration screen. Only users with [Y_TECONF]-GROUP can create/edit Groups. Users with [Y_TEUSER]-CONFIG can view but not edit. Groups that have been used in the past but have now become obsolete may be hidden so that they can no longer be assigned.
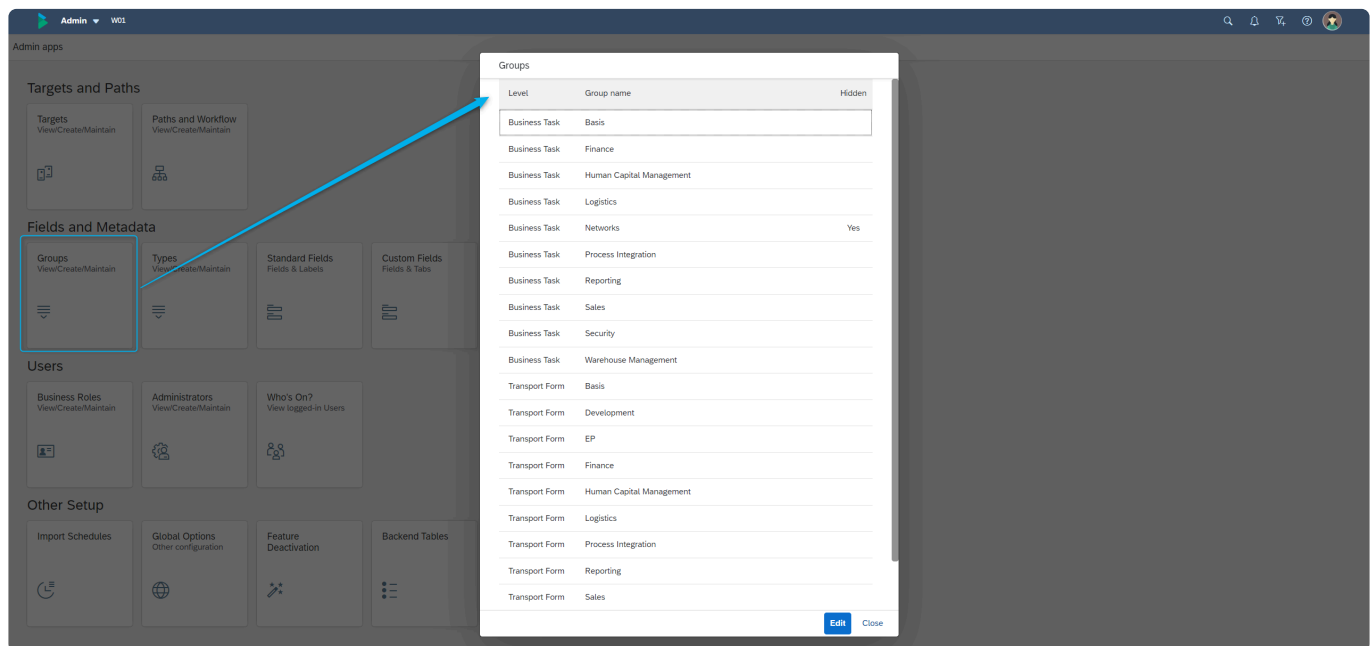
Figure: Group configuration screen.

> ✳ The Rules Engine introduced with ActiveControl 8.00 introduced a lot more power and flexibility around Approvals. Whereas in older releases of ActiveControl, it was only possible to govern Approvals by Transport Form 'Group', the Rules Engine approvals consumer enabled customers to setup approvals logic based on other fields, including Business Task 'Group' (or even combination of fields, such as Group AND Project).

✱ Since ActiveControl 9.00, it is possible to transport Group configuration between a non-Production Domain Controller and a Production Domain Controller. This is done via table /BTI/TE_GROUPS. Please refer to this online Knowledge Article for details of how to configure this.

5.2.2. Types

Types are used as another way of classifying Business Tasks or Transport Forms.

- At Business Task level, a Type could be used to differentiate ticket types (eg Change Request, Standard Change, Incident Fix).
- At Transport Form level, a Type could be used to differentiate transport types (eg Workbench, Customizing, Transport of Copies).

Types are typically used for Reporting purposes, or in some customers also for driving skipping rules so that certain types of Business Tasks or Transports bypass certain parts of the workflow.

Configuration

Types are created and maintained via the **Types** app tile on the Administration screen. Only users with [Y_TECONF]-TYPE can create/edit Types. Users with [Y_TEUSER]-CONFIG can view but not edit.
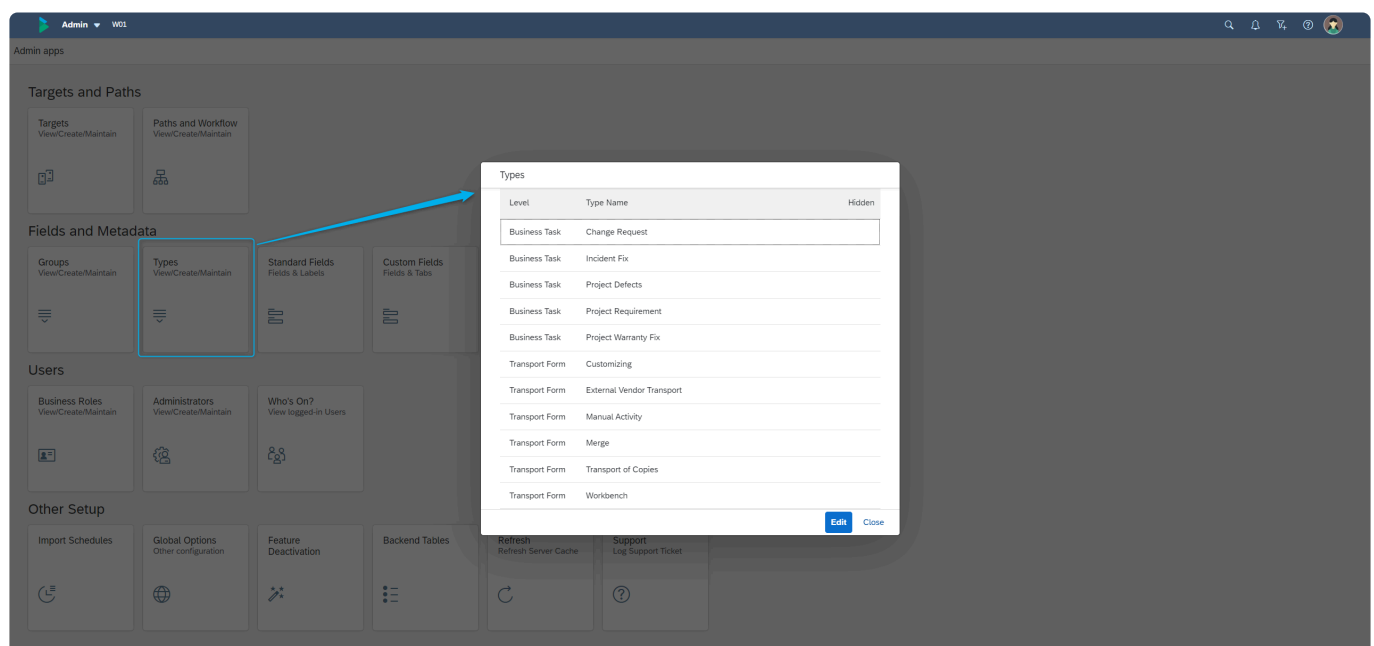
Figure: Type configuration screen.

Once a Type has been created, this field cannot be changed. Types that have been used in the past but have now become obsolete can be hidden.

> ✱ As of ActiveControl 9.00, it is optionally possible to transport Type configuration between a non-Production Domain Controller and a Production Domain Controller, via table /BTI/ TE_TYPE directly. Please refer to this online Knowledge Article for details of how to configure this.

5.2.3. Standard Fields

Various standard Fields exist on Projects, Business Tasks and Transport Forms, as follows:

Field	Level	Details	Further Information
Transport Form	Request Number	SAP-standard TR Number	N/A
Transport Form	Description	SAP-Standard TR Description Field	Link
Transport Form	Long Description	Field where the Transport Owner can put more details about the purpose/contents of the Transport	N/A
Transport Form	Group	Typically used to define the main functional area of a trnasport form	Link
Transport Form	Type	Typically used to define the nature of the transport (eg Workbench, Customizing, Transport of Copies, Merge etc.)	Link
Transport Form	Path	ActiveControl Path against which the SAP Transport will be deployed against	Link
Business Task	Subject	Short Description of the ticket.	N/A
Business Task	Description	Long Description of the ticket.	N/A
Business Task	Project	Short Description of the ticket.	Link
Business Task	Priority	Priority of the ticket (Low, Normal, High, Critical)	Link
Business Task	Group	Typically used to define the main functional area of a change	Link
Business Task	Type	Typically used to define the nature of the Business Task (eg Normal Change, Standard Change, Incident Fix, Project Defect etc.)	Link
Business Task	Deployment Status	Used to give an indication of the location of the Business Task in the process, based on the position of the underlying Transport Forms in the workflow.	Link
Business Task	Planning Status	Legacy concept used as part of pre-Development workflow within ActiveControl	Link
Project	Caption	Short Description of the Project	Link

5.2.3.1. Mandatory Fields

It is possible to configure standard fields on Business Tasks and Transport Forms as **Mandatory fields**, to force users to populate them at the point of creating the Transport Form or Business Task.

If a mandatory field is not populated, the Transport Form or Task cannot be saved.

Configuration

Mandatory fields are defined by ActiveControl Administrators via the 'Standard Fields' app tile on the Administration screen.
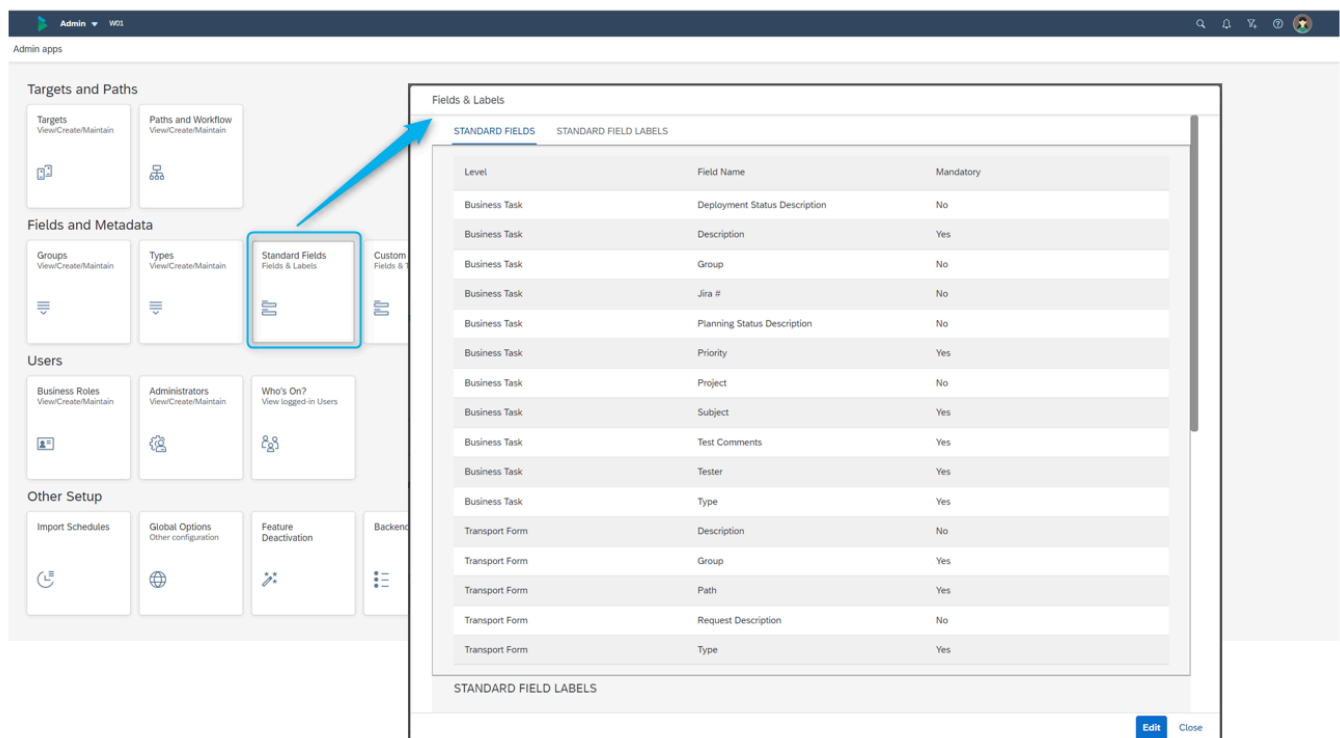
Figure: Fields are defined as Mandatory via the Standard Fields app tile.

> ✳ Some fields must be mandatory for ActiveControl to function correctly. For example, if the Transport Form Group is not populated, it would typically impact the Approvals workflow. Similarly, if you are using some of the standard fields to drive your workflow or skipping rules, it would be advisable to make all such fields mandatory.

5.2.3.2. Standard Field Labels

Standard Field Labels allow customers to rename the standard Business Task field labels (e.g. Description, Subject etc.) to align with their own internal organizational terminology.

For example, it is possible to rename the Business Task 'Group' field to 'Work Package', or the 'Reference' field to instead say 'JIRA ticket' .

The Business Task fields whose labels can be amended with custom labels are:

1. Description
2. Subject
3. Group
4. Reference
5. Project
6. Type
7. Priority

Note that the current custom labels functionality only supports Business Task fields and not Transport Form fields.

Configuration

Labels are added/removed by ActiveControl Administrators via the 'Standard Fields' app tile on the Administration screen.
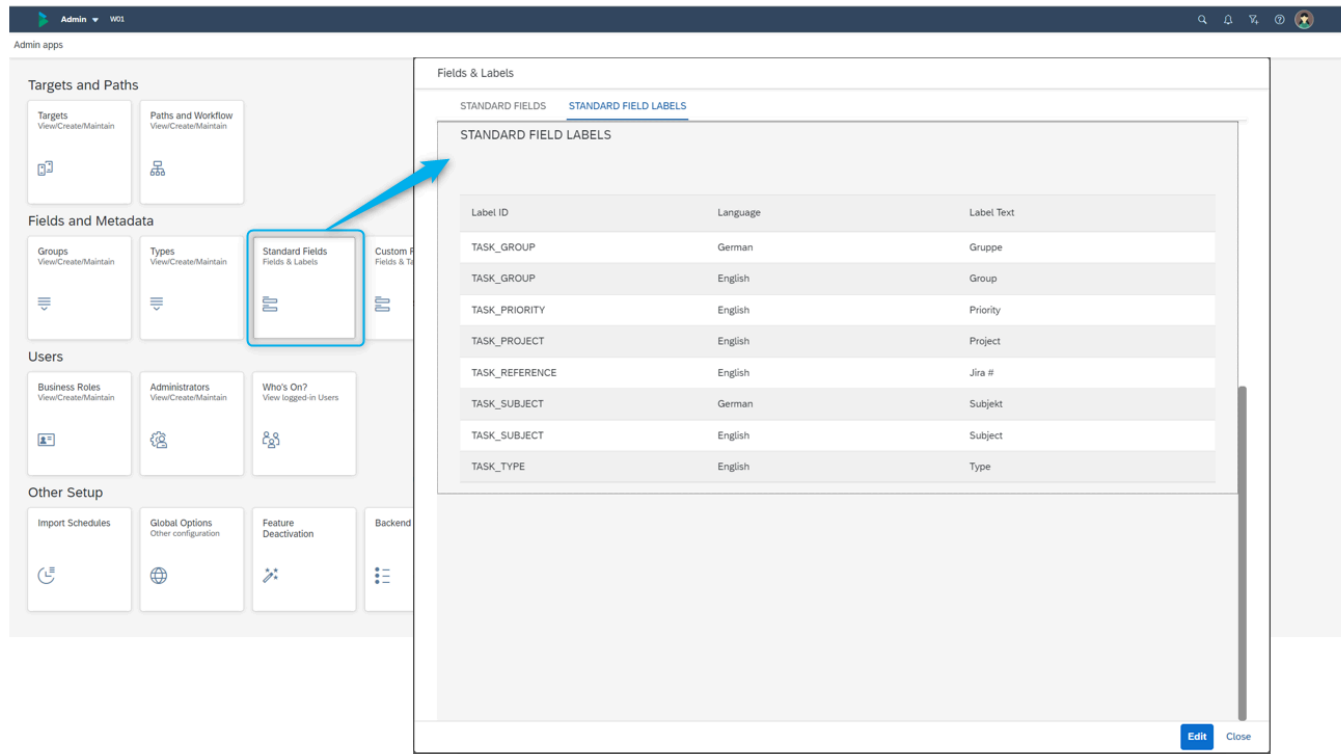
5.2.4. Custom Fields

It is possible to enhance the standard Transport Form, Business Task and Project screens with **Custom fields**.

Custom Fields are a popular way for ActiveControl customers to tailor the out-of-the-box product to their individual processes. Custom Fields can be used to drive 'Skipping' rules within an ActiveControl workflow, and are also available in most ActiveControl Reports.

The following custom field types are currently supported in ActiveControl:

Field Type	Transport Form	Business Task	Project
Text fields	Supported	Supported	Supported
Dropdown List	Supported	Supported	Supported
Option/Radio-Button	Supported	Supported	Not Supported
Check-box	Supported	Supported	Not Supported
Date	Supported	Supported	Supported
Time	Supported	Supported	Not Supported
User Selection	Supported	Supported	Supported
Section Header	Supported	Supported	Not Supported
Dynamic Dropdown List	Not Supported	Supported	Supported

Configuration

Custom Fields are created and edited via the **Custom Fields** app tile on the Administration screen. Users with [Y_TECONF]/BTI/TE_OB-CUSTF can create and edit custom fields. Users with Y_TEUSER-CONFIG can view (but not change).

> ✱ For customers that want to transport Custom Fields, it is possible to do this instead of configuration via the UI. Details of this transportable configuration option can be found in this online Knowledge Article.
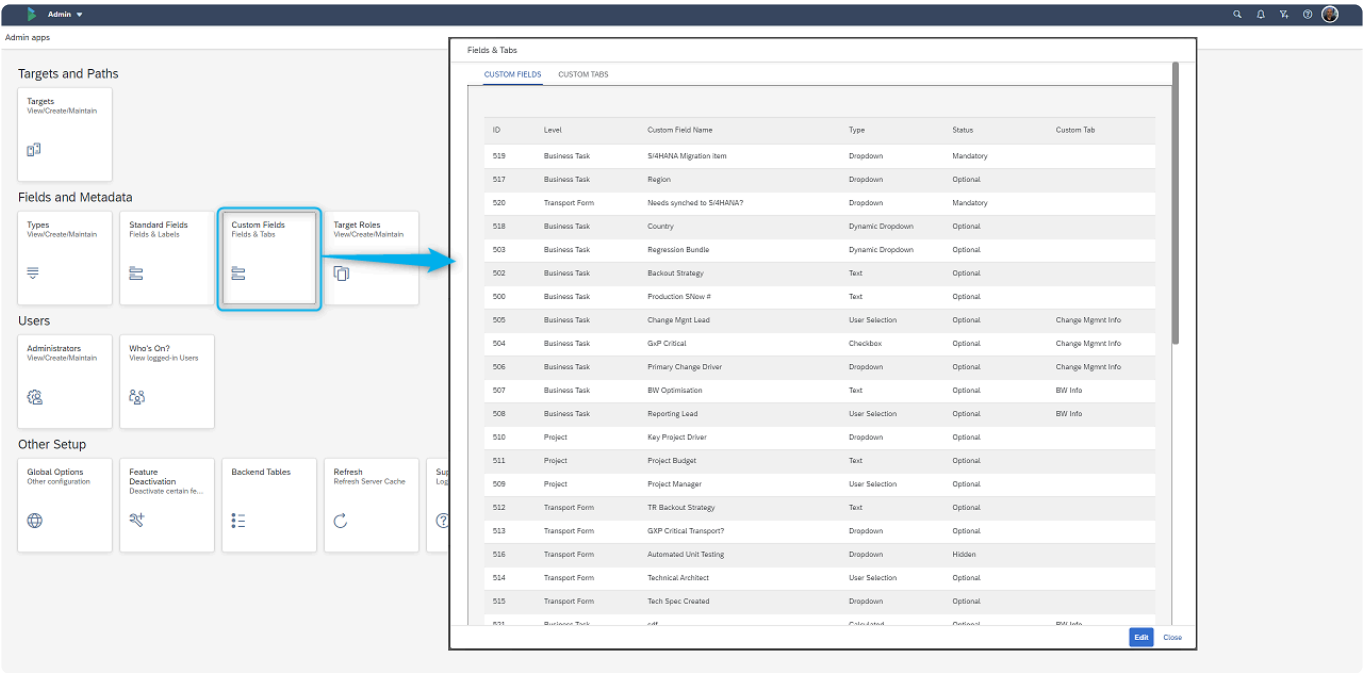
Figure: Custom Field configuration screen.

All custom fields can be marked as optional, mandatory or hidden. Other options are also available for specific custom fields, such as to limit the number of characters of a text field.

> ✱ When you create a Dropdown custom field, the order that you see them in the configuration screen is the sequence that you will see them in the Dropdown on the Business Task or Transport Form.

> ✱ Section Header field type can be used to create logical groupings of custom fields within the same screen. It simply creates a line across the screen.

Make custom fields read-only after a certain Deployment or Planning status

It is possible to make a custom field (on either a Business Task or Transport Form) become read-only after a certain Deployment or Planning status has been reached. This configuration is done via backend table **/BTI/TE_CF_STYLE** in the ActiveControl domain controller.

Field	Description
FIELD_ID	This is the number of the custom field that you want to make read-only, you can get this number from the Web Platform configuration screen.

DSID	This is the Deployment Status (you can select the status from drop-down during configuration, you do not need to get the long GUID from another table).
PSID	This is the Planning Status (you can select the status from drop-down during configuration, you do not need to get the long GUID from another table). Note, most customers do not use Planning workflow so this field will be blank.
READONLY	You need to tick this box to 'activate' your rule.

Notes on read-only Custom Fields

(1) Read-only custom fields only works on custom fields. It does not work on standard fields.
(2) You must configure all statuses where you want the field to be read-only. You cannot just enter the first status in the sequence where it should become read-only.
(3) The sequence of statuses is based on what you have defined in [Task Statuses] configuration screen.
(4) User with authorization object Y_TEUSER for field '/BTI/TE_AC' should have the value 'EDITCUSTFIELD' to edit the configured field to edit the custom fields at any point, regardless if they are read-only due to the configuration.
(5) This functionality relies on a Deployment Status being defined for every target/location in your workflow. This should be done any for effective Reporting within ActiveControl, but it becomes even more important with this functionality. If you have not set Deployment statuses for some of your path/target/locations – you will see spurious results. Please refer to Defining Task Statuses section of this Administration Guide for more information on how to create these.
(6) This functionality uses the Task Statuses calculations ("Use latest step in sequence" or "Use earliest step in sequence") defined in the Global Options configuration screen. This means that if you have more than one transport against a Business Task, you may see unexpected results depending on how you are calculating the status. Similarly, you may also see unanticipated results in the event you link a Transport Form to more than one Business Task as part of your process. It should be noted that this activity is not generally recommended by Basis Technologies for most customers.

5.2.4.1. Custom Field Tabs

ActiveControl includes a capability to add **Custom Tabs** on a Business Task or Transport Form level. This can be useful for customers that want to add a large number of custom fields within ActiveControl to track additional information, but don't want them all to appear on the main General tab.

Custom tabs are visible on the Business Task and Transport Form screens in the Web Platform. They are not seen in the SAPGUI screens.

Configuration

Custom Tabs can be created via the **Custom Tab** subscreen on the Custom Fields app within the Administration screen.
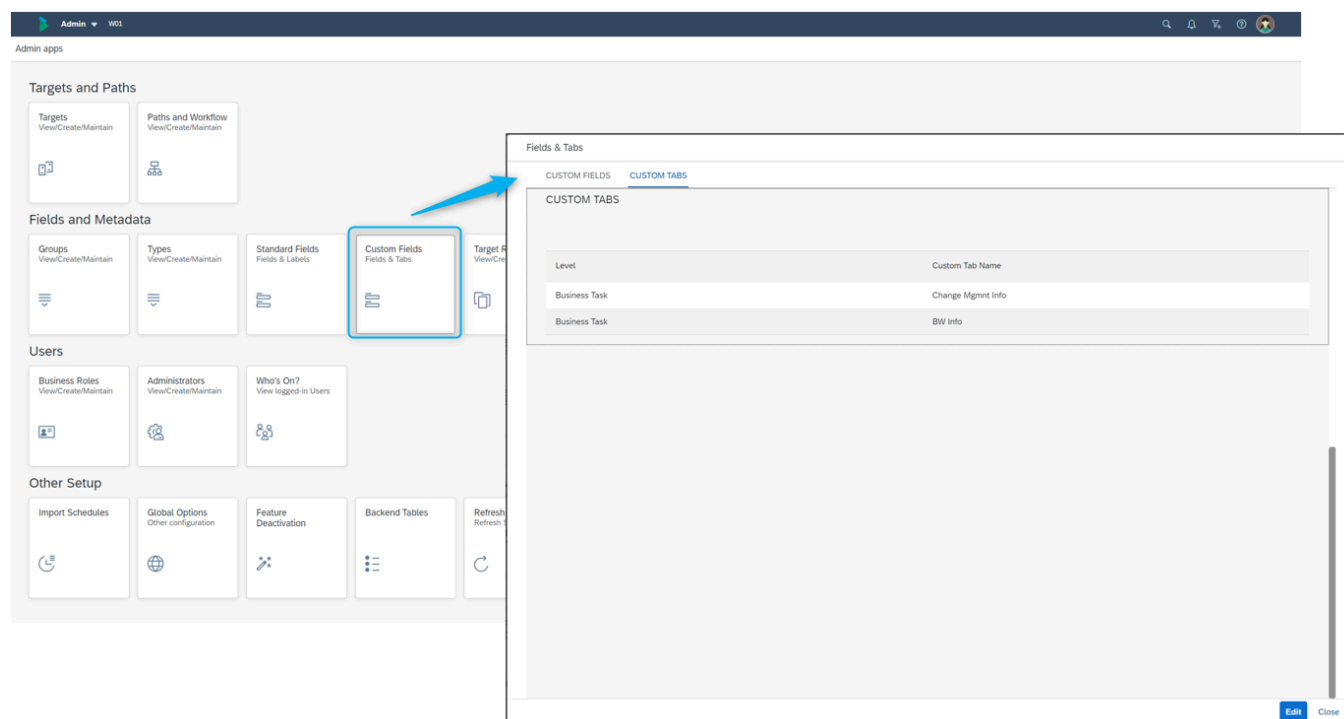
Figure: Custom Tab configuration screen.

After creating the new custom tab, custom fields can then be assigned to the custom tab. If left blank, the custom field will appear on the 'General' subscreen by default.

If you decide that a custom tab is no longer needed as part of your process, you can only delete the tab and/or the custom fields. It is not possible to hide the custom tab.

5.2.5. Target Roles

A **Target Role** is used to enforce transport request dependencies between systems in different transport paths.

The target role essentially tells ActiveControl what systems are at the same level of a landscape (eg that a ECC Dev and BW Dev system are at the same level).

When creating a dependency between transport requests, ActiveControl ensures that the dependent transport request will not be imported into a system until its dependencies have. With the configuration of target roles, it is possible to assign multiple systems in different transport paths the same role. This will ensure that the dependent transport request is not imported into a system with a specific role until all its dependencies are imported into another system with the same role.

A practical application of the use of roles can be explained with an example landscape that contains an ECC and Business Warehouse transport path, each with Development, Quality Assurance and Production systems. By grouping the two Quality Assurance systems with a role "Quality Assurance" and the two Production systems with another role "Production", it is possible for transport request dependencies to be upheld across the entire landscape. This can ensure a necessary change is moved into the BW Quality Assurance system, before a dependent change is moved into the ECC Quality Assurance system. Similarly the dependencies will be upheld when importing into the corresponding Production systems.

Configuration

Target Roles are maintained by ActiveControl Administrators via the Target Roles tile within the Administration screen.
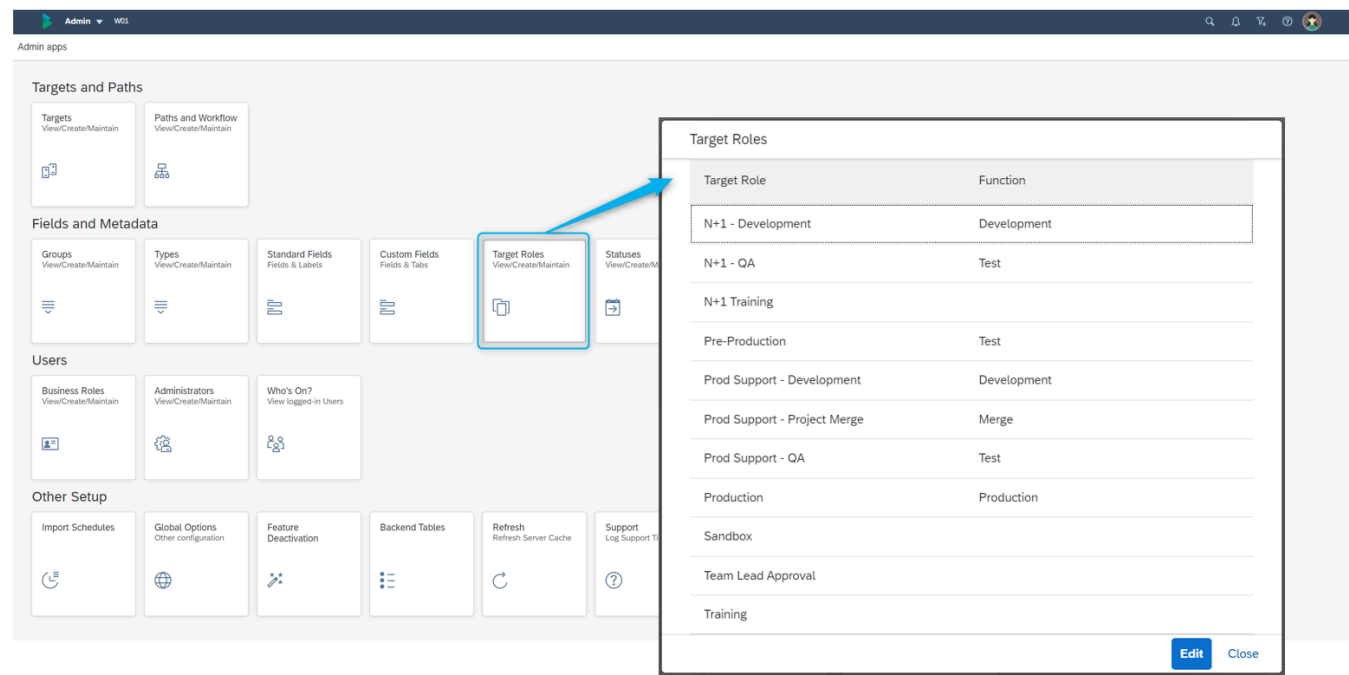
Figure: Target Role configuration screen.

5.2.6. Statuses

A Business Task can have two different kinds of **Status** configured against it:

1. Deployment status
2. Planning status

The Deployment Status is used for reporting purposes within ActiveControl, in terms of indicating where a specific Business Task is in its overall lifecycle, and the position of the associated Transport Forms in the workflow.

> ✳ Changing the configuration of new or existing Deployment or Planning statuses will not trigger updates to existing Business Tasks within ActiveControl. Once changes to the Planning Status configuration have been completed, execute the report /BTI/ TE_RUTASK_STATUS_UPDATE in the Domain Controller. This will re-calculate the planning and deployment statuses for each selected Business Task.

5.2.6.1. Deployment status

The **Deployment Status** of a Business Task reflects where the underlying Transports are in the workflow process. Each control point within a path can be configured with a Business Task Deployment status. Whenever a Business Task, or any of the Transports attached to it are changed or move along a transport path, the Business Task Deployment status is updated. The Deployment Status assigned to each control point in a transport path is configured as the target is associated to a Path during path configuration.

A Deployment Status can be configured for each control point enabled (Inbox, Test Queue and Outbox). A sequence number allocated to each Deployment Status helps indicate the statuses nearer the start of the workflow (lower numbers) and the statuses relating to control points near the end of the workflow (higher numbers). The numbers themselves do not specifically matter (ie ActiveControl will not handle 1,2,3,4,5 any differently to 10,20,30,40,50).

When ActiveControl calculates the Deployment status of a Task, it takes into account all of the Transport Forms assigned to the Task plus the Deployment Status Calculation configuration. If transports are in several control points, ActiveControl will use the status with either the lowest or highest sequence number depending on this configuration option. If all transports assigned to the Business Task are finished in all paths, ActiveControl will set the system Deployment Status as 'Deployment Complete'.

Configuration

Deployment Status' are created and maintained via the **Statuses** app tile on the Administration screen.
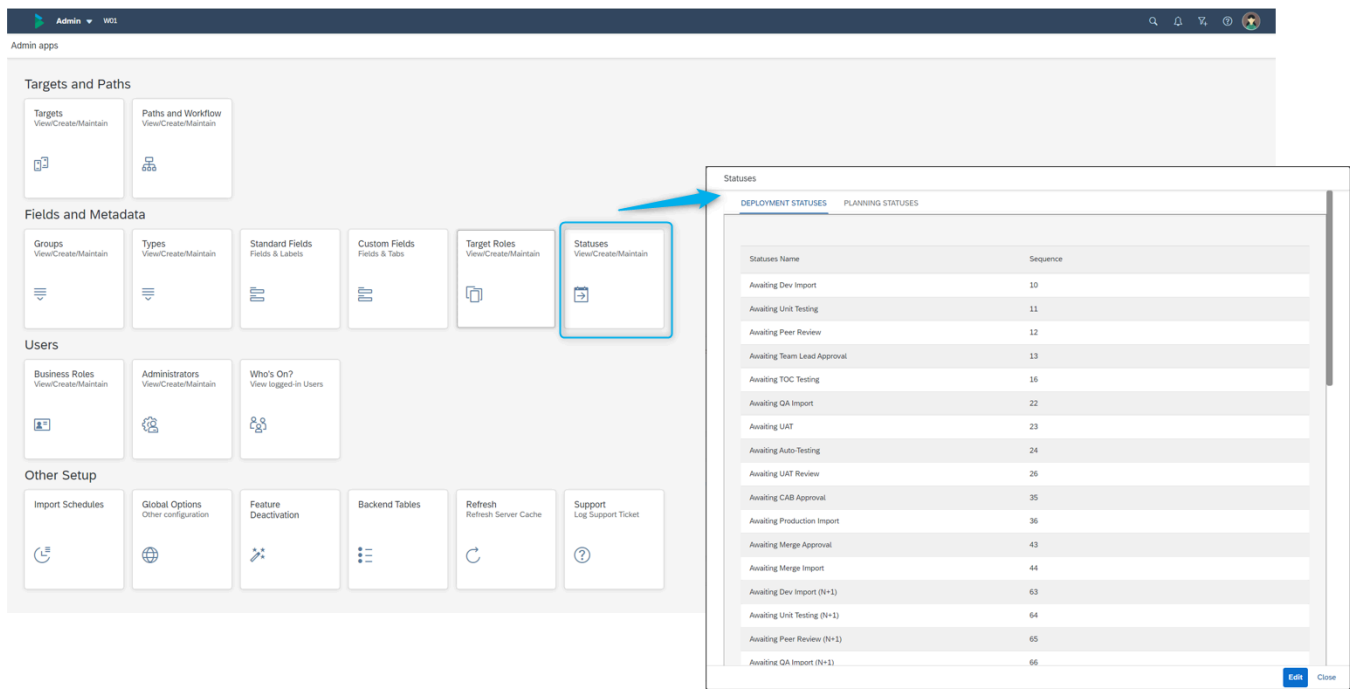
Figure: Deployment Status configuration screen.

❋ Deployment Complete is the final deployment status that all Business Tasks will go to when all underlying Transports have gone all the way through the workflow (including Transport Forms that are deleted from control point but not actually imported to all targets in the path). The Deployment Complete sequence number must be the highest configured sequence number.

5.2.6.2. Planning Status

Planning Status were used as part of a legacy Task Planning capability within ActiveControl, which allowed Customers to define pre-development Approval Workflows. This Task Planning workflow was retired in ActiveControl 7.0, as the vast majority (ie 98+%) of Basis Technologies customers are using best-of-breed tools such as ServiceNow, JIRA or Microsoft Azure DevOps to manage such change lifecycles.

The Planning status is still seen on the Business Task screen, primarily as a means of allowing customers to reflect a simple Change Approval process (eg Awaiting Approval / Approved) prior to starting to create transports against a Business Task. Details of how this can be setup are detailed in this online Knowledge Article. It should be noted however that even this simple Planning process is not widely used by Basis Technologies customers (since most have an ITSM tool such as Jira or ServiceNow for this pre-Development process) and may be retired from the product completely in the future.

Configuration

For the handful of Basis Technologies customers that do use Planning status field as part of a simple pre-Development approval workflow on each new Business Task, Planning Status' can be created and maintained via the **Statuses** app tile on the Administration screen. 95% of ActiveControl customers will not require to configure this part of the product.
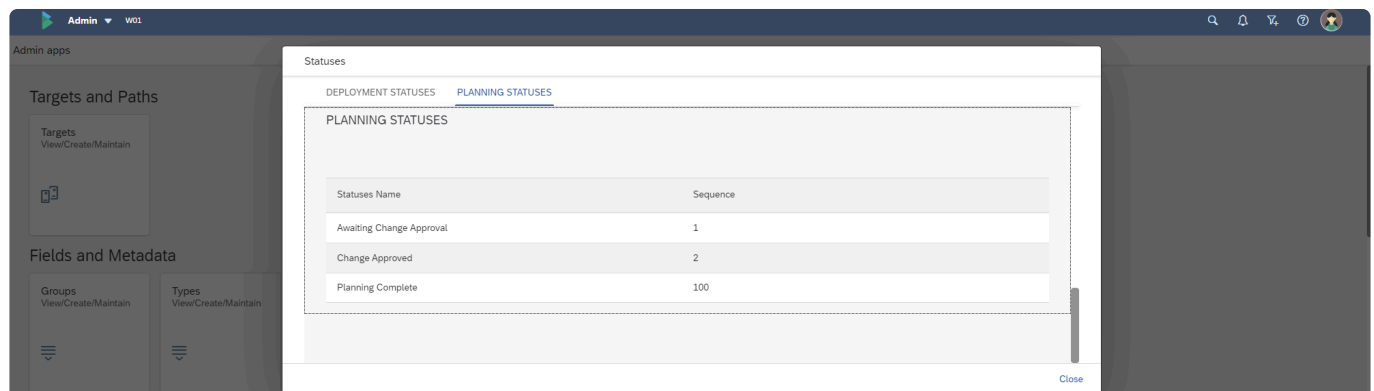
Figure: Planning Status configuration screen.

✱ Since 95% customers do not utilise Planning Statuses within ActiveControl, it is possible to hide the Planning Status dropdown field from the Business Task within the ActiveControl Web Platform by using Feature Deactivation

5.3. Users

This section of the Administration Guide details the various app tiles available within the **Users** section of the Administration screen.

- [Business Roles](#)
- [Administrators](#)
- [Priority Approvers](#)
- [Who's On?](#)
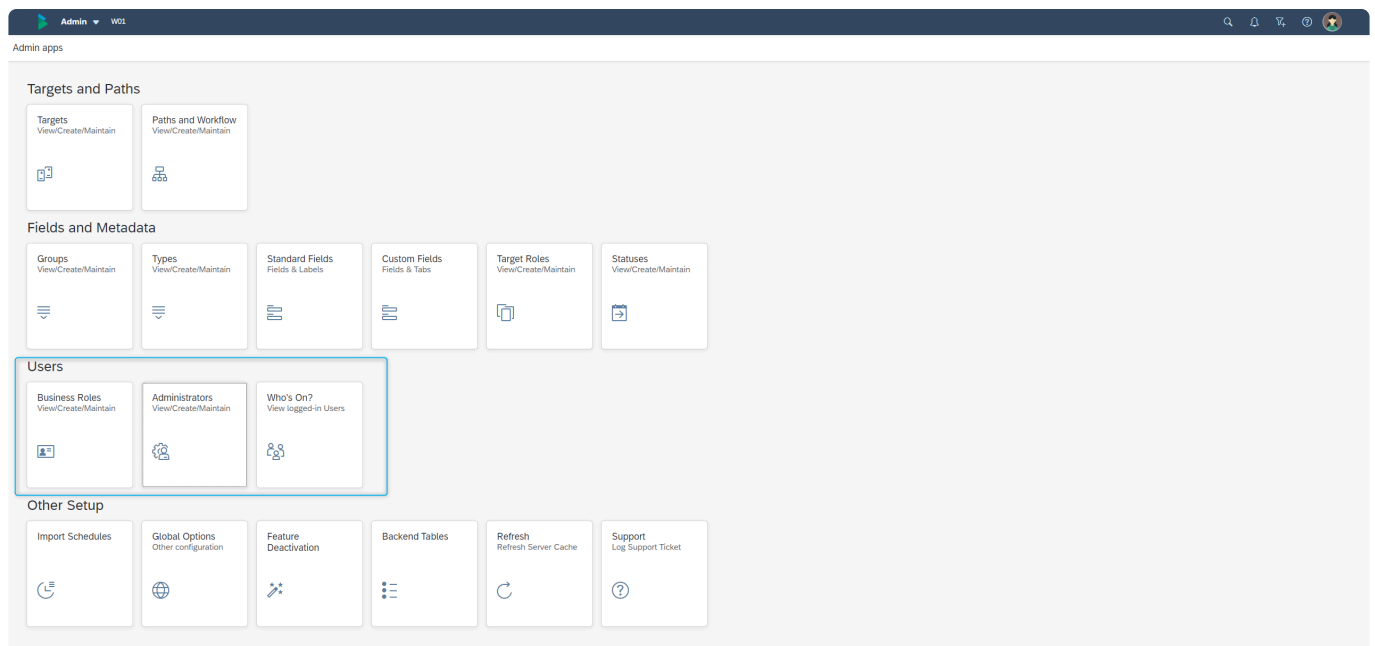
Figure: Users related tiles.

5.3.1. Business Roles

Business Roles (and User assignments) are used within various parts of ActiveControl, including:

- Within the [Rules Engine approvals consumer](#), to define who can approve in the Inboxes and Outboxes in the workflow.
- Within the [Rules Engine testing consumer](#), to automatically add testers to Business Tasks.
- To define recipients for [Custom email notifications](#).

Business Roles and the associated User assignments should not be confused with SAP user roles and assignments, however it is possible to link these entities by using the optional capability detailed in this [online Knowledge Article](#).
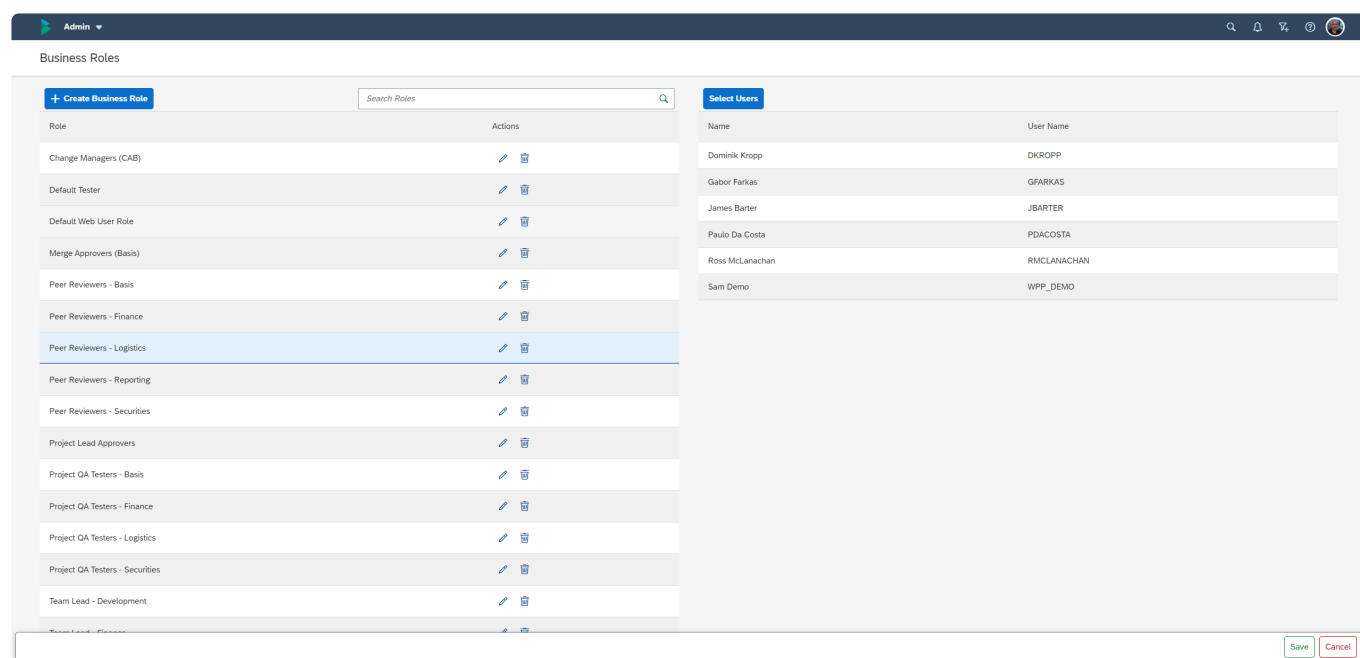
Figure: Business Roles configuration screen.

Configuration

Business Roles are typically maintained via the Business Roles app tile on the Administration screen.

For customers that prefer to transport User Roles via SM30 configuration, this can be done via the configuration detailed in this [online Knowledge Article](#).

5.3.2. Administrators

ActiveControl Administrators are the users within the customer organisation that are responsible for the ongoing maintenance and technical configuration of ActiveControl.

Within most of our organisations, these resources are typically either SAP Basis or SAP Change & Release resources.

> **!** Basis Technologies recommend to have no more than 3-4 users as Administrators, to minimise the risk of mistakes being made to the setup of ActiveControl, and also because Administrators have extremely powerful access (eg. they can approve any Transport Form or Business Task within the workflow, even when they are not configured explicitly as an Approver in the target configuration or Rules Engine configuration.

Configuration

ActiveControl Administrators are defined in one of two ways:

1. Via ActiveControl role authorisations assigned via SU01
2. Via the Administrator app tile in the Administration screen of the Web Platform

Any user that is assigned as a Administrator via either of the above methods will be able to perform configuration on the Administration screen.

> ***** Most of Basis Technologies customers prefer to maintain Administrators via the role authorisation method.

Administrator – assigned via role authorisations.

A user with the below authorisation assignments in SU01 of the ActiveControl Domain Controller will be able to perform the Administration functions within the product:

/BTI/TE:CTS_ADMIN_USER
/BTI/TE:STD_ADMIN_ROLE

Administrator – assigned via Administrator app tile

A user can be assigned as an Administrator via the Administrator app time on the Admin screen.
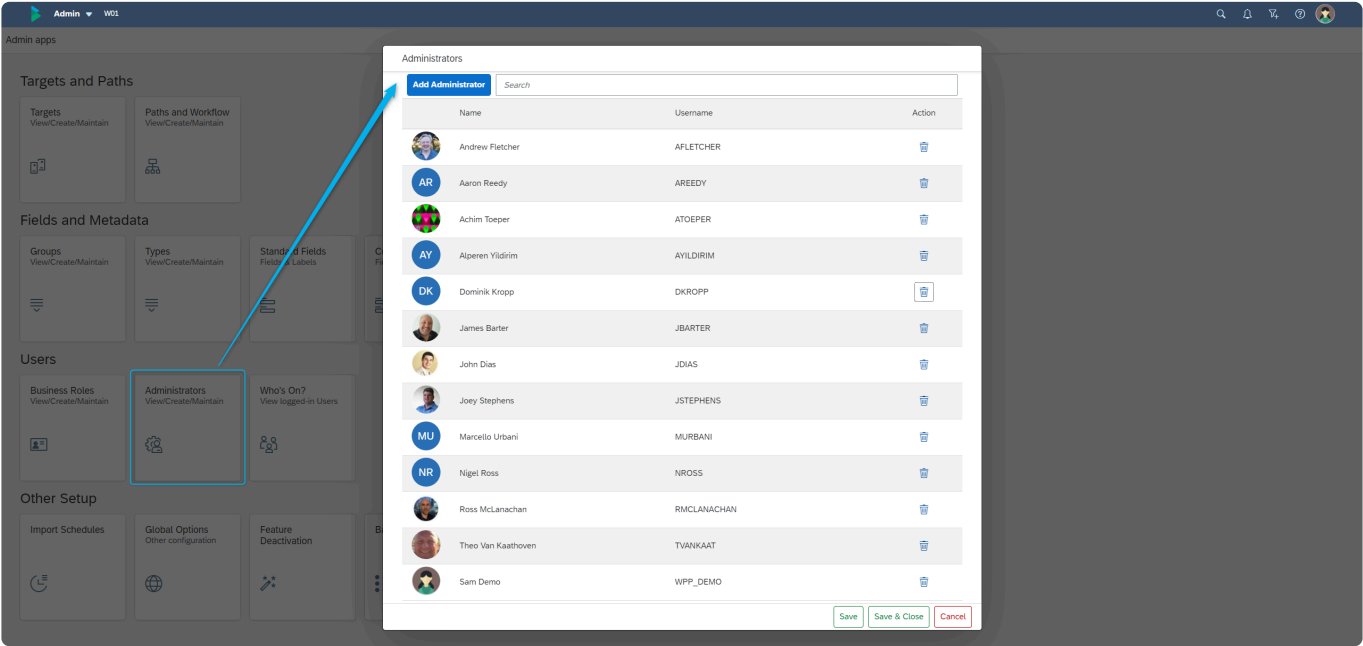
Figure: Administrator app screen.

5.3.3. Priority Approvers

Priority Approvers may approve changes in any Inbox or Outbox. Additionally, when approving a selection of changes, they may choose to approve with priority, which means that the changes will not need to be approved into or out of any other targets, once the priority approval is given. Priority Approvers may also sign off the Test Queue of any Business Task.

Configuration

Priority Approvers are created and maintained via the **Priority Approvers** app tile on the Administration screen.
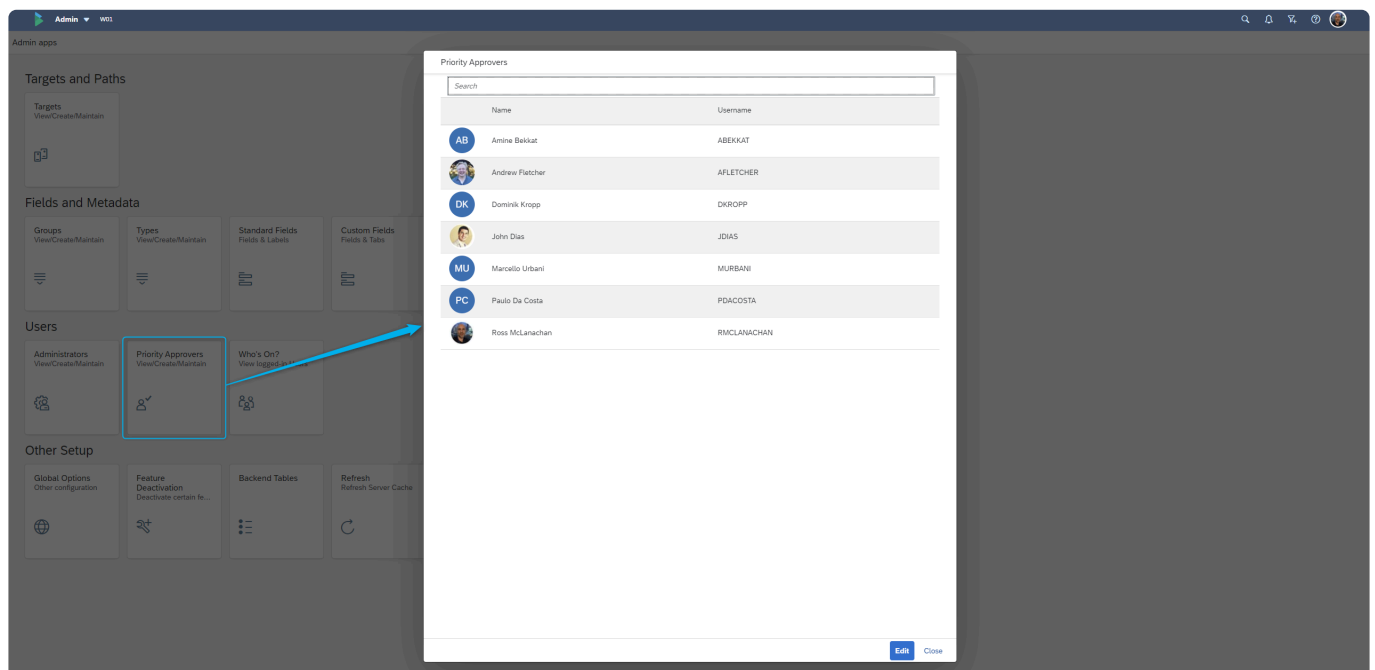
Figure: Priority Approvers configuration screen.

> ❗ Priority Approvers is quite powerful functionality within ActiveControl, as it in effect means that the automated analysis checks are bypassed and issues are potentially not highlighted. For this reason along with wider audit/compliance concerns, many Basis Technologies' customers choose not to enable Priority Approvers as part of their ActiveControl workflow.

5.3.4. Who's On?

Who's On? screen can be used by Administrators and other authorised users to see who is currently logged onto the Web Platform. Who's On screen is accessed via the Administration screen.
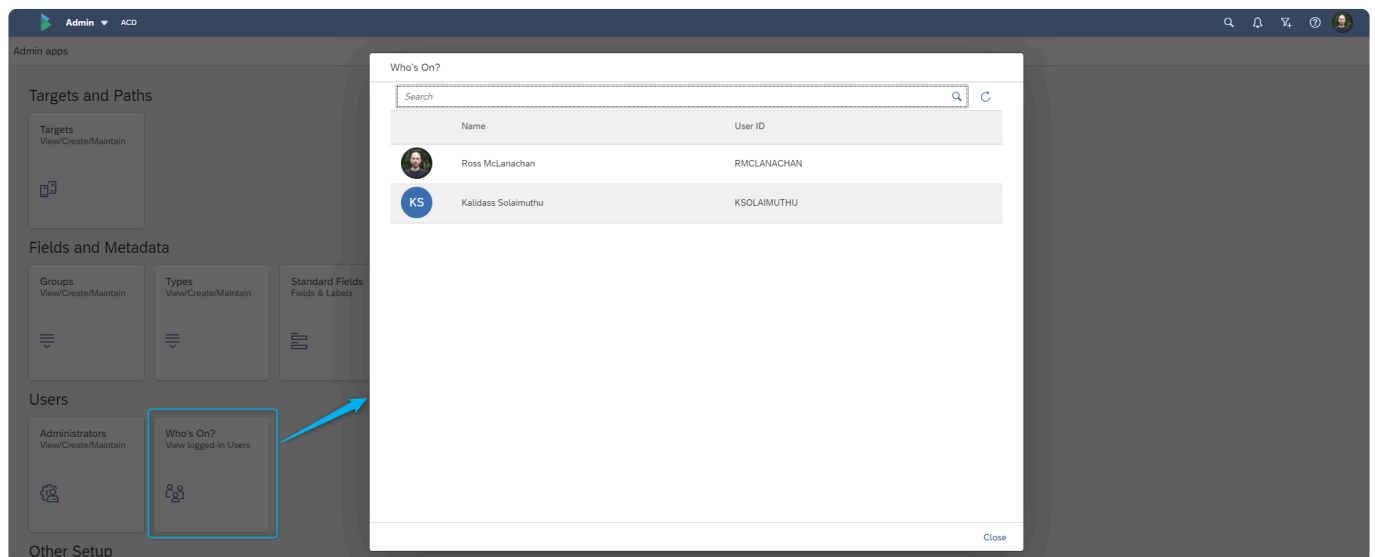
Figure: Who's On' screen.

5.4. Other Setup

This section of the Administration Guide details all of the app tiles available within the **Other Setup** section of the Administration screen.

- [Import Schedules](#)
- [Global Options](#)
- [Feature Deactivation](#)
- [Backend Tables](#)
- [Refresh](#)
- [Support](#)
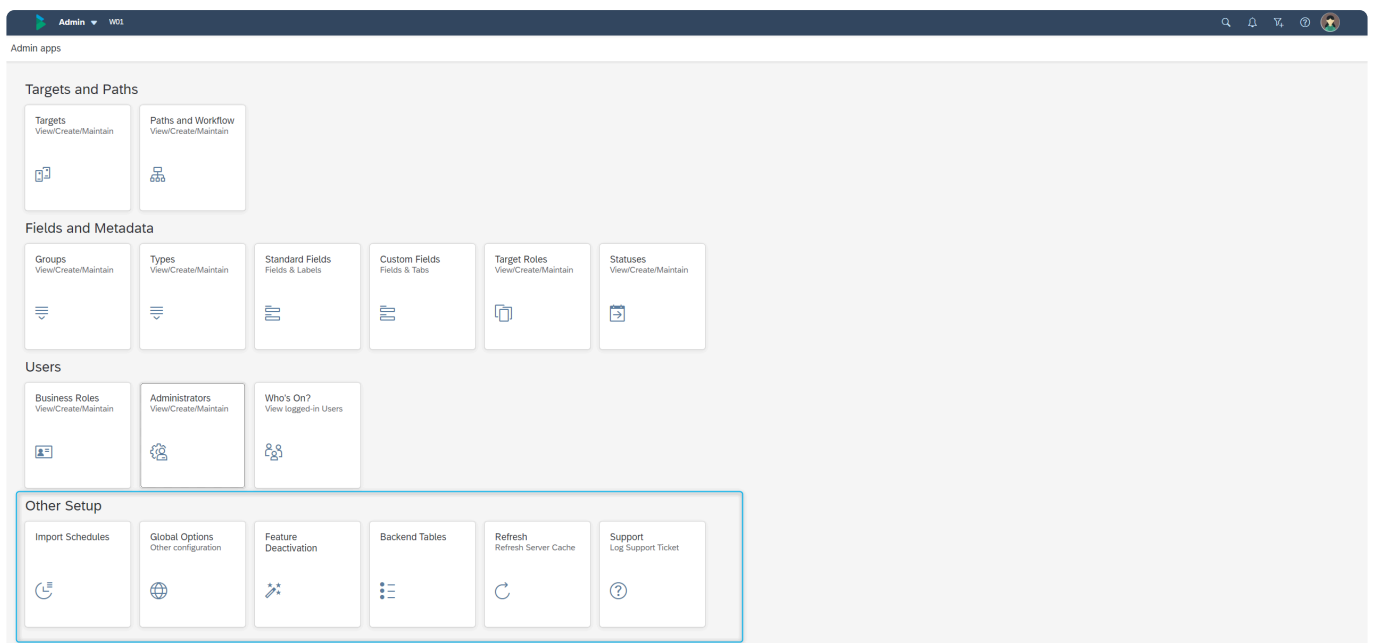
Figure: Other Setup tiles.

5.4.1. Import Schedules

An **Import Schedule** defines a list of days and times when transport requests should be imported automatically.

When an Import Schedule is assigned to a target, ActiveControl automatically creates a background job in the Domain Controller that will import transport requests that are currently within the target's import queue.

The name of the automated import job is **TE_SCHEDULED_IMPORT_SID_nnnn**, where SID is the SAP system ID and nnnn is an internal number for a target. These background jobs should not be maintained or deleted from directly within SAPGUI.

ActiveControl ensures that the background job always executes according to the current version of the transport schedule. This includes deleting the aforementioned background job if the transport schedule is no longer assigned to the target.

Configuration

Transport Schedules are maintained by ActiveControl Administrators via the **Import Schedules** app tile. There are three steps to creating an Import Schedule:

1. Each Schedule has a description and optionally the user ID that the import should be scheduled under.
2. The timings are allocated to the Schedule, and then dragged to the right-hand window.
3. Any restrictions can be allocated to the Schedule.
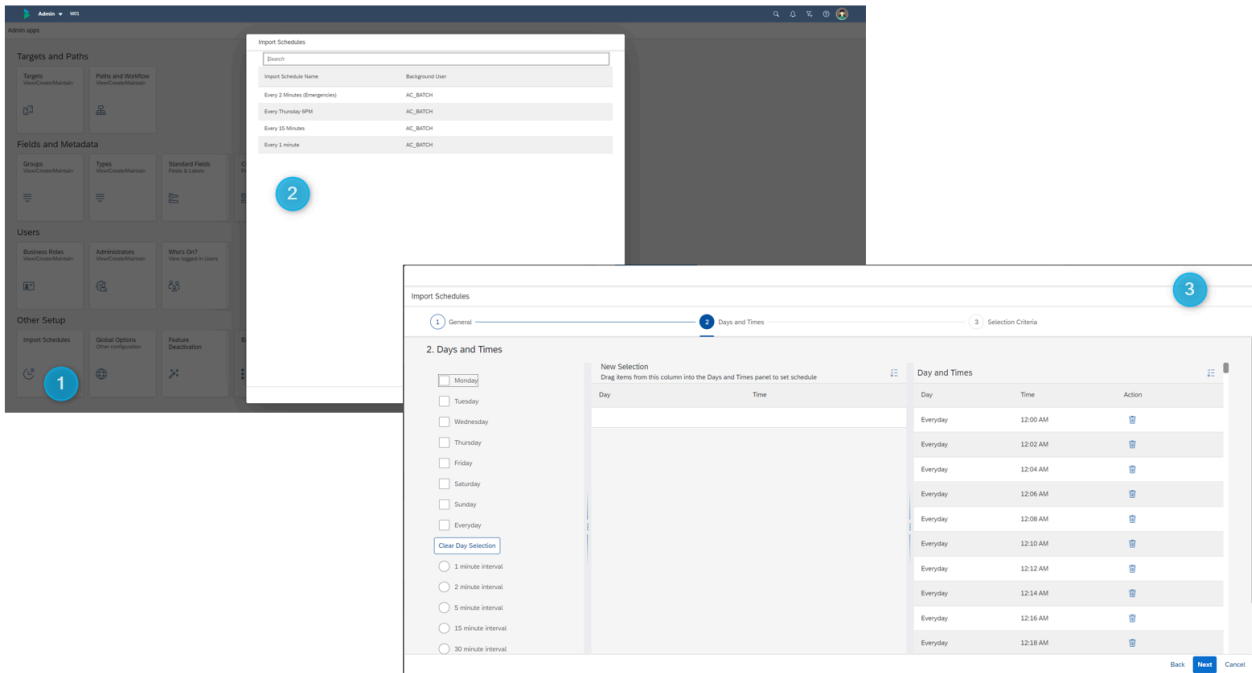
Figure: Import Schedule configuration screen.

> ✳ Basis Technologies recommend to use a dedicated batch user in your Domain Controller for handing Transport Schedules. This batch user – which we typically call AC_BATCH – needs to have /BTI/TE:CTS_ADMIN_USER, /BTI/TE:CTS_RFC and /BTI/ TE:COMP_ADMIN_ROLE roles assigned to it.

> ✳ As well as the AC_Batch user, it is also necessary for an RFC to be created in the Domain Controller, that points back at itself. (eg TRANSPORT EXPRESS [SID], where SID is the System ID of the Domain Controller.

> ❗ Please note that maximum limit of 64 import schedules can be configured within ActiveControl. This is unlikely to be an issue at the majority of customers, but it is worth being aware that housekeeping should be done to delete Import Schedules that are no longer used, to avoid them building up and potentially reaching the upper 64 limit. Addititional information on the error relating to this can be found in this online Knowledge Article.

5.4.1.1. Condition-based Import Schedules

It is possible to create and assign multiple condition-based Import Schedules to an individual Target system.

This can be helpful in scenarios where you want to deploy different types of transport/change to different release frequencies, for example if you want Emergency Fixes to be imported as soon as they are ready, but other Business Task 'Types' to be deployed as part of a less frequent release cycle.

Configuration

Condition-based Schedules can be configured within the Selection Criteria section of the Import Schedule creation process. Conditions can be created based on both standard and custom fields at both a Business Task and Transport Form Level.

Figure: A simple example of a condition-based Import Schedule, based on Business Task 'Priority'

5.4.1.2. Future Scheduled imports

It is possible to future (or forward)) schedule Transports into **Production** – ie to set a date/time in the future before which the Business Task will not be deployed to Production, even if the underlying Transport Forms are sitting in the Import Queue.

This can be done via options available on the individual Business Task **Scheduling** subscreen.

This functionality aims to address the scenario whereby an ActiveControl customer has a regular release cycle, but wants to delay specific changes until a specific date/time *after* the next planned release.

Figure: Future scheduling a Business Task so it is not deployed to Production before a specified Date/ Time in the future.

Configuration

Please refer to this [online Knowledge Article](#) for all configuration that needs to be enabled to use this optional ActiveControl capability.

> **!** Forward Scheduling is completely separate to standard ActiveControl Import Schedules configuration, and does not work in conjunction with any custom field based Selection Criteria rules that you may have setup. This means that if you setup a forward schedule, it will be imported at the specified future date/time, irrespective of any restrictions you have configured as part of ActiveControl standard Import Schedules.

> **✳** When using the Future Scheduled "One Off" imports functionality – it is recommended not to schedule /BTI/TE_RX002 to run at the same time as the standard automated import jobs. Eg if you are running 5-minute schedule at 1:00. 1:05, 1:10 etc – then you are best to schedule /BTI/TE_RX002 to run at 1:04, 1:09, 1:14. Doing this segregation will reduce the risk of the forward scheduling not happening because the import queue is

already locked by the standard automated import job.

5.4.1.3. Assigning Import Schedules to Targets

Import Schedules can be assigned to Target Import Queues in two ways:

1) Via the Target configuration app
2) Via the Global View

Assigning Import Schedule via the Target app

Import Schedules can be assigned to a particular Target via the *Import Options" subscreen of the Targets app.

Figure: Import Schedules can be added via the 'Import Options' subscreen within Target configuration.

Adding Import Schedule via the Global View

Import Schedules can be assigned to a particular Target whilst in an Import Queue in the Global View, via the Schedules dropdown

Figure: Assigning Transport Schedules via the Global View.

! Import Schedules are only active within ActiveControl if the 'Scheduled by ActiveControl' option is enabled.

5.4.2. Global Options

Numerous global configuration options are available via the **Global Options** tile on the Administration screen.

These configuration options are all global configuration options that impact all usage of the product.

Business Task

Option	Description
Configured testers only to complete testing	When this option is enabled ActiveControl will only allow users allocated as testers in the Business Task to "Save and Approve" testing. This will also validate testers assigned to specific systems and system roles. If not set anyone can complete the testing for a Business Task. Note: In all cases users must be allocated with the TESTAPPROVE activity (Authorisation Object: Y_TE_TASK – Task Activities) to allow them to "Save and Approve" testing.
Auto-generate Task Reference with prefix:	This is useful for customers that do not use another Change Management ticketing tool, and are looking for a way to generate a unique identifier for each Business Task within ActiveControl. It is possible to configure a 3-character prefix for the sequential number.
Deployment Status Calculation	If more than one deployment status could be applied to a task, this configures which one the system should assign. Either the one with the earliest sequence or the one with the latest sequence.

Transport Forms

Option	Description
Require Transport Forms to be assigned to related tasks	When a Transport Form is completed for a transport request, it is always possible to assign the transport request to one or more Business Tasks, such as a request for a new report or a logged production support problem. Business Tasks provide greater visibility of related transport requests and associate technical changes with business requirements. Business Tasks are necessary if test results are to be entered. Enable this option to prevent a Transport Form from being saved if the related tasks section has not been maintained.
Prevent Transport Forms being linked to more than one Business Task	Basis Technologies recommendation within ActiveControl is not to purposefully assign a Transport Form to more than one Business Task (except for Consolidated Merge scenario).

Prepopoulate Type, Group, Path in new Transport Forms from last used value	This option can be used for customers that do not want the Transport Form fields to be pre-populated with the last values that the user entered.
Allow team members to delete Transport Forms of transport requests that have been imported	By default, in order to avoid losing transport history, only an administrator may delete the Transport Form of a transport request if the transport request has already been imported into some target systems. Enable this option to override this behaviour.
Enable "Add to Control Point" function	This option switches on the "Add to Control Point" functionality that allows Transport Forms to be assigned to control points in the transport path. This can be an inbox, outbox or test queue as required. This is used when a re-approval is required for the relevant transports.

Transports

Option	Description
Cache remote transport data	This option enables the caching function that stores details of remote transports on the domain controller. This means that ActiveControl does not have to make RFC calls to the remote systems to obtain the transport data. Performance is therefore improved when accessing transport requests without a Transport Form and also when viewing transports in control points. Note: Once switched on the ActiveControl GUI will need to be closed and re-started for the caching to take effect.
Hide Transport originating in 'hidden' systems	This option will not show transports if the target is set as hidden

Approvals & Analysis

Option	Description
Approvals: Request password re-entry on approval	This option allows ActiveControl customers to specify whether password must be re-entered during any approval, for increased security. This is of particular interest in an FDA or Sarbanes-Oxley compliance perspective at some customers. When switched on, every Inbox and Outbox approval will requires a password confirmation.
Require	This option can be used to force approvers to enter a reason when the 'Approve Anyway'

reason on transport Approve/ Import Anyway	button is clicked on the Analysis Results warning screen.
Analysis Mode	Select whether you want to: (i) Disable cross path conflict checks. (ii) Enable cross path conflict checks for non-hidden Targets. (iii) Enable cross path conflict check for all Targets.

Analysis Mode is where you specify whether you want the Conflict Analysis Checks to only look down the path in which you are doing the analysis, or alternatively analyse all paths (based on the system you are in and its allocated target role etc). The default value (and generally what it should be set-to for most customers) is: "*Enable cross-path conflict checks for all targets*". This ensures that any conflicts are picked up in the situation where multiple transport paths are being used by an ActiveControl customer for the same SAP system, and also when a user has manually set cross-system/path dependencies (e.g. a BW transport on an ECC transport etc.). Customers that have a lot of hidden/legacy systems/paths set up in ActiveControl might want to exclude the hidden systems to help the performance of the analysis checks, but as a general rule, no customer should ever really need to disable the cross path conflict checks completely.

Imports

Option	Description
Automatically delete from STMS import queue after transport import	This option can be used by customers that do not want to leave the SAP transports in the STMS import queue after they have been imported via ActiveControl.

Attachments

Option	Description
Control adding/ removal via Authorizations	Can be used in conjunction with optional [Y_TEUSER]-ADDFILE, ADDURL, REMOVEATTACHMENT authorisation activities, by customers that want to govern Attachments via authorisations.

Manual Steps

Option	Description
Default "Allow Progress when incomplete" for new manual steps	This option can be used to ensure that the corresponding option on a new Manual Step is always ticked.
Warn if "Allow Progress" unchanged	This option can be used to warn the Manual Step creator if they have not updated the flag.

Manual Activities and Non-SAP Deployments

Option	Description
Transport System ID	Specify what system where empty 'dummy' transports for Manual Activities are created. These transports will not be imported anywhere.

Currency

Option	Description
Currency	Allows ActiveControl customers to specify the primary reporting currency within the organisation, for some optional meta-data / reporting.

5.4.3. Feature Deactivation

No two Basis Technologies customers implement ActiveControl in the same way. Differences in SAP system landscapes, organisational structures and SAP change and release processes mean that every Basis Technologies customer configures ActiveControl differently. There are some Features within the overall product that some customers use heavily, but that are completely irrelevant within other customer processes.

Over the years customers have requested to be able to hide some of the Features that they do not use. Within the Web Platform, this is now possible via **Feature Deactivation**. Administrators can deactivate certain features, screens and buttons within the product, to tailor what their users will see.

Feature Deactivation is performed via the Feature Deactivation tile within the Administration screen. These are global settings which activate or deactivate for all users.
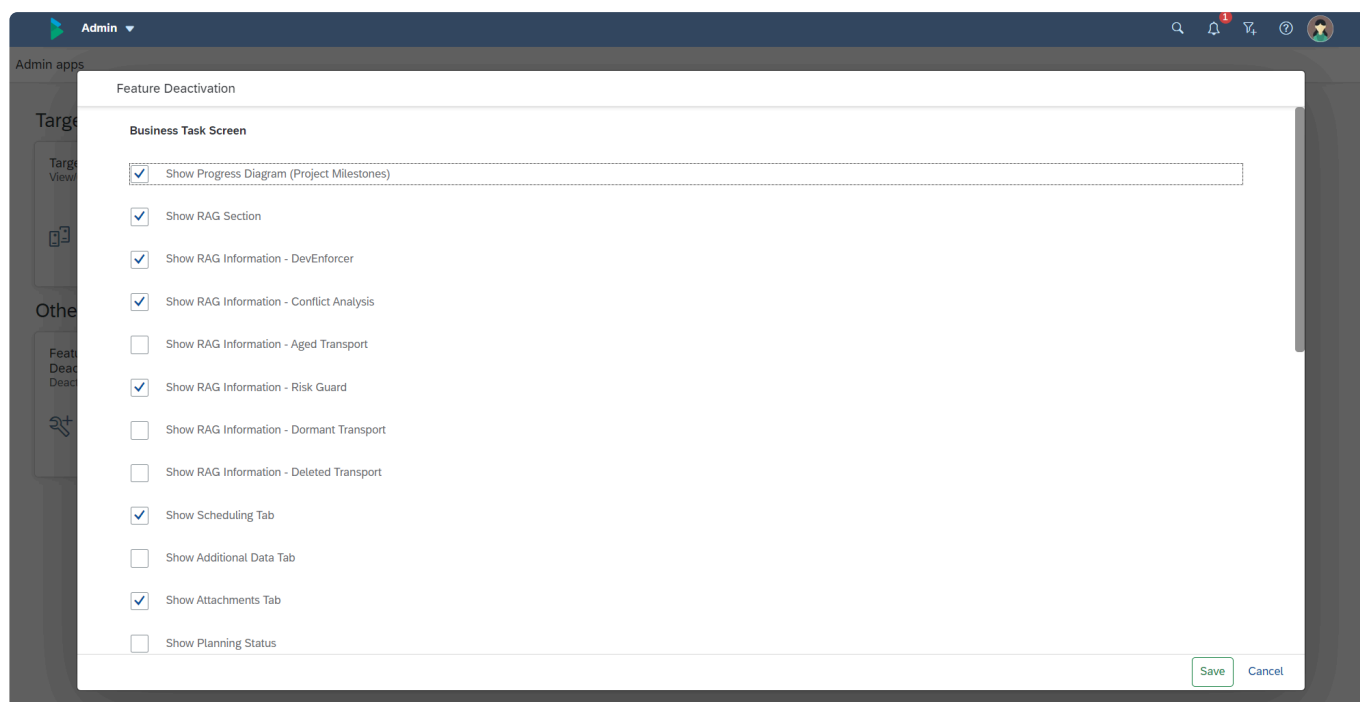
Figure: The Feature Deactivation screen within the Web Platform.

The following features can be hidden from the product via Feature Deactivation

Business Task Screen

Product Area	Feature	Details
Business Task	Show Progress Diagram (Project Milestones)	Determines whether the Progress Diagram count of Transport Forms is seen in the Business Task screen header.

Business Task	Show RAG Section	Determines whether the RAG Section is seen in the Business Task Header.
Business Task	Show RAG Information – DevEnforcer	Determines whether the DevEnforcer RAG icon is seen at Business Task level.
Business Task	Show RAG Information – Conflict Analysis	Determines whether the Conflict Analysis RAG icon is seen at Business Task level.
Business Task	Show RAG Information – Aged Transport	Determines whether the Aged Transport RAG icon is seen at Business Task level.
Business Task	Show RAG Information – Risk Guard	Determines whether the Risk Guard RAG icon is seen at Business Task level.
Business Task	Show RAG Information – Dormant Transport	Determines whether the Dormant Transport RAG icon is seen at Business Task level.
Business Task	Show Scheduling Tab	Determines whether the Scheduling subscreen (for forward scheduling Production Deployments) is seen by users on the Business Task.
Business Task	Show Additional Data Tab	Determines whether the Additional Data subscreen is seen by users on the Business Task.
Business Task	Show User Assignments Tab	Determines whether the User Assignments subscreen is seen by users on the Business Task.
Business Task	Show Dependencies Tab – Business Task Dependencies	Determines whether the Business Task Dependencies subscreen is seen by users on the Business Task.
Business Task	Show Dependencies Tab – Business Task Relationships	Determines whether the Business Task Relationships subscreen is seen by users on the Business Task.
Business Task	Show Attachments Tab	Determines whether users are able to add Attachments at Business Task level within ActiveControl.
Business Task	Show Planning Status	Determines whether the Planning Status field is seen on the Business Task.

Project Screen

Project Screen	Show Progress Diagram (Project Milestones)	Determines whether the Progress Diagram count of Transport Forms is seen in the Project screen header.
Project Screen	Show Attachments Tab	Determines whether users are able to add Attachments at Project level within ActiveControl.

Project Screen	Show User Assignments Tab	Determines whether users are able to add Users to Business Tasks, to support the Rules Engine or Custom Notification functionality within ActiveControl.
Project Screen	Show Project Status Tab	Determines whether the Project Status subscreen is seen within Project screen. Customers not using Project Milestones will probably want to hide this subscreen.

Transport Form Screen

Transport Form	Show Attachments Tab	Determines whether users are able to add Attachments at Transport Form level within ActiveControl.

Test SIgnoff Screen

Test Queue Signoff	Show 'Save and Close' button for all users	Determines whether users are able to save but not approve Testing within ActiveControl. Please note that if Save and Close is not shown, then "Problem Found" Test Results cannot be entered.

Imports

Imports	Show 'Approve and Import' button	Determines whether users are able to save but not approve Testing within ActiveControl. Please note that if Save and Close is not shown, then "Problem Found" Test Results cannot be entered.
Imports	Allow manual resequencing of Import Queue.	Determines whether authorised users are able to manually resequence transports within the Global View. If not enabled, the Manually Resequence' button will not be seen in the Global View.

Web Platform App Tiles

Web Platform App Tiles	Show Priority Approvals tile.	Determines whether Priority Approvals capability is enabled for Approvers.
Web Platform App Tiles	Show Project RAG tile	Determines whether the Project RAG tile is visibile to users.

Merge

Merge	Show Merge related functionality	Can be switched off by single-track landscape customers so that the following functionalities are hidden within ActiveControl:
		Merge related ALV reports within the Reports app
		Mark as Manually Applied button within the Global View
		Conflict/Merge Options subscreen in Target Configuration.

Transport of Copies

Transport of Copies	Show Testing TOC functionality.	Determines whether the Full, Delta and Task TOC options are seen by users, regardless if they have the corresponding authorisation activities assigned to them.
Transport of Copies	Show Production TOC functionality.	Determines whether the Production TOC options are seen by users, regardless if they have the corresponding authorisation activity assigned to them.

> ✱ Items highlighted in Blue in above Table are Features that significant numbers of ActiveControl customers have asked to be able to hide over the years.

5.4.4. Backend Tables

Around 80% of ActiveControl configuration is performed in the Web Platform front end, with the remaining 20% performed in the SAPGUI backend of the Domain Controller (and to a lesser extent, managed satellite systems).

All of the ActiveContorl backend tables can be accessed via SPRO, accessed via the **Backend Tables** app in the Administration screen. This includes commonly implemented ActiveControl capabilities such as the Rules Engine, Transport of Copies and Automated Transport Naming Convention.
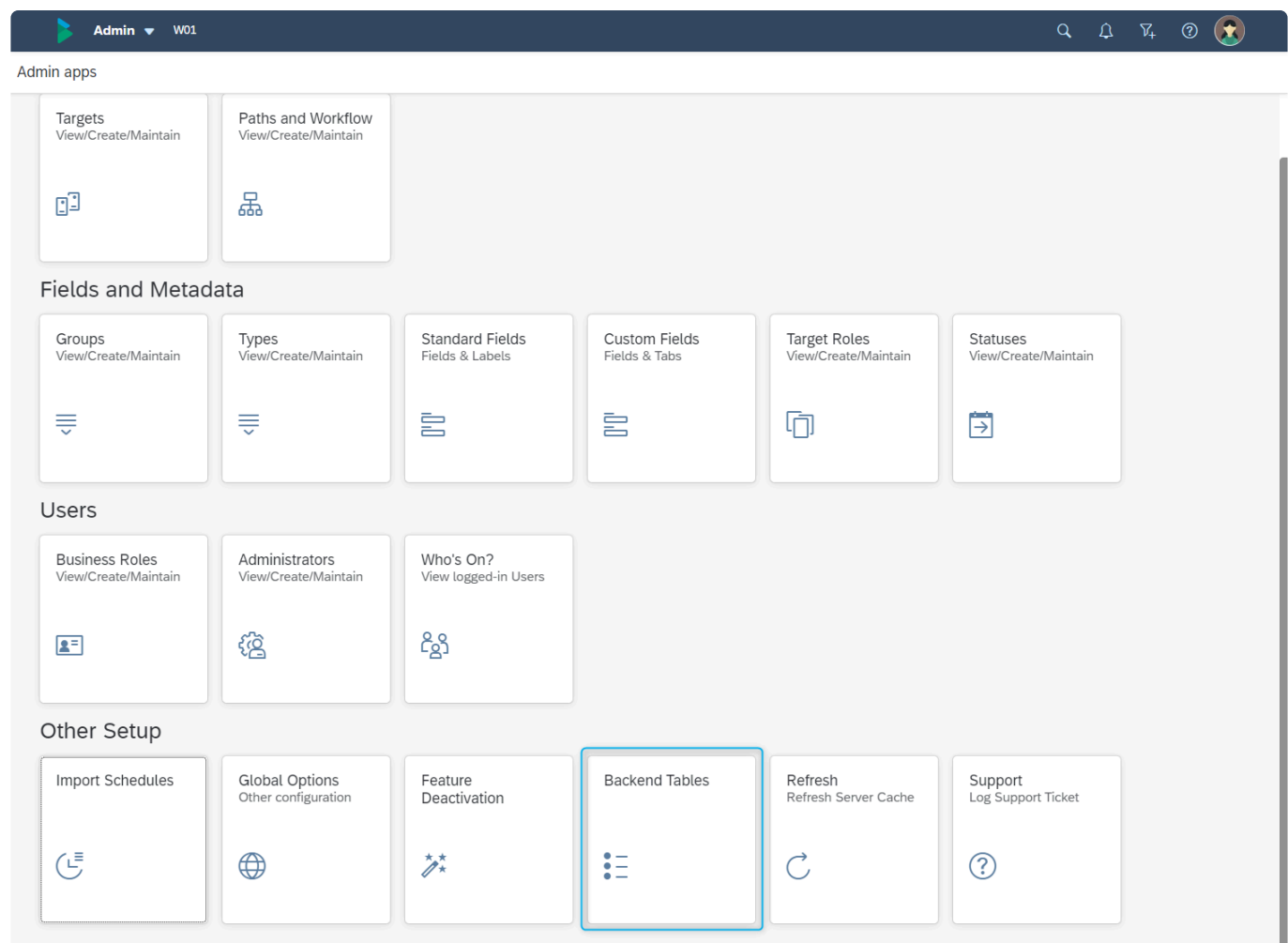
Figure: SPRO of ActiveControl configuration tables can be accessed via the Backend Tables app.

5.4.5. Refresh (Server Cache)

The Refresh (Server Cache) app tile can be used to trigger an update of the Web Platform cached configuration.

Most customers will not need to use this feature, as the majority of ActiveControl configuration changes (at least those made within the Web Platform UI itself) will automatically override any cached configuration in the UI.

Two use cases where it might however be needed:

• If a customer is using Transportable Configuration, this can be used to refresh the data after importing a new configuration in the backend.
• After Authorisation changes.
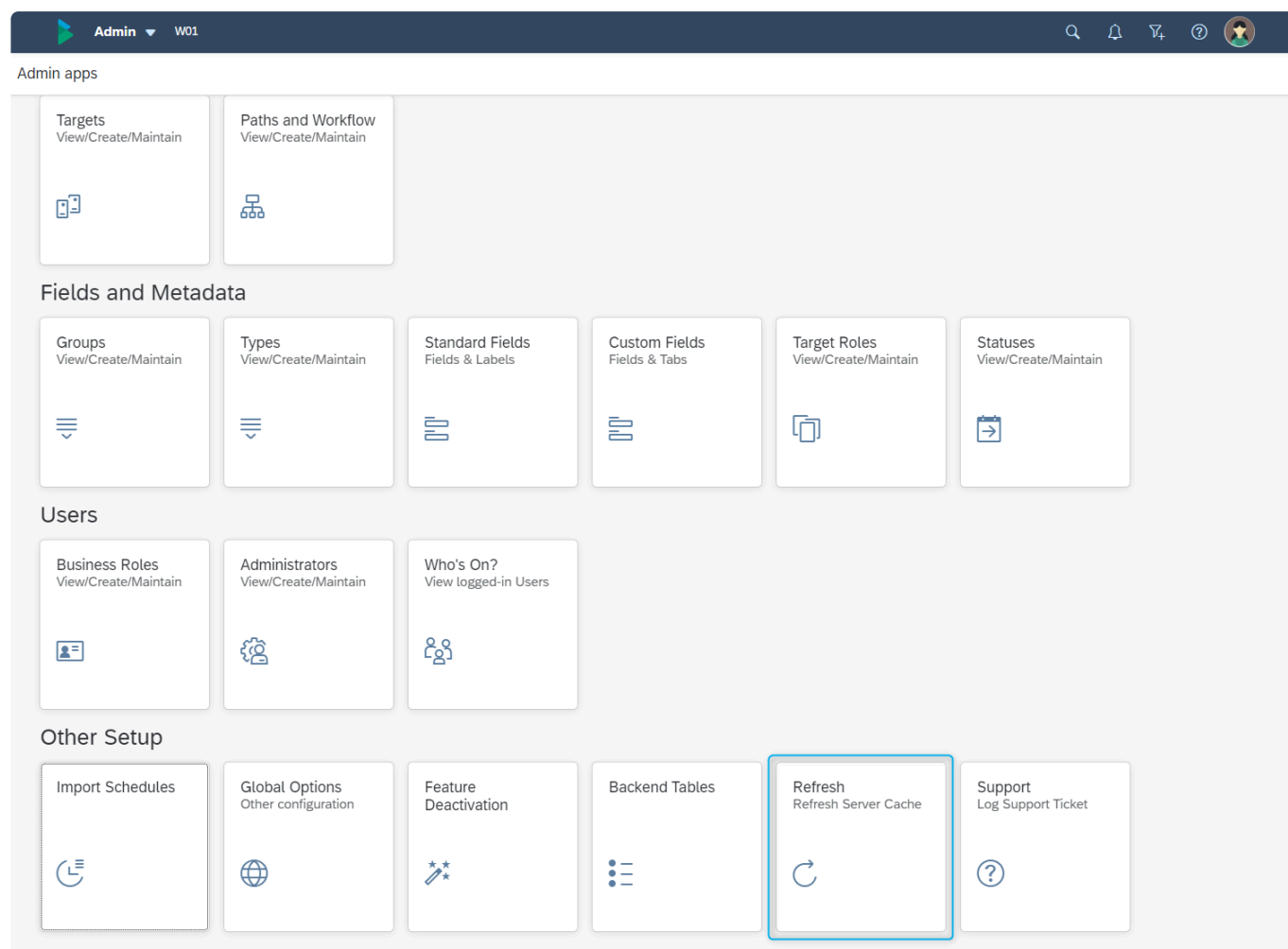
Figure: Refresh (Server Cache) app tile in the Web Platform.

5.4.6. Support tile

The Support app tile provides an easy way for ActiveControl Administrators and other authorised users to access the Basis Technologies Support Portal.

This Portal is used to to create support tickets to Basis Technologies (or view existing tickets), and also to utilise the Knowledge Articles.

Please refer to the Software Support section of this Administration Guide for further details on these topics.
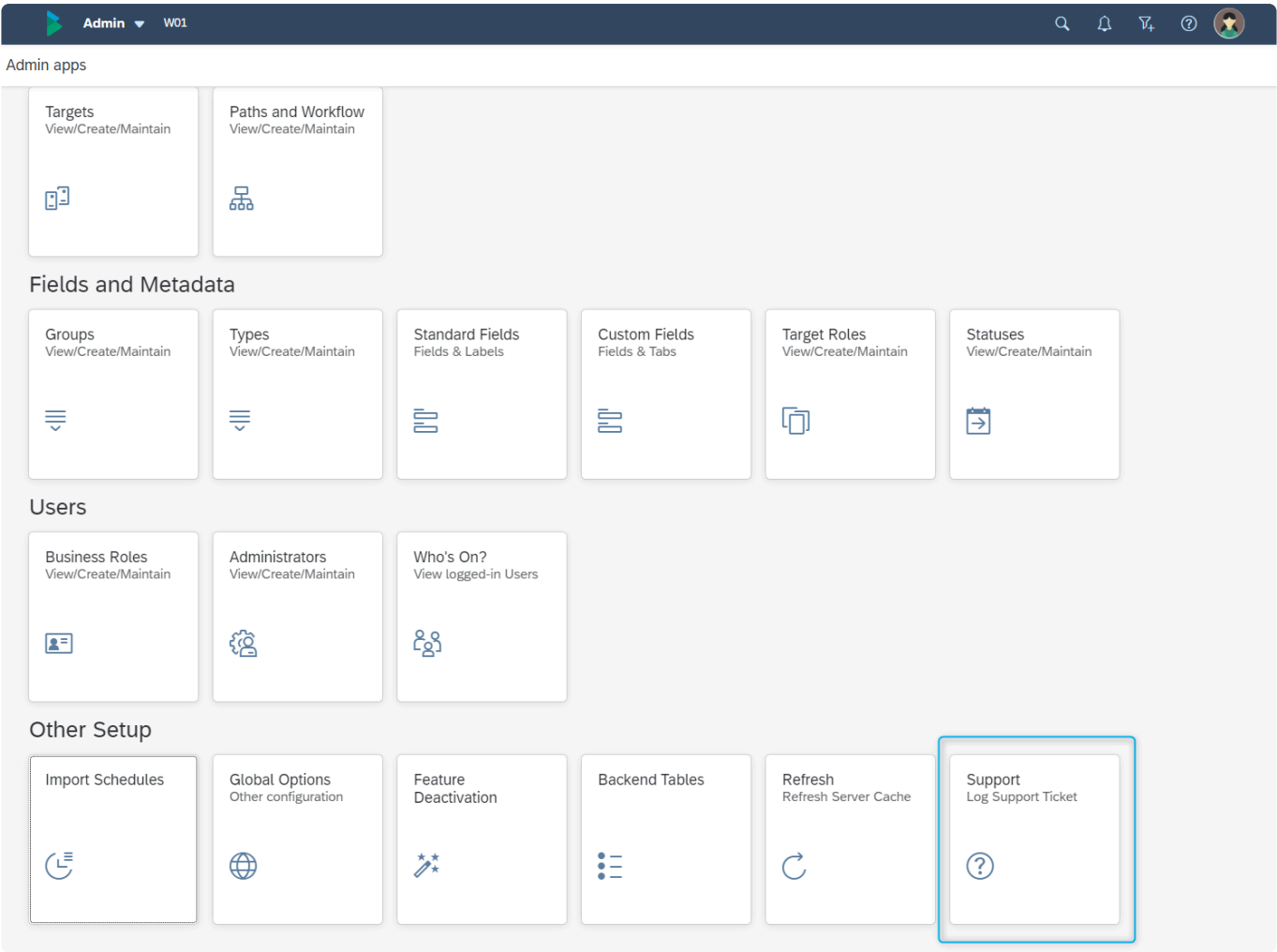
Figure: The Basis Technologies support portal can be accessed via the Support app tile.

6. Core Configuration – SAP GUI

Although most ActiveControl configuration is done within the Web Platform, there is some backend SAP table configuration required, both for some of the core functionality and also some of the advanced / peripheral capabilities of the product.

This section details some of the key functionality and associated configuration within the SAP GUI.

- ActiveControl Active Functions (/BTI/TE_ACTIVE)
- Activating ActiveControl (/BTI/TE_CONTROL)
- Email Notifications (/BTI/TE_RNOTIFICATION_ENGINE)
- Following (/BTI/TE_RUFOLLOWITEMS_UPDATE)
- Recent Activity (/BTI/TE_RUNEWS_UPDATE)
- Project Phases & Milestones

SPRO Menu

A SPRO menu is available within the SAPGUI of the Domain Controller to make it easier for ActiveControl Administrators to access and maintain all the backend configuration tables.
This can be accessed directly from within ActiveControl, via the **Backend Tables** app on the Administration screen.
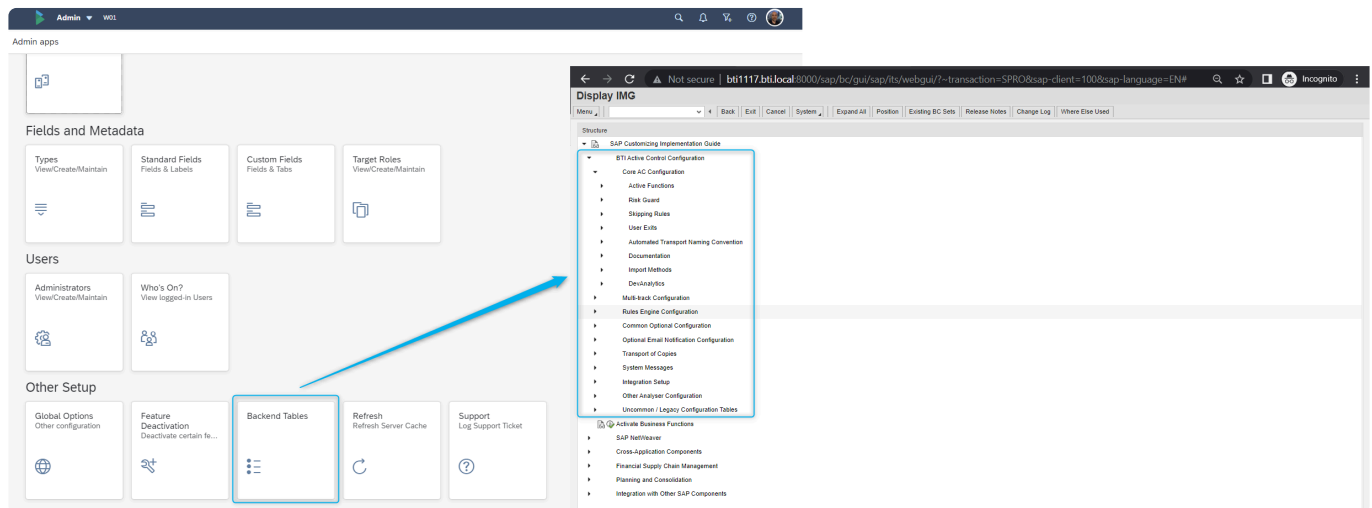
Figure: SPRO menu can be accessed via the Administration Screen Backend Tables app.

6.1. ActiveControl Active Functions

ActiveControl has the ability to trigger a **Transport Form popup** in the SAP GUI of a satellite Development system, at one or two places:

1) when the transport is released via SE09/SE10 etc, or

2) when objects are attached to a transport via SAP transactions such as SE38, SE16, PFCG etc

> ✱ There are no ActiveControl screens in Java systems such as Portal or PI. For any non-ABAP systems managed by ActiveControl using the prerequisite CTS+, the Transport Form should be created via the ActiveControl Web Platform.

The Transport Form triggers – along with other 'active functions' that may be desired depending on a customer's specific requirements and intended processes within ActiveControl – are configured via table /BTI/TE_ACTIVE in the Domain Controller. They are configured per satellite Development system in which they will be active.

Available Active Functions

Active Function	Description
Transport is released (ON_RELEASE)	This uses /BTI/TE_BADI_TR_FORM BADI in the Development system, and comes active. No additional setup required.
Transport is first used (ON_CREATE)	This functionality uses an enhancement spot. No additional setup required.
In-Line Conflict Analysis (INLINECONF)	This functionality switches on Inline Conflict Analysis, to identify conflicts across parallel development systems. Please refer to Inline Conflict section for details on the other configuration required to use this.
Show object keys in In-Line Conflict Analysis (INLINEKEY)	This option results in Inline Conflict Analysis including object keys in the results. If this is activated, then In-Line Conflict Analysis active function above must also be active and configured.
Allow TF Creation by-pass (BYPASS)	This option can be used to bypass the Transport Form creation process in a particular system.
Unit test on release (UNIT_TEST)	This option switches on Automated Unit Testing within the SAP GUI. Note that there is some configuration that needs to be done as well, this is detailed in later 'Unit Test Automation' section.
Show Transport Form popup only when configured objects added (OBJ_DEPEND)	This option can be used by customers that only want a Transport Form to be required for certain objects. Other configuration is needed to activate this functionality, please refer to online forum for details.

Object Segregation (OBJ_SPLIT)	This option can be used by customers that want to ensure certain objects are not mixed in the same transport. Other configuration is needed to activate this functionality, please refer to online forum article for further details.
Prevent releasing the transport (PREVENTREL)	This option can be used to hide the "Do you want to release.." screen in the SAPGUI that is seen after populating the Transport Form using the ONRELEASE active function. It is useful for customers that want to prevent Developers prematurely releasing Transports before other approvals are performed.

> ✱ There are numerous possible reasons for users not getting the Transport Form popup in the SAP GUI during an ActiveControl implementation. These are detailed in our online forum article here

> ✱ To stop the SAP GUI screens from timing out when entering a Transport form or Business Task, it is recommended to increase the rdisp/max_hold_time parameter on all application servers of the Domain Controller controller and relevant SAP development systems. The recommended value for this is **360**.

> ✱ The ability to create a Business Task from the Transport Form is controlled by the authorization object Y_TE_TASK with the value CREATE. If you want the developer to assign the Transport Form to an existing Business Task, but not to be able to create a new one, then restrict the authorization by removing the value CREATE.

6.2. Activating ActiveControl for Users

The activation of the SAPGUI processing for users mentioned in previous section is controlled via table **/BTI/TE_CONTROL** in each satellite Development system.

An 'Active' entry must exist for the relevant users for the processing to occur. It is possible to either switch on ActiveControl for only certain specific users by entering their username (this is typically done during the initial implementation phase so that certain users can test the product), or to switch on ActiveControl for ALL users by maintaining an entry with a blank username.

> ❗ Do not add entries in /BTI/TE_CONTROL for users that do not yet have any ActiveControl authorisations assigned to them in the Domain Controller. Doing this will result in the users getting errors in the Development system when doing their work, and potentially be unable to save their work.

6.3. E-mail Notifications

ActiveControl can be configured to send out email notifications in various scenarios, for example to notify Approvers or Testers when their approval or test signoff respectively is required.

All emails are sent from the Domain Controller system, and rely on (i) SCOT being setup and (ii) the end users having a valid email address assigned to their account in SU01.

This section of the Administration details some of the email related capabilities within ActiveControl:

- Standard Email Notifications
- Custom Email Notifications
- Reminder Notifications
- Sending Analysis Results
- Sending Analysis Results
- Import Error Notifications to additional recipients

6.3.1. Standard email notifications

ActiveControl can be configured to send automated **emails notifications** to relevant stakeholders in numerous scenarios, such as:

- Notify approvers when changes are waiting to be approved (provided the changes are associated with one or more tasks).
- Notify team members that their changes have been imported successfully or with errors. It is possible to additionally notify administrators when a transport is imported with errors.
- In the case of branched development systems, notify team members if their changes should not be imported because of conflicts with changes already made in the project development system.
- Notify team members when changes are waiting to be tested by them (provided that the changes are associated with one or more tasks).
- Notify administrators when a serious error occurs that prevents changes from being imported or an import error occurs. Non administrator users can also be informed of these issues for specific transport paths by maintaining entries in table **/BTI/TE_NOTIFUSR**.

Available Standard Email Notifications

Please refer to seperate Email Notifications spreadsheet for details of the available standard out of the box Email Notifications. This is available on request from Basis Technologies.

Configuration Steps

In order to send e-mail notifications, report **/BTI/TE_RNOTIFICATION_ENGINE** must be scheduled to run periodically in the ActiveControl domain controller. This report allows you to filter those target SAP systems that various types of notifications should be sent for, as sometimes you may not want each type of notification to be sent for each target SAP system.

Standard RSCONN01 program must also be running within the ActiveControl Domain Controller for the emails to be sent.

ActiveControl provides out-of-the-box HTML templates for each of the standard email notifications. These are stored in the Web Repository (transaction **SMW0**), for each type of notification. These templates can be copied and adapted if desired.

Before sending a notification e-mail, ActiveControl attempts to determine the recipient's Internet e-mail address from their SAP user ID. If an Internet address is not specified then the e-mail is sent to the SAP user ID and must be viewed using the SAPoffice Business Workplace (transaction SBWP).

In order to send e-mails to Internet e-mail addresses, a connection to an external e-mail server must have been configured for the ActiveControl domain controller. In systems running on SAP's Web Application Server 6.20 and higher, this is easily done using SAPconnect's built-in SMTP connection.

✱ Email notifications where an action is required (eg Approval, Test Signoff, Manual Step completion) include a URL link to the Web Platform. For Single Sign-On (SSO), please configure main.html instead of index.html at the end of the **Web UI HTML Path** parameter in /BTI/TE_RNOTIFICATION_ENGINE, this will bypass the login screen and use the current user logon ticket instead.

✱ To mark certain users to not receive any email notifications they can be maintained in table **/BTI/TE_EMAILIGN**. These users can then be excluded via user exit 0510 and removed from the list of recipients.

6.3.2. Custom email notifications

In addition to the many standard types of notifications that can be enabled, ActiveControl also allows the creation of additional 'Custom Notifications'.

For each custom notification you wish to send, an entry needs to be configured in table **/BTI/ TE_NOTIF_CU**.

Field	Description	Notes
NOTIFID	A unique identifier for the custom notification	
NOTIF_NAME	A description of the custom notification	
NOTIF_HTML	The name of the HTML template for the custom notification	Use transaction SMW0 to copy and update an existing HTML template
TARGET LOCATION	If the custom notification is to be triggered when a Transport Form moves into a specific control point, the target and location should be entered	Both the Target and Location fields need to be filled out
DEPL_STAT	If the custom notification is to be triggered when a Business Task reaches a particular Deployment Status, then the status ID should be entered here	Task status IDs can be found in table /BTI/ TE_TASKSTAT
PLAN_STAT	If the custom notification is to be triggered when a Business Task reached a particular Planning Status, then the status ID should be entered here	Task status IDs can be found in table /BTI/ TE_TASKSTAT
RECIPIENTS	Determines the recipients for this custom notification	See the recipients table below for details
TASK_ROLEID	If the recipients of the custom notification are assigned to a role on the Business Task, the appropriate ROLEID must be entered here	The Task Role IDs can be found in table /BTI/ TE_ROLEU

The recipients of the custom notification are determined by the value of the RECIPIENTS field in the custom notification table above. The possible values are:

Value	Recipient(s)
O	The Transport Form owner
T	All testers assigned to the Business Task
N	Users assigned in the system error notification table **/BTI/TE_NOTIFUSR** for the path which the Transport Form is in
R	Users assigned to a particular role on the Business Task. The role ID must be entered into the TASK_ROLEID field in the custom notification table

Y	Users configured in the recipients table **/BTI/TE_NOTIF_RE** for this custom notification

✳ An example – with screenshots – of how to setup a ActiveControl custom notification is available in this online FAQ.

✳ Whilst testing your custom notification, the selection screen of the /BTI/TE_RNOTIFICATION_ENGINE report allows for all generated e-mails to be sent to the current user, rather than to the actual recipients.

6.3.3. Reminder Notifications

Within ActiveControl it is possible to send automated **Reminder** notifications to Testers and Approvers when they do not perform their required action in a configurable timeframe, for example when a Business Task and/or Transport Form has been sitting in a particular Inbox, Outbox or Test Queue for a long time.

These reminders can be configurable at a Path level, or down to an individual Target or Target Location. Two Reminders can be sent, each one potentially to different audiences. Eg the first reminder to the responsible person, the second reminder to a more senior manager.

Configuring Reminder Notifications

1) Configure /BTI/TE_RNTF_ALR with the required reminders.

Field	Description
TARGET	Target ID of the configurable target.
LOCATION	Location within the target (Inbox, Outbox, Test queue).
PATH	Path id for the configured target. Note, if using Path level reminders, you need to configure /BTI/TE_NOTIFUSR to specify the recipients.
ROLEID	Business role ID of a Business Task. Note, this comes from table /BTI/TE_ROLEU after configuring [Business Role]().
ALERTDAY1	Number of days the first reminder e-mail should be sent.
ALERTDAY2	Number of days the second reminder e-mail should be sent.
GROUPID1	Groupid of the recipients of the first reminder e-mail. Note, you have to configure /BTI/TE_NOTIF_RE with any Groups you have specified.
GROUPID2	Groupid of the recipients of the second reminder e-mail. Note, you have to configure /BTI/TE_NOTIF_RE with any Groups you have specified.

2) Switch on the 'Remind Approvers' and/or 'Reminder Testers' notifications in your /BTI/TE_RNOTIFICATION_ENGINE program variant.

6.3.4. Analysis Result standard notifications

It is possible to send General Analysis or ShiftLeft analysis results to defined users in an automated email. These Analysis Result notifications can be defined for specific Paths, Targets, and Locations, and optionally also based on the Type and Group of the Transport Form that had the analyser warnings.

Configuration Steps

Step	Details
1.	Create users groups and assign the relevant users in table **/BTI/TE_ANLNFGRU** table in Domain Controller.
2.	Define the conditions for sending out Analysis Results in table **/BTI/TE_ANLNFGRP** in the Domain Controller. Result notifications PATH: Path where the analysis is run (Mandatory) TARGET: Target where the analysis is run (Mandatory) LOCATION: Location (Inbox, Outbox, Import Queue) where the analysis is run (Mandatory) TYPEID: Transport form type (Optional). Only set to restrict the results for specific transports GROUPID: Transport form group (Optional) . Only set to restrict the results for specific transports REASON: Reason code for analysis issues (e.g. 21 is for the Risk Guard analysis). If not specified the email will show all analysis issues USRGROUP: User group (from /BTI/TE_ANLNFGRU) where you want to send the emails to.
3.	Switch on the 'Analysis results' notification in **/BTI/TE_RNOTIFICATION_ENGINE** program.

6.3.5. Analysis Result custom notifications

Within ActiveControl, it is also possible to email analysis results to key stakeholders using Custom Notifications functionality.

Configuration Steps

Step	Details
1.	Switch on Custom Notification as part of variant for program **/BTI/TE_RNOTIFICATION_ENGINE**.
2.	Add your required notification in table **/BTI/TE_NOTIF_CU**. <u>Notes</u>: NOTIF HTML: The standard /BTI/TE_SCHEDULED_ANALYSIS HTML template should be used. HANDLING CLASS: /BTI/TE_CL_CUST_NOT_SCHED_ANL
3	Schedule a variant of program **/BTI/TE_RANALYSE_REQUESTS_LOC** for the specific analyser/ path/location for which you want email to be sent. <u>Note</u>: Flag 'create notification entry' must be set.

6.3.6. Import Error (RC8) Notification – Additional Recipients.

A standard email notification available through /BTI/TE_RNOTIFICATION_ENGINE can be used to notify individual Transport Owners whenever their transport(s) import with RC8 or above.

It is also possible to notify additional stakeholders via the following configuration in the domain controller.

Step	Details
1.	Creating the required additional import error notifications via table **/BTI/TE_NOTIF_IE**
2.	Defining the recipients for the notification via table **/BTI/TE_NOTIF_RE**

6.4. Following

It is possible for end-users to **follow** specific Business Tasks, Transports and SAP Objects.

The following capability is aimed at making users more self-sufficient, and helps to avoid the inevitable "Has this transport been imported?", "Has that change been tested?" questions and email that otherwise inevitably arise during the delivery of SAP change.

Users can create their own rules for the items they want to follow via the Web Platform. As part of these rules, the User can define whether they (optionally) want to receive an email notification on the items they have followed, as well as see items they have followed in the Recent Activity tile in the Web Platform.

There are two configuration activities that need to be performed by Administrators to enable Following capability within ActiveControl.
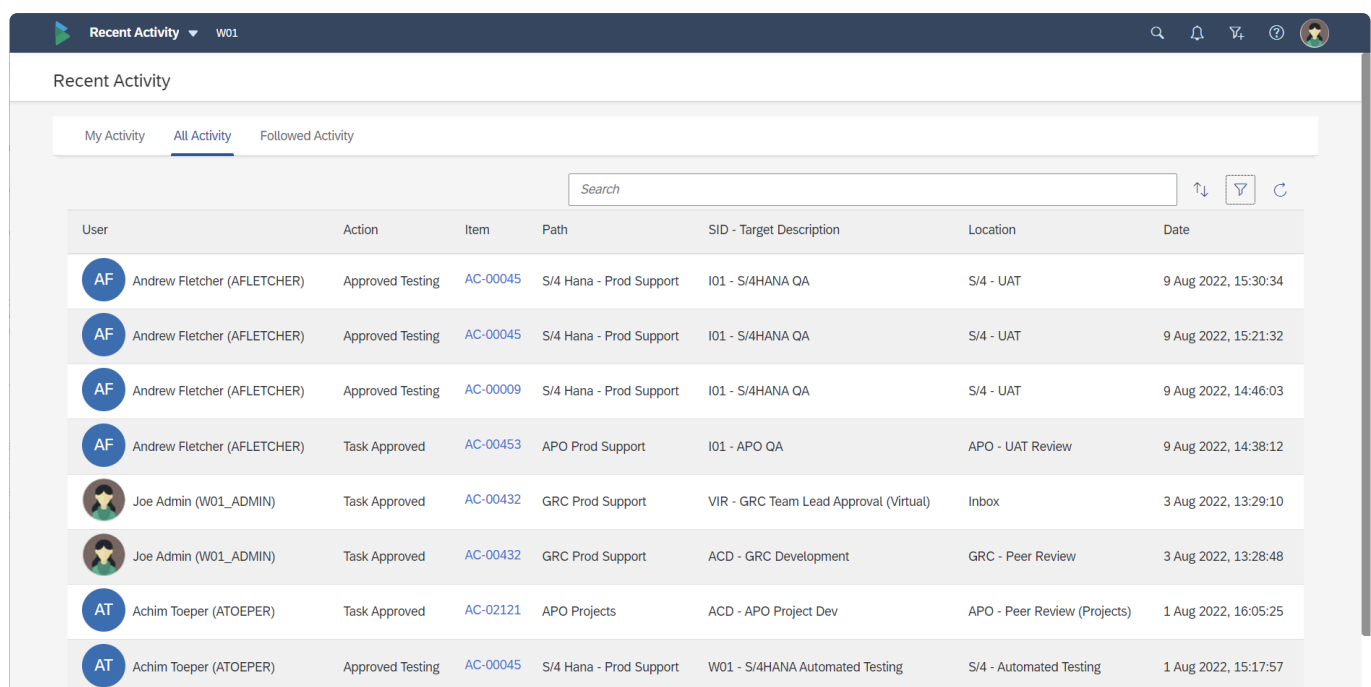
Step	Activity
1.	Program **/BTI/TE_RUFOLLOWITEMS_UPDATE** must be scheduled (after creating a variant) in the Domain Controller.
2.	The Following notification option must be switched on within program **/BTI/TE_RNOTIFICATION_ENGINE**.

6.5. Recent Activity

The ActiveControl Web Platform includes a Recent Activity tile whereby recent activity in the tool is presented, both for the logged-in user and also for all other users.

In order to generate the data for this newsfeed, program **/BTI/TE_RUNEWS_UPDATE** must be scheduled to run every 5-10 minutes in the Domain Dontroller.

In the program variant, the "No. of days to retrieve events" parameter should specify the number of days that the News / My Recent Activity is required to be reported for. The default is 60 days but in reality this could be much less for most organisations.

Figure: Recent Activity – 'All Activity' subscreen.

✱ If user pictures are desired in the Web Platform newsfeed (and other screens within the product), these must be manually uploaded by the individual end users via the User Details screen.

6.6. Project Phases and Milestones

ActiveControl includes a Project view that shows RAG milestone status information for projects, based on where the underlying Transport Forms are in the workflow.

To make use of this Project view, the following tables need to be configured in the ActiveControl Domain Controller:

Project Tables

/BTI/TE_PHASE	Project phases table
Field	**Description**
PHASEID	Unique Id for the project phase
PHASE_DESC	Description of the phase (e.g. Blueprint, Realisation, Final preparation, etc.)

/BTI/TE_PHASSTAT	Table to assign the task statuses to the project phases
Field	**Description**
PHASEID	Id for the project phase
STATID	Id for the relevant task deployment or planning status
STATTYPE	Selection of deployment or planning status

> ❗ This configuration becomes increasingly important as part of the Web Platform, as the Progress Status bars on Business Task and Project also rely on this configuration.

7. Other Core Configuration Topics

This section of the Administration Guide details some of the key capabilities of ActiveControl:

- [ShiftLeft Analysis Checks](#)
- [Rules Engine](#)
- [Partial Testing](#)
- [Release Orchestration](#)
- [Automated Transport Naming Convention](#)
- [Attachments](#)
- [Merge](#)
- [Transport of Copies](#)
- [Backout](#)
- [External Transports](#)
- [Object Linkaging](#)
- [Test Impact Radar](#)

It is likely that most Basis Technologies' customers will use some – but not all – of the features described in this section. Ultimately it will depend on the processes and workflow setup of your ActiveControl implementation.

7.1. Automated Analysis Checks

ActiveControl includes several analysis functions that run automatically as part of every Inbox or Outbox approval and Import Queue deployment – and also optionally as part of Test Queue signoff (if configured).

These core analysis functions are called the **General Analysis**, and consist of:

1. Check Dependencies
2. Overtake and Regression Checks
3. Check Locked Transport Forms
4. Check Authorisations
5. Check Transport Release
6. Conflict Analysis
7. Check Merge Origin
8. Check Manual Steps
9. Check Manual Activities

In addition to the General Analysis, the **ShiftLeft** component of ActiveControl offers more than 70+ configurable analysis that can also be used to ensure any potential issues are indicated as early on in your SAP Change & Release process as possible.
These ShiftLeft analysis functions can be turned on within ActiveControl depending on a customers specific process and environment requirements.

The rest of this section describes the automated analysis check capability of ActiveControl in more details:

- General Analysis
- ShiftLeft Analysers
- Excluding Objects from Analysers
- Creating Custom Z Analysers

7.1.1. General Analysis

ActiveControl performs a General Analysis function automatically during approval and import, this includes the following checks.

(0030) Check Dependencies
(0031) Overtake and Regression Checks
(0032) Check Locked Transport Forms
(0033) Check Authorisations
(0034) Check Transport Release
(0035) Conflict Analysis
(0036) Check Merge Origin
(0037) Check Manual Steps
(0039) Check Manual Activities
(0056) Check Future Import date/time

The rest of this section details of the above analysis functions in turn.

> ! General Analysis analysers do not need to be switched on via configuration. The General Analysis will also perform any other configured analysis types that have been marked as *mandatory* for that control point.

> * If you want to change the default parameters or attributes of one of the 003n analysers, you can do this by ticking the analyser to enable it – and updating the attributes / parameters as required. If you later decide to resort to the default analyser behaviour – it is important to remove the updated attributes/parameters and unticking the analyser. Doing one but not the other could result in unexpected behaviour – as the attributes / parameters will still be set in the backend, even though you have unticked the analyser.

> * It is possible to suppress the running of an analysis type for a specific target and location by adding entries to table **/BTI/TE_ANALEXCL**. This can be useful to stop the overtake/ regression/conflict analysis types from being executed in target system import queues when there are large numbers of transports to be imported. If the analysis has already been executed and verified during the inbox approval it might be useful to disable these for the import queue to save time when importing transports.

7.1.1.1. Check Dependencies (0030)

- Is there a dependency on another transport that has yet to be imported?

- Is the Transport Form attached to a Business Task but not all the requests in that Business Task have been imported yet or are not being approved now? Normally all transports attached to a task fulfil a business requirement so they should be approved / imported together.

Parameters

Parameter	Description
IGNORE_RELATED_TASKS	Can be used to exclude Related Tasks from the Analyser check
IGNORE_TASK_DEPENDENCIES	Can be used to exclude transports associated to the same Business Task from the results
INCLUDE_ALL_TRS	Can be used to include transports of other SIDs in the results, both in the same path, and also in other paths. Please refer to this Change Note for further details relating to this Parameter.

✳ Check Dependencies (0030) relies on Target Roles configuration. If two targets in the same path are set with same target role, or if one of the targets has no target role assigned, then you may see unexpected results.

7.1.1.2. Overtake and Regression Checks (0031)

The Overtake and Regression checks are used to ensure that transports and changes are approved and imported in the correct sequence.

- **Overtake**: This is where newer changes, for example an emergency bug fix, are being moved before existing in-progress changes to the same objects. In this case there is a risk of deploying a partial change with the big fix that is incomplete and not yet ready.
  A check is made to see if the transport(s) contains a newer version of any objects that also appear on older transports that have not yet been imported into the target system.
  If so, when the older request is imported in future you risk overwriting the target system objects with old out of date versions.

- **Regression**: This is where older changes overwrite newer ones that have been deployed out of order. Here there is the risk of losing the latest changes and unexpectedly regressing the system to a previous version
  A check is made to see if the transport(s) contains an older version of any objects that have been previously imported into the target system.
  If so you risk overwriting the target system objects with old out of date versions.

In both cases **all** objects are checked across SAP transports including, but not limited to, development and configuration objects.

In the case of configuration changes checks are done for:

- Table configuration entries (TABU). Includes the identification of overlapping table key entries so that, for example, a conflict would only be identified if the actual table key contents overlap (including wildcards)
- View Cluster Maintenance: Data (CDAT). Includes the expansion of the associated tables for conflict checking
- Customizing: Table Contents (TDAT). Includes the expansion of the associated tables for conflict checking
- View Maintenance: Data (VDAT). Includes the expansion of the associated tables for conflict checking

Parameters

Parameter	Description
EXCLUDE_TOC	Can be used to exclude Transport of Copies (TOCs) from the Analyser results.
KEY_NO_RELATED_VIEWS	By default, when transporting table entries, views that use the same table in key fields will be considered a conflict. This behaviour can be turned off with this flag.

KEY_NO_WILDCARDS	If this flag is set, wildcards are not considered when searching for conflicting table entries.
NO_CACHE	Turn off conflict cache (always recalculate the conflicts from the actual object lists).
SHOW_CONFLICTING_OBJ_KEYS	Show the actual table entries that are in conflict. (This is not purely display but can have performance implications since when you don't show the keys, you can stop at the first conflict, but otherwise it needs to go on.)

❋   Standard SAP piece list transports are excluded from the the 0031 Overtake / Regression checks.

7.1.1.3. Check Locked Transport Forms (0032)

Check Locked Transport Forms (0032) checks if the Transport Form is locked, as this would prevent approval or import.

Parameters

None.

7.1.1.4. Check Authorisations (0033)

Check Authorisations (0033) checks if the user is authorised to perform the approval based on the settings in the target system approvers.

If the user running the Analyser is an ActiveControl Administrator, Priority Approver or has the APPROVEALL authorisation then they will always be allowed. If not, they must be a designated approver for the relevant group or must have been delegated to allow approval.

Parameters

None.

7.1.1.5. Check Transport Release (0034)

Check Transport Release (0034) checks if the transport is released (as otherwise it cannot be imported).

Parameters

None.

7.1.1.6. Conflict Analysis (0035)

Conflict Analysis (0035) checks if the transport contain objects that have also been changed on the target system. This is used for conflict analysis when moving from one system to another (e.g. when merging from a production support development path to a project development path).

Parameters

Parameter	Description
COMPREHENSIVE	If set, the analyser will report on all conflicts and objects.
EXCLUDE_MERGED	if set, the analyser will ignore any conflicts before last merge.
EXCLUDE_TOC	if set, the analyser will ignore any conflicts with Transport of Copies.
GLOBALMERGECHECK	By default, only transports that originate in the target system are checked for conflicts. If this flag is switched on, then all transports in the target are checked, regardless of their original system. There is a potential performance downside to having this functionality active.
SHOW_CONFLICTING_OBJ_KEYS	If set, the analyser will show the actual table entries that are in conflict. This is purely display but can still have performance implications since when you don't show the keys, you can stop at the first conflict, but otherwise it needs to go on.
UNRELEASED_TRANSPORT_CHECK	If set, the analyser will also indicate in the results whether the conflicting transport is released or not.
USE_CACHE	If set, the analyser uses cached results, otherwise it is always recalculated.

! 0005 Conflict Analysis is the correct analyser to use to identify conflicts between parallel Development tracks and as part of ActiveControl Merge process. 0035 does not need to also be switched on. It presents less information.

✱ The name of some standard SAP objects change in S/4HANA versus what they were previously called in ECC – even though the object is ostensibly the same. It is possible to handle this situation as part of an ActiveControl S/4 migration using the functionality described in this online Change Note.

✱ Note that Conflict Analysis does not analyse unreleased transports.

7.1.1.7. Check Merge Origin (0036)

Check Merge Origin (0036) checks that the origin of the transport(s) that make up the merge request is the same system. This is relevant in case of consolidated merges and it checks if the transports you are merging are from the same source system as all the other ones that are in the current open merge.

Parameters

None.

7.1.1.8. Check Manual Steps (0037)

Check Manual Steps (0037) identifies if there is a dependency on any manual steps that have not been marked as complete.

Parameters

None.

7.1.1.9. Check Manual Activities (0039)

Check Manual Activities (0039) identifies if there is a dependency on any manual activities that have not been marked as complete.

Parameters

None.

7.1.1.10. Check future import date/time (0056)

Check future import date/time (0056) can be used to identify if any analysed Business Tasks have had future import scheduling defined.

Parameters

None.

7.1.2. ShiftLeft Analysers

7.1.2.1. Analysis Type Configuration

The analysis types are configured against the relevant target systems and control points in ActiveControl.

This is done from within the Analysers subscreen of Target configuration.

The Administrators should #1 select the control point location in which to configure Analyser, #2 activate the Analyser via checkbox and then #3 switch on the necessary attributes and parameters.
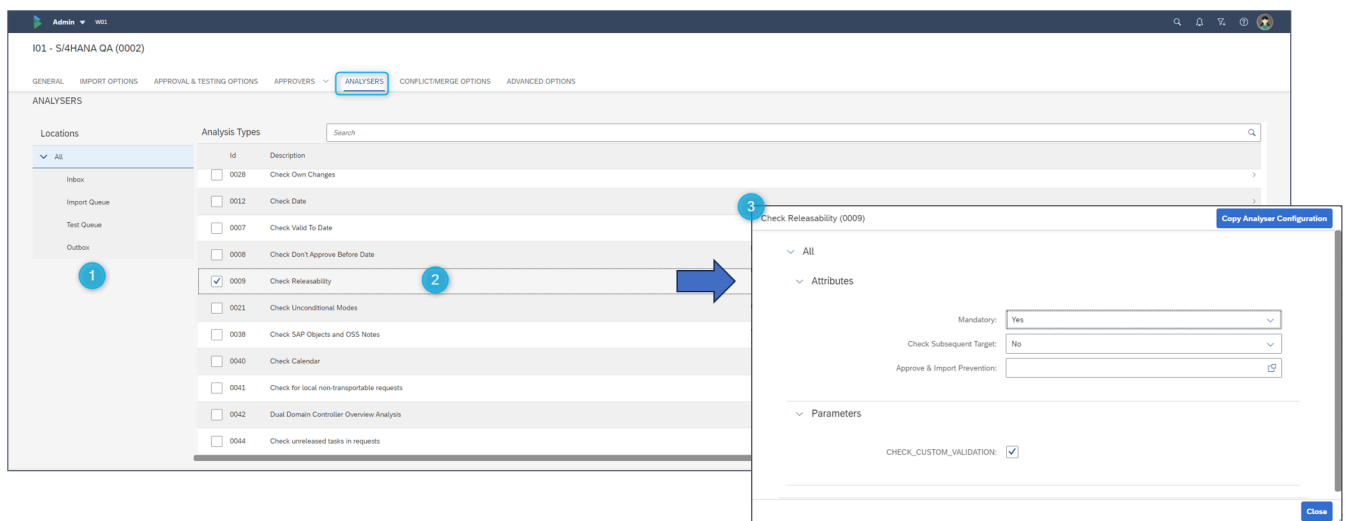
Figure: Analyser configuration screen

1. Location:

- The Analysis Types can be set differently for each control point within the target. Only the control points that are switched on for the selected target in the transport path it exists in are selectable.
- Either select "All" to switch on the analysis types for all control points or select the required control point.

2. Analysis Type:

- These are the different Analysis Types that can be selected (based on /BTI/TE_ANLTYPE).
- The General Analysis will always be switched on as this is mandatory.
- To switch on an analysis type, use the relevant checkbox.

3. Settings:

- This is where the analysis attributes and parameters are selected.
- Click on the analysis number or name to highlight it to allow these values to be maintained.

Attributes:

- Mandatory: To make the analysis mandatory so it automatically runs during the General Analysis choose "Yes"
- Check Subsequent Target: To make the analysis run on the next target in the path rather than the current target choose "Yes"
- Approval & Import Prevention: To prevent approval or import if this analysis returns an error use the button. This will allow the "Prevent Approval", "Import Approval" and "Admin Override" options to be set for each relevant reason code (based on /BTI/TE_ANRELINK).
- The "Admin Override" option allows ActiveControl Administrators (or anybody else that has role including authorisation activity APPROVEANYWAY (within Y_TEADMIN)) the ability to override the warnings using the 'Import Anyway' button
- For the General Analysis this can be used to control this for each of the attached reason codes.

Parameters:

- If parameters are available for the selected analysis types these will be listed (based on /BTI/ TE_ANLTYPEP).
- To enter a value in the parameter, highlight the required entry and choose the "Add" button. This will allow an entry to be made in the parameter value field.
- To remove a parameter value, highlight the required entry and choose the "Remove" button.

7.1.2.2. Risk Guard (0001)

Risk Guard (0001) checks all objects on the selected transport requests and highlights any that contain objects identified as critical or risky, for example Company Code changes, Plant changes or changes to Number Ranges. If there are any changes to these types of objects then a message will be issued notifying the user of the level of risk for that request.

Parameters

Parameter	Description
MINIMUMRISKLEVEL	Minimum Risk Level from table/BTI/TE_RISKL
RISKGROUP	Risk Group from table /BTI/TE_RISKG

Prerequisite Configuration

There are 4 tables that must first be configured in the ActiveControl domain controller before Risk Guard will work:

Table	Description
/BTI/TE_RISKL	Risk Levels
/BTI/TE_RISKG	Risk Groups
/BTI/TE_RISKGOB	Risk Group Objects
/BTI/TE_RISKGOBT	Risk Group Object Texts

Some sample entries are delivered in these tables but it recommended to create local customer specific entries so they won't be overwritten during any upgrades. The tables can be configured using via SE16 or SM31. It is also possible to download whatever has already been maintained in Risk Group Objects and texts using /BTI/TE_RUDOWNLOAD_RISK_DATA, and also to do an enmasse upload of this data using /BTI/TE_RUUPLOAD_RISK_DATA.

Risk Levels

Risk levels are configured in backend table **/BTI/TE_RISKL**.

Field	Details
RISKLEVELID	10 character field for the Risk Level Identifier.

RISKLEVEL	10 digit numerical field used to indicate the risk level. The higher the value of this field, the higher the risk.
TITLE	50 character comment field. This can be used to indicate the risk level in words. For example, "Low risk", "Moderate risk", "High risk" etc.

Below are some example entries for this table:

Risk Level Identifier	Risk Level	Comment
BT0001	1	Risk level 1
BT0002	2	Risk level 2
BT0003	3	Risk level 3
BT0004	4	Risk level 4
BT0005	5	Risk level 5
BT0006	6	Risk level 6
BT0007	7	Risk level 7
BT0008	8	Risk level 8
BT0009	9	Risk level 9
BT0010	10	Risk level 10

When setting up Risk Guard, you can specify a risk level value. If that is set, the Risk Analysis will only report on objects that have a risk level greater than the specified value.

Risk Groups

Risk groups provide ActiveControl with a way of varying how risks are identified for different systems or control points. For example, a program called ZZ_TEST may be a moderate risk when going into a QA system but a high risk when moving into a Production system. Risk Groups are configured in backend table **/BTI/TE_RISKG**.

There are 2 fields in this table. Field **GROUPID** is the group identifier and the field **TITLE** is the description of the group.

Below are some example entries for this table:

GROUPID	TITLE
BT0001	Basis Technologies Risk Group 0001

Risk Group Objects

Risk Groups Objects are configured in backend table **/BTI/TE_RISKGOB**.

Field	Description
GROUPID	Links the object to the group specified in table /BTI/TE_RISKG.
PGMID , OBJECT, OBJ_NAME	Relate to the same fields in the object list for a transport. For example, to highlight the transports of any number range objects as risks, there needs to be 2 entries in this table, one for R3TR NROB and one for R3TR TABU NRIV. Note that * can be used as a wildcard value. E.g. T0*
RISKLEVELID	References the risk level table /BTI/TE_RISKL.
APPENDFLAG	Checking this will include direct includes (eg. adding MARA with this flag set also adds EMARA and IST_MAT_FIELDS)
INVERSEFLAG	Currently does not do anything.
DELETEFLAG	Can be used if you want the Risk Guard analysis to indicate if a transport contains a deletion to the object)
URL	Can be used if you want the Risk Guard analyser output to include a URL to further information.

Below are some example entries for the **/BTI/TE_RISKGOB** table:

GROUPID	PGMID	OBJECT	OBJ_NAME	RISKLEVELID	TEXT	APPENDFLAG	INVERSEFLAG	DELE
BT0001	LIMU	INDX	*	BT0009	Database indexes require rebuilding – take care importing into production			
BT0001	LIMU	TABD	*	BT0007	Table definition changes may have an effect on production data			
BT0001	R3TR	NROB	*	BT0008	Be careful when transporting			

					number range objects			
BT0001	R3TR	TABL	*	BT0008	Table definition changes may have an effect on production data			
BT0001	R3TR	TABU	NRIV	BT0010	Number range intervals should not be transported unless during setup			
BT0001	R3TR	TABU	PATH	BT0007	Be careful when transporting logical filenames and directories			
BT0001	R3TR	TABU	T000	BT0008	The client table should never be transported			
BT0001	R3TR	TABU	T001	BT0008	Be careful when changing the critical Company Code table			
BT0001	R3TR	TABU	T012	BT0007	Be careful when transporting the House Banks table			
BT0001	R3TR	TABU	T030	BT0007	Be careful			

					when transporting the critical General Ledger table			
BT0001	R3TR	TABU	TBDLS	BT0008	Be careful when transporting Logical Systems			
BT0001	R3TR	XINX	*	BT0009	Database indexes changes should be carefully applied to production			
BT0001	R3TR	XPRA	*	BT0006	Take care as this change will be executing program(s) after import			

Risk Groups Object Texts

Risk Groups Object Texts are configured in backend table **/BTI/TE_RISKGOBT**. This table contains the text to be displayed when the Risk Guard finds any risks.

7.1.2.3. Dev Enforcer: Security (0004)

In transaction SCI it is possible to setup Code Inspector variants to perform security checks on SAP programs. These can be setup as General variants for all users or user specific ones. Dev Enforcer: Security (0004) hooks into these variants to perform the check as part of the Analysis/Approval process within ActiveControl.

Parameters:

Parameter	Description
CIEXCL_EXISTING_ISSUES	Can be used to display the Code Inspector results in following modes: LIST_ALL – All the CI issues that have been existing will be listed LIST_BOTH_SEP – issues that have been existing and issues that are introduced with the current transport will be displayed with separate section. LIST_NEW – Only issues that are introduced with the current transport will be displayed.
IGNORE_WARNING_INFO	EXCLUDE_BOTH: Exclude both Informational and Warning messages from DevEnforcer results. Only Errors will be reported. EXCLUDE_INFO: Exclude only Informational messages. Warning and Error messages will be reported. EXCLUDE_WARNING: Exclude only Warning messages. Information and Errors messages ill be reported.
CISID	SAP System ID for Execution. Specify the system ID (e.g. D01) where the Code Inspector variant is to be run from.
CITARGET	Target System for Execution if CISID is not specified. Specify the target system ID (e.g. 0001) where the Code Inspector variant is to be run from.
CIUSER	Code Inspector Execution User. Leave blank for global variants.
CIVARIANT	Code Inspector Variant name.
IGNORE_EXTERNAL_TRANSPORTS	Can be used to exclude external transports from the analysis results.

> ✳ More information – including screenshots – of SAP Code Inspector can be found in this online FAQ.

7.1.2.4. Dev Enforcer: Performance (0006)

The Dev Enforcer: Performance analysis is achieved by making a call to SAP Code Inspector in the relevant target system.

In transaction SCI it is possible to setup Code Inspector variants to perform the required performance checks on SAP programs. These can be setup as General variants for all users or user specific ones.

Parameters

Parameter	Description
CIEXCL_EXISTING_ISSUES	Can be used to display the Code Inspector results in following modes: LIST_ALL – All the CI issues that have been existing will be listed LIST_BOTH_SEP – issues that have been existing and issues that are introduced with the current transport will be displayed with separate section. LIST_NEW – Only issues that are introduced with the current transport will be displayed.
IGNORE_WARNING_INFO	EXCLUDE_BOTH: Exclude both Informational and Warning messages from DevEnforcer results. Only Errors will be reported. EXCLUDE_INFO: Exclude only Informational messages. Warning and Error messages will be reported. EXCLUDE_WARNING: Exclude only Warning messages. Information and Errors messages ill be reported.
CISID	SAP System ID for Execution. Specify the system ID (e.g. D01) where the Code Inspector variant is to be run from.
CITARGET	Target System for Execution if CISID is not specified. Specify the target system ID (e.g. 0001) where the Code Inspector variant is to be run from.
CIUSER	Code Inspector Execution User. Leave blank for global variants.
CIVARIANT	Code Inspector Variant name.
IGNORE_EXTERNAL_TRANSPORTS	Can be used to exclude external transports from the analysis results.

> ✳ More information – including screenshots – of SAP Code Inspector can be found in this online FAQ.

7.1.2.5. Dev Enforcer: Standards (0016)

In transaction SCI it is possible to setup Code Inspector variants to perform the required programming conventions checks on SAP programs. These can be setup as General variants for all users or user specific ones. Dev Enforcer: Standards (0016) analysis check is achieved by making a call to SAP Code Inspector in the relevant target system.

Parameters

Parameter	Description
CIEXCL_EXISTING_ISSUES	Can be used to display the Code Inspector results in following modes: LIST_ALL – All the CI issues that have been existing will be listed LIST_BOTH_SEP – issues that have been existing and issues that are introduced with the current transport will be displayed with separate section. LIST_NEW – Only issues that are introduced with the current transport will be displayed.
IGNORE_WARNING_INFO	EXCLUDE_BOTH: Exclude both Informational and Warning messages from DevEnforcer results. Only Errors will be reported. EXCLUDE_INFO: Exclude only Informational messages. Warning and Error messages will be reported. EXCLUDE_WARNING: Exclude only Warning messages. Information and Errors messages ill be reported.
CISID	SAP System ID for Execution. Specify the system ID (e.g. D01) where the Code Inspector variant is to be run from.
CITARGET	Target System for Execution if CISID is not specified. Specify the target system ID (e.g. 0001) where the Code Inspector variant is to be run from.
CIUSER	Code Inspector Execution User. Leave blank for global variants.
CIVARIANT	Code Inspector Variant name.
IGNORE_EXTERNAL_TRANSPORTS	Can be used to exclude external transports from the analysis results.

> ✳ More information – including screenshots – of SAP Code Inspector can be found in this online FAQ.

7.1.2.6. Dev Enforcer: Naming Conventions (0003)

Naming Conventions (0003) can be used to check that the transport description of all analysed transport (s) meet a specific naming convention. As transport naming conventions for this differ from customer to customer, this is generally delivered by Basis Technologies.

> ✳ Nowadays most Basis Technologies' customers use ActiveControl's newer 'Automated Naming Convention' functionality to ensure a consistent naming convention of their SAP transports. Using that functionality makes this analyser check redundant.

7.1.2.7. Check Valid To Date (0007)

Check Valid To Date (0007) gets a unique list of tasks relating to the analysed transport requests and then checks the validity date of these tasks against the system date. This is based on the date contained in the specified custom field. If the system date is greater than that of the custom field date then a message is issued stating that the change is no longer valid.

Parameters

Parameter	Description
ANALYSISCAPTION	Allows the analysis caption to be overridden. Enter the required text up to 100 characters. This text will appear in the analysis results.
ERRORIFNOTSET	If the valid to date is not set then display an error.
IGNOREURGENT	Ignore check if task priority is set to Urgent.
TASKFIELDTEXTID	Custom field text ID for Valid To date (from table /BTI/TE_CUSTF).

7.1.2.8. Check Don't Approve Before Date (0008)

Check Don't Approve Before Date (0008) gets a unique list of tasks relating to the analysed transport requests and then checks the approval date of these tasks against the system date. This is based on the date contained in a specified custom field. If the system date is less than that of the custom field date then a message is issued stating that the change is not ready to be approved yet.

Parameters

Parameter	Description
ANALYSISCAPTION	Allows the analysis caption to be overridden. Enter the required text up to 100 characters. This text will appear in the analysis results.
ERRORIFNOTSET	If the valid to date is not set then display an error.
IGNOREURGENT	Ignore check if task priority is set to Urgent.
TASKFIELDTEXTID	Custom field text ID for Valid From date (from table /BTI/TE_CUSTF).

7.1.2.9. Check Releasability (0009)

Check Releasability (0009) looks at each unreleased transport request and checks to see if there are any problems that would cause the release to fail, such as if a program is still inactive in SE38. An SAP function is used to perform this check and if any issues are found a message will be output.

Parameters

CHECK_CUSTOM_VALIDATION: Flag can be used to show releasability problems with BW/PBC objects specifically (as those sometimes have a seperate screen in the SAPGUI that highlight issues at the point of releasing the transport via SE09/SE10.

Notes

Please note that this Analyser currently does not work on non-ABAP systems being managed by CTS+.

7.1.2.10. Check Date (0012)

Check Date (0012) checks gets a unique list of tasks relating to the analysed transport requests and then checks the date contained in the specified custom field against the system date. The custom field date is compared to the system date based on the specified operator and if the comparison is true a message is issued stating that the change is not yet ready for deployment.

Parameters

Parameter	Description
ANALYSISCAPTION	Allows the analysis caption to be overridden. Enter the required text up to 100 characters. This text will appear in the analysis results.
ERRORIFNOTSET	If the valid to date is not set then display an error.
IGNOREURGENT	Ignore check if task priority is set to Urgent.
OPERATOR	Date comparison operator. Valid values: >, <, >=, <=, =, <>
TASKFIELDTEXTID	Custom field text ID for date (from /BTI/TE_CUSTF)

7.1.2.11. Conflict Analysis (0005)

Conflict Analysis check (0005) analyses a transport request against the target system and checks for conflicts before importing changes into that system. This is mainly used in the merge processing to identify objects changes in the merge target system that are also contained on the transport request being analysed. If any conflicts are found the details of the source system and merge target system transports are displayed along with the list of conflicting objects.

Parameters

Parameter	Description
CHECK_CONF_FLAG	If set, the analyser will only consider targets in the analysis that have the "remote import analysis" flag set.
EXCLUDE_MERGED	if set, the analyser will ignore any conflicts before last merge.
EXCLUDE_TOC	if set, the analyser will ignore any conflicts with Transport of Copies.
GLOBALMERGECHECK	By default, only transports that originate in the target system are checked for conflicts. If this flag is switched on, then all transports in the target are checked, regardless of their original system. There is a potential performance downside to having this functionality active.
SHOW_CONFLICTING_OBJ_KEYS	If set, the analyser will show the actual table entries that are in conflict. This is purely display but can still have performance implications since when you don't show the keys, you can stop at the first conflict, but otherwise it needs to go on.
UNRELEASED_TRANSPORT_CHECK	If set, the analyser will also indicate in the results whether the conflicting transport is released or not.
USE_CACHE	If set, the analyser uses cached results, otherwise it is always recalculated.
USE_CURRENT	By default, if the transport is past the import queue, the conflict analysis will be done in the successor target. If this is set, we can force it to run it on the current one even in this case.

✱ Standard SAP piece list transports are excluded from the the 0005 Conflict Analysis check.

✱ Note that Conflict Analysis does not analyse unreleased transports.

7.1.2.12. BW Conflict Analysis (0013)

BW Conflict Analysis (0013) looks for specific BI/BW objects that are renamed on import. As the names differ between systems the conflict analysis is not reliable so if any are found in they are reported. This specifically refers to Routines (ROUT) and formulas (RSFO).

Parameters

None

7.1.2.13. CTS+ Conflict Analysis (0011)

CTS+ Conflict Analysis (0011) performs the conflict checks for non-ABAP objects during the merge process to ensure that the transport being imported does not overwrite local changes in the merge target system. The transport attachments are exploded and the contents are analysed to determine if any conflicts are present.

For conflicting objects, the last changed timestamps are compared and a message is output if it has been found that the transport to be imported has an earlier timestamp than the one in the merge target system.

Parameters

EXCLUDE_TOC	Optional. Can be used if you want to exclude Transport of Copies (TOC) from the Analyser results

> **!** Please note that this Analyser only works for certain objects of type R3TR FILE – and does not currently cover PI/PO.

7.1.2.14. MDM Conflict Analysis (0025)

MDM Conflict Analysis (0025) is used to identify MDM overtakes and conflicts. It will highlight:

- Other transports with full MDM exports that potentially conflict with the transports being analysed
- Transports that contain full MDM exports which potentially could conflict with everything else

Parameters

None

7.1.2.15. Check Transport Release (0014)

Check Transport Release (0014) checks whether the selected transport requests are released or not, and if not it issues a message to indicate this.

Parameters

None

7.1.2.16. Check Unicode (0015)

Check Unicode (0015) checks all transport request objects to see if they are Unicode compliant.

Parameters:

Parameter	Description
CHECKFLAG	A flag to indicate if the analysis should report programs that do not have the Unicode Check flag set. If the CHECKFLAG attribute is set ('X'), any programs without the Unicode Check flag set will be reported.
CHECKCODE	Indicates if a Unicode Syntax check should be carried out on programs and the scope of the syntax checking. If the CHECKCODE attribute is set, a Unicode syntax check will also be carried out on the object. Setting this attribute to '1' means the syntax check is carried out on all programs, setting it to '2' will mean only programs without the Unicode Check flag set will be syntax checked.
CHECKSID	SAP System ID where the Unicode check is to be run

7.1.2.17. Check Unconditional Modes (0021)

Check Unconditional Modes (0021) will display the details of any Unconditional Modes set on the selected transports. Unconditional Modes are added on Transport Forms in the Advanced Options tab.

Transports with the following modes set will be highlighted by this analysis:

- 2: Overwrite original objects
- 6: Overwrite objects in unconfirmed repairs
- 8: Import customer table entries

Parameters

None

✳ When any non-standard Unconditional Modes have been set on a Transport Form, they will also be seen via the **UModes** Umodes status icon within the Web Platform.

7.1.2.18. Show Future Manual Steps (0022)

This analysis will display the details of any manual steps that will need to be completed during import of the selected transports into targets in the current path. If the parameter is set, any Manual Steps that have already been completed for future targets are also included in the output.

Parameters

Parameter	Description
DISPLAY_COMPLETED	Show Manual Steps that have already been completed.

7.1.2.19. Deep Impact Analysis (0023)

> ❗ Please note that this is a legacy analyser. It is replaced by Deep Impact Analysis (New) (0060).

Deep Impact Analysis (0023) can be used to highlight the lower level dependencies between the repository objects contained within the transport(s) being analysed and other transports existing in the landscape. This can be used to avoid deployment errors where transports are imported without the necessary dependent objects being present in the target SAP system.

The process checks the objects included in the analysed transports and determines whether any of the objects referenced within those are either part of the group of changes being approved/imported or have already been imported beforehand. For example, if a database table is being transported, a check would be made to ensure that all referenced data elements are not missing. The same would apply to a program being transported to ensure that any referenced data dictionary objects, function modules, classes, methods, etc. are not missing. This can then reduce the number of import failures due to hidden dependencies between changes and transports.

Deep Impact Analysis is used to perform technical / repository checks so therefore doesn't include configuration objects in its analysis.

Note that there is some pre-requisite Diffuser configuration setup that needs to be performed for Deep Impact Analysis (0023) to run correctly. This is detailed in this FAQ.

Parameters

Parameter	Description
GROUP_IMPORT_METHODS	Fast import/Import All methods to ignore transport sequence. Default is methods 2 and 5.
IGNORE_SEQUENCE	Ignore the transport sequence when calculating missing dependencies (transports with missing dependent objects that are contained in transports later in the import sequence will not be reported) . If not set then Fast import/Import All methods specified in GROUP_IMPORT_METHODS will ignore the transport sequence anyway. It's good practice to set IGNORE_SEQUENCE = 'X' on non-Import Queue.
LEVELS	Specify the number of levels to go down in object hierarchy.
MAX_OBJ_TIME	Maximum time to analyse an object. Default = 60 seconds.

7.1.2.20. Previous Import Errors (0024)

Previous Import Errors (0024) can be used to highlight any transports that are likely to fail when being imported into the next target, as they have failed during import to previous systems. If any of the selected transports were imported with errors into previous systems in the path, they will be highlighted by this analysis. The results of all imports into the same target will be displayed. Setting the below input parameter will suppress the display of any transports which had previous import errors, but for which the latest import was successful.

Parameters

Parameter	Description
IGNORE_LATEST_IMPORT_OK	Flag to indicate whether or not to ignore transports if the latest import was successful.

7.1.2.21. Check Import Order (0026)

Check Import Order (0026) can be used in import queues to check whether the selected transports are sorted into the correct ActiveControl calculated sequence prior to import. If the user has not sorted the transports into the correct order the analysis will highlight this fact along with the correct sequence that should be used.

Parameters

Parameter	Description
EXCLUDE_UNRELEASED	Flag to indicate whether or not to include un-released transports in the analysis.
IGNORE_COMPLETENESS	Flag to indicate whether the analysis should return an error if the sequence is correct but there are some missing transports in the selection.

7.1.2.22. Lock Control Point / Import Queue (0027)

Lock Control Point / Import Queue (0027) can be used to lock a control point or import queue to prevent approvals or imports. This can be useful when a system is taken off line for a refresh, to prevent any imports from being processed.

Parameters

None

> **!** This particular analysis needs to be made mandatory so that it is always run when approvals or imports are processed. Otherwise it won't have the desired outcome of preventing Approvals and/or Imports.

7.1.2.23. Check Own Changes (0028)

Check Own Changes (0028) can be used to check the ownership of a Transport Form during approval / import. If the current user is the owner of any of the transports being analysed and they are not allowed to approve their own changes a message can be output to report this to the user and prevent approval / import of their own changes. If the current user is not the owner of any of the transports being analysed and they are only allowed to approve their own changes a message can be output to report this to the user and prevent approval / import of their own changes.

Parameters

Parameter	Description
PERMITOWNCHANGES	Flag to indicate whether the current user is allowed to approve their own Transport Forms or not. No = Not allowed to approve your own transports Yes = Only allowed to approve your own transports
OWNERFIELD	Field to be checked to determine the ownership of the Transport Form. If OWNER is specified the ORIG_OWNER field will be checked. If you specify REQUESTOR, then it will check the current Transport Form owner.

7.1.2.24. Check SAP Objects and OSS Notes (0038)

Check SAP Objects and OSS Notes (0038) can be used to check whether any of the selected transport requests contain changes to SAP objects or OSS notes.

If so, the relevant objects will be listed along with any OSS note numbers included in the transports.

Parameters

None

7.1.2.25. Check Calendar (0040)

Check Calendar (0040) analysis can be used to check a factory calendar (in any system) and be configured to give a warning message if today is not a 'work day' in the factory calendar.

Parameters

Parameter	Description
SYSTEM	The System ID of the system the factory calendar resides in.
CALENDAR	The ID of the factory calendar.
TEXT_NAME	The name of the standard SAP text (created using SO10) that is displayed if today is not a 'workday' in the factory calendar.

7.1.2.26. Check for Local Non-Transportable Requests (0041)

Check for Local Non-Transportable Requests (0041) can be used to check and report local non-transportable transport requests where the SAP transport target is blank.

Parameters

None

7.1.2.27. Dual Domain Controller Overview (0042)

Dual Domain Controller Overview (0042) can be used to check the status of any Dual Domain controller integrations. The transports are analysed to check whether the transfer of them to another ActiveControl Domain Controller can be carried out or not.

It will highlight the following:

- Requests that have already been interfaced
- Requests that have been filtered out based on the configuration (so will not be transferred)
- Requests that are merge requests so will not be transferred
- Requests that are valid and will be transferred

Parameters

Parameter	Description
ERRORS_ONLY	Optional exclusion of results where no issues detected.

7.1.2.28. Test Impact Radar (0043)

Test Impact Radar (0043) analysis can be used to highlight what top level SAP objects (e.g. Transactions, programs, etc.) are impacted by the selected transport(s). For example, if a database table structure was changed it could be used to identify all transactions and programs that use that table to help target testing effort.

It can also indicate what Test Scripts are impacted by the changes in the transports if these have been uploaded into ActiveControl. I.e. identify what test scripts should be executed at a minimum as a result of the changes contained in the transports.

It can also be linked to Production Usage Statistics to provide a more focussed indicator of impacted objects, and also optionally used to identify objects that are not mentioned in an organisations library of Test Scripts.

Note that there is some pre-requisite Object Linkage setup that needs to be performed for the Test Impact Radar analysis check to run correctly. Please refer to 'Test Impact Radar' section of this Administration Guide for details of this setup.

Parameters

Parameter	Description
CHECK_LINKS	Check if the link creation is up to date.
IS_NEW_DI_LINKS	Should always be X (Yes).
MAX_LEVEL	Maximum recursion level for analyser (Default = 10).
MAX_OBJ_TIME	Maximum time to analyse an object (Default = 60 seconds).
NOT_IN_TESTSCRIPT	Optional. Can be used if the Analyser is required to report on analysed objects that are not covered by existing test scripts. Please refer to this Knowledge Article for further information.
TARGET	Target ID where the dependencies will be checked.
USAGE_PRIORITY	Optional. Can be used if Analyser is required to take Production Usage Statistics into account. Please refer to this Knowledge Article for further information.
USAGE_PRIORITY_SOURCE	Optional. Can be used if Analyser is required to take Production Usage Statistics into account. Please refer to this Knowledge Article for further information.

7.1.2.29. Check Unreleased Tasks in Requests (0044)

Check Unreleased Tasks in Requests (0044) can be used to check and report any unreleased sub-tasks inside transport requests.

Parameters

None

7.1.2.30. Check Request Tasks not yet in a TOC (0045)

Check Request Tasks not yet in a TOC (0045) can be used to ensure that all transport sub-tasks have been included in a Transport of Copies (ToC), for example, if ToC's are being used to deploy development changes to QA.

Parameters

None

7.1.2.31. TOC Analysis (0046)

TOC Analysis (0046) can be used to check if a transport is a Transport of Copies (ToC) and if so report it.

If, for example, ToC's have been used to deploy development changes to QA it could be that the ToC's should not move past QA to production in the transport path as the original development transports should be used in this case. The analysis can be used to prevent the ToC's from moving past QA in this case.

Parameters

None

7.1.2.32. BPCA (0047)

SAP Business Process Change Analyzer compares the objects included in a transport to the objects contained in the TBOMs of the target system.

BPCA (0047) hooks into that standard functionality to present the results information within ActiveControl.

Parameters

Parameter	Description
DESTINATION	System ID of the Solution Manager system where SAP Business Process Change Analyzer has been setup. (mandatory field).
EXCLUDE_GROUP	Can be used to exclude specified ActiveControl [Group](s) from the analysis.
EXCLUDE_TYPE	Can be used to exclude specified ActiveControl [Type](s) from the analysis.
FORCENEW	Can be used to force a new analysis, even if BPCA has run previously on the same transport(s).
MULTIPLE	Specify if you want to analyse multiple transports during a single analysis run.
VARIANT	Can be used to force a new analysis, even if BPCA has run previously on the same transport(s).

7.1.2.33. Changes to Same Objects (0048)

Changes to Same Objects (0048) can be used to identify other transports containing the same objects in the *same control point* as the ones being analysed. The original use case of this analyser was for a customer wanting to identify other transports containing same objects in a Test Queue, so that they were aware that other changes might be positively/negatively impacting the testing results.

Parameters

None

> ✱ To identify transports containing same objects in *other control points of the transport path*, you should use the newer Changes to Same Objects (Path) (0055) analyser.

7.1.2.34. Allowed Objects Check (0049)

Allowed Objects Check (0049) can be used to stop Business Tasks containing Transport Forms that contain anything other than a pre-defined set of objects being approved. The original user case for this analyser was for a customer that wanted to prevent Standard Changes containing anything other than specific objects.

Parameters

None

Configuration

Allowed Objects Check (0049) uses the same configuration tables as Risk Guard (0001) – however since they are different analysers, it is possible to configure both analysis to run at the same control point, but with different Risk Groups.

1) Create your Risk Group in table **/BTI/TE_RISKG** in the Domain Controller e.g. STANDARD
2) Define the SAP objects that you want to be part of the Risk Groups that you have created in table **/BTI/TE_RISKGOB** in the Domain Controller (e.g. your agreed list of objects that can be delivered in 'Standard' changes)
3) Populate table **/BTI/TE_ANRGTYPE** with the Task Types that you want to check (taking the serial ID from table /BTI/TE_TYPE) and the associated Risk Groups you created in (1) above.

7.1.2.35. Disallowed and Critical Objects Check (0050)

Disallowed and Critical Objects (0050) can be used to check if Transports contain particular objects. This Analyser is ostensibly the same as the ShiftLeft: Risk Guard analysis, but since it is possible to have both Analysers running in the same control point, you can set the Disallowed and Critical Objects Check analyser to not allow 'Approve Anyway' but set the standard Risk Guard to allow 'Approve Anyway'.

Parameters

Parameter	Description
MINIMUMRISKLEVEL	Minimum Risk Level from table/BTI/TE_RISKL.
RISKGROUP	Risk Group from table /BTI/TE_RISKG.

7.1.2.36. Check Documentation (0051)

Check Documentation (0051) can be used to check if documents of particular categories have been attached/linked to a Business Task as part of the approval in a particular ActiveControl Control Point. This can help to automatically check if, for example, a functional specification has been attached to a Business Task at the point a Dev Outbox approval is being performed, or if UAT Test Evidence has been attached at the point a Production Inbox approval is being performed.

The Check Documentation analyser does not check the contents of the documents, it purely validates that the defined documents have been attached.
It is possible to check for a maximum of 5 different document categories in a particular control point.

Parameters

Parameter	Description
CATEGORY1	Populate with the document category that you want the Analyser to check for in this control point.
CATEGORY2	Populate with the document category that you want the Analyser to check for in this control point.
CATEGORY3	Populate with the document category that you want the Analyser to check for in this control point.
CATEGORY4	Populate with the document category that you want the Analyser to check for in this control point.
CATEGORY5	Populate with the document category that you want the Analyser to check for in this control point.

> ✳ The Document Category's used in this Analyser are configured in table /BTI/ TE_ATT_CAT. Please refer to [Document Categories] section of this Administration Guide for more information on this functionality.

> ✳ Please note that if you want to run Check Documentation analyser in a Test Queue, then some additional configuration is required, and any missing documentation is presented in a seperate screen after the main Analyser warning screen. Please refer to this Knowledge Article for details.

7.1.2.37. Unit Test automation (0052)

Unit Test Automation (0052) can be used to automate unit testing in your SAP Development system. This analyser hooks into standard SAP functionality available within SAP Code Inspector, and ensures that Approvers at the configured control points (typically Dev Test Queue or Dev Outbox) have visibility of any development issues prior to the transports being released and deployed to QA systems.

Parameters

Parameter	Description
CIUSER	Username that the SAP Code Inspector variant has been created against.
CIVARIANT	Name of the SAP Code Inspector variant.

7.1.2.38. Check Component Version (0053)

Component Version differences (0053) is used to report if a transport has a different component version than the next system that it is to be imported into.

Parameters

None

7.1.2.39. Changes to Same Objects in Path (0055)

Changes to same objects in path (0055) identifies what other transports in a transport path contain the same objects as those contained within the transport(s) being analysed. It was requested by a few existing customers that want to stop new versions being imported into a system until an older version that has already been imported into that system had been tested and deployed to Production

The analyser can look for the object in other transports i) Forward, ii) Backward or iii) Forward and Backward in the Path, depending on how the exact requirement

Parameters

Parameter	Description
CHECK_BACK_AND_FORWARD	Define whether you want to look only Forward, only Backward or both Backward and Forward in the Path.
EXCLUDE_MERGE	Can be used to exclude Merge transports from the Analysis results.
EXCLUDE_PROJECT	Can be used to exclude all Transports relating to Business Tasks associated to the same Project(s) from the Analysis results.
EXCLUDE_TOC	Can be used to exclude Transport of Copies transports from the Analysis results.
IGNORE_SAME_TASK	Can be used if you want to ignore other transports assigned to same Business Task that contain the same object(s).
KEY_NO_RELATED_VIEWS	By default, when transporting table entries, views that use the same table in key fields will be considered a conflict. This behaviour can be turned off with this flag.
KEY_NO_WILDCARDS	If this flag is set, wildcards are not considered when searching for conflicting table entries.

* Note that IGNORE flags set on Transports still in the Path will result in those Transports not being included in the 0055 Analyser output.

* Note that separate Changes to same objects (0048) analyser can be used to identify other transports containing the same object(s) in the same control point.

7.1.2.40. Check Custom Field entered (0057)

Check Custom Field Entered (0057) analyser can be used to check if a custom field has been populated or not. This is useful for customers that do not want a particular custom field to be mandatory at the point the Transport Form or Business Task is created, but want to ensure that it has been populated by a certain point in the process, e.g. for customers that have a separate Change Ticket raised as part of their process for moving SAP Change to Production.T

Parameters

Parameter	Description
CHECK_TASK_AND_FORM	TASK or FORM or TASK & FORM – this is the level of the ActiveControl Hierarchy that you want the Analyser to check.
CUSTF1	This is the number of the custom field that you want to check. You can get this number from the [Fields] tab in the Custom Fields configuration screen.
CUST1_MSG	This is the message you want to appear in the analyser warning.
CUST1_VAL	Optional parameter if you want the Analyser to highlight if a field is not blank but does NOT have a specifc text value. More information on this can found in this Change Note

> ✳ As of ActiveControl 8.2 onwards, Text, Dropdown and Checkbox custom fields are supported by this analyser. Prior to that release, only Text custom fields were handled.

7.1.2.41. SCC1 Client Copy Check (0058)

SCC1 Client Copy Check (0058) can be used to check that a client dependant transport was copied to the other clients in that Development system.

Parameters

None

7.1.2.42. Check sibling system imports (0059)

Check sibling system imports (0059) can be used to analyse if a transport has been imported into a sibling system in a path. An example of its use is where an SAP customer has parallel regional SAP QA systems. Using this analyser can ensure that the transport does not progress onwards to Production until it has been approved and imported into all of the QA systems.

Parameters

Parameter	Description
TARGETROLEID	Enter the appropriate Role ID (from backend table /BTI/TE_TARGROLE) if you only want to check the sibling systems that are assigned to the specified target role. If it is not set, then the analyser will check all sibling systems.

7.1.2.43. Deep Impact Analysis (New) (0060)

> ✱ Please note that Deep Impact Analysis (New) (0060) replaces the original Deep Impact Analysis (0023) analyser, from ActiveControl 7.0 onwards.

Deep Impact Analysis (0060) can be used to highlight the lower level dependencies between the repository objects contained within the transport(s) being analysed and other transports existing in the landscape. This can be used to avoid deployment errors where transports are imported without the necessary dependent objects being present in the target SAP system.

The process checks the objects included in the analysed transports and determines whether any of the objects referenced within those are either part of the group of changes being approved/imported or have already been imported beforehand.

For example, if a database table is being transported, a check would be made to ensure that all referenced data elements are not missing. The same would apply to a program being transported to ensure that any referenced data dictionary objects, function modules, classes, methods, etc. are not missing. This can then reduce the number of import failures due to hidden dependencies between changes and transports.

Parameters

Parameter	Description
CHECK_MISSING_OBJECT_IN_SOURCE	This parameter if set to 'X' then the analyser will also check if the reported missing dependency exists in the source system. If it does not also exist in the source system then it will not report the object as a missing dependency. This has been introduced as some custom includes statements are referenced within a table structure or within source code but the which have not yet been created in the source system and without this parameter set these will be reported as missing dependencies in the target system.
DEEP_IMPACT_RELEVANT_OBJECTS	With this parameter set to 'X' it is possible to only check dependencies on objects within a defined range. This range of object names needs to be defined in the table /BTI/TE_TVARV – please refer to online FAQ documentation for screenshot. These are possible entries but other can also be entered
EXISTS_IN_REF_TARGET	Can be set to the Reference Target system number in which the Dependency needs to be checked again. More information on this optional parameter and its usage can be found in this online Change Note.
GROUP_IMPORT_METHODS	(only relevant in import queues). The analyser already knows how to behave with standard AC import methods, assumes

	any unknown one to be sequential. Only set this if you use a non-standard fast import method.
IGNORE_VIRTUAL_TARGET	Can be used by customers with Virtual Targets within their workflow, to ensure that the Analyser looks at the subsequent Targets in the Path.
INCLUDE_DUPLICATES	By default, when the Analyser find an object to be a missing dependency at the 1st level, it doesn't check it at the 2nd level to save time. When this is set, Analyser keep looking at every level. Gives better results but slows down the analyser, particularly when levels is high.
LEVELS	Determines how many levels the Analyser should travel the dependency tree. High value are slow and give many false positives. Recommend to stay between 1 and 3.
MAX_LINKAGE_AGE	Number of hours after which transports for unreleased transports are considered stale. We recommend leaving this to 1 hour.
MAX_LINK_TIME	Maximum total time in seconds to wait for the links to be created on the fly. Recommendation is 60 seconds.
MAX_OBJ_TIME	Maximum time in seconds to be spent analysing an object. Recommendation is 2-3 seconds.
RELEASE_TASKS	Release tasks of unreleased transports during link creation.

> ❗ A step by step setup – including configuration screenshots – on how to setup Deep Impact Analysis can be found in this online Knowledge Article.

> ✳ Deep Impact Analysis is used to perform technical / repository checks so therefore doesn't include configuration objects in its analysis. It currently covers objects on ERP-type systems (ie ECC, CRM etc) and also BW and Gateway. It will not work on systems like Fiori or Java systems.

Decoupled Deep Impact Analysis

Deep Impact Analysis can have a longer run-time when the analysis is performed on transports containing many objects and/or many transports are analysed. ActiveControl now includes a newer capability to decouple the Analysis runtime – or more specifically – to run the Analyser when the transport lands in the control point and cache the results and present those to the user at actual runtime of the Approval, Test signoff or Import. This new decoupling framework can be used in conjunction with 0060 Deep Impact Analysis.

Configuration Steps

1. Setup Deep Impact Analysis as per the usual steps detailed in the aforementioned Knowledge Article
2. Update table /BTI/TE_ANLTYPE in the Domain Controller for 0060, with [CLASSNAME] field populated with '/BTI/TE_CL_ANALYSIS_DI_ADC' and the [FUNCNAME] field blank.

Please refer to this Change Note for further information / screenshots of this change.

1. Setup Deep Impact Analysis as per the usual steps detailed in the aforementioned Knowledge Article
2. Update table /BTI/TE_ANLTYPE in the Domain Controller for 0060, with [CLASSNAME] field populated with '/BTI/TE_CL_ANALYSIS_DI_ADC' and the [FUNCNAME] field blank.

7.1.2.44. Critical Impact Analysis (0061)

Critical Impact Analysis (0061) can be used to check to identify critical impacts by using a combination of existing Risk Guard and Test Impact Radar functionality.

For an analysed transport, the check will:

1. Traverse up the dependency hierarchy to find all objects above that are possibly affected.
2. Check this set of objects against a set of objects configured in a Risk Group
3. The intersection of the two sets of objects creates the output

The output of the analyser shows:

i) a 'summary' the list of the objects in the risk group that are affected by the transport(s) being analysed.
ii) a 'detail' list for each of the objects in the 'summary' list, to show all of the objects from the original transport(s) that affect this particular risk group object.

Parameters

Parameter	Description
INCLUDE_DUPLICATES	if there are duplicates in the results, whether you want to see them or not. (the default is No).
LEVELS	How many levels up to check.
MINIMUM RISKLEVEL	Minimum Risk Level from table /BTI/TE_RISKL
RISKGROUP	Risk Group from table /BTI/TE_RISKG

7.1.2.45. Check Interdependencies in Path (0062)

Check Interdependencies in Path (0062) analysis uses a combination of the existing Test Impact Radar, Deep Impact Analysis and Overtake sequencing analysis checks to do the following:

1. Explodes out all dependent objects for a transport/change (to configurable number of levels)
2. Adds in all objects above the transport objects in the dependency hierarchy
2. Checks to see if any of the exploded out objects are in transports in the path, in the same target as the transport being analysed or in front of the transport being analysed (i.e. not in production yet) – to provide an intersection of the transports/objects between the transport(s) being analysed and other transports in the path.

It is possible to run the Check Interdependencies in Path analyser in three ways:

i) to report on the intersection of transports/objects if the intersecting transports do not have the same value as a Custom Field on the Business Task(s) being analysed
ii) to report on the intersection of transports/objects if the intersecting transports are not in the same Project(s) as the Business Tasks I am analysing
iii) to report on the intersection of transports/objects if the intersecting transports are not in the Business Tasks I am analysing.

Parameters

Parameter	Description
ANALYSIS_TYPE	Whether you want to run the Analysis by i) Custom Field, ii) Project or iii) Task.
CUSTOM_FIELD	The Custom Field number if you have selected that Analysis type.
LEVELS	Specify the number of levels to go down in object hierarchy.

7.1.2.46. Approver SOD Check (0063)

Approver SOD Check (0063) analysis can be used to ensure that the same Approver does not do two particular (configurable) control point approvals within ActiveControl. The analyser should be switched on in the second approval point, ie where you want to ensure the approver cannot be the same person that did the approval of the same transport(s) in an earlier approval point. These two approval points can be any locations in the transport path, they do not need to be adjacent approval points in the workflow.

Parameters

Parameter	Description
CONTROL_POINT	This is the prior Inbox/Test Queue/Outbox that you want to check against.
TARGET	This is the number of the prior Target that you want to check against.
MESSAGE	This is the custom message that you want to be presented to the Approver when they try to perform an approval when it was them that did the approval in the defined prior Target/Control Point.

7.1.2.47. Check SAP Import (0064)

Check SAP Import (0064) analysis can be used to perform an SAP-level check if a transport has been imported. If the transport has NOT already been imported, the analyser will return a warning.

Parameters

Parameter	Description
MSG	This is the message that will be presented to the Approver if the analysed transport(s) have not been imported to the defined SAP system.
SID	This is the SAP system that you want to check if the analysed transport has been imported.

7.1.2.48. Integration Status Check (0065)

Integration Status Check (0065) analysis can be used to perform an automated check to ensure that a corresponding ticket in an integrated ITSM or other external system is in the correct/expected status. The analyser will warn if the other tool ticket is not in the expected (configurable) status (as can potentially happen depending on the setup of the Integration / the external ticket being transitioned back in its workflow). For example – if you are about to approve some Transports to move to Production in ActiveControl, but the corresponding external ticket for that Business Task is somehow sitting in status "Awaiting UAT".

Parameters

Parameter	Description
EXTERNAL_SYSTEM_ID	Needs to match what was configured for your external system in table /BTI/TE_INT_SYST.
MSG	The message you want to appear in the message output if the expected/actual status' do not match.
STATUS_FIELD_NAME	This is the field name from the external System. E.g. status-name in the case of JIRA Status field.
STATUS_IN_EXTERNAL_SYSTEM	This is the Status field value from the external System that you want to check for (any other value will make the Analyser present a warning). Please note that [STATUS_IN_EXTERNAL_SYSTEM] is the technical value – not the Label that is seen by the user (in the case of JIRA). Also please note that the status parameter is case sensitive. It needs to match the technical field value in your external system exactly (eg "To Do" and not "TO DO" in the above screenshots).

Notes

(i) The analyser requires some of the standard Integration framework to already be setup for your external system. (i.e /BTI/TE_INT_SYST plus associated configuration tables).

(ii) The analyser has been build to satisfy a specific customer requirement for their existing ActiveControl integration with JIRA, but the reality is the Analyser can potentially be used with any ITSM / external tool that is supported by the ActiveControl Integration Framework. It should be noted, this would require some modification to the existing 0065 Analyser, ie it will not work out-of-the-box on other tools such as ServiceNow or suchlike.

7.1.2.49. Version Comparison (0066)

Version Comparison (0066) enables Customers to easily indicate any other inflight versions of an object being analysed, that have not yet reached Production – and also Production versions that are later versions of the same objects in the transport being analysed.

Unlike most of the other ActiveControl analysers, Version Comparison analyses at an SAP level, and therefore also reports on transports that do not have Transport Forms.

Parameters

None.

Additional Notes

This Analyser makes use of Target Roles and the Production function – in order to be able to determine what system is the Production system in the path. For the Analyser to work, you need to (1) link your Target Role to the "Production Function" as per below screenshot – and also (2) ensure that all your Production targets are linked to your Production target role.
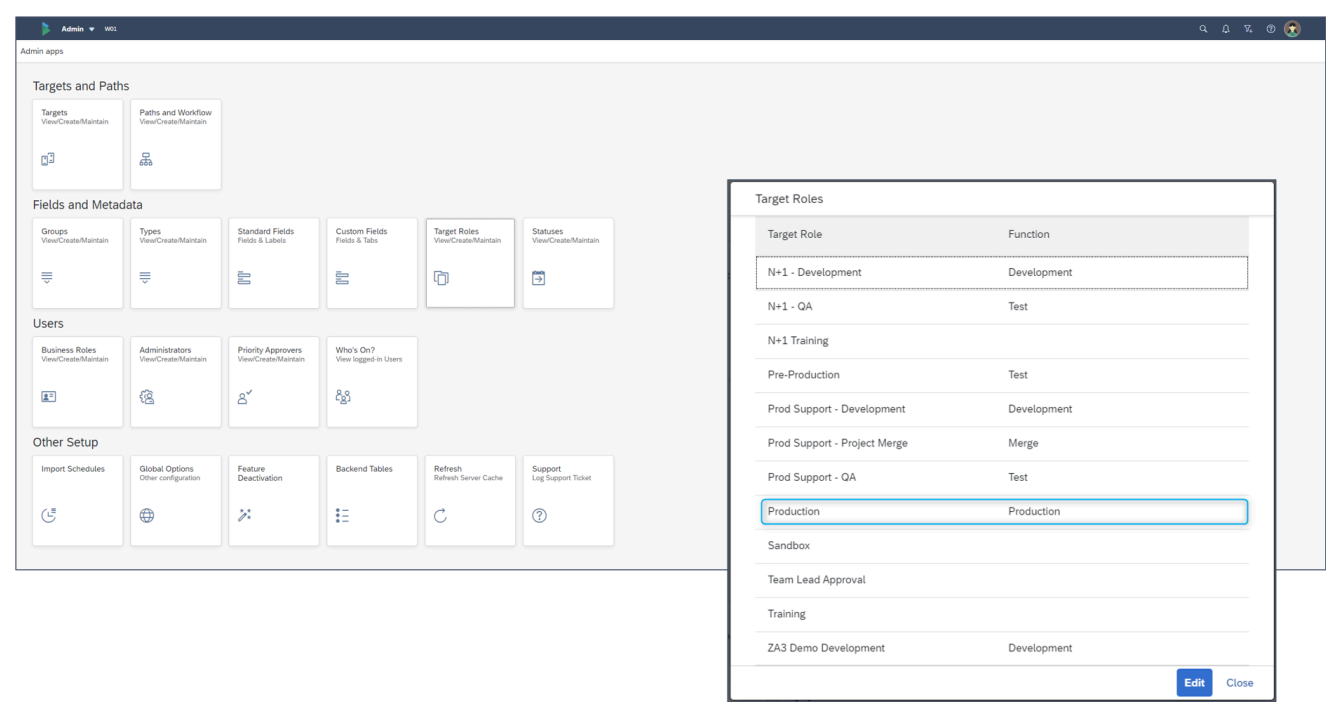
Figure: Assigning Production function to the Production target role.

> ✳ Because Version Comparison (0066) also looks at transports that do not have Transport Forms, this analyser could be particularly helpful within organisations that have lots of

historical orphaned transports that have not been deployed right through the SAP landscape, and that are not migrated into ActiveControl.

7.1.2.50. Impacted Batch Jobs (0067)

Impacted Batch Jobs (0067) allows customers to easily identify which scheduled Batch Jobs are potentially impacted by the objects being delivered in SAP transports. It was added in response to several customers requesting the ability to be able to easily avoid changes being moved to Production at the same time as critical batch jobs were scheduled to run.

This Analyser uses the same Diffuser-based object linkaging technology as that employed by Deep Impact Analysis (0060) and several other Analysers. As a result, setting up Deep Impact Analysis should be seen as a pre-requisite for using this analyser.

Parameters

Parameter	Description
CAPTION	This can be used by customer to configure the message seen in the analyser output (to enable customers to tailor it to their own terminology/explanation)
INCLUDE_DUPLICATES	If there are duplicates in the results, whether you want to see them or not. (the default is No).
LEVELS	How many levels up to check.
TARGET	Can be used to specify the target for the job definition (this will usually be the production system, but not always)

7.1.2.51. Check Transport Presence (0068)

Check Transport Presence (0068) allows customers with branched transport paths, to easily prevent transport to be deployed beyond a certain control point location in one (configurable) branch if the transport still exists in certain (configurable) locations in other branch(es).

Example use cases:

1) Where a customer undertaking their S/4HANA migration did not want an ECC transport to move beyond the ECC test system until it had already been merged into their new S/4 landscape.
2) Where a customer has multiple parallel QA systems, and does not want to be moved to Production until it has been successfully tested in all the parallel test systems
3) Where a customer has a 1:Many landscape (ie single developement, multiple QA and Production systems) and does not want transports to be moved to any Production systems unless it has passed beyond a certain (configurable) location in all parallel QA and Production branches.

Parameters

Configuration is also required via backend table /BTI/TE_SRC_TARG.

Parameter	Description
INCLUDE_DEVTOC	(optional) If enabled, the Analyser will also check for any associated Dev TOCs in the configured location(s).
INCLUDE_MERGETOC	(optional) If enabled, the Analyser will also check for any associated Merge TOCs in the configured location(s).

More information on this Analyser can be found in the original Change Note and subsequent enhancement Change Note.

7.1.2.52. DevEnforcer: Check ABAP Test Cockpit results (0069)

ABAP Test Cockpit (ATC) is a standard SAP tool for checking the quality of ABAP programs. ATC allows SAP customers to run static checks and ABAP Unit tests for their Z ABAP programs. It is possible to either install and run ATC locally in the systems of your development landscape, or alternatively install ATC centrally as a Hub and check the systems using Remote Code Analysis in ATC.

DevEnforcer: Check ABAP Test Cockpit results (0069) can be used to run ATC as part of an automated ActiveControl workflow – similar to our longstanding DevEnforcer analysers. The analyser will allow you to connect to a Target System, either:

(i) a Local Dev System: to run an ATC Check on the Transports highlighted in Active Control).
(ii) a Central ATC System: to look for the last running of a Central Series Run of ATC and compare the objects in AC Transports with the results from the ATC check and return the matching objects from the ATC results.

Parameters

Parameter	Description
ATCTARGET	The NNNN target ID of the Target where ATC is configured.
ATC_CHECK_TYPE	Define whether you want to do a Central or Local Check.
ATC_PRIORITY	Define what level of results you want to return in the Analyser output.
IGNORE_EXTERNAL_TRANSPORTS	(optional) Only required if you want to exclude external transports in your analyser output results.

p(banner tip). More information – including screenshots – of Check ABAP Test Cockpit results (0069) can be found in this online Change Note.

> ✳ More general information on Remote ATC can be found in this external SAP link. More information on setting up Remote Code Analysis using ATC can be found in another external SAP link

Running Onapsis Checks as part of the 0069 Analyser

It is possible to present results of third-party product Onapsis as part of SAP-standard Abap Test Cockpit, and by extension also from the results of the ActiveControl 0069 ShiftLeft analyser.

Please note that the output you will see within DevEnforcer: Check ABAP Test Cockpit Results will depend on your installation of both ATC and Onapsis

- If you are using "Control for Code" version of Onapsis, then Onapsis needs to be installed in same system as ATC for the ActiveControl analyser to present the results.
- If you are using newer "Control Central" version – it is possible to use ATC remote variant to perform Onapsis checks from another system.

Please note that the Basis Technologies recommendation is to use the newer ShiftLeft: Onapsis Checks (0073) analyser available as of ActiveControl 9.10

7.1.2.53. Check Parallel Import Possible (0070)

Parallel Import capability in ActiveControl enables Approvers to initiate an additional transport import, even when an existing import is in progress.

Check Parallel Import Possible (0070) will run automatically during the 'Approve and Import' parallel import process , to confirm that that the parallel deployment is technically feasible – and more importantly – safe to do so alongside the Import that is already running. This new 0070 analyser will essentially perform the following checks:

1) that the Target is configured for parallel imports
2) that the Target is not a Merge Target
3) That there are no object overtake/regression warnings
4) That DDIC objects are not contained in both the i) transports already being imported, and ii) the transports on which the 'Approve and Import' is being performed.

If any of these checks fail, then the Parallel import will not be allowed to proceed. Instead, the Transports will solely be approved and moved into the Import Queue for import as part of the next automated or manual import once the current running import finishes, and a message will be presented to the User to tell them that the parallel import has started.

Parameters

Please note that 0070 does NOT need to be configured. It runs automatically as part of the General Analysis process during the 'Approve and Import' process.

Parameter	Description
KEY_NO_RELATED_VIEWS	By default, when transporting table entries, views that use the same table in key fields will be considered a conflict. This behaviour can be turned off with this flag.
KEY_NO_WILDCARDS	If this flag is set, wildcards are not considered when searching for conflicting table entries.
RISKGROUP	If you want to exclude certain Objects from being able to be included in Parallel Imports, you should configure these via a new and distinct Risk Group (using the usual /BTI/TE_RISKG, /BTI/TE_RISKGOB and /BTI/TE_RISKGOBT configuration) and configure against this RISKGROUP parameter.

✱ Details of the possible Messages that might be seen as a result of Check Parallel Import Possible (0070) can be found in this online Knowledge Article.

7.1.2.54. SAP Level Checks (0071)

SAP Level Checks (0071) runs an optional combination of four SAP-level checks against the contents and availability of a transport:

1) the ability to indicate if a TR contains more than a certain number of objects
2) the ability to highlight if a TR has been deleted at SAP level
3) the ability to highlight if the underlying data/cofiles for a TR no longer exist at SAP level
4) the ability to indicate if a TR contains no objects (ie is an empty transport that is at risk of being released or deployed prematurely)

Each of these individual checks can be activated, depending on the customer's individual requirements.

Parameters

Parameter	Description
CHECK_TRANSPORT_DELETED	Used to highlight if an SAP transport has been deleted within the SAP development system.
CHECK_TRANSPORT_EMPTY	Used to highlight if an SAP transport contains no objects.
CHECK_TRANSPORT_FILES	Used to highlight if an SAP transport datafile/cofile no longer exists in the Development system.
CHECK_TRANSPORT_NUM_OBJS	Used to highlight if an SAP transport contains more than N objects. Please note that this parameter requires variable MAX_NUM_OF_TRANSPORT_OBJECTS to be configured in /BTI/ TE_TVARV table in the Domain Controller backend.

More information on this new Analyser – and instructions on how to configure it – can be found in this online Change Note.

7.1.2.55. Transport Import Date Analysis (0072)

'Transport Import Date Analysis' (0072) is an informational analyser that aims to provide Change & Release Managers with an indication of when Transports could be deployed into Production, based on the object contents and the usage of the top level objects (ie Transactions, Programs) to which those objects roll up.

The output of the Analyser will present three suggested time windows for deploying the Transport(s) in the following 7 day period, based on when the top level objects were not used in a previous time period (eg 30 days) as indicated by a production usage data retrieval program.

Ultimately, the aim of this Analyser is to help SAP Teams move to more Agile deployments – where transport deployments can be done more frequently based on actual usage of the top-level objects impacted by the objects in the transports to be deployed – and not just based on the more traditional time-window based deployment process (ie where it is not expected that Business users will be on the system).

Parameters

EXCLUDE_DAY	(Optional) Can be used to exclude certain day(s) from the results. Ie if Customer does not want the Analyser to propose deployments on Weekends for example. This is done via a new 00NN_EXCLUDE_DAY parameter in table /BTI/TE_TVARV in the Domain Controller.
EXCLUDE_OBJECTS	(Optional) Can be used to exclude certain objects from the calulation. These are configured in existing /BTI/TE_ANLEXC table also being delivered as part of ActiveControl 9.00.
EXCLUDE_TIME_RANGE	(Optional) Can be used to exclude certain time windows from the results. Ie if Customer has a policy of never deploying between certain hours (eg 09:00 – 13:00) then this can be defined. This is done via a new 00NN_EXCLUDE_TIME parameter in table /BTI/TE_TVARV in the Domain Controller.
LEVEL	(Mandatory): Enter the number of levels that the calculation should roll up to see the Top Level Objects.
USAGE_SOURCE	(Mandatory) Target Number for the production target ID (where the usage data is to be retrieved from)

Configuration Steps

More information on this new Analyser – and instructions on how to configure it – can be found in this

online Knowledge Article. The original Change Notes for this new analyser can also be found here and here.

> ❗ 0072 can only be run in a Production Inbox. It is not designed to be run on Dev or QA Targets – its purpose is to determinate appropriate time windows to move to Production, based on Production usage data.

7.1.2.56. Onapsis Checks (0073)

'**Onapsis Checks' (0073)** is an automated ShiftLeft analyser that hooks into 3rd Party product Onapsis (previously called Virtual Forge).

It enables customers that already use both ActiveControl and Onapsis to see the results of those checks within ActiveControl as part of an Approval or Test Signoff, in much the same way as the DevEnforcer analysers that hook into SAP SAP Code Inspector and ABAP Test Cockpit.

Please note that Onapsis is a seperate product that needs to be purchased/licensed directly from Onapsis (https://onapsis.com/). Onapsis Checks (0073) cannot be used by Basis Technologies' customers that have not already purchased and installed Onapsis.

Parameters

CENTRAL_SYST	(Optional). Can be used when Onapsis is installed on a central system other than the ActiveControl Domain Controller.
MANDATORY_ONLY	(Optional) Can be used to only see Mandatory warnings only.

> ✱ Similar to the suite of DevEnforcer analysis checks, the ShiftLeft: Check Onapsis analyser would generally be switched on early in the ActiveControl workflow, typically in a Development Test Queue or Outbox, and certainly prior to the SAP Transports being released.

Configuration Steps

More information on this new Analyser – and instructions on how to configure it – can be found in this online [Knowledge Article](#)

7.1.3. Exclude Objects from certain Analysers

It is possible to exclude certain (configurable) objects from certain Analysers. This has been requested by several customers over the years to avoid what they perceive as spurious Analyser warnings from being presented in some of the Analysers.

As of current ActiveControl version, it is possible to exclude objects from the following Analysers:

- 0004 Dev Enforcer: Security
- 0006 Dev Enforcer: Performance
- 0016 Dev Enforcer: Standards
- 0031 Overtake/Regression analysis
- 0035 Conflict Analysis
- 0060 Deep Impact Analysis
- 0072 Transport Import Date Analysis

Objects for exclusion are configured in backend table /BTI/TE_ANLEXC in the Domain Controller.

> ✱ Please refer to these Knowledge Articles for screenshot examples of how to exclude specific objects from Deep Impact Analysis and Conflict Analysis

> ❗ This functionality was introduced as part of ActiveControl 9.00. Customers using pre-existing /BTI/TE_CONFL_EX table to exclude objects from the Conflict Analysis should manually migrate that configuration over to the new table.

7.1.4. Custom Analysis Types

Custom analysis types can be created by customers to complement the standard-out-of-the-box ShiftLeft analyzers. In order to do this, entries must be maintained in the following tables:

Table	Usage
/BTI/ TE_ANLTYPE	Lists all the analysis types currently available within ActiveControl
/BTI/ TE_ANLTYPEP	Contains all the analysis type parameters. These are only required for the types that need them
/BTI/ TE_ANTYPEPT	Analysis parameter types: 01 BOOL TRUE or FALSE 02 COMBO Combination 03 COMBOLIST Combination list 04 DATE Date value 05 STRING String value 06 MEMO Multi-line 07 NUMERIC Numeric value
/BTI/ TE_ANREASON	Lists all the analysis error reason codes
/BTI/ TE_ANREAS_P	Configuration used to control the approval / import anyway functionality. This is stored by Reason, Analysis type, Target and Location. • If the Analysis type is blank the config applies to all analysis types • If the Target is blank or 9999 the config applies to all targets • If the Location type is blank the config applies to all locations
/BTI/ TE_ANRELINK	Used to link the error reason codes to the relevant analysis types

To implement an analysis type one of the standard ShiftLeft analysis function modules should be copied to a Z version so the framework and parameters can be copied and utilised. The recommendation is to copy function module /BTI/TE_ANALYSIS_CHECKDATE as this FM utilises analysis parameters and custom field processing both of which are likely to be required in most custom analysis types.

It is recommended to number any custom analysis types and reason codes starting with a '9' to distinguish them from standard ones and to prevent them from being overwritten during upgrades. E.g. 9001

Once the table entries and function module are available, they will appear for use within the ActiveControl configuration alongside the standard ShiftLeft analysers.

7.2. Rules Engine

7.2.1. Introduction

Background

Skipping and Approvals are features used by almost all ActiveControl customers. Despite their popularity, Basis Technologies have occasionally received feedback from some users that both parts of the product could benefit from additional flexibility and versatility such as:

1) To be able to define Approvers based on a combination of criteria, and not only the Transport Form [Group] field.
2) To be able to define Peer Reviewers for a Dev Outbox, based on Business Task assignment instead of via ActiveControl configuration
3) To be able to create AND, OR and NOT logic-based skipping rules.
4) To be able to create rules whereby transports created by specific external resources stopped for additional approvals.
5) To be able to create rules whereby particularly old transports stopped for additional approvals.
6) To be able to create 'template' skipping rules, that can be reused to avoid having to configure duplicated rules.

During the last few months, Basis Technologies have worked on a co-innovation project with a large SAP user to enhance ActiveControl to support their complex landscape and process requirements. To achieve their requirements – and to deliver on the feedback received from them and other ActiveControl users – a new Rules Engine has been developed which can be used to create more complex rules for both Skipping and Approvals. It is also expected that this Rules Engine concept will be extended in future releases of ActiveControl to enable rules to also be created in other areas of the product such as Testing, Import Schedules and Email Notifications.

Key Terminology

Consumers: Consumers are the ActiveControl functionalities that make use of the Rules Engine. For ActiveControl 8.0, a Skipping consumer and an Approver consumer are available.

Step: A Step is a condition that will return True or False depending on the particular logic it is coded to perform. (eg if a field = a certain value). Steps can be created for Transport Form, Business Task or Project level conditions. Some Steps will call on other child steps as part of their evaluation (eg AND and OR) and are essentially Parent Steps, whereas other Steps might perform the entire evaluation themselves.

Rule: A Rule is essentially the top-level 'parent' Step which is then called by the Consumer.

Compatibility

The Rules Engine solves lots of complex requirements, but the reality is that many ActiveControl

customers do not have such complex requirements. As such, the Rules Engine has been added to the product in such a way that it is essentially optional functionality. Individual ActiveControl customers can therefore choose whether they want to use the Rules Engine, or continue to use the simpler (but less functionally rich) Approvals and/or Skipping capabilities that were already available prior to ActiveControl 8.0.

For existing ActiveControl customers that want to use the Rules Engine as part of an Upgrade to ActiveControl 8.0 or later versions, a conversion exercise will need to be performed to convert their existing Skipping rules in /BTI/TE_SKIPCP to the new structure used within the Rules Engine. No functionality will be provided by Basis Technologies to automate this, but our Solution Specialists can of course support customers performing this conversion as part of a formalised Upgrade project.

Rules Engine – Technical Summary

1.	Summary	Technical Details	Notes
1.	RFCs	No additional RFCs required.	–
2.	Users	No additional Users required.	–
3	Authorisations	No additional Authorisations required.	–
4.	Configuration Tables	Consumer activation	/BTI/TE_RE_CONSE
		Steps	/BTI/TE_RE_STEP
		Rules	/BTI/TE_RE_RULES
		Step Conditions	/BTI/TE_RE_STEPC
		System Types	/BTI/TE_RE_SYSTP
		Variables	/BTI/TE_RE_TVARV
		Resusable Steps	/BTI/TE_RE_STEPR
5.	Consumer Tables	Skipping	/BTI/TE_RE_SKPCP
		Approvals	/BTI/TE_RE_APPRV
6.	Programs	Rules Harness	/BTI/TE_RURE_TEST_HARNESS
7.	Jobs	None required	–
8.	User Exit	None required	–

The rest of this section of the Administration details the configuration of the Rules Engine.

7.2.2. Core Configuration

This section details the core Rules Engine configuration tables.

Table	Description
/BTI/ TE_RE_CONSE	Table where Rules Engine Consumers are switched on. Otherwise, the legacy Skipping and/or Approvals functionalities are used.
/BTI/ TE_RE_STEP	Table where all parent and child Steps are defined.
/BTI/ TE_RE_RULES	Table where the overarching parent step Rules are defined (and also briefly documented if desired).
/BTI/ TE_RE_STEPC	Table where each child Step Conditions are defined.
/BTI/ TE_RE_SYSTP	Table where Systems are associated as Development, QA, Production systems. This is required if you want to create System-level rules as part of the Skipping and/or Approver consumer configuration tables.

Tips for Rules Engine Configuration

1. Map out your intended rules diagrammatically before starting any configuration. This will not only aid your thought process in determining what child / parent steps you need to make up your overall Rule, it will also help Basis Technologies assist you more easily in the event you need to raise a support ticket.
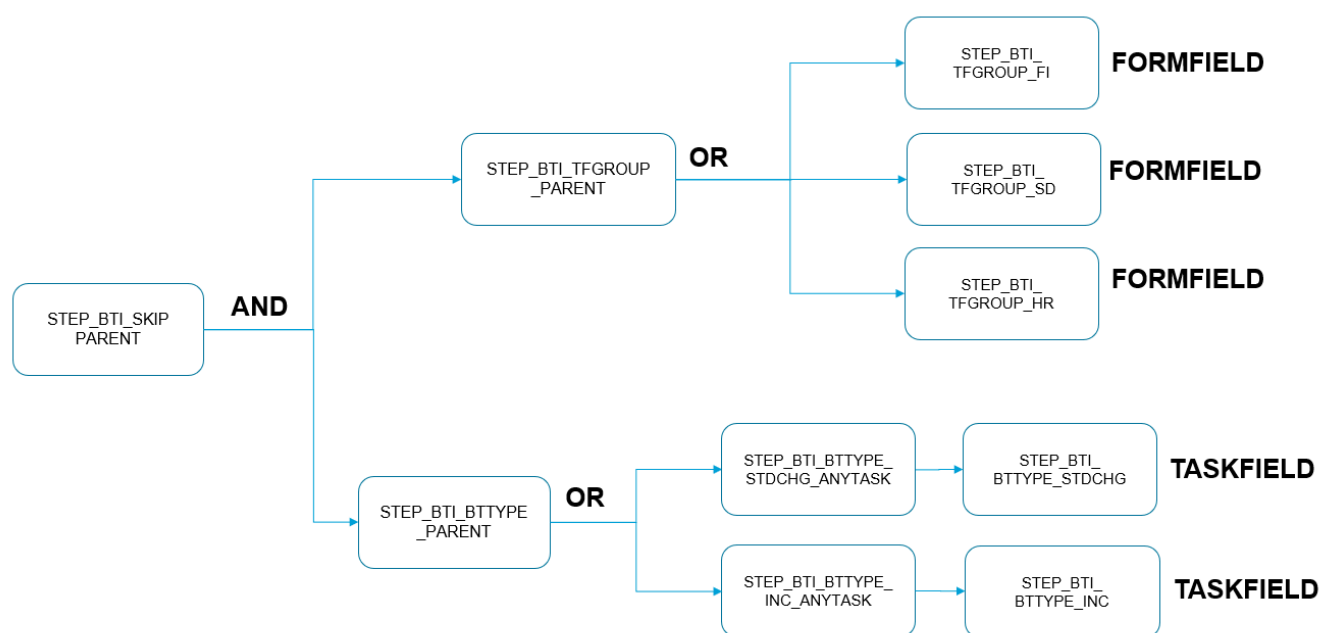
Figure: Example of planning out an intended Rule diagrammatically

2. Give all your steps meaningful names, and use a consistent naming convention. This will make it a lot easier to audit and maintain your Rules Engine configuration later.

3. When configuring, create the Steps from left to right. This is required because you cannot define a child step to a parent step unless the parent step has already been configured.

7.2.2.1. /BTI/TE_RE_CONSE

Table /BTI/TE_RE_CONSE is used to switch on/off individual consumers within the Rules Engine.

If this table is not configured, then the Skipping and/or Approvals functionalities that were available prior to ActiveControl 8.0 will be used, using /BTI/TE_SKIPCP and Target and Workflow configuration respectively.

Field	Description
Consumer	This is the Consumer being switched on, the variables comes from preconfigured /BTI/ TE_RE_CONSE table: **APPROVAL_RULE_ENGINE** : Used to enable/disable the Rules Engine Approvals consumer. **SKIP_RULE_ENGINE** : Used to enable/disable the Rules Engine Skipping consumer. **AUTO_CREATE_TOC**: Used to filter the automated TOC creation. See this online Knowledge Article for a configuration example.
Enabled	This is used to switch on/off the Consumer.
Filter_Field	(optional) if you want to use Filters, the Field name is entered here. See Filters section for more information.

> ❗ If a Rules Engine consumer is activated, it means the legacy equivalent functionality (eg Skipping, Approvals) will no longer be active, regardless if the configuration is still there. It is not possible to use a combination of the legacy capability and the Rules Engine equivalent of a particular Consumer such as Skipping or Approvals.

7.2.2.2. /BTI/TE_RE_STEP

Table /BTI/TE_RE_STEP is where all the simple/multilevel steps used by the Rules Engine are configured.

Field	Description
Step ID	Unique name of the Step.
Parent Step ID	Used when you are creating a child step that forms part of a parent step (eg when you have an AND logic parent step consisting of two child steps. Note that the Parent Step also needs to be defined as a seperate Step in this table, and you must configure this first.
Step Type	See list of available Step Types below.

Step Types

The following details the available Step Types that can be configured in /BTI/TE_RE_STEP (the most common types are detailed at the top).

Step Type	Description
FORMFIELD	This can be used to evaluate a value in a standard or custom field on a Transport Form. Note: Step type FORMFIELD cannot be a child node to ALLTASKS / ANYTASK.
TASKFIELD	This can be used to evaluate a value in a standard or custom field on a Business Task. Note: Step type TASKFIELD can only be a child node to either ALLTASKS or ANYTASK
PROJFIELD	This can be used to evaluate a value in a standard Project field. Note: Step type PROJFIELD needs to be a child node of TASKPROJECT.
ALLTASKS	This can be used to evaluate whether ALL of the Business Tasks assigned to a Transport Form satisfy the child condition. This has been added for the benefit of a few long-term ActiveControl customers that associate a Transport Form with more than 1 Business Task (although this is generally not something Basis Technologies recommend in newer versions of the product due to the concept not working well with newer capabilities such as Partial Testing).
ANYTASK	This can be used to evaluate whether ANY of the Business Tasks assigned to a Transport Form satisfy the child condition. Similar to ALLTASKS, this has been

	added for the benefit of a few longterm ActiveControl customers that associate a Transport Form with more than 1 Business Task.
AND	This can be used to evaluate several steps as an AND scenario, whereby all the steps must be TRUE for the result to be TRUE. In this instance, the parent step would have the AND Step Type, and the child steps would each have their own condition. Note: Step type AND must have at least 2 child nodes
OR	This can be used to evaluate several steps as an OR scenario, whereby if any of the steps is TRUE, then the result is TRUE. In this instance, the parent step would have the OR Step Type, and the child steps would each have their own condition. Note: Step type OR must have at least 1 child nodes
NOT	This can be used to evaluate several steps as an NOT scenario. Note: Step type NOT must have at least 1 child nodes of either AND or OR Please refer to this Knowledge Article for an example of a NOT step type configuration.
ALWAYSTRUE	This can be used when you always want the result to be TRUE. A common use case for this is in ALLGROUPS approval process. Please refer to this FAQ for an example configuration of this scenario.
CHECKSTEP	This is used in conjunction with Reusable Steps.
RISKCHECK	This can be used to evaluate whether a transport contains risk objects, similar to what was possible in /BTI/TE_SKIPCP previously. Note that only the relational operators (eg =, <>) can be used as conditions against this step type.
CONTEXT	This Step Type should be used for Fields which are neither on FORM or TASK. For example, it can be used in conjunction with TARGET or LOCATION conditions in /BTI/TE_RE_STEPC.
CUSTOM_STEP_TYPE	This can be used by customers wanting to create Custom Step Types – see here for further information.

> ❉ ALLTASK/ANYTASK can only have one child node which is either AND or OR(followed by multiple TASKFIELD) or 1 TASKFIELD or or 1 TASKPROJECT.

7.2.2.3. /BTI/TE_RE_RULES

Table /BTI/TE_RE_RULES is where the overarching parent step to be used in the Consumers are defined. This mandatory table is also useful for summarising textually what each Rule is for, making it easier to audit and maintain Rules later. (this is something that customers of /BTI/TE_SKIPCP concept have often asked for in the past).

Field	Description
Step ID	Name of the main Step.
Consumer	(Optional) Can be used to refer to the Consumer (eg Skipping, Approvals) that the Rule will be used for.
Step Description	(Optional) Can be used to summarise the purpose of the Rule.

7.2.2.4. /BTI/TE_RE_STEPC

Table /BTI/TE_RE_STEPC is where Step Conditions are defined.

Field	Description
Step ID	This is the Step ID as defined in table /BTI/TE_RE_STEP.
Field	The current available Fields supported are detailed in table below.
Operator	The current Operators supported are as follows: = <> < <= > >= IN REG_EXP INITIAL NOTINITIAL
Value	The Value format will depend on the Field. See below table for examples.

Available Fields

The following table details the Field variables that are typically configured in /BTI/TE_RE_STEPC. The Fields at the top of the list are the ones that are more likely to be widely used.

Available Field	Value	Other Information
GROUPID	Value will be the Group GUID from /BTI/TE_GROUPS	Refer to this online FAQ for a configuration example
TYPEID	Value will be the Type GUID from /BTI/TE_TYPE	Refer to this online FAQ for a configuration example
[CUSTOM FIELD NUMBER] eg 510	(custom fields at Transport Form, Business Task and Project level are all supported)	Refer to this online FAQ for a configuration example
PROJECTID	Value will be the Project GUID from /BTI/TE_PROJ	
PHASEID	Value will the nnnn Phase ID, from /BTI/TE_PHASE	
PHASEID	Value will the nnnn Phase ID,	

	from /BTI/TE_PHASE	
START_DATE	Value will be in YYYYMMDD date format	
CLIDEP	Value will be X for client dependent	Typically used to avoid the symptom described in this online FAQ
[RISK GROUP] eg BT0001	Value will be 1-digit number – for the Risk Level	Refer to this online FAQ for a configuration example
PRIORITY	Value will be 1, 2, 3 or 4 (Low, Normal, High, Critical respectively)	Typical use case is for high priority changes to skip certain approval points, or stop for additional approvals, depending on the Customer's process
TESTERID	Value would be something like JROBERTS.	Refer to this online FAQ article for a configuration example.
REFERENCE	Value will be the Business Task Reference field value, eg CRQ0001293	
CAPTION	Value would be a text string.	
NUM_OBJECTS		Possible use case would be to stop transports containing high numbers of objects for additional approval
NUM_KEYS		
PATH	Value would be something like 02 (ie the 2-digit number of the path, from /BTI/TE_PATH	
TARGET	Value would be something like 0005 (ie the 4-digit number of the path, from /BTI/TE_TARG	
STAT_DEPL		
STAT_PLAN		
TRKORR	Value would be something like ACDK904698.	
CREATION_DATE		Possible user case could be used to drive an additional approval on transports older than X years
CREATION_TIME		CREATION_DATE is probably more likely to be used.
CREATED_BY	This is the username of the person that created the AC Transport Form.Value would be something like RROBB.	

REQUESTOR	This is the username of the person that created the SAP transport. Value would be something like JBARTER.	Possible use case would be to force additional approval on transports created by certain users (eg external consultants). Refer to this online FAQ article for a configuration example.

Available Operators

Operator	Description	Other Information
=	Equals	Note, if you want to create a condition based on a field being blank, you would use the Operator = and the Value ""
<>	Not Equals	Note, if you want to create a condition based on a field not being blank, you would use the Operator <> and the Value ""
<	Less than	
<=	Less than or Equal To	
>	Greater than	
>=	Greater than or Equal To	
IN	Within a range of Values	Please refer to this online FAQ article for example configuration of a Range based IN operation.
INITIAL	Checking if a field is blank	
NOTINITIAL	Checking if a field is not blank	

Custom Field's supported

Field Type \ Supported ?	Transport Form	Business Task	Project
Text	Supported	Supported	Supported
Dropdown	Supported	Supported	Supported
Checkbox	Not Supported	Not Supported	Not Supported
Date	Supported	Supported	Supported
Time	Supported	Supported	Supported
User Selection	Supported	Supported	Supported
Selection List	Supported	Supported	Supported
Option (Radio Button)	Not Supported	Not Supported	Not Supported

| Calculated | Supported | Supported | Supported |

7.2.2.5. /BTI/TE_RE_SYSTP

Table /BTI/TE_RE_SYSTP is used to map Targets configured in the Web Platform front-end to **System Types** used in the Rules Engine back-end configuration.

This configuration table is only required if you want to be able to configure the Consumer tables based on System Type / Location level, instead of Target/Location.
Some more information on why you might want to use System Types is detailed in this online FAQ article.

Field	Description
System Type	eg Development, Quality Assurance, Production.
Target	{Target Number} per the target configured in the Target configuration screens.

> ❗ The Rules Engine does not use Target Roles defined in the Target Roles configuration app to group systems together.

7.2.2.6. /BTI/TE_TVARV

RE_CACHE_ON variable should be added to table /BTI/TE_TVARV, with Low value 90.

This is required to optimise the performance of the Rules Engine, particularly around the Approvals Consumer in the Web Platform.

7.2.3. Consumers

7.2.3.1. Skipping (/BTI/TE_RE_SKPCP)

Skipping consumer is used in conjunction with the Rules Engine to enable customers to allow Transport Forms to bypass specified locations (Inboxes, Import Queues, Test Queues, Outboxes) based on configurable logic.

The Rules Engine skipping consumer replaces table /BTI/TE_SKIPCP configuration that was available in earlier versions of ActiveControl.

/BTI/TE_RE_SKPCP

Table /BTI/TE_RE_SKPCP is the consumer table for Skipping rules.

Field	Description
Filter	(optional) Please refer to Filter section.
System Type	System Type as defined in /BTI/TE_RE_SYSTP. You can create rules based on either System Type/Location combination OR Target/Location. You cannot create a rule with both System Type and Target.
Target	Target number, as generated automatically via the Target configuration app. You can create rules based on either System Type/Location combination OR Target/Location. You cannot create a rule with both System Type and Target.
Location	I (Inbox), Q (Import Queue), T (Test Queue) or O (Outbox).
Step	The overarching Rule, as configured in /BTI/TE_RE_RULES.
Priority	Number sequence (1,2,3 etc). This is the order in which the rules will be processed. See additional Priority note below.
Skip Action	'Skip' or 'Do Not Skip' or 'Delete'
Def on Exception	"Defer on Exception" is an optional setting. If switched on, then if there is an exception, then the action (Delete/Skip/NoSkip set for the rule will be carried out, but a system error will also be logged.

✳ As mentioned above, you must configure EITHER a System Type or a Target/Location combination. You cannot configure both within the same entry. If you configure an entry against target/location and another entry against system type which includes that target, then both records will be considered during the rule execution.

✳ Priority is used to create a sequence in which the rules should be processed. In the old /BTI/TE_SKIPCP table, 'Do Not Skip' always took precedence over a skip rule in the

same location. The priority field in the Rules Engine allows the ActiveControl Administrator to define which rule should be treated with the greatest importance (ie Priority = 1). You should not configure two rules with the same numerical priority. Although Priority is not a mandatory field, it is recommended to maintain it, as otherwise the Rules Engine will just run the rules in the order in which they are maintained in the table.

! The legacy Skipping consumer /BTI/TE_SKIPCP is no longer supported by Basis Technologies. Customers should look to migrate existing skipping logic over to the Rules Engine as part of an upgrade to newer version of ActiveControl.

7.2.3.2. Approvals (/BTI/TE_RE_APPRV)

Prior to ActiveControl 8.0, it was only possible to define approvers within ActiveControl based around the Transport Form [Group] field, via the now-legacy [Approvers](#) rarget configuration

Over the years, many Basis Technologies customers – particularly larger enterprises with more complex organisational structures – told us that this Approval structure could sometimes be limiting, and that they would like the flexibility to be able to assign Approvers more granularly, such as

1) Different Approvers for CRs and Incidents (ie Business Task [Types].
2) Different Approvers for transports relating to different Projects.

ActiveControl 8.0 introduced this increased flexibility via an Approvals consumer that forms part of the core Rules Engine. It should be noted that this increased flexibility comes at the cost of increased configuration – as it requires several backend tables to be configured. For customers that do not want to use the Approvals consumer within the Rules Engine, they can simply continue to use the existing Approvals configuration performed in the Web Platform Target's app on the Inbox/Outbox approver subscreen. It is not possible to use a mixture of the Rules Engine approvers and Target configuration Inbox/Outbox approver structure.

/BTI/TE_RE_APPRV

Table /BTI/TE_RE_APPRV is the consumer table for Approver rules. If you want to have Inbox and Outbox Approvers in your workflow based on fields other than the Transport Form [Group] field, then this is where you define them.

Field	Description
Filter	(optional) Please refer to [Filter](#) section.
System Type	System Type as defined in [/BTI/TE_RE_SYSTP](#). You can create rules based on either System Type/Location combination OR Target/Location. You cannot create a rule with both System Type and Target.
Target	Target number, as defined in the [Target](#) configuration screen. You can create rules based on either System Type/Location combination OR Target/Location. You cannot create a rule with both System Type and Target.
Location	I (Inbox), Q (Import Queue), T (Test Queue) or O (Outbox)
User Group	User Group, configured via the [Business Roles](#) screen (and seen via backend table /BTI/TE_ROLEU table).
Group Type	The current available Group Types supported are detailed in table below.
Step	The overarching Rule (Step) configured in /BTI/TE_RE_RULES.

Group Types

Group Type	Description
ROLE	If you want your Approvals to be based on the Users defined against the User Role (as stored in /BTI/TE_ROLEU / /BTI/TE_ROLEUX)
PROJECT	If you want your Approvals to be based on the Users maintained against a Role on a particular Project (as stored in /BTI/TE_PROJU)
TASK	If you want your Approvals to be based on the Users maintained against a Role on a particular Business Task (as stored in /BTI/TE_TASKU)

✻ The Approvals consumer uses pre-existing tables /BTI/TE_ROLEU and /BTI/TE_ROLEUX for the definition of User Roles and User assignments to those roles. These are configured in the front end via Business Roles app tile.

7.2.3.3. Testers (/BTI/TE_RE_TSTER)

Testing consumer is used in conjunction with the Rules Engine to enable customers to automatically assign users as Testers on Business Tasks:

Field	Description
[STEP]	As per what is configured in /BTI/TE_RE_STEP.
[ROLE_TYPE]	Can be either PROJECT or ROLE ROLE = Users assigned to a User Role in the 'Business Role' app. PROJECT = Users assigned to a AC Project Role TASK is not allowed.
[USER_ROLE_ID]	The Business Role as per what was configured in the Business Roles app screen.
[ALL_SYSTEM]	If you want the defined Testers to be assigned at the highest 'All System Tester' level on the Business Task.
[SPECIFIC_TARGET]	If you want the defined Testers to be assigned to Specific System(s) on the Business Task.
[TARGETROLEID]	If you want the defined Testers to be assigned as Testers on a specific Target Role on the Business Task.
[SYSTEM_TYPES]	If you want the rules to be applicable for all systems defined in /BTI/TE_RE_SYSTP – instead of a specific system.

Please refer to this online Change Note for further details – plus examples of – the configuration of the Testers consumer in the Rules Engine.

7.2.3.4. Transport of Copies

Within ActiveControl it is possible to automatically create Transport of Copies (TOCs) as part of a Dev>QA testing cycle.

This capability is described in later [Transport of Copies](#) section of this Administration Guide.

As part of the TOC automation, it is possible to (optionally) define rules in the Rules Engine which govern when TOCs are created. As an example, some customers might want all Transports except Securities and Basis Transports to trigger a TOC.

Due to this, a TOC consumer is available as part of the Rules Engine. There is no specific Rules Engine table as part of the TOC automation capability, but some of the general Rules Engine tables such as /BTI/TE_RE_STEP, /BTI/TE_RE_STEPC and /BTI/TE_RE_RULES are utilised.

7.2.3.5. Import Client Distribution (/BTI/ TE_RE_CLISE)

Many SAP customers have multiple clients within at least some of their SAP systems. In some cases, this multi-client strategy is limited to the the Development system (eg 100 main client, 200 unit test client) – but in other cases, multiple clients can also be seen in Test and sometimes even Production SAP systems.

In some cases, the client distribution is based on the original source client of the Transport. This scenario can be handled in ActiveControl via long-standing client distribution capability described in this online Change Note.

In other cases, customers may want to specific the client(s) in a system to which individual Transport Forms should be deployed, based on a user choosing on the Transport Form. This scenario can be achieved using Rules Engine consumer for client selection/import.

/BTI/TE_RE_CLISE

Table /BTI/TE_RE_CLISE is the consumer table for the Client Selection import rules.

Field	Description
FILTER	(optional) Please refer to Filter section.
SYSTEM_TYPE	If you want the rules to be applicable for all systems defined in /BTI/ TE_RE_SYSTP – instead of a specific system.
TARGET	Define the Target against which the client import rule is running against.
TARCLIENT	Define the Target client against which the client import rule is running against.
STEP	As per what is configured in /BTI/TE_RE_STEP.
PRIORITY	Number sequence (1,2,3 etc). This is the order in which the rules will be processed.
DEF_ON_EXCEPTION	"Defer on Exception" is an optional setting. If switched on, then if there is an exception, then the action set for the rule will be carried out, but a system error will also be logged.

> ✳ Please refer to this online Change Note for a configuration example with screenshots.

7.2.3.6. Consumer Configuration Examples

The ActiveControl Rules Engine offers a lot more flexibility for Skipping and Approvals than was available prior to ActiveControl 8.0, however does require a greater level of configuration to achieve these more powerful scenarios.

To help our customers get up to speed quickly with the configuration, we have created some online Knowledge Articles of how to setup common scenarios:

Skipping FAQs

Scenario	Knowledge Article Link
HOW DO I: create a single condition Transport Form standard field skipping rule?	Click here
HOW DO I: create a single condition Business Task standard field skipping rule?	Click here
HOW DO I: create a skipping rule based on a Custom Field?	Click here
HOW DO I: create a skipping rule of client dependent transports?	Click here
HOW DO I: create a skipping rule based on OR condition?	Click here
HOW DO I: create a skipping rule based on Project Phase?	Click here
HOW DO I: create a skipping rule based on objects contained in rule?	Click here
HOW DO I: create a skipping rule based on AND condition?	Click here
HOW DO I: create a skipping rule in the Rules Engine based on Tester?	Click here
HOW DO I: create a skipping rule IN a range of values?	Click here
HOW DO I: create a skipping rule based on NOT IN a range of values	Click here
HOW DO I: create a skipping rule based on a Calculated Custom Field?	Click here

Approvals: Configuration Examples

Scenario	Knowledge Article Link
HOW DO I: create Approver structure based on Transport Form [Group], with an ALLGROUPS approver?	Click here
HOW DO I: create Approver structure based on Transport Form [Group] AND Business Task [Type]	Click here
HOW DO I: create Approval structure based on Transport Form [Group] AND [Project]	Click here

| HOW DO I: configure a Peer Review process for an Inbox or Outbox ? | Click here |
| HOW DO I: configure Project Managers to perform approval of RICEFs in their Project? | Click here |

Testers: Configuration Examples

Scenario	Knowledge Article Link
HOW DO I: Assign Testers based on Business Task [Group]	Click here
HOW DO I: Assign same Testers for ALL Business Tasks	Click here
HOW DO I: Assign Testers to BTs based on a specific User Role assigned to the allocated AC Project	Click here

Other Rules Engine FAQs

Scenario	Knowledge Article Link
HOW DO I: create a custom node type?	Click here
Why do I need a ANYTASK or ALLTASK parent step when creating a TASKFIELD step in Rules Engine?	Click here

7.2.4. Rules Test Harness

A **Rules Test Harness** has been built as part of the Rules Engine solution. This was initially built for Basis Technologies internal use to help our Development and QA team test the Rules Engine, however it is also an extremely useful mechanism for our customers to validate how a particular transport will behave within the ActiveControl workflow as a result of their Rules Engine configuration, or indeed to troubleshoot any unexpected behaviour resulting from their Rules Engine setup.

The Rules Harness is accessed via program **/BTI/TE_RURE_TEST_HARNESS** in the Domain Controller.

Figure: The Rules Harness

Selection Screen

Field	Description
Data Entry	Single Entry : Should be used when you want to evaluate a specific transport against a Rule. Mass Entry : Should be used if you want to evaluate a spreadsheet list of transports against a Rule Used Stored Data : This can be used if you want to analyse a historical Validation run
Transport	The Transport against which you want to validate against a Rule
Target	The target against which you want to validate a Rule
Location	The location of the target defined above, against which you want to validate a Rule
Step ID	The Rule against which you want to validate a Transport

File Path (location	Used in conjunction with the 'Mass Entry' mode. Please refer to this FAQ for instructions on how to use this data entry mode.
Run IDs	Used in conjunction with the 'Use Stored Data' mode. This mode is primarily for Basis Technologies internal usage.
Run Version	Used in conjunction with the 'Use Stored Data' mode. This mode is primarily for Basis Technologies internal usage.

7.2.5. Troubleshooting Issues

Validating Rules

The [Rules Test Harness](#) is a really useful tool for testing configuration and troubleshooting issues. When creating new rules or maintaining existing ones, it is strongly recommended to evaluate some transports with the Rules Harness, to check that the configuration is working as expected.

Error Logging

Unlike the historical /BTI/TE_SKIPCP, a new error logging capability is included as part of the Rules Engine. This error logging is aimed at helping customers quickly identify and troubleshoot configuration errors in their setup during the implementation or ongoing maintenance of the Rules Engine.

System Errors can be viewed within the [Health Console](#), and are also sent to ActiveControl Administrators via email notification, if the corresponding 'System Errors' notification is switched on within /BTI/TE_RNOTIFICATION_ENGINE variant.

Common Configuration Errors

The following FAQ articles summarise some of the most common configuration issues on the Rules Engine.

Error	Knowledge Article Link
"StepID [XYZ] is not maintained as Skip Rule in table /BTI/TE_RE_RULES"	Click [here](#)
"StepID [ABC] cannot evaluate a subject of type FORM for the step type TASKFIELD"	Click [here](#)

7.2.6. Advanced Topics

7.2.6.1. Ranges

Ranges can be used in conjunction with the IN operator, to create a step condition based on one of a range of values. This can be useful in certain scenarios to help significantly cutdown on the number of steps/rules that you might otherwise need.

For details of how to configure a Range-based Rule, please refer to this online FAQ article.

/BTI/TE_RE_TVARV

Table /BTI/TE_RE_TVARV is used to as part of the Contains / IN operator within the Rules Engine.

Field	Description
Variable Name	Please see underneath for the variables relating to the Rules Engine.
Number	This can be 1 (unless several line items are required, in which case they should be in numerical sequence, 1,2,3 etc.
INCL / EXCL	Optional, will depend on the variable.
Option	Optional, will depend on the variable.
Selection Value	Optional, will depend on the variable.

Variable Name	Description
[RANGE NAME]	Refer to FAQ article linked earlier in this section.
[CONTAINS]	Refer to Contains section.

> ❗ Please note that the Rules Engine variable table is different to the /BTI/TE_TVARV table used by other functionalities within ActiveControl.

7.2.6.2. Contains

CONTAINS can be used in conjunction with the IN operator, to create a step condition based on the value containing a string within that value. This can be useful in certain scenarios to help significantly cutdown on the number of steps/rules that you might otherwise need. For example, if you have a dropdown with values such as:

EU – France
EU – Germany
EU – Italy
EU – Greece
APAC – Australia
APAC – New Zealand
APAC – Malaysia
AFRICA – South Africa
AFRICA – Zimbabwe
AFRICA – Ethopia
LATAM – Colombia
LATAM – Brazil
LATAM – Argentina

…and want to create a skipping rule based on the selected value being a European country – you can now achieve this with one single CONTAINS step/condition (EU*), instead of having to create a step/condition for each of the individual EU country values.

> ✱ Please refer to this online FAQ for a configuration example of a CONTAINS logic step.

7.2.6.3. Reusable Steps

Table /BTI/TE_RE_STEPR can be used to define child steps / conditions for reuse – to avoid duplicated creation of complex rules.

Field	Description
Step ID	Text description of the step.
Reusable Step	Text name of the reusable step that will then be configured in /BTI/TE_RE_STEP.

✳ Please refer to this online FAQ for a Reusable Step configuration example.

❗ Note that you do not to create a reusable Step in the scenario where you want to reuse the same complex step / rule within the Consumers. The same Step/Rules can be used against different Consumer locations.

❗ Resusable steps are really only beneficial for complex rules involving multiple child steps (eg AND or OR). There is no real benefit of having a resusable step for a single condition step, you are better just to duplicate that in /BTI/TE_RE_STEP and not use /BTI/TE_RE_STEPR.

7.2.6.4. Custom Node Types

Custom Node Types can be used by customers wishing to create their own custom node types that run within the Rules Engine architecture. This is an advanced capability of the Rules Engine which Basis Technologies do not envisage many customers needing to use, given the standard /BTI/TE_RE_STEP and /BTI/TE_RE_STEPC tables should cover the vast majority of desired condition use cases.

/BTI/TE_RE_STEPT

Table /BTI/TE_RE_STEPT is an application table used by the Rules Engine. It is pre-configured with the standard classes used by the Rules Engine to perform the various functionality, and should not need to be maintained by the majority of customers. The only exception to this is for customers creating custom node types. In this instance, the custom step type and implementing class must be defined in /BTI/TE_RE_STEPT

❋ Please refer to this online Knowledge Article for a configuration example of a Custom Node Type.

7.2.6.5. Filters

Filters can be used on the Consumer configuration tables in conjunction with Calculated Custom Fields (or indeed any other fields), to limit (filter) the number of Skipping or Approval rules to be evaluated.

This is optional functionality that Basis Technologies does not anticipate needing to be widely used in most ActiveControl-managed SAP environments.

7.2.6.6. Calculated Custom Fields (CalcCF)

Calculated Custom Fields enable ActiveControl customers to write their own custom calculations and logic upon which Rules Engine rules can be based. This custom calculation is written to a custom field on the Transport Form or Business Task, which then drives behaviour of the Rules Engine consumers.

A new calculated custom field type has been created to support this new functionality. This is configured via the Custom Fields app screen.

A new implementation method/class is available for customers to write their own complex custom calculations, which will result in a value being populated in the Calculated Custom Field.

> ✳ Please refer to this online FAQ for a Calculated Custom Field configuration example.

/BTI/TE_CCF_IMPL

It is possible to have more than one calculated custom field (CCF). Table /BTI/TE_CCF_IMPL is used to associate the CCF to the specific implementor.

Field	Description
Field ID	This is the field number of the calculated custom field (as seen in the Custom Fields configuration screen.
Implementer	Name of the custom Implementing class.

> ❗ Calculated Customer Fields is an advanced topic of the Rules Engine, and will not be required in most customer implementations of ActiveControl. The core Rules Engine capabilities should fulfil the vast majority of customer process / workflow requirements.

7.2.6.7. Application Tables

Various application tables are introduced with the Rules Engine. These tables do NOT need to be maintained by customers. This section is purely informational, and to hopefully avoid customers from updating the tables.

/BTI/TE_RE_STEPT

Table /BTI/TE_RE_STEPT is an application table used by the Rules Engine. It is pre-configured with the standard classes used by the Rules Engine to perform the various functionality, and should not need to be maintained by the majority of customers. The only exception to this is Custom Node Types, in this instance the custom step type and implementing class must be added to /BTI/TE_RE_STEPT.

/BTI/TE_RE_CONSU

Table /BTI/TE_RE_CONSU is an application data table used by the Rules Engine. It is pre-configured with the available Consumers, which can then be enabled/disabled via /BTI/TE_RE_CONSE configuration table.

/BTI/TE_RE_RUNS

Table /BTI/TE_RE_RUNS is an application data table where data associated with running the Test Harness is stored.

/BTI/TE_RE_GTYPE

Table /BTI/TE_RE_GTYPE is an application table where the possible Approval types are defined. These are available for selection within configuration table /BTI/TE_RE_APPRV.

7.3. Partial (Transport Level) Testing

In early versions of ActiveControl, it was only been possible to sign off testing in Test Queues at a Business Task level. The guiding principle behind this has always been that testing is being signed off on an entire change, and so all Transport Forms relating to the Business Task should be moved at the one time.

There are scenarios where customers want to move individual transports forward from Test Queues, (for example when unit testing of one transport is complete, and the Developer wants to move it into subsequent test system for further testing in advance of the other transports relating to the same change being developed/unit tested).

As such, a **Partial Testing** capability is now available in ActiveControl to allow individual transports to be signed off within Test Queues. This capability must be switched on explicitly for each of the desired target systems.

Configuration Steps

To enable transport level testing signoff, tick the 'Allow test result entry for my transports on this target' checkbox seen onon the [Approvals and Testing Options](#) screen of Target configuration.

> ✳ If the new configuration option is left unchecked, then Test Queue sign-offs will operate on Business Task level. Only users assigned to the Business Task will be able to do a "Save and Approve" in the Test Queue.

> ✳ Partial testing can only be done on transports that you own, not on other people's transports. It can also be done across Business Tasks, ie by selecting Transport Forms on different business tasks.

7.4. Release Orchestration

ActiveControl Orchestration provides a seamless and automated approach to Cross System Dependencies and Manual Step scenarios.

In earlier versions of ActiveControl (or with Release Orchestration switched off in current versions), a System Error is generated in the event of an unmet dependency or incomplete pre-import Manual Step when that Transport reached the Import Queue and an automated import ran. This results in Basis Team or Administrators having to get involved, which resulted in delays as well as a rather inefficient manual intervention.

With Orchestration switched on, a Transport will sit in 'Pending Import' status where there is an unmet transport dependency or incomplete pre-import Manual Step. As soon as the pre-requisite transport is imported, or the Manual Step is completed, then the pending transport will be automatically imported. This happens immediately, not when the next scheduled import runs.

Configuration Steps

Orchestration is switched on via the 'Orchestrated' option on the [Import Options] tab of a Target. Basis Technologies would generally recommend switching it on for all configured Targets.

7.5. Automated Transport Naming Convention

ActiveControl can be used to automatically populate the Transport Description in an SAP transport at the point the Developer is saving a Transport Form in the SAP GUI of the ABAP Development system. This can help with the consistency of descriptions within SAP, and also the auditability of transports later.

The following information can be used to build an automated Transport naming convention:

1) Standard/Custom fields from a Business Task (or a specified substring from that value)
2) Standard/Custom fields from a Transport Form (or a specified substring from that value)
3) Hardcoded Text strings
4) The Transport Description that the Developer writes prior to saving the Transport Form.

Configuration of Transport Description naming automation

To setup this functionality, you need to configure the required Transport Description naming convention in **/BTI/TE_TR_DESC** table:

Field	Description
PATH	The path that this configuration is valid for.
SEQUENCE	The sequential number to put the records in the correct order.
TYPE	This is the type of the record. T = Task Field, F = Form field, X = constant/delimiter, D = current description of transport.
CUSTOM_FIELDNUM	If you want to use the contents of a custom field, this is the number of it.
TE_FIELD	This is the fieldname of the Task or TF. Note, for Group and Type fields, the field names are actually GROUP_NAME and TYPE_NAME. If you use GROUPID, it will actually use the internal ID of the group. Task Reference = REFERENCE, not TASK_REFERENCE Task Subject = CAPTION, not SUBJECT Project = PROJECT_NAME, not PROJECT.
JUSTIFICATION	Use this if you only want a sub-set of what is in the field. L = left x characters, R = right x characters, M = Middle of value, D = characters after a delimiter.
LENGTH	The number of characters from the field you want to use (notes this is used in conjunction with the JUSTIFICATION above). If you leave this blank, the whole value is used.
MID_START	If you select M for the JUSTIFICATION, this is the starting point in the value.
TEXT	If this is a constant/delimiter, then the text value should be entered here. Also, if you use the JUSTIFICATION = D, this is the delimiter in the text that the api looks for.

Notes:

i) you should enter the **&** character before a ""*" or "!" if you want to use either of those two characters in your text element. ie* **&**" or **&!**

ii) you should enter **& &** if you want to have a leading or trailing space in your text element

iii) the transport naming automation only works when the Transport Form is created, not on later updates to existing Transport Form. So if you create the Transport Form and then later update fields on the Transport Form or Business Task, the Transport Description will NOT get automatically updated. In that scenario, you will need to manually amend the Transport Description in SAP GUI or in the Transport Form (if the transport is still modifiable).

> ✱ Further information on how to configure Automated Transport Naming Convention – plus a screenshot example of some configuration – is available in this online FAQ.

7.6. Attachments within ActiveControl

It is possible to add attachments into ActiveControl via the Web Platform, and also in the SAP GUI.

It is possible to upload all file types with the exception of .exe executable file types.

Attachments can be added at various entity levels within ActiveControl.

1) Business Task level
2) Transport Form level
3) Project level
4) Test Results
5) Manual Steps

This can be used to add Change Documents (eg Technical Specs etc) or Test Evidence etc as part of your defined processes within ActiveControl..

Regardless of where and when you want to upload the attachment, there are three options for attaching within ActiveControl:

- **Upload file attachments within ActiveControl**: the files are stored within the ActiveControl Domain Controller SAP system.

- **URL Linking**: the file is stored in 3rd Party document management repositories such as Sharepoint, OpenText or Confluence, and solely a URL link to that file is saved within ActiveControl.

- File Upload to 3rd Party Document Management repositories* : where the files are uploaded via ActiveControl but are actually stored within tools like Sharepoint and OpenText. This requires User Exits described in this Change Note.

7.6.1. Attachment Categories

As part of the process for adding documents (either uploading or linking) into ActiveControl, a **Document Category** can be specified – for example Functional Spec, Unit Test Evidence, UAT Test Script, Email, etc).

These Document Categories can be used for Reporting, and also by ShiftLeft: Check Documentation (0051) to perform an automated check for the presence of a uploaded document at a particular Inbox, Test Queue, Outbox control point in the workflow.

Document categories are defined in table **/BTI/TE_ATT_CAT** in the Domain Controller.

These Document Categories can be restricted so that they can only be used for Business Tasks, Transport Forms, Test Results, Project or Manual Step. This is controlled via the CLASS field. The valid entries for this field are:

- TASK
- REQUEST
- TESTRESULT
- PROJECT
- MANUALSTEP

If the CLASS field is left blank, the document category is valid for all object types.

Default Document Categories

It is possible to set default document categories so that a configured Category is pre-populated during the process of uploading a Document in both the ActiveControl Web Platform; this is useful for customers that always upload the same types of documents or alternatively do not want to benefit from the Document Category functionality, but do want to upload or link documents.

Defaults can be specified via the DEFAULT_CAT field in /BTI/TE_ATT_CAT table, by entering an "X" against the row that you want to be defaulted.

CATEGORY	CAPTION	CLASS	DEFAULT_CAT
CTMS	cTMS artifact	REQUEST	
FUNCSPEC	Functional Specifications	TASK	
MANSTEP	Manual Step Documentation	MANUALSTEP	
PROJORG	Project org chart	PROJECT	
PROJSPEC	Project specification	PROJECT	X
SITTEST	System Integration Test Evidence	TESTRESULT	
TECHSPEC	Technical Specifications	TASK	
TRCHECKLIST	Transport Check List	REQUEST	
UATTEST	UAT Test Evidence	TESTRESULT	
UNITTEST	Unit Testing Evidence	TESTRESULT	

Figure: Example configuration of Documentation Categories .

✳ Further information on Document Categories is detailed in this online FAQ.

7.6.2. Attachment Security

When a file is uploaded within the ActiveControl Web Platform, the backend will run the virus scan profile "/SIHTTP/HTTP_UPLOAD" if it is activated and set-up in transaction VSCANPROFILE.

More information on what is required can be found in these external website links 1 2

7.7. Managing N+n Landscapes

ActiveControl offers support for branched SAP development streams, such as when a Production Support development stream is copied to a project development stream to allow project changes to be made in parallel to and independent of continuing Production Support changes.

The problem to be overcome with branched development systems is ensuring that Production Support changes are applied completely, correctly and at the right time to the project development stream. ActiveControl provides various functionality to help manage and control branched development streams as an integrated whole by:

1. Tracking when changes must be applied to the project development system.
2. Maximising productivity by analysing changes to determine those that can be automatically applied and those which must be manually merged because of conflicts with project work already undertaken.
3. Providing a reconciliation capability to give confidence that all changes have been applied completely and without regression.

It is important to note that whilst the methodology for managing branched development systems may result in production support transport requests being imported into the project development system, such transport requests are not imported into the downstream systems of the project development stream, such as the project Quality Assurance system. Instead, ActiveControl creates special transport requests called **Merge** requests (similar in nature to backup requests) in the project development system and it is these requests that are transported throughout the project development stream. This differentiation is made to reduce complexity and confusion caused by transports being source from multiple systems.

The rest of this section summaries the features within ActiveControl that support managing parallel Development tracks:

- [Merge](#)
- [Inline Conflict Analysis](#)
- [Conflict Analysis](#)
- [Mark as Manually Applied](#)

7.7.1. Merge

ActiveControl Merge works according to the following high-level process:

1) The original transport(s) are imported to the target development system.

2) A Merge transport (Transport of Copies) is created (not imported) in the target development system.

3) All of the objects in the original transports are put into the new Merge TOC.

4) That new merge transport is then released and moved down the target landscape.

When should we Merge in the process?

ActiveControl flexibility allows customers to Merge at any point in the development lifecycle. This could be after Development, after QA, after Production etc.

In most cases, Basis Technologies' customers choose to Merge to the project development stream after they have been imported into the Production system, otherwise there is a risk that the project will introduce changes that the business is either not ready for or do not want, when it goes live.

To this end, it is necessary to add the target for the project development system to the transport path for the Production Support development stream. The project development system must appear as a child of the Production system. Once changes are applied to the Production system, they will flow to the import queue of the project development system and will be automatically analysed to determine whether the changes can be applied automatically (as described further on the next page).

Configuration Steps

Detailed information on how to configure ActiveControl Merge can be found in this online FAQ article

There are many different options (eg 1:1 Merge versus Consolidated Merge, Merging to original Business Task versus a single central Business Task etc) that are best discussed with a Basis Technologies consultant.

7.7.2. Inline Conflict Analysis

ActiveControl includes an 'Inline Conflict' capability to notify Transport creators – at the point of assigning their object change to a transport in the SAP GUI – if the change conflicts with another change already made to the same content in another development system. This covers both workbench and customizing objects.

When a conflict is detected, the conflicting transports are displayed and the team member is given the opportunity not to save their changes.

When this Inline Conflict Analysis is performed, ActiveControl connects from the current SAP development system to the ActiveControl domain controller, which in turn connects to the other configured SAP development systems to check for conflicting changes. A target SAP system is deemed to be a development system if the target attribute "Show transport requests created in this SAP system within ActiveControl" is enabled.

Inline Conflict Analysis is switched on for the relevant Development systems within table **/BTI/ TE_ACTIVE** in the ActiveControl domain controller.

In order to restrict the systems that ActiveControl checks during the analysis, the relevant entries need to be maintained in table **/BTI/TE_INLINE**. For example, this could be used to check from the ECC project development system (field SYSID) to the ECC BAU development system only (field CHECK_SYSID). The INACTIVE flag allows specific systems checks to be switched off if required.

In addition to the /BTI/TE_ACTIVE and /BTI/TE_INLINE table configuration, the client to check when connecting to the relevant development system must be specified in the Conflict Analysis Options section of the [Conflict/Merge Options](#) target configuration Import Options tab in field "Client to be used during conflict analysis". This must be done in the target system that is being connected to for the conflict analysis.

> ✳ Further information on Inline Conflict Analysis – including screenshot – is available in [this](#) online FAQ.

Notes

(1) Please note that although Inline Conflict Analysis does cover customising objects, it does not cover [role changes made via PFCG](#) at the current time.

7.7.3. Conflict Analysis

When source changes reach the inbox or import queue of the Merge system, ActiveControl can analyse the changes to determine if there are any conflicts with changes already made in the target development system.

This is done using the ShiftLeft: Conflict Analysis (0005) analysis check.

For performance reasons, ActiveControl only checks whether the changes conflict with changes already made in the target SAP system if the target's import option "Check whether the same content has been changed in this system before importing" is enabled. When this option is enabled, you must also specify the client in which client dependent changes are analysed. Specify the client in which you make client dependent configuration changes.

If the changes are found to conflict, then unfortunately the production support changes would typically be manually merged with the changes already made in the project development system. Please refer to subsequent Mark as Manually Applied section in this Administration Guide.

> **!** Please note that 0035 Conflict Analysis does NOT need to be switched on in a Merge Target. The important analyser for conflict analysis between parallel Development tracks is aforementioned 0005 Conflict Analysis.

> **✳** For customers with BW/BI systems, analyser" BW Conflict Analysis":#check-for-bw-object-which-fails (0013) should also be switched on.

Importing changes that do not conflict

Transport requests that do not conflict may be imported automatically, by selecting them in the project development system's import queue and clicking the Import button.

If the target option "Create a merge transport request in this system after importing changes" is enabled, ActiveControl will create a special transport request, called a merge request, in the project development system after the changes of the import run have been imported. The merge request contains all the items that were on the production support transport requests and is used to transport the same changes to the downstream systems of the project development stream.

ActiveControl automatically associates the merge request with the same tasks (that is, business issues and requirements) as the production support changes. This supports later reconciliation that those business issues and requirements have been applied to the project development stream before the project goes live.

7.7.4. Mark as Manually Applied

There may be occasions during the Merge process where a Conflict is identified. In some instances, decision may be taken by the SAP team not to utilise ActiveControl Merge, but instead to manually rekey the source change into the target Development system.

In this situation, Mark as Manually Applied action can be used in the Transport Form to reflect that the Transport Form will not be merged.

When performing Mark as Manually Applied action, the user must indicate the Transport number of the Transport against which the manual rekey was done. Doing this ensures an audit of this manual rekey within ActiveControl (as the

Figure: Performing Mark as Manually Applied action via the Transport Form.

Figure: Related Merge section of the Transport Form shows the merge transport(s) for the source Transport Form.

✳ Mark as Manually Applied action will only be seen when a Transport Form is sitting in a
Merge Inbox or Merge Import Queue.

✳ Only users with the authorisation activity [Y_TEIMPORT]-MARKASMANUALLYAPPLIE
will be able to perform the Mark as Manually Applied action.

7.8. Transport of Copies

7.8.1. Transport of Copies (Testing TOCs)

ActiveControl includes the ability to create Transport of Copies (TOC) of existing transport(s) to push to their test systems. This avoids the need to release the original transport until testing is complete, and can significantly reduce the number of transports moving beyond your test system to Production.
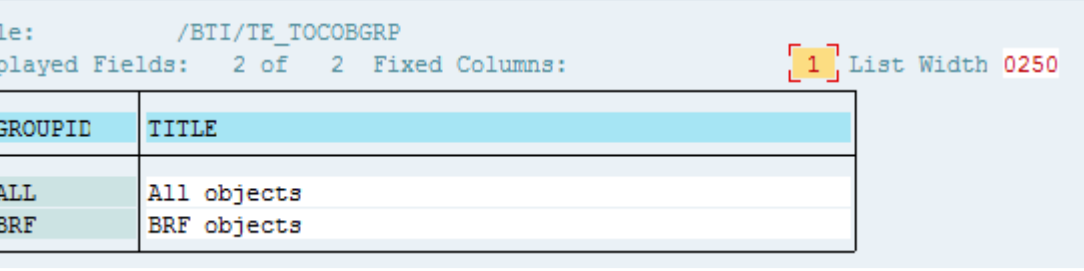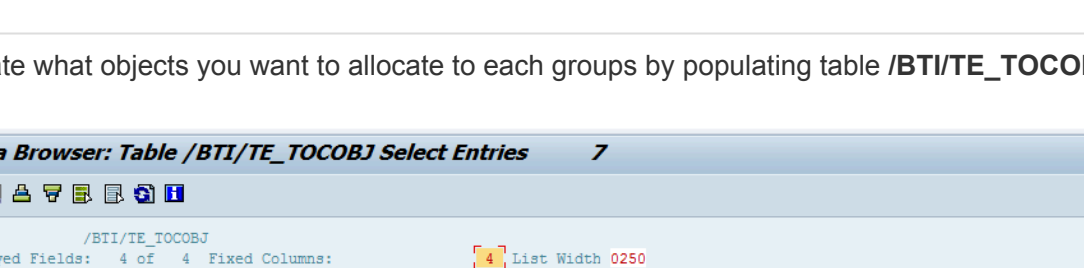
To enable the automated TOC functionality within ActiveControl requires the following configuration in the Domain Controller:

Step	Details
1.	Use table **/BTI/TE_TOCONFIG** – add a configuration entry depending on your requirements. The configuration flags are as follows: • *CREATELEVEL* allows you to dictate at what level the TOCs are created at. E.g. if you have two Transport Forms that are part of two different Projects, configuring CREATELEVEL = P will result in two separate TOCs being created. • *SELECTLEVEL* • *REMOVEONOVERTAKE* • *DELETE_EMPTY* will remove any SAP Tasks which contain no objects. • *AUTO_RELEASE* will automatically release any unreleased SAP Tasks that are included in the Transport(s) that you are creating a TOC for. • *OPEN_NEW_TASKS* will automatically create new SAP Tasks assigned to the same consultant as those included in the Transport(s) that you are creating a TOC for. • *STOP_TOC_IN_TOC* will prevent a TOC being created of a TOC • *COPY_CUSTFS* will result in any custom field values on the source Transport Form being copied across in the TOC, when a TOC is being created of a single source Transport
2.	Use table **/BTI/TE_VAUTOCON** to set up the conditions in which your TOCs are created, either automatically or manually by ActiveControl. Numerous online Knowledge Articles detail various common configuration examples, including: <>BR • TRAVEL trigger – Configuration example available here • APPROVE trigger – Configuration example available here • MANUAL trigger (against individual SAP Tasks) – Configuration example available here • RULES ENGINE filtering – Configuration example available here

p(banner tip). Further information – including configuration screenshots – on setting up ActiveControl TOCs can be found in this online Knowledge Article.

TOC object splitting

As part of the ActiveControl 'Transport of Copies' functionality, it is possible to split out the original transport into several separate TOCs based on the objects contained within the original transport. Setting up this object splitting is a two step process, as follows:

Step	Activity
1	Create **Groups** for each of the TOCs that you want to create by populating table **/BTI/TE_TOCOBGRP** In above screenshot, we intend to split out each transport into two TOCs, one for BRF objects, and one for everything else
2	Allocate what objects you want to allocate to each groups by populating table **/BTI/TE_TOCOBJ** In above screenshot, we intend to create one TOC for the various BRF related objects, and one for everything else

> ✱ Note that wildcard * can be used when defining the objects for TOC object splitting, to reduce the configuration required.

Changing the naming convention of TOCs

When a TOC is created, the default TR description of the TOC will match that of the original SAP Transport. It is possible to change the convention (eg to include the word "TOC" or suchlike at the start of the description. Please refer to [this online Knowledge Article](#) for details on how to do this.

Manual TOC creation

The typical process for Transport of Copies within an ActiveControl workflow is that the first TOC of an original unreleased transport is created automatically, and then subsequent TOCs to incorporate fixes are created either manually or automatically.

Transport of Copies can also be manually be created via the individual Transport Form or the Global View within the ActiveControl Web Platform.

7.8.2. Transport of Copies (Production TOCs)

As well as the functionality to push TOCs from Dev to QA, ActiveControl also includes the ability to create Transport Of Copies (TOC) for deployment to Production. This can be used to reduce the number of transports being deployed to Production, and by extension, reduce the time it takes to deploy them.

Production TOCs are created via the Global View app within ActiveControl. This is done by selecting the transports and then using the Other Actions > "New Transport of Copies" > "For Production" action.

The Production TOC capability within ActiveControl behaves quite differently from the ActiveControl 'Testing TOC' capability.

Key points of note:

(1) the TOC will be put in the same location as the original transports.
(2) the original transports are deleted from the location.
(3) there is no user exit, a Transport Form is created automatically, which (i) ignores the task selections made in the GUI (ii) assigns the tasks of the original transports (4) takes the ActiveControl [Group] and [Type] coming from /BTI/TE_TOCONFIG DEPLOYTYPEID and DEPLOYGROUPID.
(5) If there is a user exit, then creating and moving the TF will be handled by the exit.
(6) When a TOC Transport Form is deleted completely without being completed, the original transports are added back to the original location.

This functionality is intended only for Production deployments, and will only work if all the transports imported in QA but not in Production are merged into a single TOC. Side effects could happen if the TOC is created earlier in the path or some transports are excluded from the TOC (and also many of the ShiftLeft analysers will not work correctly)

Configuration Steps

To configure Production TOCs, two configurations are required:

1) a couple entries must be added in table /BTI/TE_TOCONFIG in the Domain Controller.

DEPLOYTYPEID: The "Type" to be used for the TOC Transport Form (from /BTI/TE_TYPE)
DEPLOYGROUPID: The "Group" to be allocated to to the TOC Transport Form (from /BTI/TE_GROUPS

2) the system in which the TOC will be created should be configured as a valid source system in the path within the ActiveControl Path configuration.

3) User creating the Production TOC in the ActiveControl Global View app needs to have CREATETOCDEPLOY authorisation activity.

7.9. Backout

Sometimes, despite best intentions, unwanted or adverse changes might be applied and you need a way to quickly and safely restore the affected SAP system to its pre-import state. ActiveControl Backout supports this requirement through the creation of **Backup** requests.

A backup request is a special transport request that ActiveControl can be configured to create in each client of the target SAP system before a selection of transport requests is imported. The purpose of a backup request is to export (and thereby save) an image of the content that is about to be changed by the import process, which can then be applied to revert out the changes in the event of an issue.

Each attempt to import a selection of transport requests is logged and is referred to as an import run. ActiveControl associates each backup request with its corresponding import run. If necessary, it is possible for an administrator to back out the changes applied by an import run by clicking on the Backout Import Run toolbar button in the History pane when displaying the target SAP system's import queue. When this is done, ActiveControl restores the pre-import state of the SAP system by simply importing the backup request back into the SAP client from which it was exported. If the target SAP system is configured with multiple clients, then the backup request created for each client is imported into each of the corresponding clients.

Creating backup requests slows the import process and so ActiveControl will only create backup requests for a target SAP system if the import option "Automatically create backup transport requests" is enabled. In addition, the following technical requirements must be observed:

1. A virtual system called **BAK** must be defined in TMS. This virtual system is necessary because backup requests are transport requests of type "transport of copies" and the virtual system BAK is specified as the target system in the transport request header (as displayed in transaction SE10).

2. The logon details specified on the target system's RFC destination (see RFC Destinations) must be valid for each client specified in the target's properties. This is required so that ActiveControl can log into the correct client when creating and applying backup requests, so that client dependent content can be correctly backed up and restored.

3. If using Backout, you also need to set the STMS parameter 'tadirdeletions' = "True" in each of the systems where Backout transports will be created.

4. Import runs must be backed out in reverse chronological order in order to guarantee the integrity of the SAP system. Of course, changes can only be backed out if backup requests were created when the import run was applied.

> ❋ Additional information on how to configure ActiveControl Backout – along with some configuration screenshots – is available in this online FAQ.

> ❋ When Backout is performed on an import release of transport(s), it is reflected as an

Event in the [Transport Status and History] tab on the corresponding Transport Form(s). When Backout is performed, the Backout transport is visible via the 'Related Backup Requests' tab on the Transport Form.

! ActiveControl Backout is currently only intended for use on ECC-type SAP systems. It will not work fully on BW or Java type systems.

7.10. External Transports

External third party vendor transports can be uploaded into ActiveControl via the Web Platform or via the SAPGUI.

Adding External Transports in the Web Platform

External Transports are added in the Web Platform via the **Transport Form** app tile. Via this screen, it is possible to add the data/cofile and define where those should be stored. Following this, a Transport Form is created for the external transport, and it follows the defined workflow.
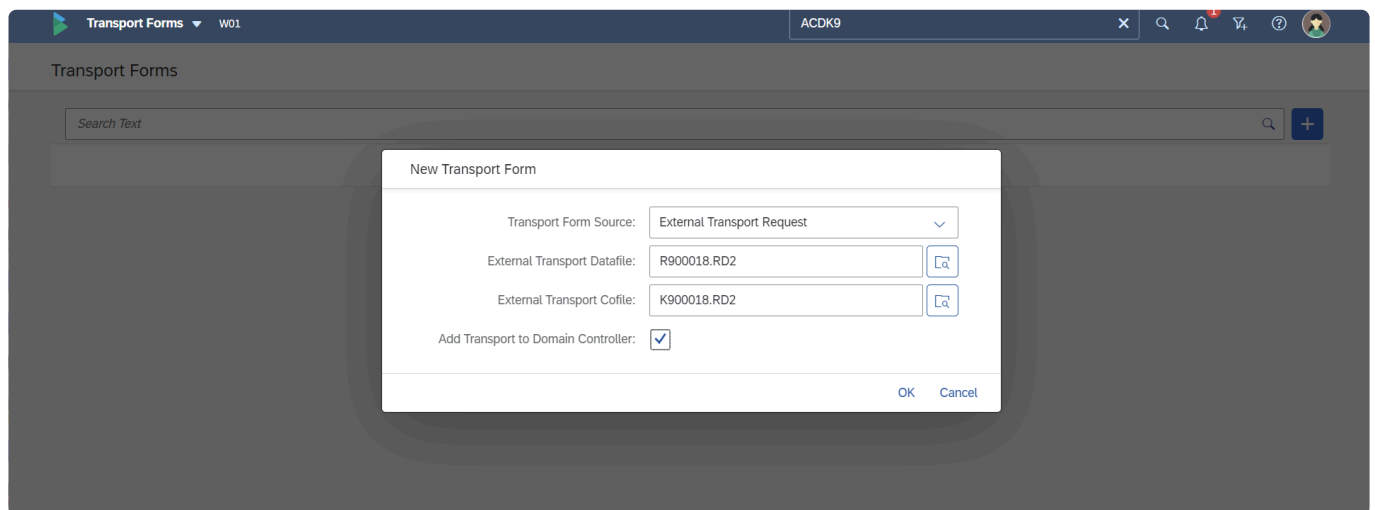
Figure: External Transports can be uploaded in the Web Platform via the Transport Form app.

Adding External Transports in the SAP GUI

For any ActiveControl customers that prefer to upload external transports via the SAP GUI instead of the Web Platform, this can be done using program **/BTI/TE_RUPLOAD_TR_REQUEST** in the Domain Controller.

> ❗ It is recommended to upload external transports via ActiveControl. Adding the data/ cofiles via SAPGUI and then creating a Transport Form via ActiveControl will not work.

7.11. Diffuser / Object Linkaging

Several parts of ActiveControl process significant amounts of SAP object level data, and use another SAP add-on developed by Basis Technologies called **Diffuser** (previously known as Mass Data Runtime (MDR)) to enable ABAP programs and transactions to run in a fraction of their normal run-time without the need for additional hardware.

Diffuser is used to process the object linkaging which is used in in ShiftLeft: Deep Impact Analysis, ShiftLeft: Test Impact Radar and several other ActiveControl functionalities.

Setting up Diffuser for ActiveControl

Step	Setup required
1.	A Diffuser license key needs to be uploaded to the Development system using transaction /N/BTR/ LICENSE.
2.	Define the following programs via /n/BTR/MDR in the Development systems: /BTI/TE_REP_MDR_OBJECT_DI_LINK /BTI/TE_REP_MDR_CR_TRAN_LINKS
3.	Create number range for /BTI/TE_OI via transaction SNRO.

Initial Object Linkaging

There are two main ways of setting up the object linkaging, and it really depends on what ActiveControl functionality you want to use it for.

1) Object Linkaging for use with Test Impact Radar

Use /BTI/TE_REP_MDR_OBJECT_DI_LINK This will typically run for days and use a lot of data. Function module flag should be left unticked. "Save links determined" should be ticked to avoid errors

2) Object Linkaging for use with Deep Impact Analysis

Use /BTI/TE_DI_LINKS_UPDATE_JOB on every transport form in the relevant paths, a dev target for each path and * for the location. This will schedule /BTI/TE_REP_MDR_CR_TRAN_LINKS on each dev system, creating links for every transport with a TF.

✱ Please refer to this online FAQ for a lot more detailed information – and screenshots –
on how to setup Object Linkaging for use with Deep Impact Analysis.

7.12. Test Impact Radar

ActiveControl includes a **Test Impact Radar** functionality that can be used to assess which customer test scripts are impacted by the delivery of a particular SAP change. This was a precursor to the fully automated regression testing capability of Basis Technologies more recent product Testimony.

Diffuser setup

Similar to Deep Impact Analysis and some of the other ActiveControl Shiftleft analysers – Basis Technologies separate product Diffuser is a pre-requisite for using Test Impact Radar. Information on setting up Diffuser object linkaging for use with ActiveControl is found [here](#).

Test Script Upload

To use Test Impact Radar, you must upload your existing suite of test scripts into the ActiveControl domain controller using transaction **/n/BTI/TE_TSCRT_IMPORT**.
These test scripts files can be in either Microsoft Word or Excel format.

Field	Description
Local source directory	Specify the local directory in which the test scripts are stored. These should have been exported out of the test script repository (e.g. HP QC) via the bulk export function. Effectively you'll end up with N number of Excel/Word files within this local directory.
Filename filter	Specify the filename filter to restrict which files in the local source directory are selected (e.g. *.xls or *.xlsx).
File type	Allows you to select whether the test script files are Excel or Word. Alternatively, just leave as "Auto detect
Remote Target System	Since this is running on the Solution Manager system (Domain Controller controller) then there are no SAP applications installed there (e.g. HR, FI, SD). Hence, specify a target system upon which the SAP transactions, programs, BAPI's, BSP applications and Web-dynpro's will be retrieved from.
Update existing scripts	Updates existing test scripts that have already been loaded. This may be required if test scripts have been changed in the external test management system (e.g. HP QC).
Output progress indicator	Outputs the progress
Test mode	Run the upload in test mode only. No database changes will be made. Used for testing purposes.
Output token list	Output the list of "tokens" that are found within the file (for testing purposes only).
Single file multiple test script upload – '///' is test script delimiter	Enables the upload of bulk script upload.

Initial Linkage Creation

The initial linkage creation for Test Impact Radar is performed as follows:

Step	Activity
1.	Run /BTI/TE_REP_MDR_OBJECT_DI_LINK program in the satellite Development system to create the linkages. Function module flag should be left unticked. "Save links determined" should be ticked to avoid errors. This will typically run for several days and use a lot of data.

Ongoing Linkage Creation

The ongoing linkage creation for Test Impact Radar can be setup as follows:

Step	Activity
1.	Create a variant /BTI/TE_DI_LINKS_UPDATE_JOB program in the Domain Controller as follows Source System IDs = SID of the Development System. Newly Released Transports. Maximum number of retries = 30 Update reference date (to now) (plus a date and time from a couple weeks ago)
2.	Schedule above program/variant to run every 10 minutes.

Analysis Check setup

Test Impact Radar (0043) analysis check is used to highlight what top level SAP objects are included in the selected transport(s) for which it is run, and also to indicate what Test Scripts are impacted by the changes in the transports – i.e what test scripts should be executed at a minimum. This Analysis Check needs to be switched on at each of the Control Points in your Transport Path that you wish to be told this information.

Please refer to (link this) section of this Administration Guide for details of how to setup the Test Impact Radar analysis check.

Test Script Management

After uploading test scripts, the Test Script Management console can be used to maintain existing scripts in your repository and also to upload additional individual scripts in the future. This is done via transaction **/n/BTI/TE_TSCRT_MANAGE** (technical program: /BTI/TE_RTEST_SCRIPT_MANAGE)

The left hand pane outlines the scripts that have been uploaded. Double clicking on an individual script (on the folder icon) will bring up details of the script in the right hand pane. From this screen, it is possible to deactivate test scripts so they are not included in the Test Impact Assessment. It is also possible to add additional meta-data information about the script (for example the business process the script relates to), and also view the top level SAP objects impacted by the test script.
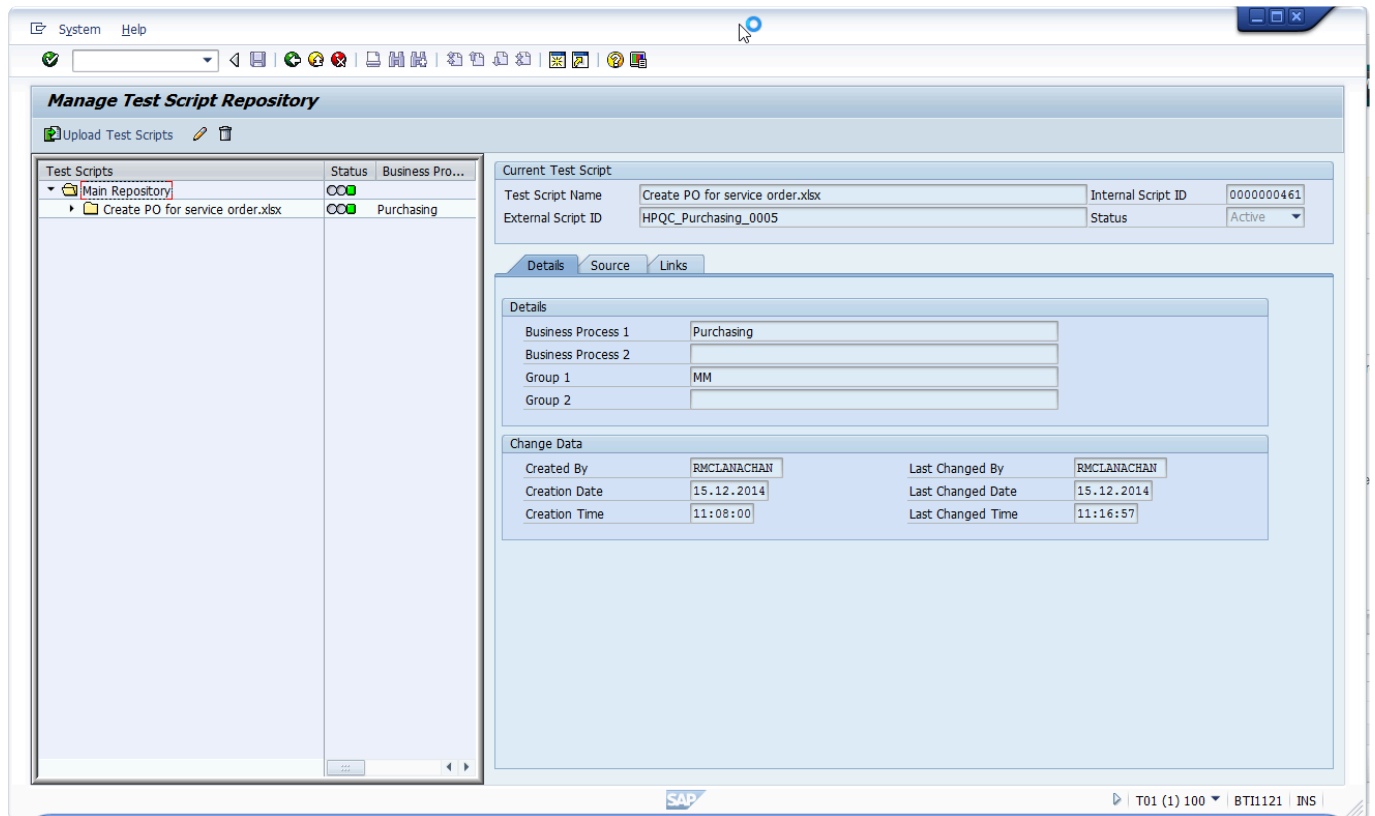
Figure: Test Script Management console.

8. Advanced Configuration Options

ActiveControl has many features and capabilities, and the reality is that no customer uses (or needs to use) them all.

This section of the Administration Guide summarises some of the less commonly implemented capabilities, for those few customers that might choose to use them:

- Unit Test Automation
- Inline Risk Analysis
- Additional Metadata
- Consolidated Import Queues
- Client-based Transport distribution
- Airgap
- Automated Exception-Based Approvals
- Rejection Reasons

8.1. Managing non-ABAP systems via ActiveControl

In order to deploy non-ABAP / Java transports, ActiveControl utilises CTS+ so this must be setup and configured beforehand.

Configuring ActiveControl to manage non-ABAP systems

For each non-ABAP / Java system to be managed by ActiveControl, a new target and RFC destination must be setup as described in the 'Configuring ActiveControl' section of this Administration Guide. In this case there are some small differences in the configuration.

For example, you might have the following non-ABAP / Java systems:

- JD1 – Development
- JT1 – Test
- JP1 – Production

The CTS+ controller system in this example is CT1

RFC Destinations

An RFC destination is required for each system but for non-ABAP / Java systems this must connect to the relevant CTS+ controller system. In the example above these would be setup as follows:

- ACTIVECONTROL JD1 – connects to CTS+ controller system CT1
- ACTIVECONTROL JT1 – connects to CTS+ controller system CT1
- ACTIVECONTROL JP1 – connects to CTS+ controller system CT1

Target Systems

Each non-ABAP / Java system needs to be created as a Target System in the same way as ABAP systems, but with some subtle configuration differences:

Clients	For the target client specify the client of the CTS+ controller system.
Ignore System Id during import (CTS+ only)	For CTS+ systems the SAP system ID is different to the system that is the CTS+ domain controller. In this case the flag should be set to inform ActiveControl that the target is a CTS+ system.

Transport Paths

When creating the transport path the "Valid Source Clients" should be setup for the relevant CTS+ development system and referencing the client for the CTS+ controller. E.g. JD1:100

Once the above setup has been done, ActiveControl will then automatically use CTS+ to process and

import the non-ABAP / Java transports.

> ✱ Further information – including configuration screenshots – is available in this online FAQ.

8.1.1. Java change

ActiveControl can be used to manage Java-stack SAP systems such as SAP Portal and SAP PI/PO.

In order to deploy non-ABAP / Java transports, ActiveControl utilises CTS+ so this must be setup and configured beforehand as a pre-requisite step.

Configuring ActiveControl to manage non-ABAP systems

For each non-ABAP / Java system to be managed by ActiveControl, a new target and RFC destination must be setup as described in the 'Configuring ActiveControl' section of this Administration Guide. In this case there are some small differences in the configuration.

For example, you might have the following non-ABAP / Java systems:

- JD1 – Development
- JT1 – Test
- JP1 – Production

The CTS+ controller system in this example is CT1

RFC Destinations

An RFC destination is required for each system but for non-ABAP / Java systems this must connect to the relevant CTS+ controller system. In the example above these would be setup as follows:

- TRANSPORT EXPRESS JD1 – connects to CTS+ controller system CT1
- TRANSPORT EXPRESS JT1 – connects to CTS+ controller system CT1
- TRANSPORT EXPRESS JP1 – connects to CTS+ controller system CT1

Target Systems

Each non-ABAP / Java system needs to be created as a Target System in the same way as ABAP systems, but with some subtle configuration differences:

Clients	For the target client specify the client of the CTS+ controller system.
Ignore System Id during import (CTS+ only)	For CTS+ systems the SAP system ID is different to the system that is the CTS+ domain controller. In this case the flag should be set to inform ActiveControl that the target is a CTS+ system.

Transport Paths

When creating the transport path the "Valid Source Clients" should be setup for the relevant CTS+ development system and referencing the client for the CTS+ controller. E.g. JD1:100

Once the above setup has been done, ActiveControl will then automatically use CTS+ to process and

import the non-ABAP / Java transports.

> ✳ Further information – including configuration screenshots – is available in this online FAQ.

8.1.2. BTP change

It is possible to manage **SAP BTP** (Business Technology Platform) via ActiveControl.

Although older ActiveControl releases could already achieve this via CTS+, latest releases of ActiveControl introduce a new solution that can be used by customers to manage MTAR or ZIP changes via ActiveControl.

The scope and process of this solution is essentially as follows:

1. Developer does their changes in BTP.
2. Developer exports work to MTAR or ZIP (depending on the change being made).
3. Developer creates a non-transportable Transport Form within ActiveControl, and uploads the MTAR or ZIP file to it.
4. Developer links the Transport Form to a Business Task as per normal process within ActiveControl.
5. Transport Form follows the usual approvals workflow.
6. In an Import Queue, ActiveControl will automatically deploy the changes via Cloud Transport Management Service (cTMS).

The benefits of this solution are ultimately to allow Basis Technologies' customers to manage Hybrid landscapes involving both traditional and BTP cloud changes in a single, consistent fashion. These BTP changes will follow the usual ActiveControl workflow (with full auditability), and be automatically deployed via an ActiveControl Import Schedule (with any issues highlighted back to ActiveControl in the form of a System Error. Any dependencies across BTP and traditional ABAP stack systems can also be set, to ensure appropriate sequencing and central orchestration of the change in a Hybrid landscape.

Configuration Steps

Please contact Basis Technologies if you are interested in implementing this new capability. We strongly recommend this is done with some formal Basis Technologies' services so that we can best support you not just with the configuration that is required, but also to support any feedback you might have in order to improve and/or widen the scope of the current solution.

8.2. Unit Test Automation

ActiveControl **Unit Test Automation** capability hooks into standard SAP functionality available within SAP Code Inspector, and can be used to:

1) run automatically at the point of transport release in the SAPGUI, to ensure Developers get early awareness of unit testing issues with the changes they have made.

2) run automatically as a ShiftLeft Analyser in the Web Platform, to ensure that Approvers also get visibility of non-adherent transports.

Configuring Unit Test Automation

Step	Configuration
1.	The unit test automation on transport release is switched on in table **/BTI/TE_ACTIVE** in the domain controller by adding the *Unit test on release* active function for the relevant development system.
2.	The SAP Code Inspector variant and user parameter also needs to be configured in the Domain Controller in backend table **/BTI/TE_ACTPARMS**.
3.	Switching on ShiftLeft: Unit Test Automation.

8.3. Inline Risk Analysis

ActiveControl includes [ShiftLeft: Risk Guard](#) to warn users performing an Approval or Test signoff if the transports contain 'risky' objects.

This functionality also exists in the SAP GUI in the form of an **Inline Risk Analysis** that can be presented to users at the point they are adding objects to transports.

Inline Risk functionality has several main use cases:

1) to warn Developers if the objects they are changing have been deemed risky, earlier in the process than the Approval/Test sign-off process.
2) to facilitate an allowed lists / blocked lists scenario – whereby certain objects cannot be touched in certain Development systems.
3) to facilitate transport splitting scenario – where certain objects cannot be mixed in the same transport.
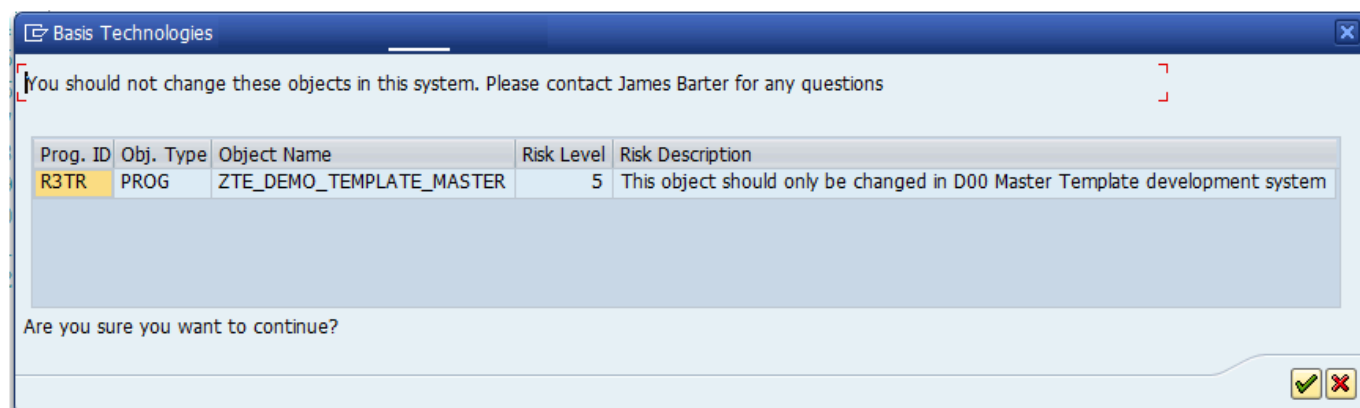
Figure: Example of Inline Risk screen presented to Developers.

Configuration

To use Inline Risk Analysis in its simplest form of warning Developers/Functional teams that the objects they are changing have been deemed risky objects, the following configuration is required in the ActiveControl Domain Controller. Most of the configuration steps are similar to that used by the ShiftLeft: Risk Guard analyser.

Step	Description
1	Risk Group should be configured in **/BTI/TE_RISKG**.
2	The set of objects should be added to **/BTI/TE_RISKGOB**.
3	Each Development system is then configured for the appropriate risk object groups along with a risk level that if exceeded with trigger the error/warning, in table **/BTI/TE_RISK_INL**.

> **System ID**: Enter the SID of the development system for which you are switching on Inline Risk Analysis
>
> **Risk Group**: Enter the Risk Group (from /BTI/TE_RISKG) that contains the risky objects that you want to highlight to the developer
>
> **Risk Level**: Enter the minimum risk level that you want to report on
>
> **Error Mode**: Choose here whether you want to present a Warning to the developer (allowing them to continue) or an Error (which will stop them from adding the object)

Object Allowed Lists / Blocked Lists

Within ActiveControl it is possible to setup object allowed lists / blocked lists to support Template protection, where certain objects can only be changed in a Master Template development (and certain objects cannot).

ActiveControl can be used to manage a Master Template / Child Developments based SAP landscape, and help ensure the Template system is protected.

Template Protection takes the form of object blocked lists – to prevent objects from being created in either the master template or child development systems. When an object contained within the blocked list is then added to a transport, the developer will receive message when saving to a transport. Depending on the configuration, this message can be either an error or a warning.

The Template Protection capability runs in the SAP GUI using the existing Inline Risk functionality. Please refer to online FAQ for more details of how to configure this topic.

Object Mixing (Transport Splitting)

Within ActiveControl it is possible to force certain objects to be split into separate transports and by the same token prevent certain objects from being mixed within the same transport. This functionality uses the standard Risk Guard functionality. Objects are defined in Risk Groups, and these objects in these Risk Groups are then prevented from being mixed with objects in other Risk Groups.

Again, the functionality runs in the SAP GUI using the existing Inline Risk functionality. The message, "The object you are adding cannot be mixed with other object(s) that are already on this transport." will be presented when the Developer tries to mix objects from different Risk Groups that are not supposed to be mixed.

Please refer to online FAQ for more details of how to configure this topic.

8.4. Automated 'Exception-based' Approvals

ActiveControl offers an exception-based auto approval capability, to allow customers to have certain (configurable) analysers running automatically in a particular Inbox or Outbox, and only stop the transports for a manual approval if those analysers identify issues.

Three outcomes are possible with the analyser results:

- BLOCK: if a particular analyser highlights an issue, ActiveControl will stop the Transport Form for a manual approval by the configured approver(s)
- WARN: if a particular analyser highlights a issue, ActiveControl will notify the configured approver(s) but still move the Transport Form forward to the next location.
- IGNORE: if a particular analyser highlights an issue, ActiveControl will move the Transport Form forward to the next location and not notify the configured approver(s).

Configuration Steps

Detailed information on how to configure automated exception-based approvals is detailed in this online Knowledge Article .

Notes

(i) Auto-Approval runs at Transport Form level. This is important as it means you should probably set the General: Dependency Check to BLOCK to ensure that individual transports do not move forward.

(ii) Auto-Approval is only designed to work on Inboxes and Outboxes, NOT on Test Queues

(iii) Priorisation of BLOCK / WARNING / IGNORE: If a Transport has a BLOCK on one analyser and a WARNING or IGNORE on the other analyser, the BLOCK will always take priority and the transport will stop for a manual approval.

8.5. Approvals: Rejection Reasons

It is possible to customise the [Rejection Reasons] dropdown values that appear to users performing a Rejection in an Inbox or Outbox.

This can help Customers tailor the terminology used in the out-of-the-box product to local customer terminology.

Out of the box values:

- Unexpected change
- Unauthorised change
- Design documentation insufficient
- Unit testing insufficient
- Functional testing insufficient
- Development standards violation
- COnfiguration incorrect
- Incompatible functionality

Configuration Steps

Rejection Reasons can be maintained via transaction /n/BTI/TE_REJ_REASON in the Domain Controller. More information can be found in this online Knowledge Article.

> **!** Any new custom rejection reasons should be created using a reject ID in the range A-Z otherwise during an upgrade any rejection reason ID's in the range 1-9 will be overwritten by the BTI defaults.

8.6. Additional Metadata

This section of the Administration Guide details various optional 'Business' and 'User' metadata that is available within ActiveControl.

Business metadata

Additional metadata can be recorded against Business Tasks via the **Additional Data** tab of the Business Task screen in the Web Platform.

The metadata seen within the various fields on this tab is configurable, it is maintained via the following tables in the ActiveControl Domain Controller:

Table	Description
/BTI/TE_BUS_UNIT	Business Unit.
/BTI/TE_STTHRUST	Strategic Thrust.
/BTI/TE_COMP	Complexity.
/BTI/TE_AREA	Area.
/BTI/TE_TSK_PRTY	Task priority.
/BTI/TE_CONFIG	Set the currency to be used.

> ✱ Many customers choose not to use these fields as part of their ActiveControl processes. In the Web Platform, it is possible to hide the Additional Data subscreen via Feature Deactivation.

User Metadata

Additional metadata can be recorded against individual users on the **User Details** screen within the Web Platform.

The metadata seen within the various fields on screen is configurable, it is maintained via the following tables in the ActiveControl domain controller:

Type	Table	Description	Notes
User	/BTI/ TE_EMPL_TYP	Employee Type	

User	/BTI/ TE_SUPPLIER	Supplier	
User	/BTI/ TE_GEOLOC	Location (With Geo coordinates)	
User	/BTI/ TE_COSTBAND	Cost band	
User	/BTI/ TE_USERPREF	User preference data	
User	/BTI/ TE_WEBUICFG	Web Platform config	SUPLPIC_PREFIX and SUPLPIC_URLPREFX need to be maintained

8.7. Dual Domain Controller

ActiveControl offers a Dual Domain Controller (DDC) setup for customers that want to manage different SAP landscapes in different ActiveControl Domain Controllers.

This can be useful for a couple of different scenarios:

1. Where the customer has multiple SI partners that are responsible for different SAP landscapes, and they want to be able to manage the AC Administration themselves.

2a. Cloud migrations where the customer has multiple SAP systems with the same system IDs for a limited time period (eg where legacy On-premise and replacement Cloud systems have same SIDs).
2b. S/4HANA migrations where customer has multiple SAP systems with the same system IDs.

Althogh DDC was originally developed in 2014 because of scenario 1, the reality is that it has been implemented more often by customers because of Scenario 2a. Scenario 2 requires the DDC solution because it is not currently possible to manage two systems of the same SID within the same ActiveControl Domain Controller.

Configuration Steps for DDC

The steps to setup Dual Domain Controller are detailed on this online Knowledge Article. It is recommended that this advanced configuration is done with formal consulting engagement from Basis Technologies.

> ✱ Please note that when using Dual Domain Controller capability, the source and target Domain Controllers need to be on the same version of ActiveControl.

8.8. Client-based Transport distribution

Some SAP customers have a SAP client architecture requirement to distribute transports to particular system clients in the landscape, based on rules and the source client of the transport. ActiveControl includes a capability to automate this client-based transport distribution, which can be setup via the following steps.

1) Configure table /BTI/TE_IMP_CLI in the Domain Controller with the required transport distribution rules

Field	Description
PATH	the ActiveControl path for which the rule is being defined.
SOURCE SYSTE	the source system (SID).
SOURCE CLIENT	the source system client.
TARGET	the target system in the path where the transport has/not to be imported into particular client.
SORT ORDER	This is used for sorting the clients in a particular target.
TARG CLIENT	The client of the target system.
SKIP	An X should be entered in this field for the rules where you want the transport to not be imported into the defined client defined in the rest of the rule.

2) Switch on TE_EXIT_SAMPLE_0065 in /BTI/TE_EXITC table in the Domain Controller

Notes:
i) the import queue is not skipped, it is during the import that the skipping occurs based on the rules defined in the configuration table
ii) the clients will be sorted based on SORTORDER
iii) if a client is not defined in the configuration it will be ignored
iiii) if no entries are found for a transport it will be imported in all the clients defined in the config
iv) the transports can still be imported using both single one-by-one or block import.
v) It is NOT possible to use this functionality during the standard Merge process into a multi-client Dev system (as Merge process will import the source transport into all configured clients of the Development target and then create the Merge TOC in one of those clients). If you really want to achieve Merge to specific client, the solution would be to configure multiple Merge targets, each with one client.

8.9. Consolidated Import Queues

If you have the same SAP systems configured on more than one path in ActiveControl (e.g. to separate BAU and project changes into different paths through the same SAP systems), it is possible to set up a Consolidated Import Queue (CIQ).

This gives a complete view of all transports waiting to be imported into that system and can be useful during cutovers and for system refreshes.

Even if a target is part of a CIQ, transports can still be imported using the individual Target Import Queues, as well as using the consolidated queue. A CIQ can be made up of any number of targets, all of which must point to the same physical system. Configuration can be used to show the CIQ within the respective paths or be shown as a separate entity in the path window of the GUI.

An example of when you may want to use a CIQ is if you configure ActiveControl to have two paths using the same systems, one for Production Support / BAU and one for Minor Projects. In ActiveControl the paths could look something like this:

Production Support / BAU:	D01 -> T01 -> PRD -> TRN
Projects:	D01 -> T01 -> PRD -> TRN

If you want to see all of the transports waiting to be imported into PRD, you could look at the Import Queues of each of the PRD Targets in each path, but you could also configure a CIQ that will show you the transports waiting to be imported into PRD in both paths.

- Note: It is important to remember that when importing using a CIQ, all import options are taken from the CIQ Target configuration and NOT the individual Targets that make up the CIQ. For example, if the individual Targets are set up to create backup / merge transports, but the CIQ Target is not configured to do so, when importing using the CIQ a backup / merge transport will not be created, whereas if you import transports using the individual Import Queues, then backup / merge transports would be created.
- To be able to see Consolidated Import Queues within the GUI, users must have the VIEWCONIMPORTQUEUE activity in the TE_USER authorisation object. This is delivered in the ActiveControl Basis and Admin roles, as detailed in the ActiveControl Roles Matrix.

Configuring a CIQ

To configure a Consolidate Import Queue, the following steps should be performed:

Step	Activity
1	Create a Target in ActiveControl for the SAP system that you wish to show a consolidated view for. This Target cannot have any control points configured. To act as a CIQ, this Target must have the configuration option set

2	Configure the Import Options for the CIQ target.
3	In each of the individual Targets that make up this CIQ, the configuration options below must be entered. I.e. you need to point each individual target for the SAP system to the relevant CIQ target.
4	If you want the CIQ to be displayed within the individual paths, select the consolidated queue visible check box. When looking at the path in the GUI, you will see the CIQ as a child object to the individual Import Queue.
5	If you want to display the CIQ as part of a path (i.e. separately and not visible within the individual paths), create a path as normal, but set the path status to "Cannot be assigned to new Transports, but visible within…."

This will allow you to show this and any other CIQ's as separate entities in the GUI Path/Target view but not allow Transport Forms to be created for them as these should still use the individual paths

Once a CIQ has been configured in ActiveControl, it will automatically show all transports waiting in the Import Queue of each related individual Target. In the screen shot above, the T01 CIQ has been configured to show all the transports in both the 'BT QA Test' T01 Target and the 'BT Project Test' T01 Target. It shows that there are 16 transports and 2 transports waiting in each of the respective Import Queues. Therefore the CIQ is showing 18 transports. The order in which ActiveControl imports the transports in a CIQ is dependent on the Import Options configuration of the CIQ Target.

> **!** To import the transports in release order, the import options for the CIQ Target and all the related Targets must have the same Import configuration.

> **✱** To import the transports in the same order as a previous system, the CIQ Target should have something selected for the configuration option "Try to import transport requests in the order….". It does not matter which Target is selected here, as the actual 'previous system' that ActiveControl will check is the one configured in each individual Target that makes up the CIQ.

8.10. Airgap

Airgap is a requirement within some organisations with secure networks whereby they cannot allow changes to be electronically transmitted from development to their production systems. It is typically found in industries such as the public sector, aerospace and defence, exploration and energy. In an SAP context, an Airgap typically means that following Development or QA or Regression testing, the SAP transport files need to be downloaded to some external media (disk, USB drive, DMZ) and then physically moved and uploaded to the production system side of the Airgap for import there.

High Side / Low Side

The key principle of the ActiveControl Airgap solution is the presence of two Domain Controllers, one on the Low side and one on the High side.

- The Low side is the Dev instance
- The High side is the (main) Production instance.
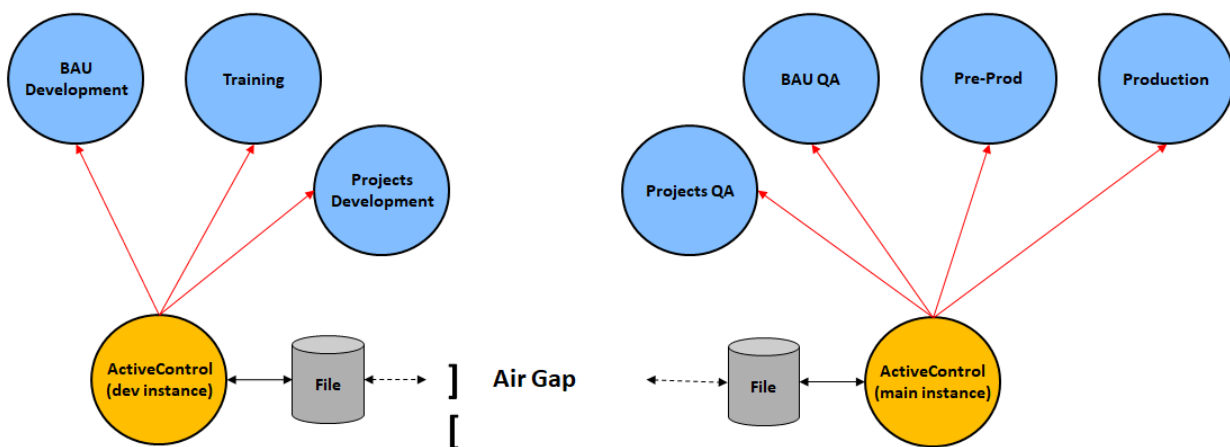- Information is passed from one AC instance to the other in order to manage the complete flow of change.

Figure: Airgap within ActiveControl

Configuring Airgap

Airgap usage requires the configuration of various ActiveControl tables, and the scheduling of several programs.

> ✳ Further information on the Airgap configuration – plus screenshot examples – can be found in this online FAQ.

Table /BTI/TE_TVARV

Standard configuration table /BTI/TE_TVARV is used as part of Airgap configuration, with various new variables used to achieve the required scenarios.

1) Path location of files
Configuration, Business Task and Transport Form related files will be written to a (user configurable) location as part of the solution. This is done via the TE_AIRGAP_OUTBOX variable on both the Low and High side.

2) Send Business Task and Configuration from High Side to Low Side
Most Airgap customers will want to create the Business Task on the High Side, and then have this sent over the Airgap to the Low side. This is done via the following configuration on the Low and High side:

High Side: Maintain TE_AIRGAP_ALLOWED_RECIDS_OUT in /BTI/TE_TVARV with value TASK, CONFIGURATION and ACKNOWLEDGE.
Low Side: Maintain TE_AIRGAP_ALLOWED_RECIDS_IN in TVARV with value TASK, CONFIGURATION and ACKNOWLEDGE

3) Create Transport Form on Low Side, send to High Side
Most Airgap customers will want to create the Transport Form on the Low Side, and then send this over the Airgap to the High Side. This is achieved with the following configuration.

Low Side: Maintain TE_AIRGAP_ALLOWED_RECIDS_OUT in /BTI/TE_TVARV with value TRANSPORT and ACKNOWLEDGE in the field low.
High Side: Maintain TE_AIRGAP_ALLOWED_RECIDS_IN in /BTI/TE_TVARV with value TRANSPORT and ACKNOWLEDGE in the field low.

4) Send programs
In order for the value entered in field external system in the AirGap SEND programs to be validated, values must be maintained in /BTI/TE_TVARV.

High Side Configuration:
AIRGAP_ALLOWED_SYS_IN: the systems valid for incoming messages (usually only one). Used to validate the system ID for inbound messages (used to receive tasks on low side and forms on high side)
AIRGAP_ALLOWED_SYS_OUT: the systems valid for outbound messages (usually only one). Used to validate the system for outbound messages (used to send tasks to low side and forms to high side)

Low Side Configuration:
AIRGAP_ALLOWED_SYS_IN: as per above description.
AIRGAP_ALLOWED_SYS_OUT: as per above description.
AIRGAP_ALLOWED_SYS_DECODE: used to validate the system used to decode task IDs (currently only used when sending forms, low side only)

Table: /BTI/TE_AGMSGTYP

For the framework to pick the correct class for every message type, table /BTI/TE_AGMSGTYP will have require entries to be configured. These table entries are shipped as part of the standard ActiveControl

software transports. You do NOT need to maintain or change this table manually.

Table: /BTI/TE_INT_SYST

To send Business Tasks or Transport Forms over the Airgap, an integration ID must be defined for both systems in standard Integration table /BTI/TE_INT_SYST.

Table: /BTI/TE_INT_MAPP

As part of Airgap Solution, integration mapping is only required for field PATH for creating a transport form on the low side. All other values such as Groups, Types are same in both system.

Table /BTI/TE_INT_MAPP should be configured on the High side as follows:

Field	Description
EXTSYS_NO	Value configured in table /BTI/TE_INT_SYST
EXTSYS_NAME	Name: configured in table /BTI/TE_INT_SYST Direction: Inbound (I) Sequence No: Doesn't have to be in sequence but just to have part of key
TEFIELDREF & EXTFLD_VAL	Field that needs conversion. Will be same. Refer structure /BTI/TE_ST_IFORM for other fields for transport forms.

Table: /BTI/TE_INT_CONV

Table /BTI/TE_INT_CONV should be configured on the High side as follows:

Field	Description
EXTFLD_ID	Value of path from other side(LOW)
EXTFLD_VAL	Value of path in the same system(HIGH)

Airgap: Programs

After maintaining the aforementioned Airgap configuration tables, several programs also need to be scheduled as part of the Airgap solution.

Program: /BTI/TE_RUAIRGAP_SEND_TASKS

/BTI/TE_RUAIRGAP_SEND_TASKS is used on the Low side to send Business Task information to the High side.

Option	Description
Receiver	Value must be the number configured in table /BTI/TE_INT_SYST on High side.
Sender	value must be the one configured in table /BTI/TE_INT_SYST on Low side.
Specify Target and Location for when the transports are ready to send across Airgap.	

Program: /BTI/TE_RUAIRGAP_SEND_CONFIG

Program /BTI/TE_RUAIRGAP_SEND_CONFIG is used to send Groups, Types, Projects and Custom Fields from High Side to Low Side.

It is recommended to check the flag "Only send if changed". Otherwise, same data will be sent on each run and generates spool.

Program: /BTI/TE_RUAIRGAP_PROCESS_INBOX

Program /BTI/TE_RUAIRGAP_PROCESS_INBOX is used on both the Low side and the High side to create what is required.

Option	Description
SAP Directory name	Directory where all the messages are stored to process.
No. Retries before error	The number of times the program will try to process the message before changing the status to failed.
Archive processed & failed msg	(Default) Choosing this will move down the file to the specified path if the message is processed or failed.
Delete processed & failed msg	Choosing this will delete the file if the message is processed or failed.
Keep the files	Select this if you want files to remain in the inbox. If the option Keep the files is chosen, it is better to flag the Checkbox 'Display at least one new file is processed' when running in background to avoid generating the spool unnecessarily for an already processed/failed messages.

9. Deployment Considerations

This section of the Administration Guide details some of the other Deployment Considerations above and beyond the configuration already mentioned

- [Global View](#)
- [Help Links](#)
- [System Messages](#)
- [Mobile Access](#)
- [Eclipse](#)
- [User Exits](#)
- [User Images](#)
- [Domain Controller Migrations](#)
- [Transportable Configuration](#)
- [Accessibility](#)

9.1. Global View

The ActiveControl Global View gives a holistic overall 'tree structure' view of the entire SAP estate being managed by ActiveControl.

At most Basis Technologies' customers, it is predominantly used by Change Managers, Basis Teams and other users that typically need to have this 'helicopter view' of all Targets and Paths within ActiveControl.

The Global View is accessed via the Global View app tile on the home screen.
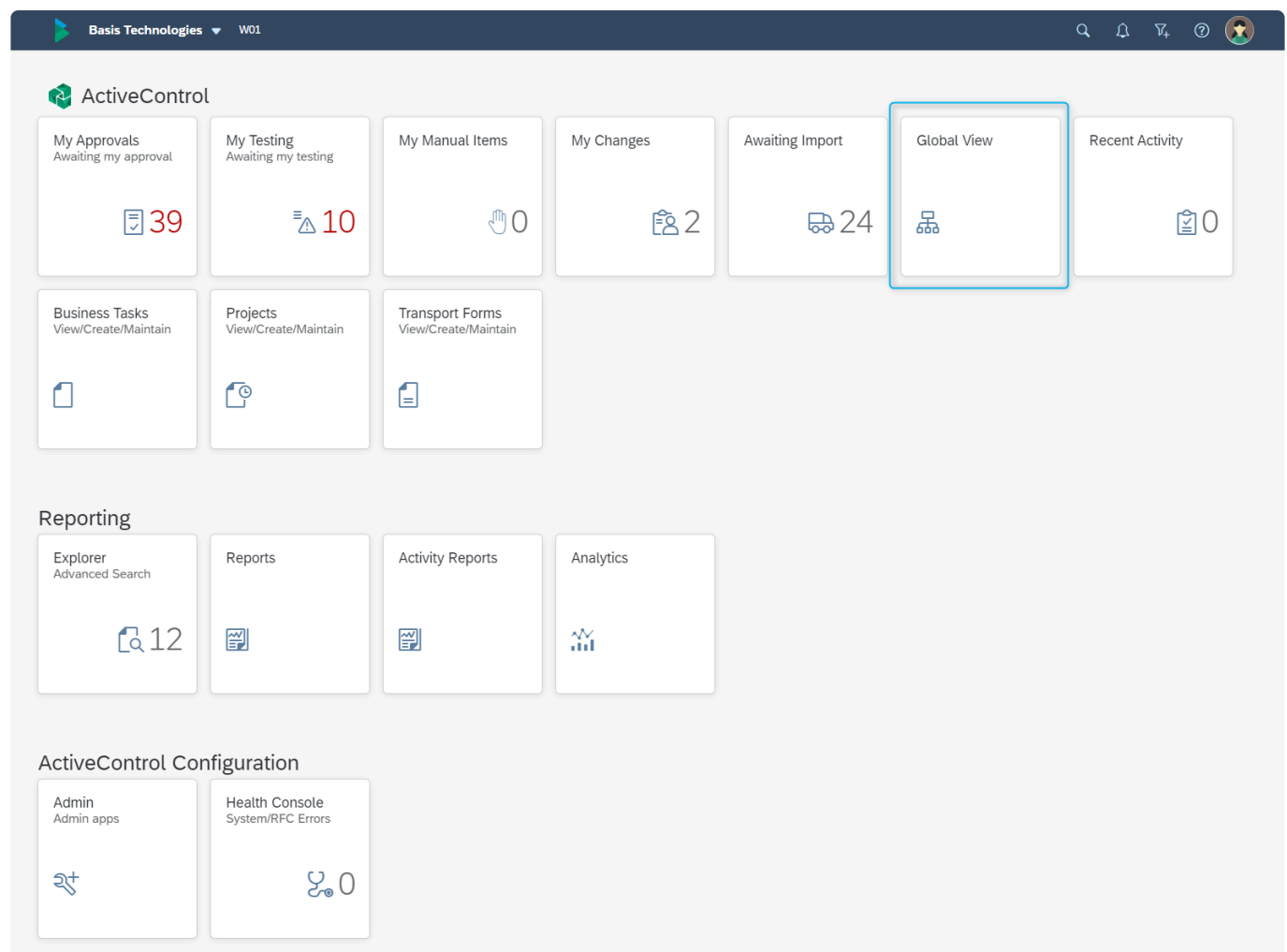
Figure: Global View tile.
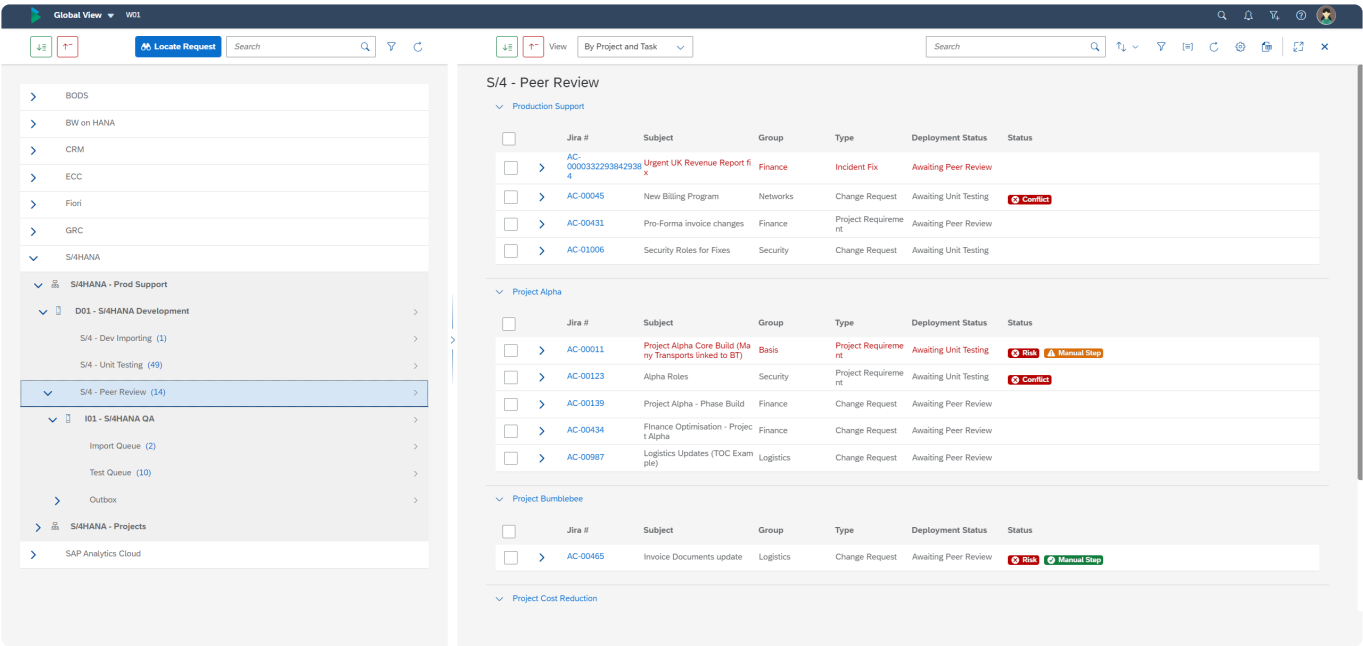
Figure: Global View screen.

✳ Only authorised users with [Y_TEUSER]-VIEWGLOBALVIEW authorisation activity can access the Global View. This auth activity has been given to the Change Manager, Basis and Administrator out-of-the-box roles. Customers wanting to let other user personas within their organisation access the Global View will need to create a Z role with this authorisation activity.
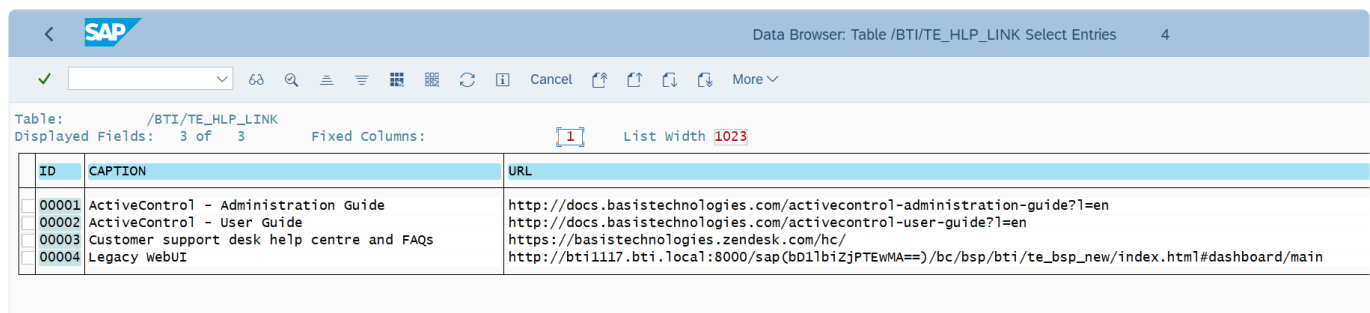
✳ Global View can only be accessed via PC. It is deliberately not accessible via Mobile Devices because of the complexity of the screen not translating well to smaller device screen sizes.

9.2. Help Links

It is possible to add **Documentation Links** that point users at standard BTI or customer specific documentation relating to ActiveControl (or anything else).

Document links can be maintained in the Domain Controller via table **/BTI/TE_HLP_LINK** in the Domain Controller.

These document links are visible to users via the Help menu in the shellbar of the Web Platform.

Figure: Documentation Links configured in /BTI/TE_HLP_LINK.
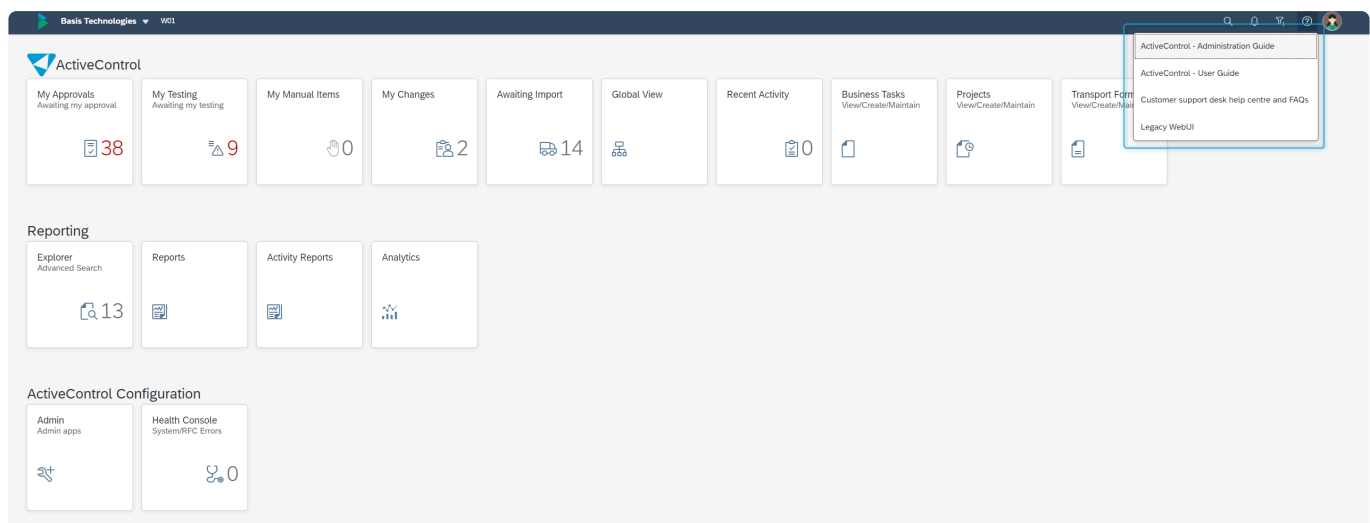
Figure: Documentation Links as seen in the Web Platform.

9.3. System Messages

It is possible for ActiveControl Administrators to issue **system messages** to all users on the Web Platform, via configuration in backend table **/BTI/TE_SYSMESS** in the Domain Controller.

This can be used to inform users of an upcoming system outage or other significant events such as a system refresh or planned upgrade.

The start and end dates/times indicate the time period during which ActiveControl will present the configured message to users.

Any configured system messages show on the Web Platform home page, via the notification icon in the shellbar.
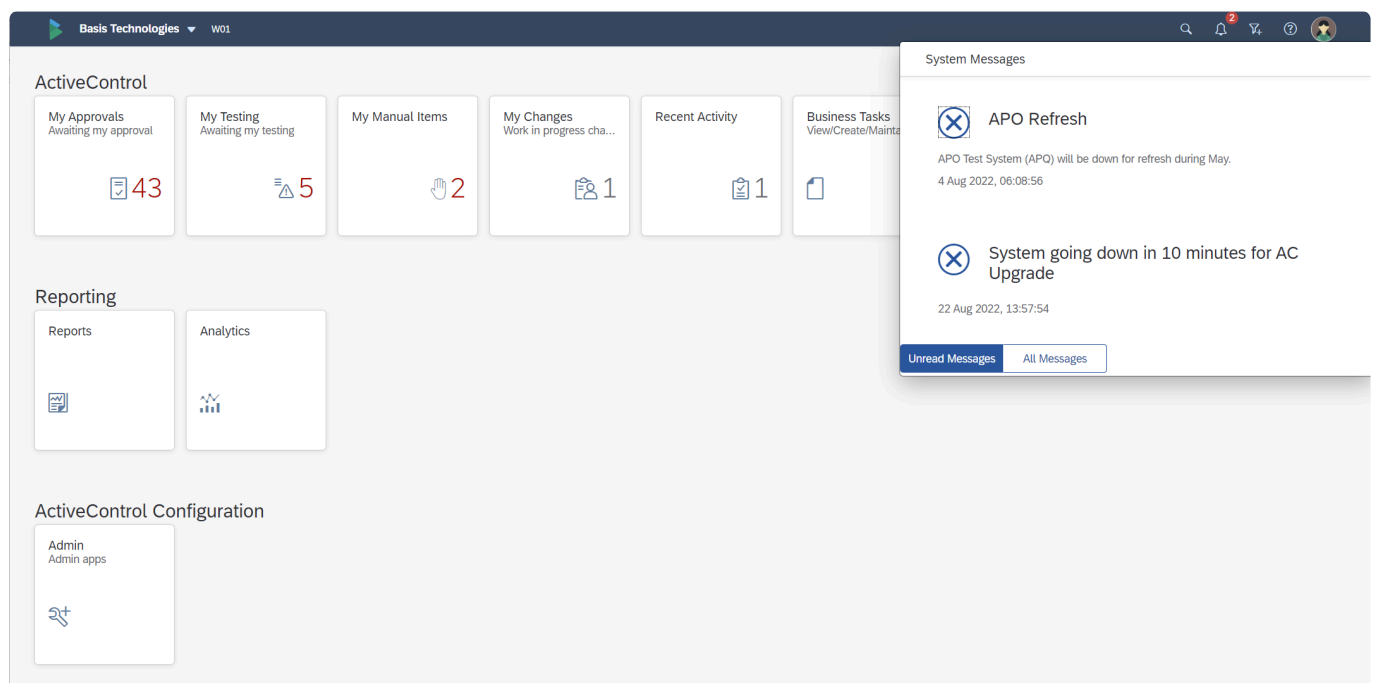
Figure: Example system messages in the Web Platform.

✱ It is possible to configure multiple system messages against the same start/end date range – via the use of the Count field as part of the table key in /BTI/TE_SYSMESS.

9.4. Mobile Access

In addition to accessing ActiveControl via PC or laptops, it is also possible to access ActiveControl Web Platform via mobile devices such as tablets and mobile phones. This can be particularly useful for Approvers.
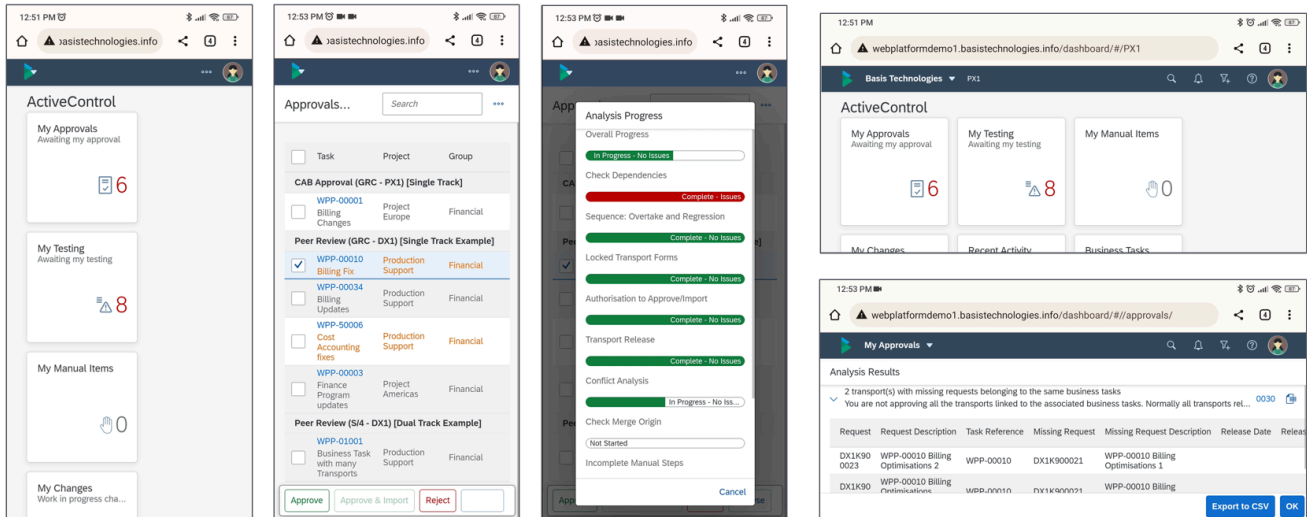
Figure: Example screenshots of the ActiveControl Web Platform from a Mobile device.

Mobile Access

There is no specific setup that is required to enable Mobile Access to the ActiveControl Web Platform.

As long as a user can connect to your organisations' SAP system (specifically the ActiveControl Domain Controller system) via their mobile device, they should be able to access the ActiveControl Web Platform as well.

Available Functionality

The majority of ActiveControl is available via mobile devices. This includes all key screens such as:

1) Search
2) My Approvals
3) My Testing
4) My Manual Items
5) My Changes
6) Recent Activity
7) Projects
8) Business Task
9) Transport Form. (see underneath for certain unavailable subscreens)

10) Explorer (Advanced Search)
12) Delegations
13) Admin home screen (limited to certain tiles)

In most cases, simplified screens are seen on mobile device, with less fields visible depending on the size of the screen. Viewing in landscape rather than portrait is recommended.

Unavailable Functionality

The following ActiveControl capabilities are only available on PC. They will not be seen via Mobile devices due to the complexity / volume of information resulting in them not rendering well on smaller screen.

1) Transport Form – [Manual Step] tab
2) Transport Form – [Advanced Options] tab
3) Activity Reports
4) Most Administration tiles
5) Global View
6) DevAnalytics

9.5. Eclipse – ABAP Development Tools (ADT)

ActiveControl includes support for ABAP Development Tools (Eclipse), via a dedicated plugin.

Please refer to this [Knowledge Article](#) for additional information on how to install the ActiveControl plugin within Eclipse

9.6. User Exits

Numerous user exits points are available to enhance ActiveControl for specific customer requirements.

User Exit	Description
Validation during saving of a Transport Form **(Exit Identifier 0010)**	When a Transport Form is being saved by the user, this user-exit enables one to do whatever is necessary (for example validation of the input data).
Validation of a locked/unlocked Transport Form **(Exit Identifier 0011)**	When a Transport Form is locked or unlocked by the user, this user-exit enables one to perform any required function.
Transport Form creation (Map User) **(Exit Identifier 0012)**	Can be used to map users during Transport Form creation process (incase the userid is different in Development and Domain Controller)
Get extended task list item **(Exit Identifier 0020)**	When searching for a Task in the "Task Search" dialog, it is possible to retrieve other tasks from, for example, external systems in this user-exit.
Action Confirmation **(Exit Identifier 0030)**	Implement this exit to override whether a particular action within ActiveControl requires confirmation, as well as the behaviour of the confirmation dialog. Possible actions are: A = Approve a task (or set of tasks) I = Import a transport request (or set of transport requests) T = Save test results and finish testing Errors can be issued by setting the return structure Y_RETURN by calling function module /BTI/TE_RETURN_GET, passing in the message details: message type, message ID, message number and variables. Set parameter XY_CONFIRMATION_REQUIRED=X to force ActiveControl to ask the user to confirm their actions.
Validation during saving of a Task (Create or Change) **(Exit Identifier 0040)**	This user-exit is called during the creation or changing of a Task (after the save button is selected). Refer to User Exit 0620 for a user-exit prior to display of the Task. The mode is passed through (Create or Change) as well as the values that have been entered. Based upon this, the user-exit can issue a message to the user to prevent the creation/change of the Task or add additional data behind the scenes. It should be noted that this user exit cannot be used to update custom fields.
Validate transport creation from task **(Exit Identifier 0041)**	This user exit can be used to validate the populated Transport Form from Business Task information.

Check for duplicate task reference during saving of a Task (Create or Change) **(Exit Identifier 0045)**	This user-exit is called during the creation or changing of a Task (after the save button is selected). A flag can be set to indicate whether the task reference field can accept duplicates values or whether it must be unique.
Dependency Check **(Exit Identifier 0050)**	This user exit is called during dependency checking.
Transport import **(Exit Identifier 0060)**	This user-exit is called during the transport import process. It allows specific actions to be carried out during the import process.
ActiveControl Backout **(Exit Identifier 0061)**	This user-exit can be called at the start of the ActiveControl Backout process. This was introduced at the same time as Business Task level Backout in 2023. More information can be found on this Knowledge Article.
Change clients during import process **(Exit Identifier 0065)**	This user exit is called during the import process to override the clients used for client dependent imports. By default ActiveControl will import into all configured clients for the relevant target but this user exit allows the list to be adjusted if there are any special rules. E.g. only import transports originating in client 200 into client 210 and ignore clients 100 and 110
Non SAP Change Import **(Exit Identifier 0068)**	Can be used to deploy non-SAP changes from within ActiveControl
Merge request creation in participating systems **(Exit Identifier 0070)**	This user exit is called at the point where either a merge request or a backup request is to be created in a participating system. It is possible to override the standard functionality for creating these requests within this user exit.
Merge request processing **(Exit Identifier 0071)**	This user-exit is called during the processing of merge transports. This can be used to influence how the merge requests are created. For example, the standard implementation can be used to create a new merge transport for every source transport being merged.
Set form fields for merge **(Exit Identifier 0072)**	This user-exit can be used to set fields for auto merge form creation. It has been largely replaced by configuration options on the Merge Options screen.
Task creation webservice preprocess **(Exit Identifier 0080)**	This user-exit can be used to perform webservice pre-processing during Business Task Creation. This needs to be activated to enable custom fields (e.g. CF_500) to be saved in the in the header structure for task creation

Task read webservice postprocess **(Exit Identifier 0081)**	This user-exit can be used to perform webservice post-processing during Business Task read
Task change webservice preprocess **(Exit Identifier 0082)**	This user-exit can be used to perform webservice post-processing during Business Task change. This needs to be activated to enable custom fields (e.g. CF_500) to be saved in the in the header structure for task change
Task test results webservice preprocess **(Exit Identifier 0083)**	This user-exit can be used to perform webservice pre-processing during Test Results entry
Task approval webservice preprocess **(Exit Identifier 0084)**	This user-exit can be used to perform webservice pre-processing during Business Task approval
Task get transports WS postprocess **(Exit Identifier 0085)**	This user-exit can be used to perform webservice pre-processing to get Transport list from Business Task
Integration conversions **(Exit Identifier 0090)**	This user-exit can be used to perform conversions as part of Integration
Integration notifications **(Exit Identifier 0091)**	This user-exit can be used to perform alternative notifications as part of Integration
Load User List **(Exit Identifier 0100)**	Implement this exit to override the list of users that will appear in ActiveControl when choosing administrators, approvers and managing the list of users whose transports are being displayed. The main user details like user ID, first / last name, email address, etc. can be returned.
Load Test User List **(Exit Identifier 0110)**	Implement this exit to override the list of users that will appear in ActiveControl when choosing test users within tasks. The main user details like user ID, first / last name, email address, etc. can be returned.
Before Transport Release: Runs in target **(Exit Identifier 0120)**	This exit can be used to perform target activity prior to transport release.
Extra validation	This exit can be used to perform additional validation during the conflict analysis

in Inline Conflict Analysis **(Exit Identifier 0130)**	process.
Set behaviour of Fast Imports with different umodes **(Exit Identifier 0140)**	This exit can be used to affect the behaviour of Fast Import, when the Unconditional Modes on underlying transports are different.
Extra validation in Inline Risk Analysis **(Exit Identifier 0131)**	This exit can be used to perform additional validation during the Inline Risk Analysis process.
Integration exit: Mapping before sending message **(Exit Identifier 0200)**	This exit can be used to perform mapping activity prior to sending Integration message.
RFC destinations **(Exit Identifier 0310)**	This exit can be used to manipulate the name of the RFC destination that is used when connecting to remote systems. For example, it can be used to override the default destination based on the system ID to point to an alternative system.
Modify list of approvers **(Exit Identifier 0500)**	This exit can be used to modify list of approvers for web gui and notification engine, prior to Delegation.
Filter transports for approval **(Exit Identifier 0505)**	This exit can be used to filter list of transports awaiting approval.
Pre-population of emails during notification **(Exit Identifier 0510)**	This exit is called during the notification engine just prior to any emails being sent. This means that all email details that have been derived, the subject, message body and recipients are provided to the user-exit for alteration if desired.
Post-population of emails during notification **(Exit Identifier 0520)**	This exit is called during the notification engine but after each email has been sent. During this exit you can send further emails if desired.
Pre-population of a Transport Form **(Exit Identifier 0610)**	When a Transport Form is initially created, this exit is called prior to the Transport Form appearing. This enables the default values of the Transport Form to be pre-populated. It also enables attachments to be automatically added as well as dependencies to other transport requests.
Pre-population of a Task **(Exit**	When a Task is either initially created or changed, this exit is called prior to the Task form appearing. All fields of the Task can be defaulted or changed prior to display of the

Identifier 0620)	form. More importantly, both the default set of Testers and the default set of attachments can be pre-populated. These are configured in table /BTI/TE_TASK_DEF
Pre-population of a Test Result **(Exit Identifier 0630)**	When a Test Result (via a Task and a Test Queue) is initially created, this exit is called prior to the Test Result appearing. The Test result has only 2 fields that can be pre-populated (Test Result and Test Description). More importantly, however, you are also able to attach file templates within this exit. Hence, attachments such as Test Documentation can be added to the Test Result automatically upon entry of the Test Result. The user then has the option to either populate the template or to remove it (if required). Please note that the context of the Test Result (i.e. the Test Queue control point) is also passed to this user-exit along with the Task details so that the behaviour can be altered dependent upon this context (e.g. one template for Integration Testing and another for User Acceptance Testing).
Test Result validation when saving **(Exit Identifier 0635)**	This user exit can be used to validate the entered Test Results during save process.
Task Search Results Filtering **(Exit Identifier 0640)**	This user exit is processed during the task search process. It can be used to further filter the list of tasks returned by the search to build in any customer specific checks. For example, it could be used to additionally search for the entered text within custom fields.
Transport Request Travel **(Exit Identifier 0710)**	When a transport request moves from one location (e.g. Inbox) to another location (e.g. Import Queue) it is possible to manipulate the movement of the transport request within this user-exit. In particular, one is able to "skip" control points and even entire systems if desired (e.g. if the transport request is of a particular type). It is also possible to release the transport request automatically after movement into a particular control point (e.g. after approval is given and the transport request moves into an import queue of a given system then perform the auto-release).
End of Transport Request Travel **(Exit Identifier 0720)**	This user exit is called at the end of the transport path travel function module. By this stage the location of the Transport Form will have been updated and this can be used, for example, to trigger the creation / sending of ActiveControl notifications.
SAP Transport Request Creation **(Exit Identifier 0730)**	This user exit is called during SAP transport request creation. It can be used to set defaults for the transport request details like description, owner, target and project.
SAP Transport Request Approval, before Travel **(Exit Identifier 0740)**	This user exit is called during approval, before the actual travel takes place.
Merge Request Creation **(Exit**	This user exit is called during the creation of merge request. Note that this user exit is deprecated in more recent versions of ActiveControl.

Identifier 0800)	
After Merge Request Creation **(Exit Identifier 0810)**	This user exit is called after the creation of merge request. It can be used to automatically create a Transport Form for the new merge transport.
Merge CTS+ Processing **(Exit Identifier 0820)**	This user exit is called during the processing of CTS+ transports. It can be used to obtain the timestamp for the CTS+ transport objects for use in overtake and conflict checks.
Post Import Processing **(Exit Identifier 0850)**	This user exit is called after transport import is complete. It can be used to carry out any required post processing activities on the imported transports or the created merge requests. For example, it could be used to perform the BW renaming on created BW merge requests.
Post Import Processing (single tp/client) **(Exit Identifier 0851)**	This user exit can be used for post processing activities on the imported transports, per single transport/client deployment.
Post Import Processing (unconditional) **(Exit Identifier 0852)**	This user exit can be used for post processing activities on the imported transports.
TOC Creation **(Exit Identifier 0855)**	This user exit can be used to create Transport Form for Transport of Copies.
Add to Import Queue (Validation) **(Exit Identifier 0860)**	This user exit can be used to validate the allowed Import Queue locations whilst trying to perform an Add to Import Queue action in ActiveControl.
Add to Control Point (Validation) **(Exit Identifier 0861)**	This user exit can be used to validate the allowed Add to Control Point locations whilst trying to perform an Add to Control Point action in ActiveControl.
Add to Import Queue (Change Locations) **(Exit Identifier 0862)**	This user exit can be used to alter the list of locations you can choose whilst trying to perform an Add to Import Queue in ActiveControl.
Add to Control Point (Change Locations) **(Exit Identifier 0863)**	This user exit can be used to alter the list of locations you can choose whilst trying to perform an Add to Control Point Queue in ActiveControl.

User Exit for global check in General Analysis **(Exit Identifier 0900)**	Used to set the global check flag during the general analysis. Setting the global check flag will mean that the general analysis will look at all transports in the path whether created locally or imported from other systems.
RFC client destination for conflict analysis **(Exit Identifier 0910)**	This user exit is called during the conflict analysis process to override the RFC destination and therefore the client used. By default the client in the merge target will be used for the conflict analysis but it can be overridden to check a different client if required but using a different RFC destination. E.g. check client 100 for conflicts with transports originating from this client but check client 200 if the transport originates from there
Web UI News feed filtering **(Exit Identifier 0920)**	This user exit can be used to restrict and filter the news and recent events items returned for the logged in user so they don't see news relating to all users.
Link creation validation **(Exit Identifier 0930)**	This user exit can be used to validate link creation.
Priority Schedule Filter **(Exit Identifier 0940)**	This user exit can be used to perform a filter on Priority Schedule.
Overtake Analysis Filter **(Exit Identifier 0950)**	This user exit can be used to perform a filter during Overtake analysis process.
Custom Field updates on Transport Form save **(Exit Identifier 0960)**	This user exit can be used to update custom fields on Transport Form when saving the Transport Form.
Custom Field updates on Transport Form save **(Exit Identifier 0961)**	This user exit can be used to set custom fields to read/write based on any conditions.
Custom Field updates on Transport release **(Exit Identifier 0970)**	This user exit can be used to update custom field on transport release (if Transport Form already exists). This is called after is called after transport release (class /BTI/ CL_IM_TE_BADI_TR_REL).
Exclude objects from analysis	This user exit can be used to exclude unnecessary objects from an analysis

(Exit Identifier 0980)	
Integration – send manipulated values based on Business Task **(Exit Identifier 0990)**	
Integration – validate data before BT creation/upgrade in webservice **(Exit Identifier 0991)**	
Integration – upgrade task/ form from the result of the 3rd Party tool **(Exit Identifier 0992)**	
Attachment file validation **(Exit Identifier 0993)**	This user exit can be used to deliver additional checks at the point of adding Attachments (either physical or URL linking) to ActiveControl. eg to restrict the file sizes that can be uploaded.

User Exit Implementation

If a user exit is to be implemented, simply copy the sample function module which has a naming standard of **/BTI/TE_EXIT_SAMPLE_XXXX** (where XXXX = 4 digit user exit number) into the customer name space. This copies across the signature of the function module (Importing, Exporting, Changing, Tables and Exception parameters). The copied function module should then be amended to the client's specific requirement.

Once implemented, an entry must be added to table **/BTI/TE_EXITC** in the ActiveControl Domain Controller. A corresponding entry may also need to be added to /BTI/TE_EXIT if it does not already exist and has been shipped.

The entry in /BTI/TE_EXITC requires:

Field	Description

EXITID	This is the User Exit identifier such as 0010, 0020, etc.
COUNTER	This is just the sequence number, starting from 01. However, if the user-exit allows multiple exits to be defined, then this can be incremented for each implemented user-exit (i.e. 01, 02, 03, etc).
EXITFUNC	The function module name defined in the customer namespace (e.g. ZABC_TE_EXIT_0010).

> **!** Please note the that the following can have detrimental impacts to wider ActiveControl and should be avoided:
> (i) A non active exit added to table /BTI/TE_EXITC.
> (ii) A non active exit created in a Function Group which has an existing FM in use.

9.6.1. Standard 'reusable' User Exits

Some standard 'reusable user exit are available as part of the standard out-of-the-box product.

Unlike the sample user exit Function Modules, the follow User Exits are expected to be immediately reusable by customers without any coding intervention.

User Exit Name	Purpose
/BTI/ TE_EXIT_ADDBTTOFORM_0610	Can be used so that ActiveControl automatically adds Business Task to a Transport Form when the Transport Form is first opened, where the first characters of the Transport Description match the characters in the Reference field of an existing Business Task.
/BTI/ TE_EXIT_WSCREATESTER_0080 and /BTI/ TE_EXIT_WSCHNGTESTER_0082	These user exits are used as part of a JIRA integration, and attempt a user mapping based on email address stored against the user assigned to the ticket in JIRA and against the same user in SAP. This was added to overcome the issue whereby most userids in JIRA do not match those in SAP
/BTI/TE_EXIT_BTLINKJIRA_0040	This user exit can be used as part of a JIRA integration, to enable a customer to automatically populate a Web Platform URL into a custom field on the JIRA ticket. More information is available in this Knowledge Article
/BTI/ TE_EXIT_STOP_APPROVE_0635	This user exit can be used to prevent "Save and Approve" action in a Test Queue, when the test result is "Waiting" or "Information" . More information is available in this Knowledge Article
/BTI/ TE_EXIT_AUTOADDTFTYP_0610	This user exit can be used to automatically populate the Transport Form [Type] field values based on the standard SAP transport type. More information is available in this Change Note
//BTI/ TE_EXIT_JIRAURLONBT_0040	This user exit an be used to automatically add a URL attachment on a new Business Task created via JIRA integration, to link back to the URL of the JIRA ticket. More information is available in this Change Note

9.6.2. User Exit Responsibilities

User Exits are typically customer-specific requirements, delivered as custom Z code on top of an individual customer's ActiveControl implementation.

The following matrix summaries Basis Technologies responsibilities both in writing and supporting customer-specific User Exits.

ID	Scenario	Chargeable?	Supported by Basis Technologies during implementation?	Supported by Basis Technologies during ActiveControl Upgrades?
1	Customer writes their own Z user exit with no assistance from Basis Technologies	No	No	No
2	Customer requests help in writing a Z User Exit	Yes	No	No
3	Customer requests BTI to develop a Z User Exit – its Custom only	Yes	Yes, during initial development / implementation	No (see note 1)
4	Customer performing AC self-upgrade. Requests BTI review of existing Z User Exits	Yes	N/A	No – unless budget is in place for it.
5	Customer performing AC upgrade with BTI involvement. Requests BTI review of existing Z User Exits	Yes	N/A	Yes, if budget in place.
6	Customer implements an out-of-the-box Standard Reusable User Exit with no changes to it	No	Yes	Yes

Notes

(1) Whilst Basis Technologies will support the initial implementation of a User Exit where we are involved as a chargeable deliverable – it will not be supported during a subsequent Upgrade of ActiveControl unless chargeable services are in place.
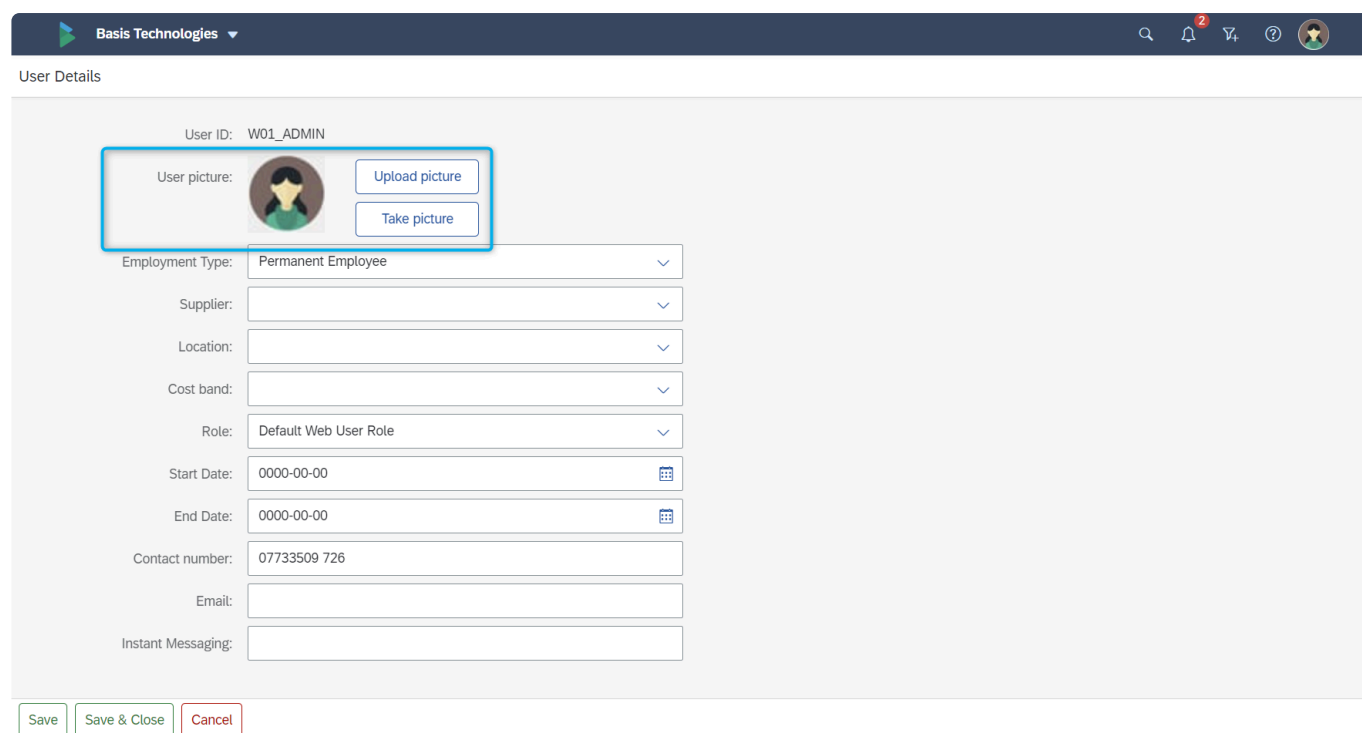
(2) Please refer to this section on the responsibilities for upgrading ActiveControl

9.7. User Pictures

Earlier versions of ActiveControl required the customer ActiveControl Administrator to centrally upload end-user pictures via backend transaction SMW0.

This created unnecessary ongoing maintenance overhead for ActiveControl Administrators, so it is now the responsibility of the individual end-user to upload their own image (if desired) via the User Details screen of the Web Platform.

It is possible to upload pictures of file type .jpeg, .jpg and .bmp. The maximum file size is 2MB.

Figure: Users can upload their own picture via the User Details screen in the Web Platform.

9.8. Migrating configuration/data between Domain Controllers

Export/Import Configuration

Typically during an ActiveControl implementation, Basis Technologies will work with the new customer to install and configure ActiveControl on a non-Production Domain Controller for testing, and then migrate the setup to Production Domain Controller after UAT and prior to go-live.

This Domain Controller migration activity is performed using specific Export / Import utility programs to migrate most of the configuration:

- /BTI/TE_RBACKUP_DATA_EXP_V3
- /BTI/TE_RBACKUP_DATA_IMP_V3

The process for performing this Domain Controller migration is detailed in this Knowledge Article.

9.9. Transportable Configuration

Over the years, many Basis Technologies customers have requested that more of the ActiveControl configuration be transportable – to enable them to make changes to ActiveControl more consistent with how they make changes in standard SAP – and to help them avoid the need to manually redo configuration via the ActiveControl Windows GUI in Production Domain Controller after having tested the configuration in the Development Domain Controller.

It is currently possible to optionally configure (and transport) the following configuration via SM30 instead of configuring it directly via the Web Platform Administration screens.

- Types
- Groups
- User Roles
- Custom Fields

Configuration Steps

Please refer to online Knowledge Articles for details on how to transport the above entities instead of directly configuring them in the Web Platform.

- [Types](#)
- [Groups](#)
- [User Roles](#)
- [Custom Fields](#)

> **!** It is not possible to configure via both Web Platform and SAPGUI. The default is via the Web Platform Administration screens. To switch to SAPGUI, the flag must be set via flag in table /BTI/TE_TBL_FLAG in the Domain Controller (using SM30).

9.10. Accessibility

Accessibility refers to the possibility for everyone, including and especially people with disabilities, to access and use information and communication technology.

The ActiveControl Web Platform UI is built using SAPUI5 and SAP Fiori design system. Accessibility is an integral part of both of these, and as such, ActiveControl offers numerous capabilities to ensure Accessibility for all Basis Technologies customers and end-users.

Visualization
• Themes • Layout adaptation for different devices • RAG statuses: text/icon combination • Support for text resizing

Keyboard Support
• Tab order of controls

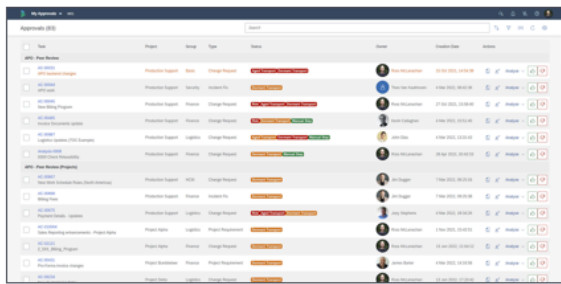| Understanding |
| --- |
| • Status updates, messages, error handling
• Labels |

Figure: Key aspects of Accessibility within the ActiveControl Web Platform

Themes

The default Theme withjin the ActiveControl Web Platform is 'SAP Fiori'. This was designed by SAP to meet the minimum colour contrast requirements of the international Web Content Accessibility Guidelines (WCAG 2.1)

Individual end-users can choose from one of eleven different themes by which they view ActiveControl Web Platform (this is done via the 'User Details' screen in the Web Platform):

- SAP Fiori
- SAP Fiori Dark
- SAP Fiori High Contrast Black
- SAP Fiori High Contrast White
- SAP Belize
- SAP Belize High Contrast Black
- SAP Belize High Contrast White
- SAP Horizon
- SAP Horizon Dark
- SAP Horizon High Contrast Black
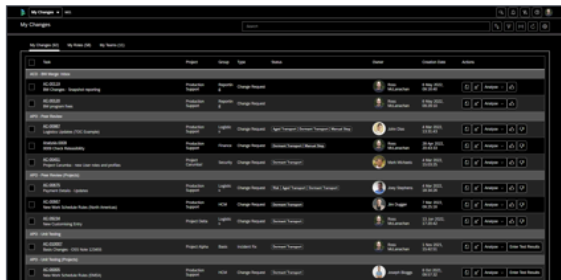- SAP Horizon High Contrast White

SAP Fiori

SAP Fiori Dark

SAP Fiori High Contrast Black

SAP Fiori High Contrast White

Figure: Example Themes within the ActiveControl Web Platform

Responsiveness

ActiveControl comes with a responsive layout that adapts to the display resolution parameters of the individual device. Most core AC capabilities can be accessed on both PC and Mobile devices.

Support for Text Resizing

ActiveControl Web Platform can be run on all main browsers supported by SAP:

- Google Chrome
- Microsoft Edge (Chromium)
- Mozilla Firefox
- Apple Safari

Users can adjust the font size themselves using the browser zoom. The responsive layout adapts to these manual adjustments automatically.
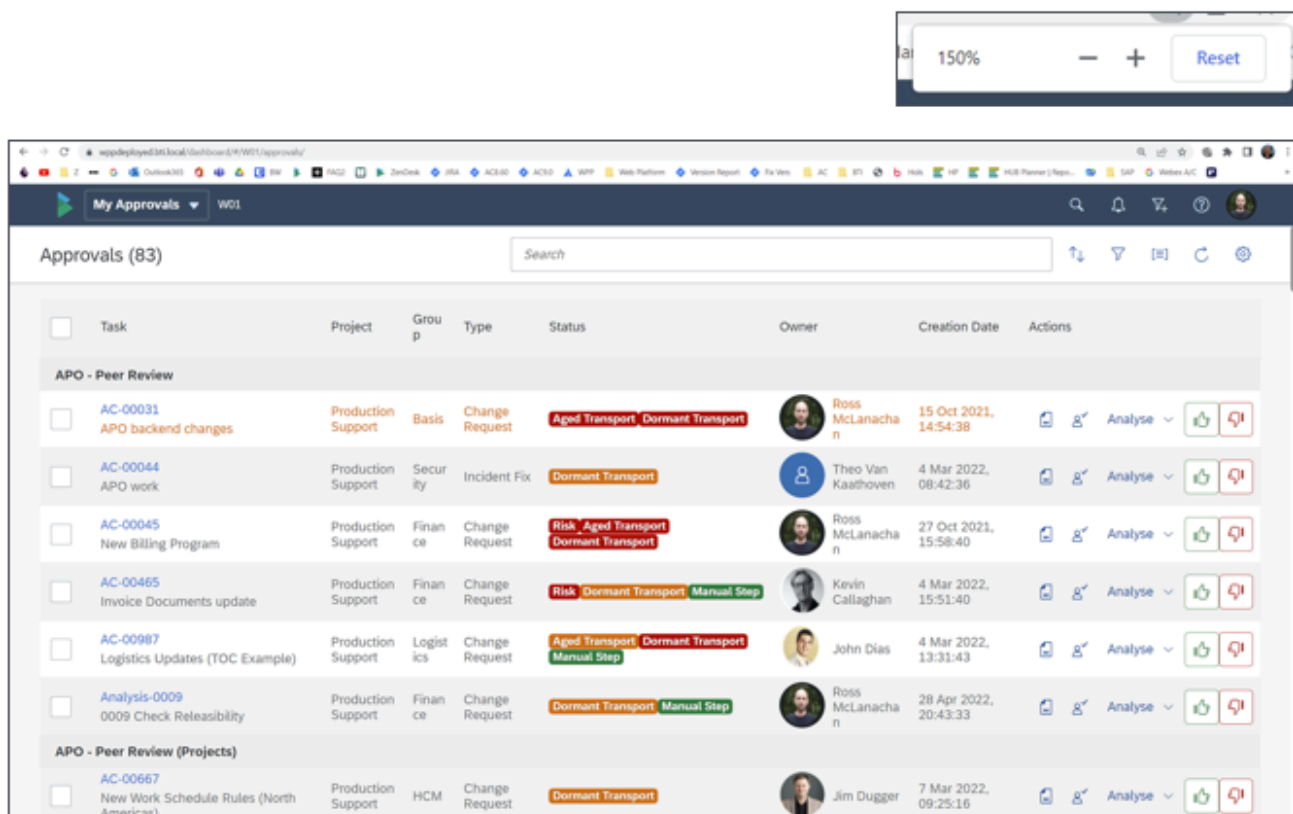
Figure: Users can use their browser zoom to change how they see the ActiveControl Web Platform within their browser.

Tab Order for Support

Navigation between fields on a screen in the Web Platform is done using the Tab key. [Tab] moves the focus from one control to the next. [Shift]+ [Tab] does the reverse.

Tab ordering is seen on all screens where a User may be maintaining information:

- Business Task
- Transport Form
- Project

Understanding

Clear status updates, messages and error handling is seen throughout the Web Platform. Labels and tooltips are used in the Web Platform to provide more information where appropriate.
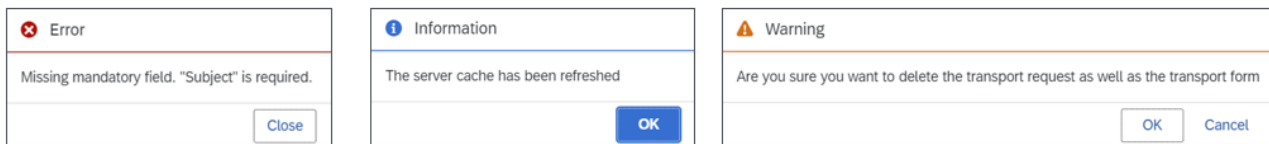
Figure: Example Error, Warning and Information messages within within the ActiveControl Web Platform

10. Reports

ActiveControl includes a number of out-of-the-box Reports aimed at cutting out the need for spreadsheets and manual analysis performed within many organisations as part of the delivery of SAP change.

ALV Reports – available via Reports app tile in the Web Platform (and also via Domain Controller backend).

DevAnalytics – available via Analytics app tile in the Web Platform.

Utility Reports – available only via the Domain Controller backend).

10.1. ALV Reports

ActiveControl includes a number of out-of-the-box Reports aimed at cutting out the need for spreadsheets and manual analysis performed within many organisations as part of the delivery of SAP change.

Most of these Reports are available in the Web Platform, via the Reports app tile. All of them are available via transactions in the SAP GUI of the Domain Controller.

Report Name	Transaction	Description
Task Status Report	/n//BTI/ TE_RTASK_STATUS	This operational report gives detailed project and task level status information. It provide a snap shot of the status of projects giving both detailed and summary information about the status of all items relating to the projects. Some of the key data that can be reported upon is: • Project/Task/Transport reporting showing the current deployment status (e.g. In development, In test, Awaiting production, etc.) • Project/Task reporting showing the current planning status • The full details of all items returned (Projects/Tasks/Transports) for the selected criteria are available along with a high level summary of the number of items in each status
Transport Location by Project / Path	/n/BTI/ TE_RTR_LOCATION	The Transport Location report displays all Transport Forms belonging to a particular Project or Transport path and where they current "sit" within the landscape.
Transport Locn by Date/Obj/ Proj/Ownr	/n/BTI/ TE_RTRAN_LOCN	This report provides transport and location information as follows: • Retention: For a selected period, the transports with import date/time and duration of "retention" in all relevant systems in the selected transport path • Object: For one or more objects, the transports imported in selected systems • Project: For a project, where the relevant transports are located • Owner: For one or more transport owners, where the relevant transports are located
Transport Import Progress by Path	/n/BTI/ TE_RTR_IMPSTAT	The Import Status report displays all transport requests for a given transport path and into which systems the transport has been imported. The report allows for you to specify whether you want the ActiveControl view of the transport request (i.e. whether ActiveControl believes the transport was imported) or via the TMS view which examines the transport logs to determine whether the transport was imported. Alternatively, both views can be combined. Each system in the transport path is displayed dynamically, and

		whether the transport has or hasn't been imported into that given target is displayed.
Transport Import Status across Paths	/n/BTI/ TE_RTR_IMPPATHS	This report is an extension of the Import Status Report, but allows you to view transports over multiple paths. For the report to format the data properly, the Roles assigned to each Target must be consistent across the paths
Build List Report	/n/BTI/ TE_BUILD_LIST	This report allows you to sequence all Transports and manual activities for a group of transports in a control point and to give estimated timings using previous import history. This report allows you to create an always up-to-date build list for project cut-overs
Build List Report across Paths	/BTI/ TE_RBUILDL_NEW	This report is similar to the Build List Report – but can be run for all ActiveControl Paths to provide a sequenced list across an entire SAP estate. For performance reasons, this report must be run for either a specific Business Task or Project.
Change Metrics Report	/n/BTI/ TE_RCHG_METRICS	This report will give total number of transport imports (and associated tasks) into selected systems for a date / time range. It can be used to report metrics for systems and projects by priority, group, type, etc.
Transport & Task Activity Audit	/n/BTI/ TE_RACT_EVENTS	This report can be used to show an audit of ActiveControl activities and events. This includes Imports (including import errors), Inbox/ Outbox approvals and rejections, Test Signoff approvals or rejections, Mark as Imported, Mark as Manually Applied, Added to Import Queue, Added to Control Point, etc. The data can be reported at transport level or task and project level as required
Open Transports by System & Chg Date	/n/BTI/ TE_ROPEN_TRANS	This report can be used to identify old/orphan unreleased transports that are present in development systems and haven't been changed since a specified date. This is useful to aid in the clean-up activity of unrequired transports
Test Results Entry Report	/n/BTI/ TE_RTEST_RESULT	This report can be used to give visibility to all test results entered for multiple Business Tasks or even a whole project. It will show negative and positive entries for each Business Task and any comments entered.
Change Analysis History Report	/n/BTI/ TE_RANAL_HIST	When an analysis is performed the results of the analysis run are stored in the ActiveControl database. This Report provides a history of analysis issues along with the action taken by the user. The change analysis history report allows this history to be reported upon. It gives the full details of the analysis issues along with the action taken by the user (e.g. Approve anyway)
Analysis Config	/n/BTI/ TE_RANAL_CONFIG	The analysis configuration report provides a view of which analysis types are switched on for specific targets / locations in

Report		ActiveControl. The yellow icon shows where the analysis is switched on for the location and the green icon indicates where it's mandatory. Clicking on the items will show a popup if there are any parameters entered.
Import Audit Report (AC / SAP comparison)	/n/BTI/ TE_RIMP_AUDIT	This report provides an audit of transport imports allowing imports carried out in ActiveControl to be compared to those performed in SAP / STMS so differences can be highlighted. It can be used find transports imported via SMTS that need to be updated in ActiveControl.
Delegations Report	/n/BTI/ TE_RDELEGATIONS	This report shows the details of all active delegations in ActiveControl.
Task Roles and Status History Report	/BTI/TE_RTSK_STAT	This report provides an overview of the roles and users assigned to the selected tasks and an overview of the changes to both deployment and planning statuses.
System Change Comparison Report	/n/BTI/ TE_RSYSTEM_COMP	The System Comparison report allows you to compare two target systems to determine what differences exist between what has been imported into each. A break-down of the missing transport requests (and Tasks) is provided enabling you to take appropriate steps.
Transport Merge Report	/n/BTI/ TE_RTR_MERGE	The Transport Merge report should be run during and just prior to the release of a project (or upgrade project) that is currently using the "Merge" process. During the merge process, Production Support transport requests are merged into the future release / project and this is either done manually or automatically. In either case, this report displays all Production Support transport requests and the corresponding merge request that they were merged into the project/release on. This report should be run during and just prior to the project/release to ensure that the Production Support transports have all been fully merged and that no regression will occur when the project is set live.
Merge & Conflict Manager	/n/BTI/ TE_RMERGE_CONF	Used to manage merges and conflicts in dual track landscapes.
Transport & Merge Recon. Report	/n/BTI/ TE_RMERGE_RECON	The transport and merge reconciliation report is used to provide reconciliation from the original transport to all related merge transports along with an import status to show which systems the transport has been imported into. It provides a linkage into all merged systems so the progress of the original transport can be fully tracked.
Transport Request Conflict	/n/BTI/ TE_RCONFLCT_ANL	The conflict analysis report is used to report on conflict analysis issues during the merge process. It can be executed for a specific merge target and all conflicting transports are reported. Each

Analysis		transport can be double-clicked to view the object details
Transport Objects Report	/n/BTI/ TE_RTROBJ_REP	Used to find out at an object level what is contained within Transports, Tasks and Projects.
Manual Step & Activity Report	/n/BTI/TE_RMAN_STP	Used to get either a management summary of the number of manual steps/activities opened/completed each day, or to get a full breakdown of manual items.
Approvers by Target & Location	/n/BTI/ TE_RAPPROVERS	Used to report on Approvers configured in ActiveControl.
Change Documents Report	/n/BTI/ TE_RCHANGE_DOCS	Audit Report to be able to track what configuration level changes have been done within ActiveControl. This includes config to (i) Targets , (ii) Approvers, (iii) Paths, (iv) Control points, (v) Groups, (vi) Admins, (vii) Analysers and (viii) User Roles.

Report Grouping

In the Web Platform, the Reports are grouped as follows:

1) Operational Reports
2) Audit / Governance Reports
3) Landscape Reports
4) Merge Reports

These groups can be modified by Customers in backend table /BTI/TE_DASHBGRP

Report Sorting

Within a Report Grouping, the Reports are sequenced based on the [SORT_SEQ] field in backend table /BTI/TE_DASHBITM. If a customer does not want particular reports to appear, they can delete them from this table.

10.2. DevAnalytics

A lot of data is stored within ActiveControl as part of normal day-to-day operational usage. This includes information such as Approvals, Testing, Import Errors etc.

ActiveControl has included a suite of ALV reports for many years, which allow customers to perform operational reporting and avoid much of the typical manual spreadsheets that would otherwise be needed to track and report on SAP change.

DevAnalytics builds on this, by providing a way of interrogating the data to help identify areas of waste and inefficiency within the existing processes and SAP organisation.

More information on DevAnalytics is available in seperate documentation, in the form of a Setup Guide, User Guide and also an Integration Guide detailing how to use the DevAnalytics data in other 3rd Party tools such as Microsoft Power BI, Tableau and Lumira.

10.3. Utility Programs

ActiveControl includes a number of utility programs in the Domain Controller to help administer and operate the system.

These utilities are available only via the SAPGUI.

Report Name	Description
/BTI/TE_USYS_REBUILD	System Rebuild report that can be run in the backend to help with system refreshes and copybacks. The report identifies missing transports after a rebuild/refresh based on a specific date – ie to reapply transports that were previously applied in the refreshed system that had not yet reached the source system of the refresh (eg Production). When not run in test mode this can also be used to add transports back into the relevant import queue as well.
/BTI/TE_RRISK_ANLSIS	Risk Analysis Report is used to identify transports containing objects contained in a specific set of risk groups. This can be useful for enabling a retrospective analysis on changes made to critical objects / blacklists etc. It is based on current Risk Guard group / template locking functionality.
/BTI/TE_RUTASK_STATUS_SET	This program can be used to do a mass update of existing Business Tasks to specific Deployment and/or Planning statuses
/BTI/TE_RMASS_APPROVAL	This program can be used to do a mass approval of Transport Forms in a particular landscape. Please refer to this online Knowledge Article for further information.
/BTI/ TE_RUFORM_TASK_ASSIGNMENT	This program can be used to do a mass update of reassining a list of Transport Forms over to a new Business Task (s)
/BTI/TE_RURL_STRING_REPL	This program can be used to do an en-masse update of string in URL links for AC attachments
/BTI/ TE_RUADD_APPROVERS_TO_CP	This program can be used to perform en-masse updates to Approvers assigned to ActiveControl Points.
/BTI/TE_MASSUPD_FLDS	This program can be used to perform en-masse updates of the same value to a custom field at Business Task or Transport Form level.
/BTI/ TE_RU_EXCLUPD_CUSTOM_FLDS	This program can be used to perform en-masse updates of different values to text custom field(s) at Business Task or Transport Form level.
/BTI/TE_RMASS_ADD_TO_CP	This program can be used to perform an en-masse addition of existing Transport Forms to a specific Control Point.
/BTI/TE_RARCHIVE_ENGINE	This program can be used to perform Archiving of ActiveControl

	data. More details on this program can be found [here](#).
/BTI/TE_RTROBJ_REPORT	Report that be used to generate a list of objects contained within a set list of transports.
/BTI/ TE_RTARGET_SET_SCHED_FLAG	This program can be used to do an en-masse switch on/off of Schedules in defined Targets.
/BTI/TE_AUTOCREATE_BTTF	This program can be used to automatically create Business Tasks and Transport Forms for transports imported to specific SAP systems. There is other configuration required to use this functionality – please refer to online Forum for details.
/BTI/TE_REVENTS_COFILE_RECON	This program can be used to revert transport sequencing to be based on initial date/time of import, in the event of accidental reimport
/BTI/TE_RMASS_TESTERS	This program can be used to perform an enmasse bulk upload of Tester assignments on Business Tasks.
/BTI/TE_RMANSTEPS_CHANGE	This program can be used to perform an en-masse bulk change of Manual Step user assignments.
/BTI/ TE_RBACKUP_DATA_EXP_NEW / /BTI/TE_UBACKUP_DATA	This utility program enables you to export all ActiveControl data to the file system. These files can then be imported into another Domain Controller system (via program /BTI/ TE_RBACKUP_DATA_IMP). This utility allows you to move your Domain Controller to another system. It can also be used to backup the ActiveControl data if desired or simply rebuild an ActiveControl playpen system. Please note that this Export program has been superseded by /BTI/ TE_RBACKUP_DATA_EXP_V3 since ActiveControl 8.3.
BTI/TE_RBACKUP_DATA_IMP_NEW / /BTI/TE_UIMPORT_DATA	This utility program allows you to take the data exported from program /BTI/TE_RBACKUP_DATA_EXP and load these files into a new Domain Controller. This can be used for moving the Domain Controller to a new system or for restoring the Domain Controller from a backup copy. Please note that this Import program has been superseded by /BTI/ TE_RBACKUP_DATA_IMP_V3 since ActiveControl 8.3.
/BTI/TE_RDATA_SYNCHRONISE	This program should only be used when two Domain Controller are running in parallel and need to be synchronised. Please consult Basis Technologies support for further information on the use of this program.
/BTI/TE_RLOCATION_CLEARDOWN	This program can be scheduled to periodically remove (delete) Transport Forms older than a configurable number of days from a particular Control Point location. Please refer to this [online Knowledge Article](#) for further details.
/BTI/TE_RNOTIFICATION_ENGINE /	The notification engine program sends email notifications for

/BTI/TE_UEMAIL_NOTIF	Approvals, Imported transports, etc. Further details about running this report can be found in earlier sections of the Administration Guide.
/BTI/TE_RSYSTEM_REBUILD / /BTI/ TE_USYS_REBUILD	If you ever rebuild a system (e.g. rebuild your test system from your production system), then this report will ensure that ActiveControl is brought back into synch. For example, if transport X was applied to the Test system but not Production and then the Test system was rebuilt from production, ActiveControl needs to be put back in synch so that transport X is added back to the import queue of the Test system). Important Note: Whenever a system is rebuilt, this utility program should always be run to get ActiveControl back in synch.
/BTI/TE_RTASK_UPLOAD / /BTI/ TE_UTASK_UPLOAD	This utility program can be run to upload one or more Tasks into the Domain Controller. The format is relatively straight forward and is described in the selection screen of the program. Data is uploaded from the front-end PC from a flat character-separated file (the character is a parameter). The program should be used during implementations of ActiveControl (during migration) or to take a feed of Task data from an external fault management software.
/BTI/TE_ANALYTICS	This program is used during the migration phase of ActiveControl implementation. It allows "in-flight" transport requests (prior to ActiveControl implementation) to be added to the correct control point (i.e. normally an import queue) in the correct transport path. Once migrated to the correct control point, the ActiveControl change process can then proceed. Please refer to the program selection-screen for further details of the operation of this report – and also this online Knowledge Article for the overall process of a Data Migration.
/BTI/ TE_RERUN_BW_MERGE_NAMEFIX /BTI/TE_UBW_MERGE_PP	During BW/BI merges some objects are renamed based on the system they are being imported into. This means that the objects added to merge transport of copies also need to be renamed. If there are issues with the merge process this renaming can fail. Use this program to re-run the renaming process for the relevant merge transports
/BTI/TE_REVENTS_COFILE_RECON / /BTI/TE_UEVENT_RECON	If transports are manually "Marked as imported" in ActiveControl the import date and time of the transport may not be based on the actual time and date in the transport logs. This can cause sequencing issues as ActiveControl uses this information when calculating the import sequence. This report can be used to update the import date and time to the actual values based on the SAP transport logs.
/BTI/TE_RU002 / /BTI/ TE_UASSIGN_ATTR	This report is used to update the transport attributes for the selected transports. This needs to be run in the relevant

	development system where the transports reside. This can be used after system refreshes / copies and when new projects are started to mark older transports as not relevant for the Conflict Analysis (see Housekeeping section of Administration Guide)
/BTI/TE_RU403 / /BTI/ TE_UUP_ORIG_SYS	This program is used to update the original system TADIR entries for all objects in a system to the current system. It can be used after project go-lives when objects may be still marked as owned by a different system. Only DDIC users are permitted to run this report
/BTI/TE_RU404	This program is used for caching of open transport requests for performance reasons. Please contact Basis Technologies support for further information on this program.
/BTI/ TE_RUTASK_STATUS_UPDATE	This program can be used to update the Planning and Deployment statuses of Business Tasks currently in ActiveControl. This should be run when configuration changes to the statuses have been made to set the statuses correctly for all existing Tasks
/BTI/TE_TRANS_DATAMIG	This program can be used during ActiveControl implementations, to help automate some of the analysis required to identify the SAP transports that need to be considered for migration into ActiveControl prior to go-live.
/BTI/ TE_RREMOVE_USR_FROM_ROLES	Can be used to remove Users from /BTI/TE_ROLEUX table if they are not seen via the Business Roles screen because they have been deleted already at SAP level

11. Operational / Housekeeping Activities

This section of the ActiveControl Administration Guide details some Operational and other ongoing housekeeping considerations when using ActiveControl

- Health Console
- Housekeeping Activities
- Archiving
- Maintenance Mode

11.1. Health Console

ActiveControl Administrators and other authorized users can access a **Health Console** tile within the ActiveControl Home screen.

The Health Console provides access to two screens:

1) <u>System Errors</u>: to see information on recent System Errors that will be impacting the delivery of SAP Change via ActiveControl.
2) <u>RFC Errors</u>: to see any connectivity issues between the ActiveControl Domain Controller and the managed satellite systems.
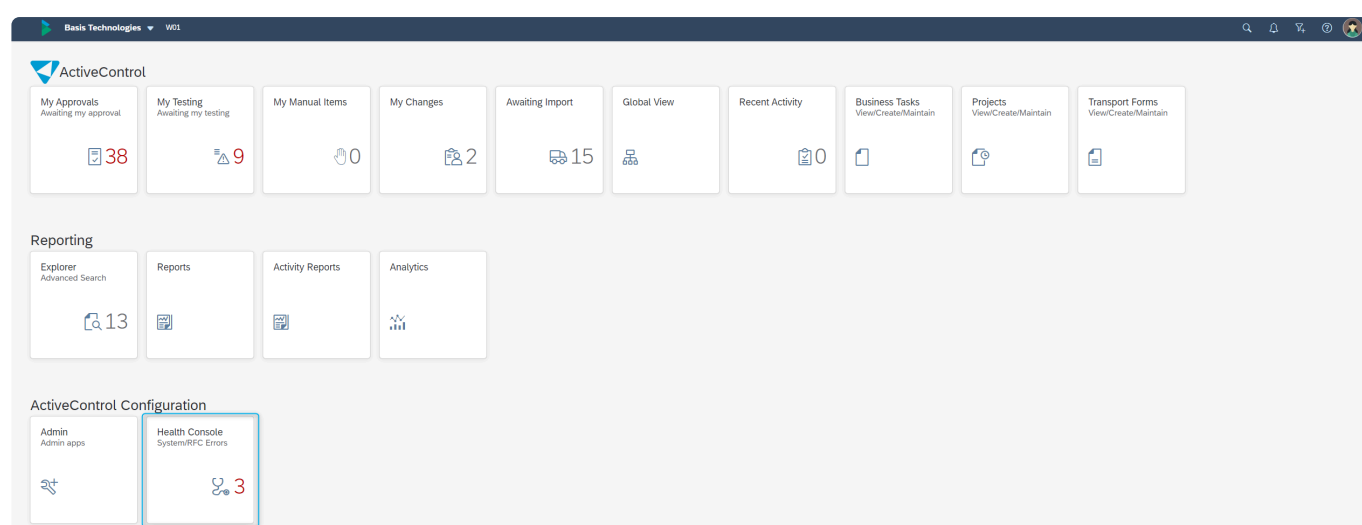

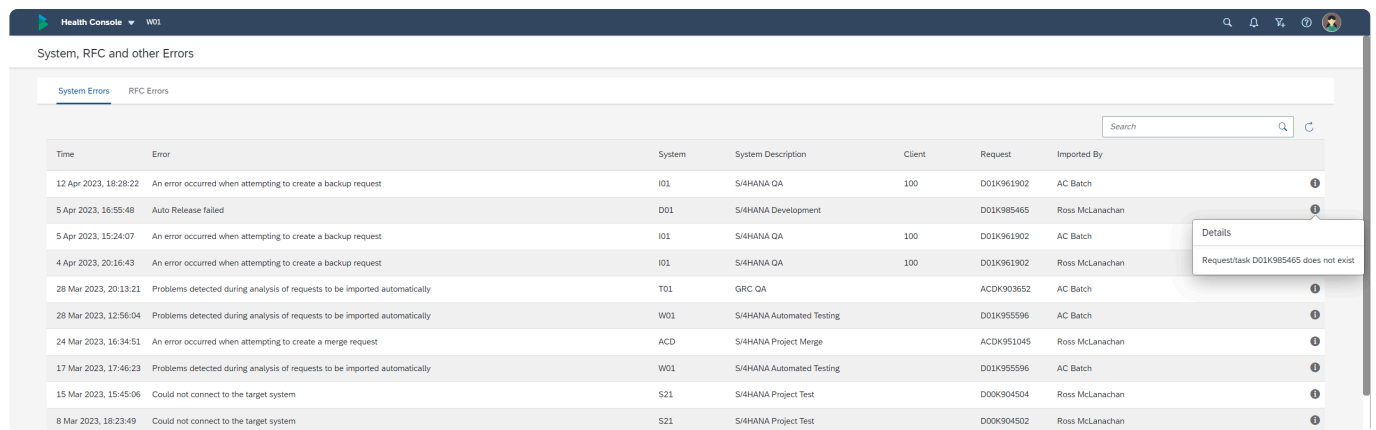Figure: Health Console app tile on the Home Screen

> ✱ Only users with [Y_TEUSER]-CONFIG or [Y_TEUSER]-CONFIGCHECK authorisation activities will see the Health Console tile and underlying subscreens.

11.1.1. System Errors

System Errors are generated in ActiveControl in the even of issues during Imports of transports (for example RC12 type issues).

When a system error occurs, an automated email notification will be sent (if it is configured in /BTI/ TE_RNOTIFICATION_ENGINE), and it will also be indicated within the Global View.

In addition, System Errors can be viewed within the Health Console.

Figure: System Errors subscreen in the Health Console

11.1.2. RFC Errors

RFCs Errors (ie connectivity issues between the Domain Controller out to the managed satellite systems) can also be viewed via the Health Console.

An RFC error will typically result in a System Error in an Import Queue, the next time an automated or manual import is attempted.
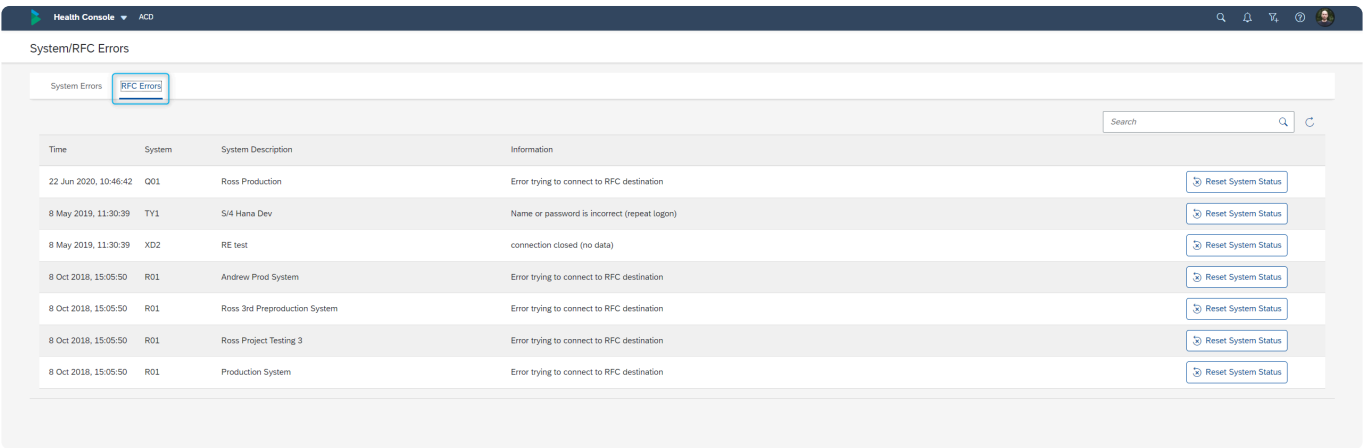
Figure: System Errors subscreen in the Health Console

11.1.3. Check RFCs

It is possible to check for RFC connectivity and other related configuration issues via the "Check RFC" feature.

Check RFCs performs a number of connection and validation checks in each of the SAP systems defined as an active target. Most significantly, Check Configuration can be used to check the RFC connectivity from the Domain Controller out to the managed satellite systems. This is a one-way check, it does not also check the connectivity from the managed Development systems back to the Domain Controller. It is possible to run Check Configuration via the [Target](#) configuration screen (either for selected or all targets).
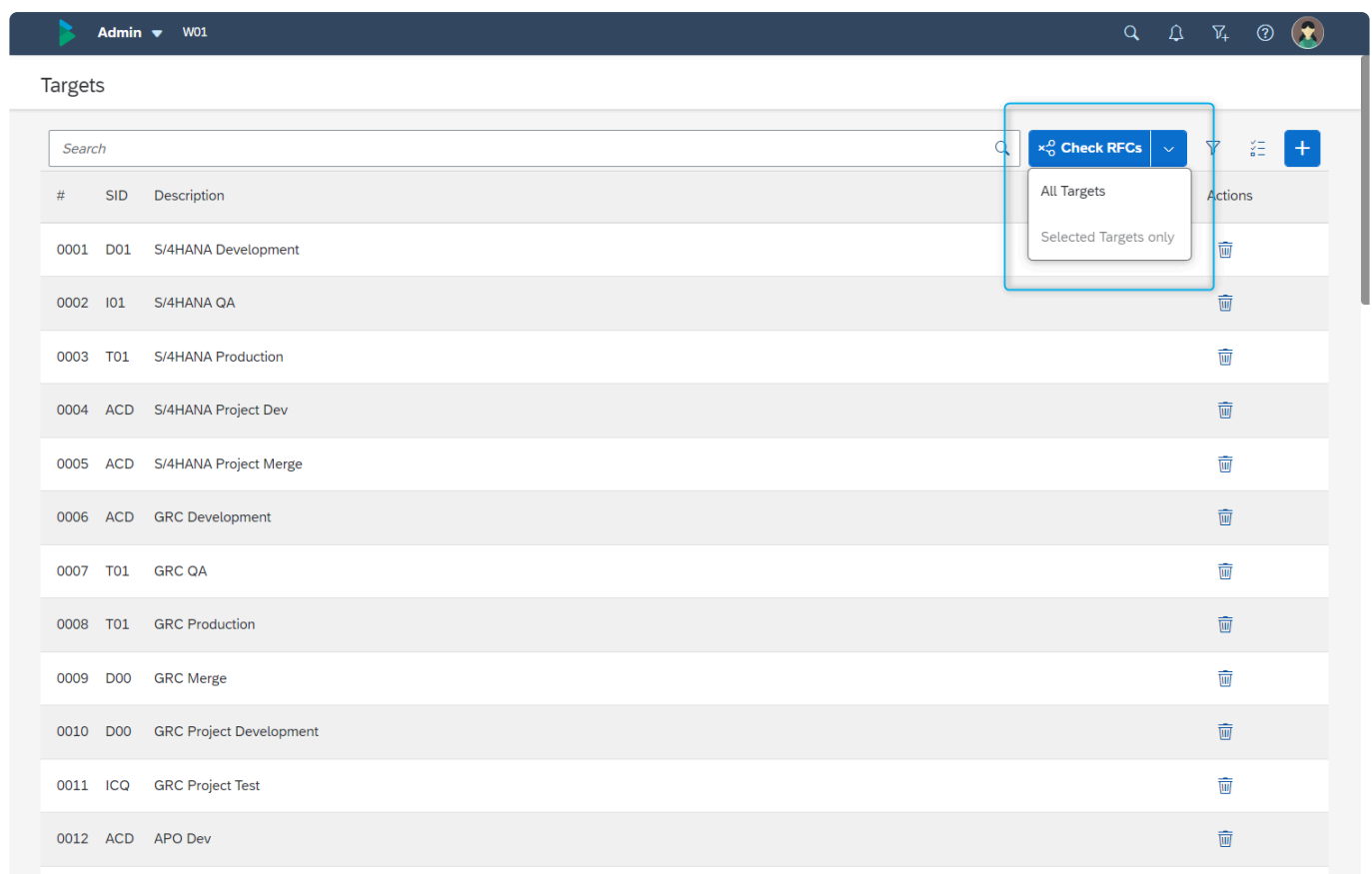
Figure: Check RFC via the Target screen

11.2. Recommended Housekeeping Activities

The performance of some functionality within ActiveControl can inevitably slow down over time, particularly in organisations delivering large volumes of transports through their SAP landscape. To avoid performance degradation over time, Basis Technologies recommend some simple housekeeping activities be performed periodically within ActiveControl.

h3, 1. Perform periodic Data Archiving

Data archiving can be performed to remove old data from the system. See proceeding "Data Archiving" section for more details on this process.

2. Review / remove non-required 'in-flight' transports

SAP best practice is always to move every transport through the entire SAP landscape to keep every system in sync, however the reality is that almost all SAP customers do not always do this. Basis Technologies therefore recommend a regular review of transports that have been stopped half-way through your landscape, and if it certain that they will never be moved further through the SAP landscape, to consider deleting them from ActiveControl.

Step	Activity
1	Run the Transport Locn by Date/Obj/Project/Ownr report. On the report selection criteria screen, enter wide start/end dates to ensure you capture all transports.
2	In the report output screen, sort the results by the [Time In (SID)] column.
3	Review the oldest transports sitting in each System, and verify if 1) whether they are valid changes that still need to be moved through landscape in the future or 2) whether they are never going to be moved.
4	For all transports that fall into the latter category and are never going to be moved, delete the Transport Form (from Control Point).

3. Set Ignore attributes on Transports

Certain ActiveControl analysis checks analyse all transports logged within ActiveControl, including those that have already reached your Production system. To avoid this becoming a performance issue over time, it is possible to set a couple of "IGNORE" flag attributes on transports so that they are excluded from specific ActiveControl Analysis Checks.

Whether you will need to set these flags is dependent on your workflow setup of ActiveControl (whether you are doing 1-way Merge or 2-way Merge) – so it is recommended to discuss with the consultant as

part of your Implementation.

If you are using 1-way Merge and making use of the

3.1 Attribute: YBT_TE_IGNORE

Can be used to remove transports from the Conflict Analysis check.

Scenario	Recommended Activity
Single Track Landscape	Whenever a transport reaches Production, run Program /BTI/TE_RU002 in each of your development systems to assign attribute YBT_TE_IGNORE to all the transports included in that Project release so they are no longer considered during conflict analysis.
Multi-Track Landscape	Whenever a Project Release reaches Production, run Program /BTI/TE_RU002 in each of your development systems to assign attribute YBT_TE_IGNORE to all the transports included in that Project release so they are no longer considered during conflict analysis.

3.2 Attribute: YBT_TE_OVERTAKE_IGNORE

Can be used to remove transports from the Overtake/Regression checks.

Step	Activity
1	Within the Windows GUI, locate the oldest 'in-flight' transport (i.e. the one with the earliest release date/time) in a system landscape, by manually checking each Control Point in in the path.
2	Any transport that has reached Production that has a release date/time older than this in-flight transport can have the OVERTAKE_IGNORE attributes set since there is no risk of an overtake/regression issue.
3	Run Transport Activity Report in the Windows GUI Dashboard to identify all transports that have been imported to Production already. Sort by Release Date to identify all the transports that were released before the oldest in-flight transport that you identified in previous Step.
4	Run program /BTI/TE_RU002 in each of your Development systems to assign attribute YBT_TE_OVERTAKE_IGNORE to all the transports identified in previous step, so they are no longer included in overtake/regression analysis check calculations.
5	Repeat for each of your SAP system landscapes

> ✳ Note: Attribute EXPTIMESTAMP must exist in the development system in order for the attribute update to be successful. If this doesn't exist, run RSWBO006 and copy the settings for EXPORT_TIMESTAMP to EXPTIMESTAMP.

> ❗ Prior to ActiveControl 8.40 , the flags were attributes on the Transport that you could see via SE09/SE10 etc. Since ActiveControl 8.40, the Ignore flags are recorded against the Transports in new backend table /BTI/TE_REQ_ATTR. This was done for performance

> reasons when running Conflict or Overtake/Regression Analysis. For customers upgrading from a version prior to ActiveControl 8.40, program /BTI/ TE_RU_REQ_ATTR_MIGRATE can be used in the Development satellite systems to migrate all previously set Ignore Flags into the new /BTI/TE_REQ_ATTR table.

4. Review / remove unnecessary Open transports

Unless ActiveControl has been specifically configured to prevent it, your organisation may have a gradual build-up of open transports in your Development systems which have either been forgotten about or deliberately not been released and moved through your SAP landscape.

Step	Activity
1	Run the Open Transports by System & Change Date report to capture a list of all historical open transports.
2	Extract this list and review with the Transport Owners, to validate if the transports are likely to be progressed in the future.
3	For the transports that are not expected to be progressed, request that the Transport Owners delete them from SAP. For the ones that already have a corresponding Transport Form, also delete them from ActiveControl (using File > Delete (Permanently Delete…).

5. Do not configure unnecessary Production Outbox

Some ActiveControl customers set-up a Production outbox to act as an easy way of viewing all transports that have gone to Production. The downside of this is that none of the Tasks to which these Transports are assigned are ever marked as "Completed" within ActiveControl. Basis Technologies would recommend not to have a Production outbox unnecessarily, and if one already exists and is not being used as a control point to a subsequent target system, to approve everything out of it.

6. Hide all inactive SAP Paths

If a SAP landscape path is no longer actively being used, deactivate it within ActiveControl so that any transports that only exist in that path are not included in the ActiveControl Analysis Checks.

Step	Activity*
1	Within Path screen, change the status of any transport paths not being used to "Cannot be assigned to new transports, not visible within ActiveControl"
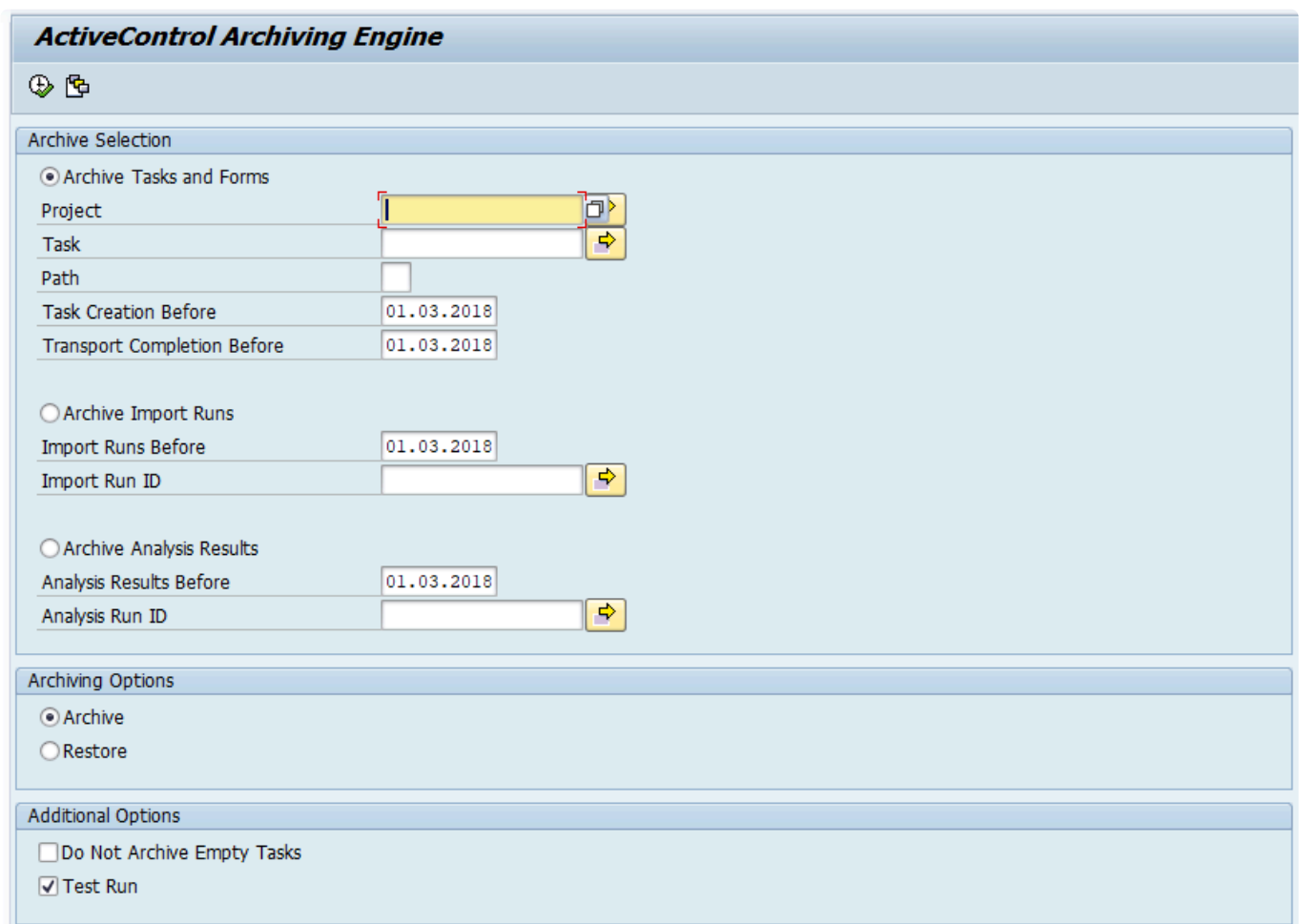
11.3. ActiveControl Data Archiving

ActiveControl includes a data archiving capability to ensure that the performance of the tool does not deteriorate over time due to data constraints.

This can be used to archive historical Business Tasks, Transport Forms, import runs and analysis history data.

Archiving is performed by ActiveControl Administrators in the backend of the ActiveControl Domain Controller, via program **/BTI/TE_RARCHIVE_ENGINE**

This program can be used to archive as well as restore data. It can also be run in test mode where required.

Figure: ActiveControl's Archive Engine

If there are events found for a particular import run, in table /BTI/TE_EVENTS then the import run can not be archived.
Message :- Import Run 00119022600000001861 is not achievable: has existing events found in database.

If there is a form available for an import run, in table /BTI/TE_FORM then import run can not be archived.
Message :- Import Run 00119022600000001861 is not achievable: DEVK971882 has been found in database.

If no data form, merger form, no events, no links in /bti/te_link are found for an import run, then we can Archive the import run.

Reporting on archived data

It is possible to run relevant reports relating to Activities, Events and Test Results on archived data. This is done via the aforementioned reports, by making use of the options on the report selection screen.

Figure: Running ActiveControl Reports on archived data

11.4. Maintenance Mode

It is enable to put ActiveControl into 'maintenance mode', whereby no users are able to access the Web Platform UI.

This can be useful when maintenance is being done by Administrators, for example a cumulative patch is being deployed or an ActiveControl Upgrade is being performed.

Maintenance Mode is enabled via "Configure Maintenance Mode" option within /BTI/ TE_LICENSE_MANAGER program in the Domain Controller.
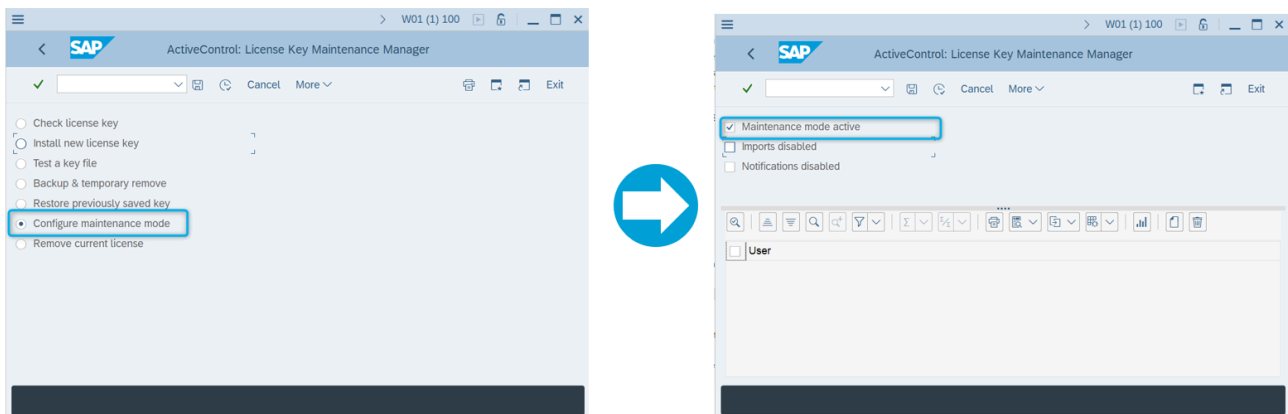
Figure: Maintenance Mode is set via backend utility program in the Domain Controller

When "Maintenance Mode Active" is set – all users will see the following screen in the Web Platform until the mode is removed.
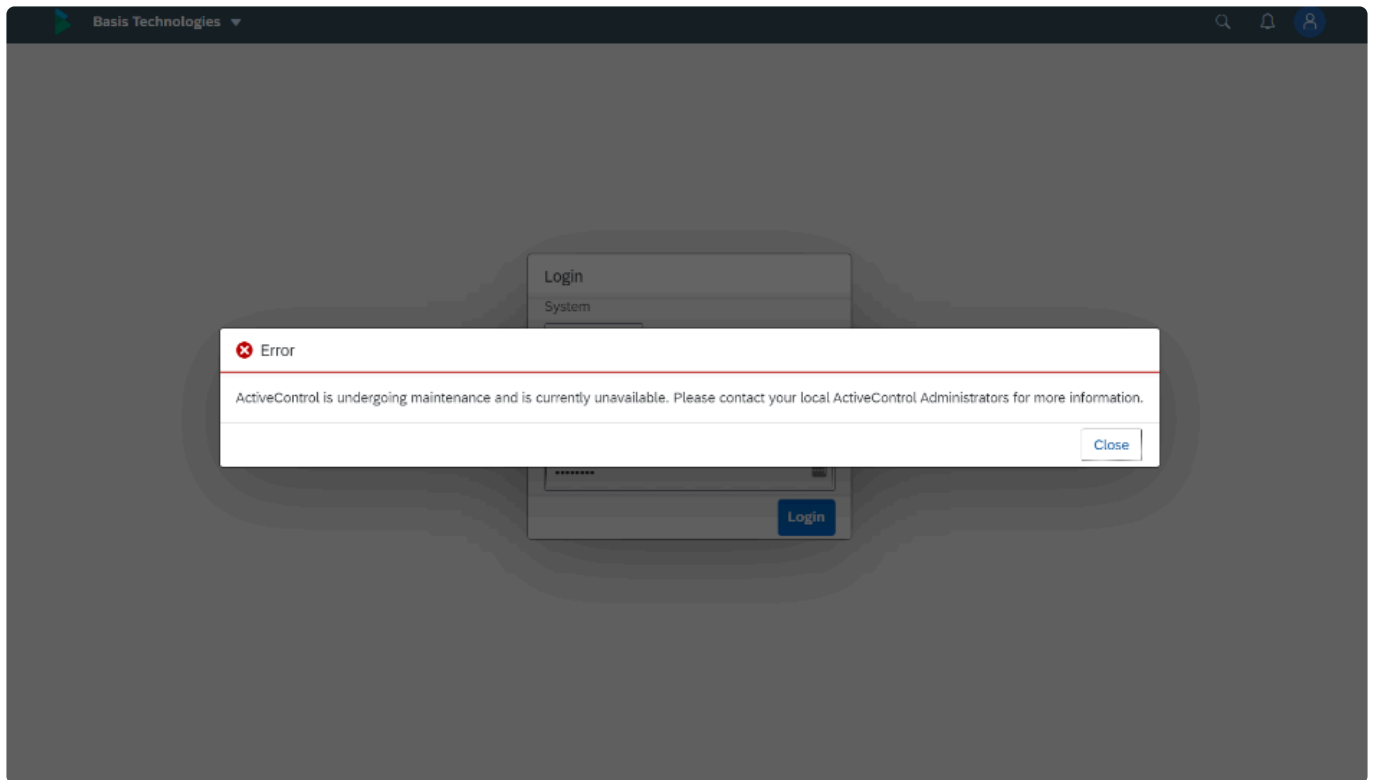
Figure: The screen seen by Users when Maintenance Mode is enabled

12. Upgrading ActiveControl

The majority of Basis Technologies customers choose to upgrade every 1-2 years, to benefit from newer capabilities that are added to the product.

This section summarises the key considerations and the steps involved in performing an upgrade of ActiveControl:

- Upgrading to the Web Platform
- What's New?
- What's Old (and considered Legacy)?
- Upgrade Steps
- Upgrade Responsibilities

The information contained within this section of the Administration Guide is version-agnostic and aims to act as a record of the high-level steps of upgrading ActiveControl, not in configuring new functionality contained within the latest release of the product.

12.1. Upgrading to the Web Platform

Important Upgrade Information

Since ActiveControl 9.00, the way in which Basis Technologies deploy ActiveControl changes significantly versus the previous deployment approach.

Prior to 9.00, the same "Server" transport was typically deployed into all of a customer's SAP systems – ie both the Domain Controller and all Satellite systems. This was quite inefficient, as the reality has always been that the majority of ActiveControl functionality exists in the Domain Controller, with a small subset of this in the Development Satellite systems, and an even smaller subset in the non-Development Satellites. As a result, ActiveControl Upgrades and also the deployment of Cumulative Patches could sometimes become more time-consuming and onerous to deploy for our customers than was really required. In addition, customer systems often ended up with more ActiveControl /BTI/ objects in their managed satellite systems than was really required.

ActiveControl 9.00 changed the software packaging, with a transport being deployed to Domain Controller and Development satellites and a *different* transport now being deployed to non-Development satellites

Please refer to this online Knowledge Article for details of the ActiveControl 9.0 software.

Upgrading to the Web Platform

Please refer to this online Knowledge Article for details of the considerations for upgrading to ActiveControl Web Platform.

Some of these are general topics – whilst some are specific to customers that will be upgrading to the Web Platform.

12.2. What's New?

Customers upgrading from earlier versions of ActiveControl will clearly see a lot of changes in the Web Platform versus the legacy WebUI.

These changes to the UI are a combination of the visually different UI5-based screens, but also new Features that have been added as part of the Web Platform project, mostly as a result of either Customer feedback over the years or internal Basis Technologies product innovation.

The table below summarises some of the new features (and requirements), for the benefit of existing Basis Technologies Administrators:

Topic	Details
Docker Image	New server requirement for the installation of the ActiveControl Web Platform. More information can be found in Installing Web Platform .
Mobile Access	Please refer to Mobile Access section of this Administration Guide.
Feature Deactivation	Please refer to Feature Deactivation section of this Administration Guide.
Control Point Labelling	Please refer to Control Point Labelling section of this Administration Guide.
Accessibility	Please refer to Accessibility in the Web Platform section of this Administration Guide.
RAG statuses	New RAG statuses for Dormant Transports and Aged Transports have been added, to give more visibility of stagnating transports within ActiveControl. Please refer to seperate Aged and Dormant Knowledge Articles for further information.
Business Task – Progress Diagram	Optional capability will provide a count of the Transport Forms associated with the Business Task, based on their location in the path and a mapping between the associated Deployment Status and the underlying Project Milestones. Please refer to BT Process Diagrame Knowledge Article for further information. A similar progress diagram is also seen at ActiveControl Project level.
Task Owner versus Testers	Business Task Owner (ie the user that creates the Business Task) is now an entirely different concept to the "Default" All Systems Tester on a Business Task. As such it can be a different user for these different concepts.

12.3. What's Old (and considered Legacy)?

This section of the Administration Guide summarises historical features of ActiveControl that have either been retired, or replaced by alternative newer functionality.

Customers upgrading to ActiveControl 9.10 from an earlier implementation of ActiveControl should take note to factor in this information into their Upgrade planning.

Feature Area	Details
Windows GUI	All core functionality previously available in the Windows GUI is available in the ActiveControl Web Platform, as of ActiveControl 9.10. As such, the Windows GUI is deemed legacy UI as part of ActiveControl. Basis Technologies intend to deprecate and remove the Windows GUI from the software from ActiveControl 9.20 onwards.
Check For Conflicts	'Check for Conflicts' button on the Transport Form in the Windows GUI and WebUI have not been ported over to the Web Platform as part of ActiveControl 9.10, as it is already possible to check this by running the same ShiftLeft: Changes to Same Object (Path) analyser (0055) in an individual control point. Please let Basis Technologies know if you still want this feature in the new UI, and we will add it.
Configuration – Text Fields	Text Fields (ie the top left portion of the Fields tab in the current Windows GUI configuration screen) will be retired as part of the Web Platform. The vast majority BTI customers already use the Custom Field text field instead of the legacy Text Field functionality. From Phase 2 of the Web Platform, it will not be possible to configure Text Fields, only Custom Text Fields.
Windows GUI – Notifications	The legacy Windows GUI had a Notifications screen whilst showed recent notifications sent for approvals. The screen was extremely buggy and slow to run – and to best of Basis Technologies knowledge was not widely used by customers. It was also not available in the legacy WebUI. This Windows GUI screen has not been migrated into the Web Platform, however the Recent Activity app can be used to view recent actions (Approvals, Imports etc) performed by users, in the same way as the legacy WebUI Newsfeed.
Configuration – Selection Fields	It was previously possible to configure Custom Dropdown Fields and Custom Selection Fields. The latter only allows single-value selection, so is essentially the same as a Dropdown, it just looks slightly different on screen. Within the Web Platform, existing Custom Selection Fields will be presented as Dropdowns on the screen. From Phase 2 of the Web Platform, Selection custom field type will be retired from ActiveControl, and it will not be possible to configure/maintain them.
Export/ Import Programs	New migration programs were introduced in ActiveControl 8.40. Customers performing upgrades should take note to start using these for any data/configuration migrations, and also for any regular Backup schedule they already have in place. See Migrating between Domain Controller section for further information on the latest programs.
AC Planning	Planning workflows have not been supported by Basis Technologies since ActiveControl 7.20. The functionality is already hidden by default within ActiveControl. Basis Technologies do not intend to migrate Planning workflows over to the new Web Platform, as only 1-2 customers still use Planning workflows, the vast majorities are using

	tools such as Jira, ServiceNow etc. to manage pre-Development workflow. Similarly, the Planning tab will not be accessible via the Business Task. The Planning Status dropdown on the Business Task – and the ability to configure Planning Status – will still be available in the Web Platform, as a larger number of customers do use this.
Ability to create more than 1 Business Task with the same BT Reference	The vast majority of customers create Business Tasks with a unique [Reference], however historically it was technically possible via a User Exit solution to allow multiple Business Tasks with the same Reference. Given the vast majority of Basis Technologies customers do not use this functionality – and Basis Technologies do not recommend it anyways since it does not work well in conjunction with newer AC functionality such as Partial Testing and Integrations, it will not be possible in the Web Platform to have more than 1 Business Task with the same [Reference].
Skipping	Skipping via table /BTI/TE_SKIPCP has existed within ActiveControl since 2015. Since 2019, (ActiveControl 8.0), a more powerful Skipping capability has existed as part of the Rules Engine, via table /BTI/TE_RE_SKPCP. Since all new Basis Technologies customers – and most upgrading customers – are now already using the Rules Engine skipping consumer, it is Basis Technologies intention to retire the legacy /BTI/TE_SKIPCP skipping capability at sopme point during 2023. All existing customers should therefore plan to migrate to the new Rules Engine skipping consumer as part of their next upgrade of ActiveControl.
Inbox / Outbox Approvers	Approvers for Inboxes/Outboxes was historically done in ActiveControl via the Target configuration screens. Since 2019, (ActiveControl 8.0), a more powerful Approvers capability has existed as part of the Rules Engine, via table /BTI/TE_RE_APPRV. Although there is no current intention to retire the legacy Inbox/Outbox Approver screens in Target configuration, the Basis Technologies recommendation is definitely that customers should look to migrate to the Rules Engine approvals consumer to benefit from much more powerful, granular capability within the product.

12.4. Upgrade Steps

The key steps to perform an upgrade of ActiveControl are summarised below:

Step	Activity	Other Information
01	Provision of ActiveControl Software + Software Links	To request the latest version of ActiveControl, please email your Basis Technologies' Customer Success Manager, or assigned Delivery consultant.
02	Delivery of License Key by Basis Technologies	Once you have received the software, you will also need a License Key. You can request this via the Basis Technologies Support Team, by providing the following information in a support ticket raised via the Support Portal : 1) Customer name 2) Domain Controller System ID 3) Domain Controller Installation Number. 4) ActiveControl version.
03	Verify if existing MDR/Diffuser Customer	If you are an existing MDR/Diffuser customer, please ensure you inform Basis Technologies – as upgrading to the latest version of ActiveControl can have detrimental impact on MDR/Diffuser if not carefully planned.
04	Delivery of Health Check by Basis Technologies	
05	Review of current user exits and enhancements, and impacts of upgrade	Please review table /BTI/TE_EXITC in the Domain Controller. If you have any non-sample User Exits defined in this table, please copy the contents of the Function Module code from SE37 and email it to Support.
06	Review of current ActiveControl roles usage – and impacts of new ActiveControl version on existing roles	Refer to Roles Matrix that should have been provided to you with the new ActiveControl software.
07	Development DC: Take Backup of AC Config and AC Data in Dev DC	Refer to online FAQ for process
08	Development DC: Perform ActiveControl Upgrade	
08a	Development DC: Apply Transports – Domain Controller	Nb: this cannot be done via ActiveControl.
08b	Development DC: Apply	Nb: this cannot be done via ActiveControl. Also note, you may wish to only

		update certain satellite system path for testing, or even use a Sandbox path for initial testing. Note that as of ActiveControl 9.00, different transports need to be deployed in Dev Satellite Systems versus non-Dev Satellite Systems.
	Transports – Satellite Systems	
09	Deploy latest Web Platform docker image to Dev/Test server	
10	Install new License Key	The first person logging into ActiveControl after the Upgrade will need to upload the new License Key
11	Development DC: Test ActiveControl Upgrade	
12	Training (if required, depending on process changes)	
13	Communicate Change Freeze	
14	Production DC: Perform ActiveControl Upgrade	
14a	Production DC: Take Backup of Config and Data	Refer to online FAQ for process
14b	Production DC: Switch off any existing Import Schedules via ActiveControl.	After doing this step, check via SM37 that the import jobs are not still running (they will all be called TE_SCHED*
14c	Production DC: Switch off Notification Jobs	You can delete the existing job via SAP GUI (SM37). The program is /BTI/ TE_RNOTIFICATION_ENGINE.
14d	Production DC: Apply Transports – Domain Controller	Nb: this cannot be done via ActiveControl itself.
14e	Production DC: Apply Transports – Satellite Systems	Nb: this cannot be done via ActiveControl itself.
14f	Production DC: Deploy latest Web Platform docker image to Production server.	
14g	Install new License Key	The first person logging into ActiveControl after the Upgrade will need to upload the new License Key
14h	Production DC: Perform	If you took copies of the out-of-the-box ActiveControl roles during original

	Roles Updates	implementation, you need to overwrite those roles with the latest ActiveControl roles
14i	Production DC: Configure all new functionality required	Refer to Release Notes for configuration steps
14j	Production DC: Switch on Notification Jobs	Reschedule program /BTI/TE_RNOTIFICATION_ENGINE via SM36, using your existing variant.
14k	Production DC: Switch on Import Schedules	Switch on the Import Schedules via ActiveControl. Check in SM37 that they are released after doing so.
15	Production DC: Initial validation of the Upgraded system	
16	Production DC: Perform Archiving (if appropriate)	Refer to online FAQ for more details on the process
17	Communicate End of Change Freeze	

12.5. Upgrade Responsibilities

Basis Technologies-led Upgrades

Basis Technologies strongly recommend that an ActiveControl upgrade is performed with assistance from one of our Solution Specialists. This not only ensures that the benefits of the newer functionality can be more efficiently reaped, it also helps ensure that any teething issues and questions encountered during the Upgrade process can be addressed in a more timely fashion since we are directly involved in the process.

If you are interested in upgrading to latest ActiveControl with assistance from Basis Technologies, please contact your allocated Basis Technologies' Customer Success Manager to discuss next steps.

Customers Self-Upgrades

For any customers that choose to upgrade ActiveControl themselves, remote support will be provided by Basis Technologies to our standard support terms. However if a customer self-upgrade causes any issues to the existing ActiveControl configuration or ongoing usage of the tool, then any Basis Technologies corrective actions will potentially be chargeable on a Time & Materials basis.

If you are wanting to upgrade to latest ActiveControl version yourself, please still inform your assigned Basis Technologies' Customer Success Manager so that the software and appropriate license keys can be provided.

> ✱ Please also refer to these User Exit responsibilities around Upgrades.

13. Software Support

This section of the Administration Guide summarises some key information relating to the ongoing support and maintenance of ActiveControl:

- [Online FAQ Forum](#)
- [Support from Basis Technologies](#)
- [Updating your License Keys](#)
- [End of Mainenance Support](#)
- [Uninstalling ActiveControl](#)

13.1. Online FAQ Forum

Basis Technologies offer an online forum containing over 1000 searchable **Frequently Asked Questions** relating to ActiveControl. These FAQs cover many of the common error / warning messages that might be experienced during usage, and also useful HOW TO knowledge articles to perform many of the common operations within the product.

The online forum can be accessed via the following URL:

https://basistechnologies.zendesk.com/hc/en-us

We strongly encourage all of our customers (in particular ActiveControl Administrators and Basis team) to register for accounts on our website, and actively make use of this forum.

It not only helps our customers be more self-sufficient and resolve common issues quickly and without the need for Basis Technologies involvement, but also helps Basis Technologies better understand the common challenges our customers are facing.

13.2. Support from Basis Technologies

Raising Support Tickets

To request support from Basis Technologies on any issue relating to our products (ActiveControl, Transport Expresso, DevOps, Testimony, Diffuser, BDEx Utilities or Transformation), support can be requested from Basis Technologies by submitting a request via our support portal link here.

Submitting your request will automatically create a ticket in Zendesk, the ticketing tool used by Basis Technologies.

Require additional Information or Services?

If additional information or services relating to any of Basis Technologies product sets is required, you can contact us via the support portal link here , or alternatively by contacting your assigned Basis Technologies Customer Success Manager.

13.3. Updating ActiveControl License Keys

Basis Technologies typically issue a new ActiveControl license key to our customers as part of the annual subscription renewals process.

This license key can be uploaded by ActiveControl Administrators via SE38 > /BTI/ TE_LICENSE_MANAGER in the ActiveControl Domain Controller.

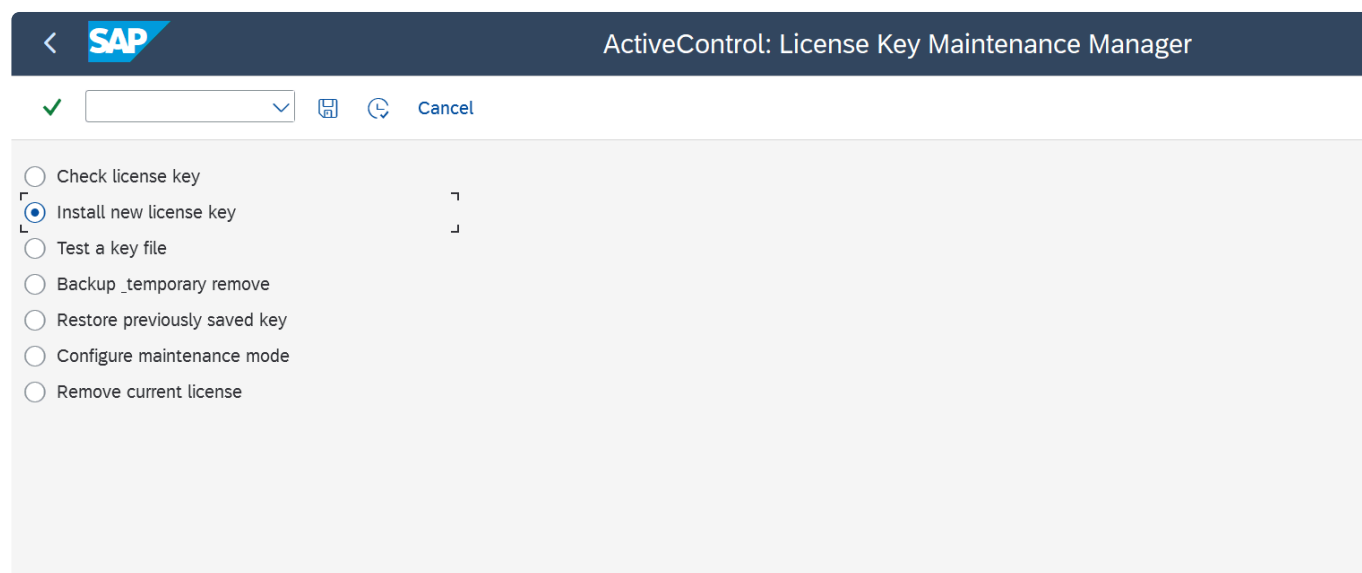Figure: Using the SAP GUI to upload a new ActiveControl License Key.

13.4. End of Maintenance Support

Basis Technologies support each release of ActiveControl for a period of three years from its GA (Generally Available) release date.

The End of Support date for each release can be found in the [ActiveControl – Product Maintenance](#).

Basis Technologies strongly recommend our customers to upgrade before their current release goes out of support, as it not only makes it a lot easier for us to support any issues that they might face within the product, it also ensures that the customer is benefitting from all of the latest production evolution.

Availability of the UI's in future ActiveControl releases

The ActiveControl Web Platform in AC9.10 replaces both the pre-existing ActiveControl Web UI and also the Windows GUI in their entirety.

As of release ActiveControl 9.20, only the new Web Platform will be delivered as part of ActiveControl. The legacy Windows GUI and BSP-based Web UI will both be retired and deprecated.

	AC8.50	AC9.00 GA	AC9.10 GA	AC9.20
	Sep 2021	Nov 2022	June 2023	October 2023
SAPGUI screens				
Web UI			Migration only	Not included
Windows GUI			Migration only	Not included
Web Platform				

Figure: Availibility of UIs as part of future ActiveControl releases

13.5. Uninstalling ActiveControl

ActiveControl is installed in the central Domain Controller and all participating satellite SAP systems.

This section details the steps to remove the installation of ActiveControl from your system.

Deletion Transports

Deletion transports to uninstall ActiveControl in both the Domain Controller and participating satellite SAP systems can be provided by Basis Technologies upon request. Via the Add-On Manager, you can apply the deletion transports to remove all the objects associated with ActiveControl. All workbench objects will be removed via this approach and none are required to be manually handled. All ActiveControl related data and configuration will also be removed when uninstalling.

The only thing that will remain after applying the deletion transports will be the RFC connections and Users. These should be manually deactivated and removed, or retained if still operational for other purposes.

It is recommended that the uninstallation of any Production system objects is carried out according to your system maintenance schedule.

Uninstallation Timing & Sequence

There is no specific order in which to uninstall the ActiveControl add-on as there are no inter-system dependencies between the Domain Controller and all participating satellite SAP systems.

License Keys

Any license keys associated with your ActiveControl tool will become inactive at the time of uninstallation.

Dependencies

If you are operating other products from Basis Technologies, you should check with Basis Technologies team before uninstalling the Diffuser Framework.

Diffuser is separate from ActiveControl and could impact the usage of the other Products you have installed.

14. Legal Statement

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