



Integrations (Direct)

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Basis Technologies

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1. Introduction

ActiveControl offers a variety of ways to integrate inbound and outbound scenarios using documented API's. ActiveControl provides an Integration Framework that can manage outbound interactions with external systems (including queuing, re-sends, error processing and reporting) and inbound integration scenarios – those initiated by a system external to AC – by exposing several fully documented API's and web-services that allow manipulation of AC objects by these systems.

This Integration Guide is intended to give the reader an overview of the capabilities of the ActiveControl Integration Engine and the current out-of-the-box ServiceNow integration, a plug-in based Integration that enables specific Inbound and Outbound scenarios between ActiveControl and ServiceNow via SOAP webservices.

✿ As ActiveControl is a Netweaver certified product, all standard SAP integration techniques are available, including tRFC and IDoc communication. But this document will focus on the SOAP webservices method, as that is what is used in our out-of-the-box ActiveControl ServiceNow integration

Intended Audience

The intended audience for this Integration Guide are the technical teams looking to implement integration between ActiveControl and ServiceNow. The document assumes prior knowledge of ActiveControl and also general Integration principles.

Need Support?

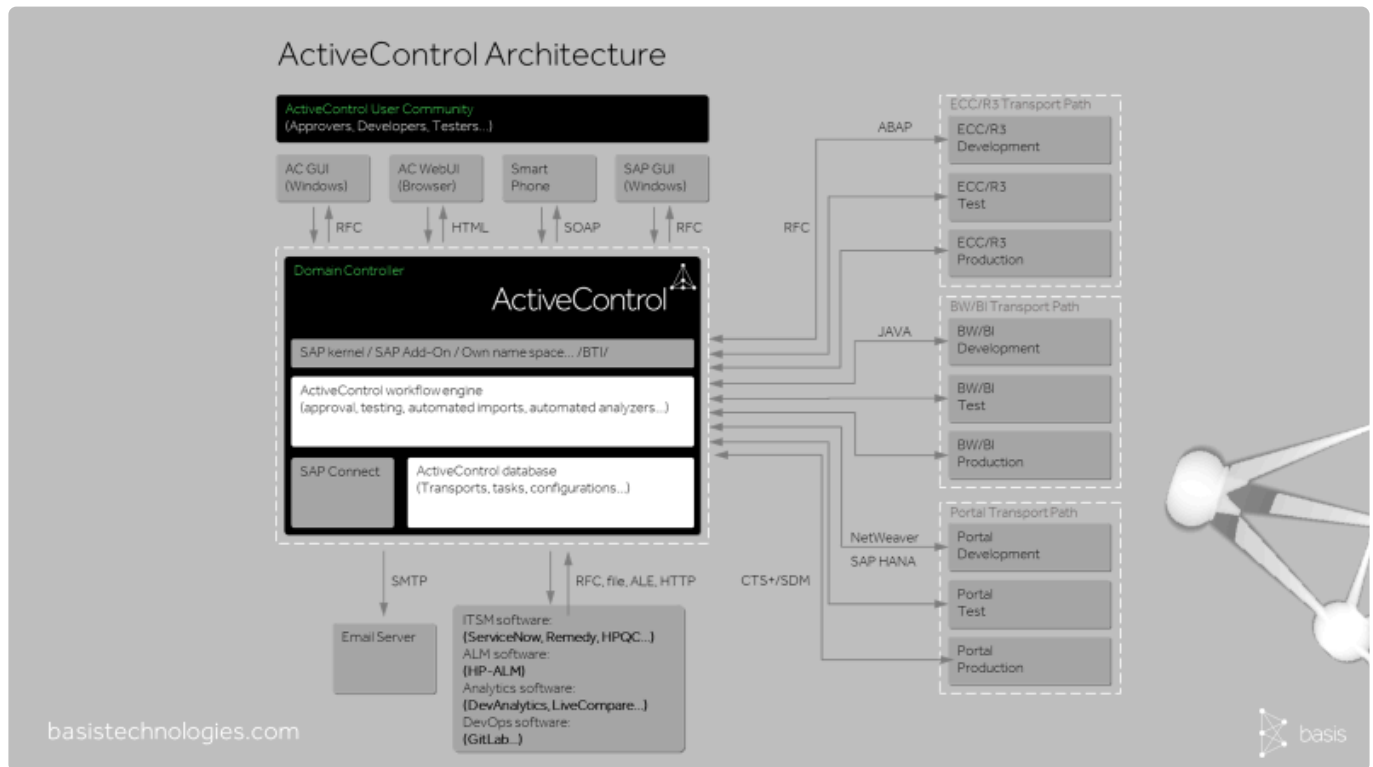
Basis Technologies effort to develop or setup Integrations using our existing ActiveControl / ServiceNow integration is a chargeable activity. If a Customer is interested in setting up a ServiceNow Integration, then they should reach out to their Account Manager in the first instance to discuss options of how best to proceed.

It should be noted that a ServiceNow Administrator from within the Customer organisation will be required as part of the setup described in this Integration Guide.

2. Integration Architecture

The architecture of ActiveControl can be broken down into: client software, a controlling SAP system, other participating SAP systems and integration systems. The diagram below illustrates the central role of the controlling SAP system – referred to as the ActiveControl “domain controller”.

ActiveControl Architecture



2.1. The Domain Controller

Like the Transport Management System, 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 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 other SAP systems to gather change request information and to perform transports. These connections are made using SAP’s remote function call (RFC) protocol.

The Integration Engine is part of the Domain Controller and manages communication with external products and systems.

More information on this can be found in the ActiveControl Administration Guide, available [here](#).

2.2. Integration Scenarios

The standard integration scenario is to combine AC and a third party IT Service Management product, and possibly a Test Automation product to create a fully integrated end-to-end process for managing change. This typically requires both inbound and outbound integration:



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

The above workflow is possible in the out-of-the-box ActiveControl / ServiceNow integration. In essence the following integration points are possible:

1. (inbound) Creation of the ActiveControl Business Task when the corresponding ServiceNow ticket reaches a certain (configurable) condition
2. (outbound) Updates to the ServiceNow ticket status when the corresponding ActiveControl Business Task reaches certain (configurable) deployment statuses.

One or two of Basis Technologies customers have also achieved the following, via enhancement to the out-of-the-box Integration capabilities:

3. (inbound) Update custom fields on the ActiveControl Business Task, when the corresponding ServiceNow ticket reaches certain condition.

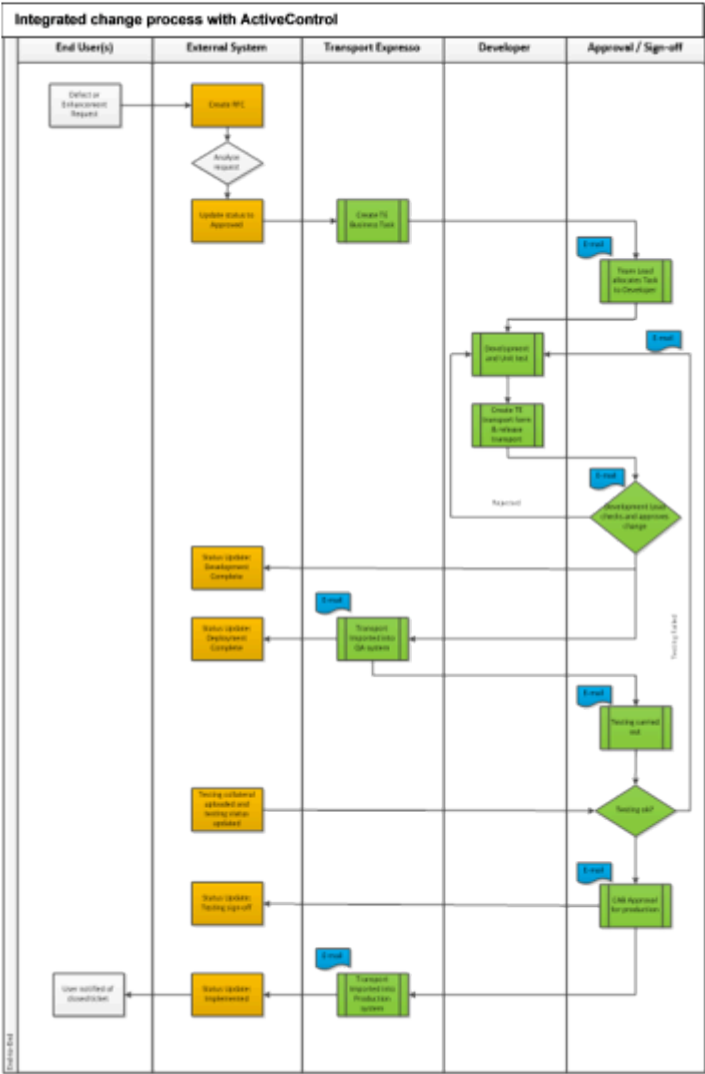
2.3. The Integration Framework Architecture

The Integration Framework is divided between inbound and outbound processes. For inbound calls, those made by a third party system into AC, a number of web services are exposed allowing the external system to manipulate ActiveControl objects. Calls to AC web services will return appropriate error messages, but expect the calling system to deal with queuing, service levels and retries for failed integration transactions. For outbound calls there is a configurable framework that includes data extraction, transformation, mapping and sending routines, alongside error detection, correction and reporting, as can be seen in the table below.

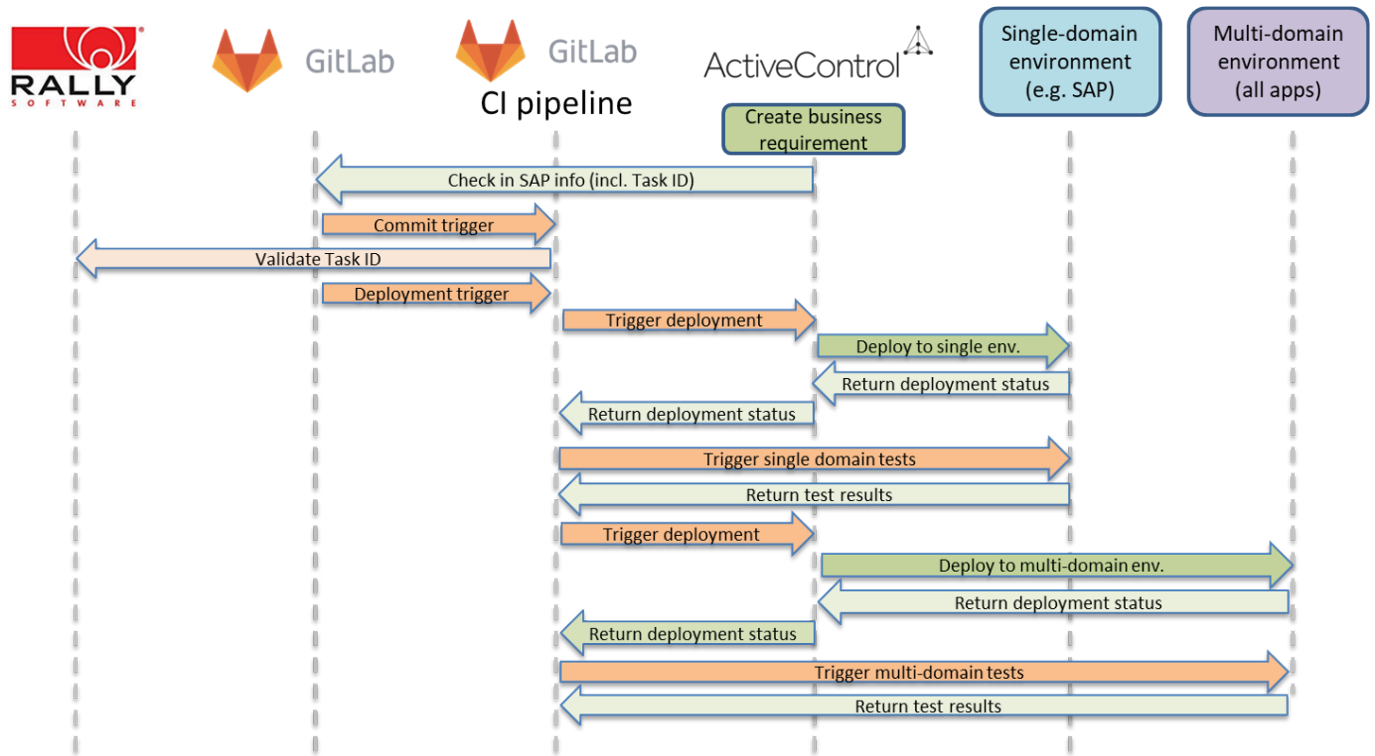
ActiveControl provides Data Extraction and Message Send components for some standard scenarios and third party tools, but these can be enhanced by the addition of custom extraction and send routines plugged into the standard framework. So if, for example, you use an in-house ITSM solution, a new send component can be developed and plugged into the integration framework to facilitate communication between it and ActiveControl. All other standard framework functions, such as data extraction, mapping and error correction remain unchanged and can be used as-is.

2.4. Integration Process Flow

The ActiveControl Integration Framework provides an open architecture for passing messages into and out of the system in a multitude of ways. Although integration can be set up in many ways, one of the more common scenarios is explained in detail below:



Example DevOps CI/CD pipeline inclusion:



In this scenario we have bi-directional integration between an external ticketing system and ActiveControl. This gives a direct link between the ticketing system and the underlying technical changes that make up the business change. So, whether looked at from the perspective of the ticketing system, or through AC, there is only one version of the 'truth' for all changes across the landscape.

From a more detailed perspective, we can look at the integration scenarios:

1. Once a proposed enhancement or defect resolution is approved and a system change is deemed necessary, the external system creates a Business Task in AC representing the change. The ticket in the ITSM system and the AC Business Task are then tied together for the remainder of the process
2. The creation of the Business task in AC marks the start of the development process. The Task can be allocated to a developer who then performs the development and/configuration, and completes unit testing.
3. Once the developer has finished their work, they release the technical change (the transport) and the development team lead is notified by ActiveControl and approves the change. AC will automatically run a number of configured analysis checks at this point to ensure the change is ok to move on in the process.
4. The change is imported into the Quality Assurance system (maybe after another approval from the Testing manager) and is now ready for testing.
5. AC updates the status of the ticket in the ITSM system to show that it is now in testing or ready to be tested.
6. Test collateral and results can be added to either the ticketing system or AC and the ITSM system automatically updated.
7. CAB approval is sought and AC analysis is completed in real time to report dependencies between changes and the impact of different approval scenarios.
8. Once approved by CAB the status of the change in the ticketing system is updated and the change is imported into the Production system at the appropriate time
9. The ticketing system is updated to show the change has been implemented.

2.5. Inbound Integration

For inbound integration scenarios AC provides several SOAP web services. Currently, these are:

- Create a Business Task
- Change a Business Task
- Read a Business Task
- Analyse a Business Task
- Read the results of an analysis for a Business Task
- Approve a Business Task
- Enter Test Results for a Business Task

Each web service is detailed in the following sections.

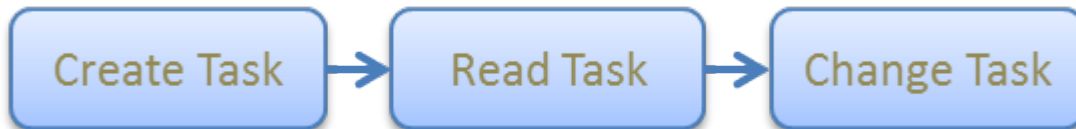
2.5.1. Inbound Process Flow

The standard inbound integration process flows would be:

- Create/Change a Business Task in ActiveControl

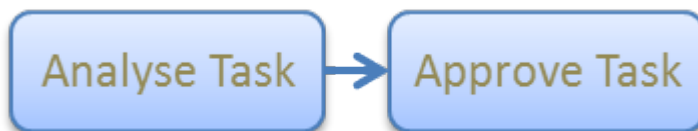
Creating or changing a Business Task requires simple calls to the appropriate web service. When changing a Task, the current field values should be read first to ensure changed data is not overwritten.

The process flow should therefore be:

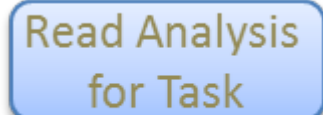


- Approve a Business Task

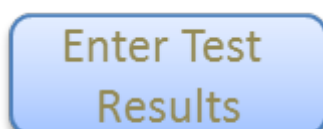
When approving a Business Task it is important that the Task Analysis is completed to first to ensure that the approval can take place safely. The approval web service will not stop the approval if analysis results are ignored. The process flow for approving a Business Task in AC should therefore be:



The analysis results for a Task can be retrieved for any specific Target/Location by calling the Analysis Read web service.



- Enter test results for a Business Task. When entering test results for a Business Task, it must be decided if this result is simply being saved or saved and approved. Only by using the save and approve will the change move to the following control point in the Path.



2.5.2. Inbound Integration Process

There are two inbound calls in the above scenario:

1. Creation of the Business Task in AC
2. Approval of Testing/Entry of test results once testing complete

Both of these calls would be web service calls to standard AC APIs (although alternative techniques are available and are described later in this document). The calling system (i.e. the ticketing system) would be responsible for queuing of messages and ensuring errors were dealt with appropriately. Some mapping may be required depending on the data passed from the ticketing system to AC for classification of the change.

2.6. Outbound Integration Process

The outbound calls from AC to the external ticketing system can all be based on the Deployment Status of a change within AC. Integration scenarios based on AC status changes are delivered as standard with the AC Integration Engine and therefore require no development.

The steps to set up this type of status based integration are:

1. Complete base AC Integration engine configuration. This includes identifying the end points of the integration and any mapping requirements. The mapping engine can be configured for most standard scenarios, but if complex mapping is required, ActiveControl user exits can be implemented to enhance the standard mapping routines. For more details on AC user exits and how they are implemented, please refer to the ActiveControl Administration Guide.

2. A trigger program should be scheduled to pick up the Task status changes that need to be interfaced to the external system(s). This trigger program selects the appropriate AC records, dependent on the configuration set up above, and passes it through the mapping engine. It then stores the mapped integration transactions into a set of standard tables. See Outbound Configuration section below.

Program Name: /BTI/TE_INTEG_TRIGGER

3. A send program is then scheduled to pick up the mapped transactions and send them out to the configured external systems. It retrieves the required records and then uses the configured send methods for each particular integration scenario to actually push the data out to the receiving systems. If a standard send method is not available for a particular external system (maybe the ticketing system is a 'home-grown' application), then custom send methods can be created and utilised in the Integration Framework. See Outbound Configuration section below.

Program Name: /BTI/TE_INTEG_SEND

4. The outcome of the send process is recorded for audit purposes. If successful, any updates configured are made to the AC data objects, alternatively if errors have occurred, the send program will try to re-send (if configured to do so) a certain number of times before marking the transaction in error and sending a notification to the relevant person(s) within the organisation.

5. At any time, the Integration Reporting Console can be used to see the status of all integrations, the status and history of each transaction and can also be used to update the underlying transactional data, if required, to fix errors. See Outbound Configuration section below.

Program Name: /BTI/TE_RINTEG_AUDIT

2.7. Connector Functionality

From the standard process flow above, it is envisaged that the developed connector will provide the services required on the ITSM side to initiate a web service call to ActiveControl to create an AC Business Task (which will be the representation of the ITSM ticket within AC).

The following functions need to be available within the connector:

1. Initiating integration: The exact conditions required for the integration to be initiated will vary from client to client. This means that a flexible, configurable way needs to be developed to initiate integration. A set of conditions need to be able to be created, including the value(s) of any field on the incident/change ticket and its status, which when met, initiates the integration to ActiveControl.
2. Default values: When initiating integration to ActiveControl, we need to be able to specify default values for the mandatory fields on the ActiveControl Task. These are:
 - a. Project
 - b. Group
 - c. Type
3. Mapping: The fields on the ITSM ticket need to be able to be mapped to fields in ActiveControl. Any fields on the ITSM ticket, including any customer defined fields, need to be able to be mapped to any field in the ActiveControl Create Task WS, including custom fields.
4. Processing: Once the ITSM ticket meets one of the conditions to fire off integration and the fields have been mapped to the ActiveControl Web Service, the connector should be able to call the AC web service. A system username and password will need to be passed to enable authentication for some clients, other clients may use SSO. Both authentication methods should be available. ActiveControl will either return an error or the internal number of the Task that has been created. The connector needs to be able to update a field on the ITSM ticket with the AC Task number or to store the error message.
5. Error processing: The connector should be able to be configured to try the integration more than once and to store any error messages that are returned. After a configured number of retries, an email (or other notification) needs to be sent to a configurable list of users, informing them of the error and the ITSM ticket involved. An administrator must be able to manually re-send the integration record if the maximum number of retries has been exceeded.

It should be noted that the connector will not be able to cater for all possible scenarios that may be required by a customer. It is really just a starter which may be extended by the client themselves.

2.8. Web Services

The technical definitions are available as WSDL both for the main definition and test endpoint .

The following documentation, which details every action available, has been generated from the WSDL above.

Port type `_BTI_-TE_TASK_WS`

3.2.1 Create a business task

Allows a new business task to be created in ActiveControl with the details specified.

3.2.2 Change a business task

Allows an existing business task to be changed in ActiveControl with the details specified.

3.2.3 Read a business task

Allows an existing business task in ActiveControl to be read to obtain the details.

3.2.4 Start the analysis for a business task

Starts the ActiveControl analysis process for a specific business task.

The status and results of the analysis can be queried later via the “Read the results of an analysis run” web service using the analysis ID returned so it can be determined if it safe to approve.

3.2.5 Read the results of an analysis run

Reads the results of an analysis run started via the “Start the analysis for a business task” web service. This will return all analysis issues reported for the analysed business task so it can be determined if it safe to approve.

3.2.6 Approve a business task

Perform the approval of a business task. Prior to approval the task should be analysed to determine whether it is safe to approve. Approval will move the task and its associated transports to the next location / process control point in ActiveControl.

3.2.7 Enter the test results for a business task

Allows test results to be entered against a business task. ActiveControl uses a test series to log the test results. Closing the test series will approve the testing and move the task and its associated transports to the next location / process control point in ActiveControl. If the test series is not closed (e.g. due to an unsuccessful test result) the test result are saved but the task and transports will not be approved and will remain open for further testing.

3.2.8 Mapping internal values

All ActiveControl web services and API's expect the AC internal field values to be supplied for them to function correctly. These internal ID's can be found in the following configuration and transactional tables:

WS field	Table	Field	Description
Groupid	/BTI/TE_GROUPS	GROUPID	Task Group ID (Use CLASS = TASK)

Typeid	/BTI/TE_TYPE	ID	Task Type ID (Use CLASS = TASK)
Projectid	/BTI/TE_PROJ	ID	Project ID
Statdepl	/BTI/ TE_TASKSTAT	STATID	Deployment Status (Use STATTYPE = DS)
Statplan	/BTI/ TE_TASKSTAT	STATID	Planning Status Use STATTYPE = PS)
XTarget, Targetid	/BTI/TE_TARG	TARGET	Target ID
Path	/BTI/TE_PATH	PATH	Path ID
XAnalysisId, YAnalysisid	/BTI/TE_ANLTYPE	ANLTYPID	Analysis Type ID
Targetroleid	/BTI/ TE_TARGROLE	ID	Target Role ID
Id, Taskid	/BTI/TE_TASK	ID	Task ID
XAnltypeid	/BTI/TE_ANLRUN	ANALYSISRUNID	Analysis Run ID
Reason	/BTI/ TE_ANREASON	REASON	Reason ID

Other mapping and web service fields:

WS Field	Description
XLocation	Location (Possible values: I – Inbox, Q – Import Queue, T – Test Queue, O – Outbox)
Priority	Priority (Possible values: 1 – Low, 2 – Normal, 3 – High, 4 – Urgent)
Locked	Locked (Flag values: X and SPACE)
XRescode	Test Result (Possible values: 0 – Testing Successful, 1 – Problem Found, 2 – Information, 3 – Waiting, 4 – Bypass Testing)
XCclose	Close and Approve testing (Flag values: X and SPACE)
XDescription	Task long description
XTask, YTask	Structure for the main task field details
Caption	Task short description / subject
Reference	Task unique reference number (e.g. ticket, defect, change request number)
Testerid	SAP user id of the main task tester
Statdeplman	Flag to indicate that the task deployment status is manually set rather than allowing ActiveControl to set it (Flag values: X and SPACE)
Statplanman	Flag to indicate that the task planning status is manually set rather than allowing ActiveControl to set it (Flag values: X and SPACE)

Systemid	SAP system ID
XtCustfields, YtCustfields	Task custom field values structure formatted as a list of: <ul style="list-style-type: none"> • Id – Custom field ID • Value – Custom field value
XtTesters, YtTesters	Task testers structure to list the testers for the task
XUpdateCustfields	Flag to indicate whether the task Custom Fields are to be updated (Flag values: X and SPACE)
XUpdateDesc	Flag to indicate whether the task Description are to be updated (Flag values: X and SPACE)
XUpdateTesters	Flag to indicate whether the task Testers are to be updated (Flag values: X and SPACE)
XUpddateTask	Flag to indicate whether the task main fields (in XTask) are to be updated (Flag values: X and SPACE)
YProblems	Flag to indicate whether any analysis issues were found (Flag values: X and SPACE)
YRunning	Flag to indicate whether any analysis is still running or not (Flag values: X and SPACE)
XComment	Test to enter a free text comment during test results entry
XtRequest – Trkorr	A list of SAP transports to be analysed / approved
YReturn	WS call return structure to pass back messages and errors
Msgtyp	Type of message returned from the WS call (Possible values: E – Error, W – Warning, I – Information, S/Blank – Success)
Msgid	ID of the message returned from the WS call
Msgnum	Number of the message returned from the WS call
Message	Message text returned from the WS call
Msgv1 – 4	Further message texts returned from the WS call

3.2.9 Other communication techniques

Although the use of web services is the standard communication technique using ActiveControl, as the product resides in the SAP Netweaver stack, other SAP standard communication techniques are available for integration if preferred.

3.2.9.1 tRFC Communication

All AC APIs exist as remote enabled function modules within the ABAP environment and can therefore be called using the standard tRFC calls through an appropriate RFC destination. If the external system integrating with AC is either another SAP system or able to call remote functions directly then this method of communication can be used.

For inbound scenarios, the standard API's can be called directly. For outbound scenarios, new send

methods would need to be developed to enable direct calling of the external system.

3.2.9.2 IDoc Communication

As with TRFC integration above, as the AC API's are standard function modules, IDoc wrappers can be created to call them and standard IDoc processing configured to control the integration.

For inbound scenarios, the appropriate IDoc wrappers would need to be generated and any IDoc sub-system configuration completed. Once again, for outbound scenarios, new send methods would need to be developed for IDoc communication to be enabled.

3. Service Now Overlay with ActiveControl Integration

Activate the following services in SICF

sap/bc/webdynpro/sap/SAML2,

/sap/public/bc/icons,

/sap/public/bc/icons_rtl,

/sap/public/bc/webicons,

/sap/public/bc/pictograms,

/sap/public/bc/webdynpro/*

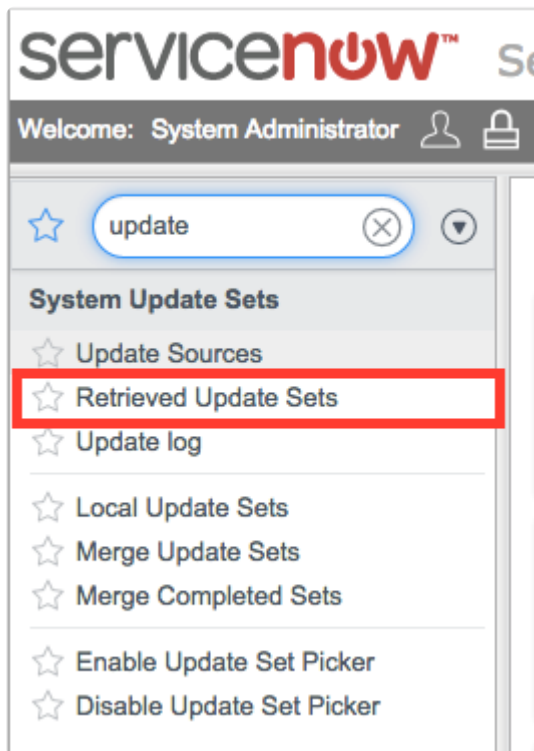
Run transaction SRT_ADMIN in client 000 and client 100

Run transaction WSIDPADMIN in client 100 (not sure if this was necessary)

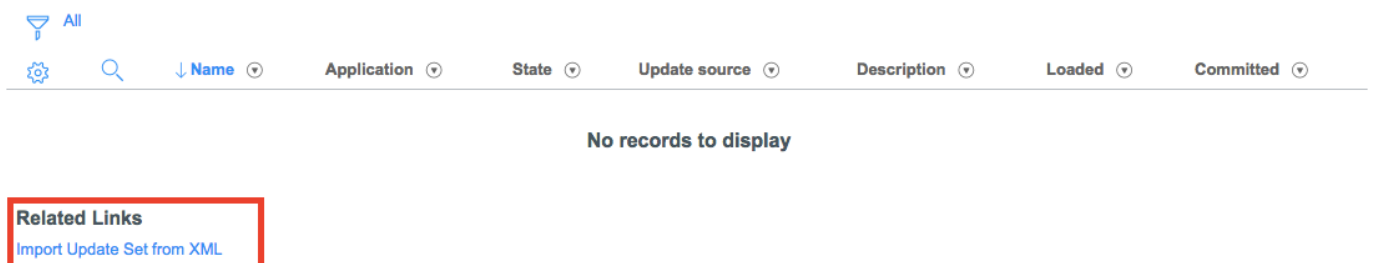
3.1. Retrieve Update Set

Step 1: Navigate to ServiceNow instance and login as an admin user

Step 2: In Navigation Menu select: “Retrieved Update Sets”



Step 3: Select the Related Link choice: “Import Update Set from XML”



Step 4: Select the “sys_remote_update_set_XXX.xml” file

Importing records from an XML file will not run Business Rules

(1) Choose file to upload:

TransportExpress.xml

(2) Upload the file

Step 5: Select the newly retrieved update set: [AC version referenced] “ActiveControl vXXX”

Retrieved Update Sets

Go to

Name

Search

1

to 1 of 1

All

⚙️

🔍

↓ Name

Application

State

Update source

Description

Loaded

Committed

<input type="checkbox"/>	<div>ⓘ</div>	TE Integration v1.0	Global	Loaded			2015-04-21 12:08:45	(empty)
--------------------------	--------------	---------------------	--------	--------	--	--	---------------------	---------

☐

Actions on selected rows...

1

to 1 of 1

Related Links

[Import Update Set from XML](#)

3.2. Preview Update Set

Step 6: Click the UI Action “Preview Update Set”

Retrieved Update Set - TE Integration v1.0

Update Delete Preview Update Set

Name: TE Integration v1.0

Application: Global ⓘ

Update source:

State: Loaded ▾

Loaded: 2015-04-21 12:08:45

Description:

Application name: Global

Committed:

Inserted:

Deleted:

Update Delete **Preview Update Set**

Related Links
[Export to XML](#)

Using the screenshot color coding in the doc, Amber = Create new listing, do not accept the update set if on the same line as a current version, create a new line.

Red = stay as current version, Note; a blank update set will wipe out the current version, make sure not to accept that.

Green = use update version. Good to go.

There are differences in each section that need to be updated once installed into client system:

Section 3, sys_choice_change_request_state, these are needed,

Section 5, sys_ui_section_cd591479c0a801640182b9b52,

Update 10: Type

and 12: u_te_status, these are needed.

1. sys_choice_change_request_impact

Compare to Local			
Current Version		Update Set Version	
fields	1:	Alto	1: 1 - High
	2:	Alto	2: 2 - Medium
	3:	Haut	3: 3 - Low
	4:	High	
	5:	Hoch	
	6:	高	
	7:	Mediano	
	8:	Medio	
	9:	Medium	
	10:	Mittel	
	11:	Moyen	
	12:	中	
	13:	Bajo	
	14:	Bas	
	15:	Basso	
	16:	Low	

2. sys_ui_section_bf1d96e3c0a801640190725e6...

Compare to Local			
Current Version		Update Set Version	
fields	1:	number	1: number
	2:	caller_id	2: caller_id
	3:	u_business_phone	
	4:	u_alternate_contact	
	5:	location	3: location
	6:	category	4: category
			5: subcategory
	7:	cmdb_ci	6: cmdb_ci
	8:	impact	7: impact
	9:	urgency	8: urgency
	10:	priority	9: priority
	11:	.split	10: .split
	12:	sys_created_on	11: opened_at
	13:	opened_by	12: opened_by
			13: contact_type
	14:	state	14: state

3. sys_choice_change_request_state

Compare to Local			
Current Version		Update Set Version	
fields			
1:	Borrador	1:	Pending
2:	Bozza	2:	Open
3:	Brouillon	3:	Work in Progress
4:	Draft	4:	Closed Complete
5:	Entwurf	5:	Closed Incomplete
6:	Rascunho	6:	Closed Skipped
7:	Rascunho	7:	Awaiting Evidence
8:	ドラフト	8:	Resolved
9:	起稿		
10:	Assess		
11:	Avaliar		
12:	Avaliar		
13:	Bewerten		
14:	Estimé		
15:	Evaluar		
16:	Valutazione		

4. sys_choice_task_state

Retrieved Update Set			
Compare to Local			
Current Version		Update Set Version	
fields			
1:	Ausstehend		
2:	En attente		
3:	In sospeso		
4:	Pendente		
5:	Pendente		
6:	Pendiente		
7:	Pending	1:	Pending
8:	保留中		
9:	待定		
10:	Aberto		
11:	Aberto		
12:	Abierto		
13:	Aperto		
14:	Offen		
15:	Open	2:	Open
16:	Ouvert		

25:	Work in Progress	3:	Work in Progress
26:	処理中の作業		
27:	工作进行中		
28:	Cerrado completo		
29:	Chiuso completo		
30:	Closed Complete	4:	Closed Complete
31:	Encerrado Totalmente		
32:	Fechado Concluído		
33:	Fermé terminé		
34:	Geschlossen - vollständig		
35:	完了してクローズ		
36:	已結束且已完成		
37:	Cerrado Incompleto		
38:	Chiuso incompleto		
39:	Closed Incomplete	5:	Closed Incomplete
40:	Encerrado Incompleto		
41:	Fechado Não Concluído		
42:	Fermé incomplet		

5. sys_ui_section_cd591479c0a801640182b9b52..

Compare to Local			
Current Version		Update Set Version	
fields	1: process_flow.xml		
	2: .begin_split		
	3: number	1: number	
		2: requested_by	
	4: category	3: category	
		4: cmdb_ci	
		5: priority	
	5: risk	6: risk	
		7: impact	
		8: .split	
	6: approval	9: approval	
	7: u_likelihood_of_failure	10: type	
	8: u_change_owner		
	9: u_cab		
	10: state	11: state	
	11: conflict_status	12: u_te_status	

6. sys_ui_section_d2921a156fe5a6001d0777dc5...

Compare to Local		
	Current Version	Update Set Version
fields	1: .begin_split	1: .begin_split
	2: name	2: name
	3: order	3: order
	4: .split	4: .split
	5: sys_scope	5: sys_scope
	6: web_service	6: web_service
	7: .end_split	7: .end_split

7. sys_ui_section_1b329e916fe5a6001d0777dc5...

Compare to Local		
	Current Version	Update Set Version
fields	1: .begin_split	1: .begin_split
	2: name	2: name
	3: order	3: order
	4: .split	4: .split
	5: sys_scope	5: sys_scope
	6: web_service	6: web_service
	7: .end_split	7: .end_split

8. sys_choice_change_request_short_description

Compare to Local		
	Current Version	Update Set Version
fields	1: Issue with a web page	1: Issue with a web page
	2: Issue with email	2: Issue with email
	3: Issue with networking	3: Issue with networking
	4: New employee hire	4: New employee hire
	5: Request for a Blackberry	5: Request for a Blackberry
	6: Request for a new service	6: Request for a new service
	7: Request for help	7: Request for help
	8: Request for new or upgraded hardware	8: Request for new or upgraded hardware
	9: Request for new or upgraded software	9: Request for new or upgraded software
	10: Reset my password	10: Reset my password

9. sys_properties_86acbebe6f329a001d0777dc5...

Retrieved Update Set			Update	Delete	Run Preview Again
Compare to Local					
	Current Version	Update Set Version			
sys_created_by	MRANJANSMF	admin			
sys_created_on	2016-04-19 09:25:26	2015-04-01 16:25:58			
sys_updated_by	MRANJANSMF	admin			
sys_updated_on	2016-04-19 09:25:26	2015-04-01 16:25:58			
type	string	boolean			

DO NOT PROGRESS ANY FURTHER IF YOU ARE UNSURE OF WHAT THE ABOVE STEPS REPRESENT. PLEASE CONTACT YOUR BTI SOLUTION SPECIALIST FOR HELP.

3.3. Update set committed

Step 7: Click UI action “Commit Update Set”

Name

TE Integration v1.0

Application

Global

Update source

State

Previewed

Loaded

2015-04-21 12:08:45

Committed

Inserted

113

Updated

3

Deleted

91

Collisions

0

Total

207

Description

Application name

Global

Update

Delete

Run Preview Again

Commit Update Set

Related Links

[Show All Preview Records](#)

Retrieved Update Sets

Go to

Loaded

Search

1 to 1 of 1

All > Name = TE Integration v1.0

Name

Application

State

Update source

Description

Loaded

Committed

=TE Integration v1

Search

Search

Search

Search

Search

Search

TE Integration v1.0

Global

Committed

09-12-2016 17:14:41

09-13-2016 09:50:37

3.4. Configuration

Step 8: Confirm the following now exist in the instance:

ActiveControl Navigational Menu Application

servicenow™

Se

Welcome: Paul Esteves



Filter

**Self-Service****Benchmarks****Guided Setup****Service Desk****Transport Espresso**

TE Field Mappings



TE Status Mappings



TransportEspresso Bus



TE Properties



Support

ActiveControl Scripted Web Service (Menu -> System Web Services -> Scripted Web Services -> Transport Expresso)

Scripted Web Service - TransportExpress

Name: TransportExpress Application: Global

Active: ☒ Function name: process

WSDL: <https://dev10586.service-now.com/TransportExpress.do?WSDL>

Short description: To be used with Transport Express integration

Script:

```
1 var transport_express_result = new TransportExpress(request).process();
2 response.result = transport_express_result;
```

Update Delete

Input Parameters (2) Output Parameters (2)

ActiveControl Script Include (Menu -> Script Includes -> Transport Expresso)

Script Include - TransportExpress

Name: TransportExpress Application: Global

Client callable: ☐ Accessible from: This application scope only

Active: ☒

Description: Used for Transport Express Integration

Script:

```
1 gs.include("PrototypeServer");
2
3 var TransportExpress = Class.create();
4
5 TransportExpress.prototype = {
6   initialize : function(transport_express_object) {
7     this.te object = transport_express object;
```

Update Delete

ActiveControl Business Rules: (Menu -> System Definition -> Business Rules)

Welcome: System Administrator

Business Rules New Go to Updated Search

All > Active = true

	Name	Active	Table	Application	Order
	Search	=true	Search	Search	Search
<input type="checkbox"/>	(TE) Create TE Ticket on Change Update	true	Change Request [change_request]	Global	
<input type="checkbox"/>	(TE) Set Task State on TE Status Change	true	Task [task]	Global	

ActiveControl SOAP Message: (Menu -> System Web Services -> SOAP Message -> Transport Expresso)

The screenshot shows the SAP NetWeaver IDE interface. The left sidebar contains a tree view with the following items: Configuration, Application Servers, Web Servers, System Properties, Web Services, System Web Services, SOAP Security Policies, WS Security Profiles, Properties, Scripted Web Services, Inbound, Create New, Computer, Location, Notification, User, Outbound, SOAP Message (selected), REST Message, REST, Getting Started, and REST API Explorer. The main editor area is titled 'SOAP Message - Transport Express'. It contains a configuration form for a 'Transport Express' with the following fields: Name (Transport Express), Application (Global), Download WSDL (unchecked), Accessible from (This application scope only), Use mutual authentication (unchecked), Basic authentication user ID (ServiceNow), Basic authentication user password (masked with dots), and Description (empty). Below the form is a section for 'WSDL XML' with a 'XML' icon and a text area containing the following XML snippet:

```
<?xml version="1.0" encoding="utf-8"?><wso:definitions targetNamespace="urn:sap-com:document:t:sap:soap:functions:mc-style" xmlns:wso="http://schemas.xmlsoap.org/wsdl/" xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/" xmlns:htt p="http://schemas.xmlsoap.org/wsdl/http/" xmlns:mime="http://schemas.xmlsoap.org/wsdl/mime/" xmlns:tns="urn:sap-com:document:sap:soap:functions:mc-style" xmlns:wsp="http://schemas.xmlso ap.org/ws/2004/09/policy" xmlns:wsu="http://docs.oasis-open.org/ws/2004/01/oasis-200401-ws s-wssecurity-utility-1.0.xsd" xmlns:n1="urn:sap-com:document:sap:rfc:functions"><wso:docume ntation><sid:sid1 xmlns:sid1="http://www.sap.com/2007/03/sid1"/></wso:documentation><wsp:U singPolicy wsdl:required="true"/><wsp:Policy wsu:Id="BN_BN_TEST"><saptrnbnd:OptimizedXMLTran sfer uri="http://www.sap.com/2006/11/esi/esp/binxml" xmlns:saptrnbnd="http://www.sap.com/web as/710/soap/features/transportbinding/" wsp:Optional="true"/><saptrnbnd:OptimizedXMLTransfer uri="http://www.w3.org/2004/08/soap/features/http-optimization" xmlns:saptrnbnd="http://ww w.sap.com/webas/710/soap/features/transportbinding/" wsp:Optional="true"/><wsp:ExactlyOne xm lns:wsp="http://schemas.xmlsoap.org/ws/2004/09/policy" xmlns:saps="http://www.sap.com/weba s/630/soap/features/security/policy" xmlns:sp="http://docs.oasis-open.org/ws-sx/ws-securityp olicy/200702" xmlns:wsa="http://www.w3.org/2005/08/addressing" xmlns:wsu="http://schemas.xml soap.org/ws/2002/07/utility"><wsp:All><sp:TransportBinding><wsp:Policy><sp:TransportToken><w
```

3.4.1. AC Properties

Step 1: Configure properties

Note: Property described as – “Describes which SN task tables will be in use with ActiveControl” should follow the convention of separating tables with commas (i.e. change_request, incident, problem)

Note 2: Property Described as: “Function name for Creating ActiveControl soap messages” will be found in the SOAP message provided by the AC admin, and can also be found in the SOAP Message:

“ActiveControl” Soap message functions list

Transport Espresso Properties

Describes which task tables will be in use with Transport Espresso.

change_request, incident, problem

Function name for Creating Transport Espresso business tasks.

bti-teTaskCreateWs

Type ID for Transport Espresso soap messages.

10010091500000000039

Group ID for Transport Espresso soap messages.

10010091500000000025, 10010091500000000036

Project ID for Transport Espresso soap messages.

10011080800000001259

XSystemNumber for Transport Espresso soap messages.

09

Step 2: Change properties in accordance with the blueprinted ID's agreed by both Basis and ServiceNow admins. These ID are inline with those in the /BTI/TE_INT_CONV table in the clients SAP Domain Controller.

Step 2a: Navigate to Change Request menu, Select Open

servicenow™ Service Automation

Welcome: System Administrator

Logout

change

Change Requests **New** Go to Number Search

All > Active = true

	Number	Short description	Approval	Type	State	Planned start date	Planned end date	Assigned to
<input type="checkbox"/>	CHG0000015	Unix update	Approved	Comprehensive	Open	2015-11-02 16:00:00	2015-11-02 22:00:00	Bud Richman
<input type="checkbox"/>	CHG0000014	CMS App FLX (depends on Java Apps FLX)	Approved	Comprehensive	Open	2015-11-09 00:00:00	2015-11-09 01:59:59	Christen Mitchell
<input type="checkbox"/>	CHG0000013	Oracle FLX (Java App Dependency)	Approved	Comprehensive	Open	2015-11-07 11:00:00	2015-11-07 13:00:00	Fred Luddy
<input type="checkbox"/>	CHG0000012	Java App Server	Approved	Comprehensive	Open	2015-10-29 18:00:00	2015-10-29 20:00:00	Charlie Whitherspoon
<input type="checkbox"/>	CHG0000011	Another Java Application Server change	Approved	Comprehensive	Open	2015-11-06 02:00:00	2015-11-07 05:00:00	David Loo

Change

- Create New
- Open
- Closed
- All
- Overview
- Schedules
 - Change Schedule
- Administration
 - Risk Conditions
 - Blackout Windows
 - Maintenance Windows
 - Conflict Properties
- System Localization
 - Exchange Rates
 - Load Exchange Rates

Step 2b: Select any Change Request. Right click the form header. Navigate to Configure -> Form Design

Change Request - CHG0000015

Number: CHG0000015

Requested by: [Search]

Category: Hardware

Configuration item: unix200

Priority: 4 - Low

Risk: Moderate

Impact: 3 - Low

Short description: Unix update

Description: [Text Area]

Approval: Approved

Type: Comprehensive

State: Open

Group: [Search]

Assign to: [Search]

Update Delete

Save

Add to Visual Task Board

Close Change

Refresh Impacted Services

Metrics Timeline

Follow on Live Feed

Show Live Feed

Edit Risk Conditions

Configure

Templates

Export

View

Copy URL

Copy sys_id

Show XML

History

Reload form

Form Design

Form Layout

Related Lists

All

Table

Security Rules

Business Rules

Client Scripts

UI Policies

Data Policies

UI Actions

Step 2c: Find the AC Status field on the options list, and place it on the form. Save

Change Request Default view Form Design

Undo Save

Fields Field Types

Filter

Fields

- Review status
- SLA due
- Scope
- Task type
- Time worked
- Updated
- Updated by

Change Request

Number

Requested by

Category

Configuration item

Priority

Risk

Impact

Approval

Type

State

Assignment group

Assigned to

TE Status

Step 2d: Navigate back to the form, and right click the field header for AC Status. Select Configure Choices.

< **Change Request - CHG0000015**

Number: CHG0000015

Requested by:

Category: Hardware

Configuration item: unix200

Priority: 4 - Low

Risk: Moderate

Impact: 3 - Low

Short description: Unix update

Description:

Approval: Approved

Type: Comprehensive

State: Open

Assignment group:

Assigned to: Bud Richman

TE Status:

Configure Label

Configure Dictionary

Configure Styles

Configure Security

Show Security Rules

Configure Choices

Show Choice List

Show - 'u_te_status'

Notes Schedule Planning

Step 2e: Tailor AC Status choices. Save.

Tailoring: change_request.u_te_status

☒ Change Request ☐ Task

Available

Selected

Available	Selected
	TE Ticket Created
	Deployment Complete
	Planning Complete
	Unit Testing Complete
	Ready for Test
	Awaiting Test
	Testing Successful
	Ready for Production
	In Production
	Awaiting Test Import
	Awaiting Production Import
	Ready for Release Test
	Awaiting Release Test Import

Add

Remove

Move up

Move down

Save Cancel

Enter new item: Awaiting Release Test Import Add

Apply to table: Change Request Task

3.4.2. AC Field Mappings

Change field mappings in accordance with the blueprinted field values agreed by both Basis and ServiceNow admins.

TE Field Mappings New Go to Key Search 1 to 15 of 15				
All	Key	SN Field	TE Field	Table
<input type="checkbox"/>	false	requested_by	CREATEDBY	Change Request
<input type="checkbox"/>	false	x_bate_transport_e_te_status	status	Change Request
<input type="checkbox"/>	false	cmdb_ci	Groupid	Change Request
<input type="checkbox"/>	false	short_description	Caption	Incident
<input type="checkbox"/>	false	TABLE	Typeid	Incident
<input type="checkbox"/>	false	cmdb_ci	Groupid	Incident
<input type="checkbox"/>	false	x_bate_transport_e_te_status	status	Incident
<input type="checkbox"/>	false	short_description	Caption	Change Request

Step 3: Set Field Mappings – The field mappings table will act as a transform map between the fields in SN and AC. Fields are case-sensitive.

Step 3a: In Navigation menu navigate to AC Field Mappings table (ActiveControl -> AC Field Mappings). Click on the UI Action “NEW”

TE Field Mappings New Go to Table Search 1 to 16 of 16				
All	Key	SN Field	TE Field	Table
<input type="checkbox"/>	false	requested_by	Testerid	Change Request
<input type="checkbox"/>	false	assigned_to	HEADER-TESTERID	Change Request
<input type="checkbox"/>	false	priority	Priority	Change Request
<input type="checkbox"/>	false	TABLE	Typeid	Change Request
<input type="checkbox"/>	true	number	Reference	Change Request
<input type="checkbox"/>	false	short_description	Caption	Change Request
<input type="checkbox"/>	false	description	Text	Change Request
<input type="checkbox"/>	false	x_bate_transport_e_te_status	status	Change Request
<input type="checkbox"/>	false	cmdb_ci	Groupid	Change Request
<input type="checkbox"/>	false	u_project_id	Projectid	Incident
<input type="checkbox"/>	false	cmdb_ci	Groupid	Incident

Step 3b: Add the key reference by checking the Key field, and setting the SN field to “Number” and AC Field to “Reference”. Submit

Note: For the Create function “Reference” is spelled with a capital “R”, while for the Update function “REFERENCE” is spelled with all caps.

Key ☒

SN Field

Submit

TE Field

Step 3c: Create the rest of the field mappings based on what fields will be sent from SN to AC, and what will be sent back from AC to SN. Choose Table, and fill-in SN Field with the dictionary name of the field in SN (i.e. short_description for Short Description), and fill-in the AC field with field from the soap message function.

Note: If admin wants to use the property value (i.e. Projectid), then type in PROPERTY, if admin wants to return what type of SN task (i.e. incident, change_request) then type in TABLE.

Key ☐

* Table

Submit

SN Field

TE Field

TE Field Mappings					
<div> <div> New </div> Go to <div> Key </div> <div> Search </div> </div> <div> 1 to 5 of 5 </div>					
		Key	SN Field	TE Field	Table
<input type="checkbox"/>	i	false	u_te_status	status	Change Request
<input type="checkbox"/>	i	false	description	Text	Change Request
<input type="checkbox"/>	i	false	short_description	Caption	Change Request
<input type="checkbox"/>	i	true	number	Reference	
<input type="checkbox"/>	i	false	priority	Priority	Change Request

3.4.3. AC Status Mappings

Change status mappings in accordance with the blueprinted field values agreed by both Basis and ServiceNow admins.

TE Status Mappings New Go to SN Status Field <input type="text" value="Search"/>				1 to 12 of 12
All		SN Status Field	TE Status Field	Table
<input type="checkbox"/>		Work in Progress	Awaiting Test Import	Change Request
<input type="checkbox"/>		Work in Progress	Awaiting Release Test Import	Change Request
<input type="checkbox"/>		Work in Progress	Ready for Release Test	Change Request
<input type="checkbox"/>		Closed Complete	In Production	Change Request
<input type="checkbox"/>		Closed Complete	Ready for Production	Change Request
<input type="checkbox"/>		Work in Progress	Awaiting Production Import	Change Request
<input type="checkbox"/>		Work in Progress	Ready for Test	Change Request
<input type="checkbox"/>		Work in Progress	Deployment Complete	Change Request
<input type="checkbox"/>		Work in Progress	Awaiting Test	Change Request
<input type="checkbox"/>		Open	Planning Complete	Change Request
<input type="checkbox"/>		Work in Progress	Unit Testing Complete	Change Request

Step 4: Set AC Status Mappings – The status mappings table will allow AC to update a SN task state field based on the AC status received.

Step 4a: In Navigation menu navigate to AC Status Mappings table (ActiveControl -> AC Status Mappings). Click on the UI Action “NEW”

Step 4b: Select Table. SN Status Field and AC Status field will show the same choices that the state and te_status fields have on the same table respectively.

SN Change Request State Choices:

TE Status Mapping

Submit

* SN Status Field

Q

* TE Status Field

Q

* Table

Change Request

Submit

Choices | ServiceNow

https://dev10586.service-now.com/sys_choice_list.do?sysparm_target=u_te_status_mapping.u_sn_status_field&sysparm_target...

Choices

New

Go to

Label

Search

1 to 8 of 8

All

Label

- Pending
- Open
- Work in Progress
- Closed Complete
- Closed Incomplete
- Closed Skipped
- Awaiting Evidence
- Resolved

SN Change Request TE STATUS Choices:

✖

SN Status Field

✖

TE Status Field

Submit

✖

Table

Change Request

Choices | ServiceNow

https://dev10586.service-now.com/sys_choice_list.do?sysparm_target=u_te_status_mapping.u_te_status_field&sysparm_target_value=...

☰

Choices

New

Go to

Label

Search

◀◀

◀

1

to 13 of 13

▶

▶▶

🔍

All

🔍

Label

▼

•

TE Ticket Created

•

Deployment Complete

•

Planning Complete

•

Unit Testing Complete

•

Ready for Test

•

Awaiting Test

•

Testing Successful

•

Ready for Production

Displaying/Hiding the AC Status field – The AC Status field serves two purposes: 1. Serves as a flag that denotes the SN task record is also a record in AC

2. Serves as a way to audit what changes to the record were made via Web Service.

Note: The default behavior of the field requires the field AC Status to be hidden on the table it is

designed to update via AC, until the field has a set value.

Note 2: The following will be instructions using an example of what has already been created

Step 1: On Change Request form right click form header and select Configure -> UI Policies

The screenshot shows the 'Change Request - CHG0000015' form. The 'Configure' menu is open, displaying options like 'Save', 'Add to Visual Task Board', 'Close Change', 'Refresh Impacted Services', 'Metrics Timeline', 'Follow on Live Feed', 'Show Live Feed', 'Edit Risk Conditions', 'Configure', 'Templates', 'Export', 'View', 'Copy URL', 'Copy sys_id', 'Show XML', 'History', and 'Reload form'. The 'Configure' option is highlighted, and its sub-menu is visible, showing 'Form Design', 'Form Layout', 'Related Lists', 'All', 'Table', 'Security Rules', 'Business Rules', 'Client Scripts', 'UI Policies' (selected), 'Data Policies', 'UI Actions', 'Notifications', and 'Dictionary'.

Step 2: Click "NEW". Set Table to Change Request, Short Description to (AC) Display AC Status, and Conditions to AC Status is not – None –

The screenshot shows the 'UI Policy' configuration screen. The 'Table' is set to 'Change Request [change_req]'. The 'Application' is 'Global'. The 'Active' checkbox is unchecked. The 'Short description' is '(TE) Display TE Status'. The 'When to Apply' section shows conditions: 'TE Status is not -- None --'. The 'Related Links' section includes 'Advanced view'. The bottom section shows the 'UI Policy Actions' list with a 'New' button and a search bar. The table below shows the configuration for the 'u_te_status' field.

Field name	Mandatory	Visible	Read only
u_te_status	Leave alone	True	True

Step 3: Navigate down to UI Policy Actions list and click "NEW" button. Set Field name to AC Status,

Visible to True, and Read Only to True.

UI policy actions specify exactly what actions to take on a specified field. The conditions specified in the UI policy determine when these actions are triggered. [More Info](#)

UI policy	(TE) Display TE Status ⓘ	Application	Global ⓘ
Table	Change Request [change_request]	Mandatory	Leave alone ▾
* Field name	TE Status ▼	Visible	True ▾
		Read only	True ▾

Update Delete



Step 4a: Add ServiceNow WSDL to ActiveControl –https://**instance_name**.service-now.com/ActiveControl.do?WSDL

Step 4b: Username – [***], Password: [***]

Note1: Password may be changed based on client's password policy. ServiceNow admin would change the password via user record.

Note2: Some clients prefer to add user to their Active Directory

Step 5a: Add ActiveControl WSDL to ServiceNow – File to be provided by ActiveControl

Step 5b: Navigate to System Web Services -> Outbound -> SOAP Message -> ActiveControl

Step 5c: Enter Basic auth user ID and Basic auth user password into respective fields (will be provided by ActiveControl)

Step 5d: Add XML from file provided in step 5a to the WSDL XML field. Click on Generate Sample SOAP Messages UI Action located under Related Links

3.5. Initial Settings

Users:

Users management interface showing a list of users. The table displays columns: User ID, Name, Email, Active, Created, Updated, and Roles. Two users are listed: 'soap.te' (SOAP TE) and 'TEUSER' (TE User). Both are active and created/updated on 2018-08-08 and 2015-03-25 respectively.

Roles:

Create/Check SOAP user for these roles

x_bate_transport_e_transport_expresso_user – Allowed to add, change, and delete field and status mappings with regards to ActiveControl.

x_bate_transport_e_transport_expresso_admin – Allowed to change the properties with regards to ActiveControl. Also allowed to reprocess business tasks that failed to be created without limit.

Allocate all 'soap' roles.

Roles management interface for 'User - TE User'. The table displays columns: Role, State, Granted by, and Inherited. Ten roles are listed, including 'soap_delete', 'soap_query_update', 'x_bate_transport_e_TE_Integration', 'soap_query', 'soap_script', 'x_bate_transport_e_transport_expresso_admin', 'import_transformer', 'x_bate_transport_e_transport_expresso_user', 'soap_update', and 'soap_create'. All roles are active and granted by 'User = TE User'.

Business Rules:

Name: (TE) Create TE Task on Change on Update

Table: Change Request

When : Before – Update

Condition:

Configuration item.name starts with SAP

AND

TE Status is –None—or TE Status is ERROR: Failed to Create Business Task
AND
Approval is Approved

Script:

```
function onBefore(current, previous) { new  
TransportExpresso().createTransportExpressoBusinessTask(current); }
```

Name: (TE) Create TE Task on Incident Update

Table: Incident

When : Before – Update

Condition:

Configuration item.name starts with SAP

AND

TE Status is –None—or TE Status is ERROR: Failed to Create Business Task

AND

Incident State is Active

Script:

```
function onBefore(current, previous) { new  
TransportExpresso().createTransportExpressoBusinessTask(current); }
```

Name: (TE) Set Task State on TE Status Change

Table: Task

When : Before – Insert, and Update

Condition:

TE Status changes

AND

TE Status is not –None—

Script:

```
function onBefore(current, previous) { var new_state = new TransportExpresso().setSNState(current);  
current.state = (!new_state) ? current.state : new_state;}
```


3.5.1. Advanced Configuration

Set Create AC business task Trigger in SN – Setting/modifying the AC business task creation trigger in SN requires updating the condition set in a business rule. The business rule runs asynchronously. Modifying or creating a new business rule for a different SN task table requires the assistance of a SN admin.

Step 1: Navigate to a Change request form and right click form header. Select Configure -> Business Rules

The screenshot displays the 'Change Request - CHG0000015' form. The form includes fields for Number (CHG0000015), Requested by, Category (Hardware), Configuration item (unix200), Priority (4 - Low), Risk (Moderate), Impact (3 - Low), Short description (Unix update), and Description. A right-click context menu is open over the form header, showing options like 'Save', 'Add to Visual Task Board', 'Close Change', 'Refresh Impacted Services', 'Metrics Timeline', 'Follow on Live Feed', 'Show Live Feed', 'Edit Risk Conditions', 'Configure', 'Templates', 'Export', 'View', 'Copy URL', 'Copy sys_id', 'Show XML', 'History', and 'Reload form'. The 'Configure' option is selected, and a sub-menu is visible with options: 'Form Design', 'Form Layout', 'Related Lists', 'All', 'Table', 'Security Rules', 'Business Rules' (highlighted), 'Client Scripts', 'UI Policies', 'Data Policies', 'UI Actions', 'Notifications', and 'Dictionary'. The form also has tabs for 'Notes', 'Schedule', and 'Planning', and a 'Watch list' section.

Step 2: Select the rule – (TE) Create TE Business Task on Change Update

Business Rule - (TE) Create TE Ticket on Change Update

A business rule is a server-side script that runs when a record is displayed, inserted, deleted, or when a table is queried. Use business rules to automatically change values in form fields when the specified conditions are met. [More Info](#)

Name: **(TE) Create TE Ticket on Change** Application: **Global**

Table: **Change Request [change_req]** Active: ☒ Advanced: ☒

When to run **Actions** **Advanced**

Condition:

Script:

```

1 function onAsync(current) {
2   if (current.short_description == "Transport Express Test" && current.u_te_status == "") {
3     gs.info("CREATING TICKET");
4     new TransportExpress().createTransportExpressTicket(current);
5   }
6 }






```


Update Delete



Or via Business Rules


Business Rules New Go to Updated Search						
	Name	Active	Table	Application	Order	Updated
<input type="checkbox"/>	(TE) Add Web Service Inputs	false	TE Field Mapping [x_bate_transport_e_te_field_mapping]	Transport Expresso	100	2017-03-01 05:01:55
<input type="checkbox"/>	(TE) Remove Web Service Inputs	false	TE Field Mapping [x_bate_transport_e_te_field_mapping]	Transport Expresso	100	2017-01-11 07:30:52
<input type="checkbox"/>	(TE) Update Web Service Inputs	false	TE Field Mapping [x_bate_transport_e_te_field_mapping]	Transport Expresso	100	2017-01-11 07:30:52
<input type="checkbox"/>	(TE) Create TE Task on Change on Update	true	Change Request [change_request]	Transport Expresso	100	2016-11-17 06:28:11
<input type="checkbox"/>	(TE) Set Task State on TE Status Change	true	Task [task]	Transport Expresso	100	2016-11-17 06:28:10
<input type="checkbox"/>	(TE) Create TE Task on Incident Update	true	Incident [incident]	Transport Expresso	100	2016-09-13 06:35:15

If: a ticket creation in SNOW returns a 'Insert task' error. Change the When to run to After. This scenario is SNOW is trying to update the ticket before a AC Business Task is created.

< **Business Rule - (TE) Create TE Task on Change on Update**     

 You are editing a record in the **Global** application ([cancel](#))

 This form has annotations - click  to toggle them - ([click here](#) to never show this again)

Name	(TE) Create TE Task on Change on	Application	Global 
Table	Change Request [change_req...	Active	<input type="checkbox"/>
		Advanced	<input checked="" type="checkbox"/>






When to run Actions Advanced


When	before	Insert	<input type="checkbox"/>
Order	before	Update	<input checked="" type="checkbox"/>
	after	Delete	<input type="checkbox"/>
	async	Query	<input type="checkbox"/>
	display		

Filter Conditions Add Filter Condition Add "OR" Clause


All of these conditions must be met

Configuration item Name	starts with	SAP	AND	OR	X
-------------------------	-------------	-----	-----	----	---

< **Business Rule**
(TE) Create TE Task on Incident Update     

 This record is in the **Global** application, but **Transport Expresso** is the current application. To edit this record click [here](#).

A business rule is a server-side script that runs when a record is displayed, inserted, deleted, or when a table is queried. Use business rules to automatically change values in form fields when the specified conditions are met. [More Info](#)

Name	(TE) Create TE Task on Incident Update	Application	Global 
Table	Incident [Incident]	Active	<input checked="" type="checkbox"/>
Priority	100	Advanced	<input checked="" type="checkbox"/>

When to run Actions Advanced

Condition

Script

```
1 (function executeRule(current, previous /*null when async*/) {
2   // new TransportExpresso().createTransportExpressoBusinessTask(current); //(Updated by WB on 07/26)
3   new x_bate_transport_e.TransportExpresso().createTransportExpressoBusinessTask(current);
4   gs.info("TransportExpresso test");
5
6 })(current, previous);
```

3.5.2. Soap Messages

ActiveControl SOAP Message WSDL now exists in the clients ServiceNow. Or a variation of the name depending on version.

The screenshot shows the 'SOAP Messages' list in ServiceNow. At the top, there is a navigation bar with a menu icon, the text 'SOAP Messages', a 'New' button, a 'Go to' dropdown set to 'Name', and a search input field. To the right of the search field are navigation arrows and a page indicator '1 to 2 of 2'. Below the navigation bar, there is a filter icon and the text 'All > Name >= Transport Espresso'. Below that, there are icons for settings, search, and a list of items. The list has two columns: 'Name' and 'WSDL'. The first item in the list is 'Transport Espresso' with a corresponding WSDL URL: 'http://te.basistechnologies.net:8176/sap/bc/srt/wSDL/flv_10002A111AD1/bndg_url/sap/bc/srt/rfc/bti/te_task_ws/100/SNOW/snr'.

The WSDL is defaulted to BTI's SAP instance, client SNOW admin needs to redefine this to what is identified in the created SAP SOAMANAGER Service Definition Binding.

The screenshot shows the 'SOAP Message - Transport Espresso' form in ServiceNow. At the top, there is a navigation bar with a back arrow, the text 'SOAP Message - Transport Espresso', and a help icon. Below the navigation bar, there is a warning message: 'This record is in the Transport Espresso application, but Global is the current application. To edit this record click here.' The form has several fields: 'Name' (Transport Espresso), 'Application' (Transport Espresso), 'WSDL' (http://te.basistechnologies.net:8176/sap/bc/srt/wSDL/flv_10002A111AD1/bndg_url/sap/bc/srt/rfc/bti/te_task_ws/100/SNOW/snr), 'Download WSDL' (checked), 'Use mutual authentication' (unchecked), 'Authentication type' (Basic (simple)), 'Basic authentication user ID (simple)' (servicenowws), and 'Basic authentication user password (simple)'. There is also a 'Description' field. At the bottom, there is a 'WSDL XML' field with an 'XML' button and a toolbar with various icons.

Note: On SNOW versions Fuji, Helsinki and Istanbul Basic authentication user ID (simple) can be entered in the SOAP Message. From SNOW version Jakarta forward, there is a specific table for Authentication type, to populate the shareable system ID and password.

Example:

Web Service Configuration (ACX;100)

Details of Service Definition: /BTI/TE_TASK_WS

Overview Configurations

Define Services and Bindings

Create Service

Service/Binding

SNOW

snow

WSDL Generation for Binding: snow

WSDL Flavours

Flavour: All possible combinations are allowed

SAP Assertions: All

Security Assertions: ABAP 702/730/740 and higher

WSDL Section: AllInOne

WSDL Version: 1.1

WSP Version: 1.2

WSP Style: single-Binding

SOAP Version: SOAP 1.1 and SOAP 1.2

SOAP Style: Document

SOAP Action: With

Options for WSDL Access and URLs

Standard

Alternative URL

Alternate Host:

Meta Data Protocol:

Alt. Port (http):

Alt. Port (https):

Apply URL options

WSDL Generation

WSDL URL for Binding: http://TE.BASISTECHNOLOGIES.NET:8176/sap/bc/srt/wsdli/fv_10002A111AD1/bndg_url/sap/bc/srt/rfc/bti/te_task_ws/100/snow/snow?sap-client=100

Basic authentication user ID (simple) is to be created in SAP Domain Controller first with ID and password shared with SNOW admin to save here.

SOAP Message - Transport Expresso

This record is in the [Transport Expresso](#) application, but [Global](#) is the current application. To edit this record click [here](#).

<input type="checkbox"/>	_btj_-teTaskReadAnalysisWs	<soapenv:Envelope xmlns:soapenv="http://..."	false	2016-09-22 08:12:05
<input type="checkbox"/>	_btj_-teTaskReadWs	<soapenv:Envelope xmlns:soapenv="http://..."	false	2016-09-22 08:12:07
<input type="checkbox"/>	_btj_-teTaskGetTransportsWs	<soapenv:Envelope xmlns:soapenv="http://..."	false	2016-09-22 08:12:09
<input type="checkbox"/>	_btj_-teTaskChangeWs	<soapenv:Envelope xmlns:soapenv="http://..."	false	2017-11-29 08:22:20
<input type="checkbox"/>	_btj_-teTaskCreateWs	<soapenv:Envelope xmlns:soapenv="http://..."	false	2018-02-09 12:41:42
<input type="checkbox"/>	_btj_-teTaskApproveWs	<soapenv:Envelope xmlns:soapenv="http://..."	false	2017-11-29 04:20:04
<input type="checkbox"/>	_btj_-teTaskTestresWs	<soapenv:Envelope xmlns:soapenv="http://..."	false	2017-11-29 04:19:19
<input type="checkbox"/>	_btj_-teTaskAnalyseWs	<soapenv:Envelope xmlns:soapenv="http://..."	false	2017-11-28 14:17:14

The WSDL url and user and password need to be added to each SOAP Message Function too.

If the client has a MID server definition (a firewall redirect, usually Active Directory) please define this in each SOAP Message Function

What is MID server?

SOAP Message Function - _bti_-teTaskCreateWs

Update Delete

* Function

bti-teTaskCreateWs

Application

Transport Expresso

SOAP message

Transport Expresso

Lock

☐

WS-Security type

Strip whitespace

☐

Use MID server

Authentication type

Basic

Basic auth profile

servicenowws

Use mutual authentication

☐

SOAP action

SOAP endpoint

http://te.basistechnologies.net:8176/sap/bc/srt/rfc/bti/te_task_ws/100/SNOW/snow

Envelope XML

```
1 <soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/" xmlns:urn="urn:sap-com:document:sap:soap:functions:mc-style">
2   <soapenv:Header/>
3   <soapenv:Body>
4     <urn:_bti_-teTaskCreateWs>
5       <!-- Optional: -->
6       <XDescription>${XDescription}</XDescription>
7       <XSystemNumber>${XSystemNumber}</XSystemNumber>
8       <XTask>
9         <Id>${Id}</Id>
10        <Caption>${Caption}</Caption>
11        <Reference>${Reference}</Reference>
12        <Groupid>${Groupid}</Groupid>
```

To test the service, update the Variable Substitutions with the client Field mapping values

SOAP Message Function - _bti_-teTaskCreateWs

Update Delete

Auto-generate variables

Preview Script Usage

Refresh SOAP message

Set HTTP Log level

Test

Variable Substitutions (7)

SOAP Message Tests (11)

Variable Substitutions

New

Go to

Name

Search

1 to 7 of 7

SOAP Function = _bti_-teTaskCreateWs

	Name	Test value	Escape type
<input type="checkbox"/>	Caption	SN integration task create test	No escaping
<input type="checkbox"/>	Groupid	10010091500000000036	No escaping
<input type="checkbox"/>	Priority	2	No escaping
<input type="checkbox"/>	Projectid	10011080800000001258	No escaping
<input type="checkbox"/>	Reference	CHG00000015	No escaping
<input type="checkbox"/>	Text	This is a test task created by SN	No escaping
<input type="checkbox"/>	Typeid	10010091500000000039	No escaping

3.5.3. Change form

Change Request

Number

Requested by

Category

Configuration item

Priority

Risk

Impact

Approval

Type

State

TE Status

Assignment Group

Assigned to

The same should be done for Incidents, if in scope for integration.

3.5.4. TE Status Choice values

Properties		
<div><div></div><div></div></div>		
<div><div></div><div>TE Ticket Created</div></div>	<div>[TE Ticket Created]</div>	<div><div>+</div><div>×</div></div>
<div><div></div><div>Deployment Complete</div></div>	<div>[Deployment Complete]</div>	<div><div>+</div><div>×</div></div>
<div><div></div><div>Planning Complete</div></div>	<div>[Planning Complete]</div>	<div><div>+</div><div>×</div></div>
<div><div></div><div>Unit Testing Complete</div></div>	<div>[Unit Testing Complete]</div>	<div><div>+</div><div>×</div></div>
<div><div></div><div>Ready for Test</div></div>	<div>[Ready for Test]</div>	<div><div>+</div><div>×</div></div>
<div><div></div><div>Awaiting Test</div></div>	<div>[Awaiting Test]</div>	<div><div>+</div><div>×</div></div>
<div><div></div><div>Testing Successful</div></div>	<div>[Testing Successful]</div>	<div><div>+</div><div>×</div></div>
<div><div></div><div>Ready for Production</div></div>	<div>[Ready for Production]</div>	<div><div>+</div><div>×</div></div>
<div><div></div><div>In Production</div></div>	<div>[In Production]</div>	<div><div>+</div><div>×</div></div>
<div><div></div><div>Awaiting Test Import</div></div>	<div>[Awaiting Test Import]</div>	<div><div>+</div><div>×</div></div>
<div><div></div><div>Awaiting Production Import</div></div>	<div>[Awaiting Production Import]</div>	<div><div>+</div><div>×</div></div>
<div><div></div><div>Ready for Release Test</div></div>	<div>[Ready for Release Test]</div>	<div><div>+</div><div>×</div></div>

3.5.5. Script includes

<

≡

Script Include - TransportExpresso

?

✓

↑

↓

!

This record is in the [Transport Expresso application](#), but [Global](#) is the current application. To edit this record click [here](#).

Name

TransportExpresso

Application

Transport Expresso

i

API Name

x_bate_transport_e.TransportEx

Accessible from

All application scopes

Client callable

☐

Active

☒

Description

Used for Transport Expresso Integration

Script

1

gs.include("PrototypeServer");

2

3

var TransportExpresso = Class.create();

4

5

TransportExpresso.prototype =

6

{

7

initialize : function(transport_expresso_object)

8

{

9

this.te_object = transport_expresso_object;

10

this.te_key_field = "";

4. ActiveControl Domain Controller Setup and Configuration

This section guides you through the steps that are needed to configure outbound integration within ActiveControl.

The Integration configuration is maintained through the SAP standard SM30/31 functions where table entries can be created and updated.

4.1. Service User

A service SAP user is needed within the AC Domain Controller.

The following roles and authorisations need to be assigned to the Service User:

- /BTI/TE:CTS_ADMIN
- /BTI/TE:CTS_USER
- Authorization for S_SERVICE (this can be done by adding /BTI/TE:INT_WEB_SERVICE role, but please be aware of [this Knowledge Article](#))

This SAP user will be added into the SOAP messages on the ServiceNow side.

4.2. Check SICF for active Services

Default_host > BTI > te_web_services

Maintain service

Create Host/Service

 External Aliases

 System Monitor Inactive

Filter Details

Virtual Host	<input type="text"/>	Service Path	<input type="text"/>
ServiceName	<input type="text"/>		
Description	<input type="text"/>		
Lang.	English	Ref.Service:	<input type="text"/>

Apply
 Reset
 Fine-Tune

Virtuelle Hosts / Services	Documentation	Referenz Service
· default_host	VIRTUAL DEFAULT HOST	
· BTI	Basis technologies	
· tessocntl	Set TE logon cookie for SSO	
· TE_mobile	TE Mobile API	
· te_web_services	Transport Express webservices	
· sap	SAP NAMESPACE; SAP IS OBLIGED NOT TO DE...	
· sap_java	VM Container Engine for Java Applications	
· SAPconnect	SAPCONNECT (E)SMTP	

Default_host > sap > bc > bsp > bti

Virtuelle Hosts / Services	Documentation	Re
<ul style="list-style-type: none"> 0001_langes_feld ap A_NEW_INTAL1 bc 	Application Platform BASIS TREE (BASIS FUNCTIONS)	/d
<ul style="list-style-type: none"> 11111 abap ags_workcenter AI_CLV_APP_BASE BPCA bsp 	sss Services from NW Foundation ABAP SAP Solution Manager Work Centers CLV Application Base Landscape service This ser... Business Process Change Analyzer Services BUSINESS SERVER PAGES (BSP) RUNTIME	
<ul style="list-style-type: none"> bti 	namespace	
<ul style="list-style-type: none"> te_bsp_app te_bsp_new te_launch te_task_approve 	TE front-end conversion to BSP (test) v0.1 TE: BSP for new web UI TE Launcher TE - task approval	
<ul style="list-style-type: none"> cem 	namespace	

Default_host > sap > public > bsp > sap > ?

Virtuelle Hosts / Services	Documentation	Referenz Service
default_host	VIRTUAL DEFAULT HOST	
BTI	Basis technologies	
sap	SAP NAMESPACE; SAP IS OBLIGED NOT TO DE...	
option	RESERVED SERVICES AVAILABLE GLOBALLY	
public	PUBLIC SERVICES	
bc	Basis Tree (Basis Functions)	
bsp	BUSINESS SERVER PAGES (BSP)	
sap	SAP NAMESPACE	
htmlb	HTMLB Public Handler	
public	CROSS-APPLICATION MIME OBJECTS	
system	SYSTEM SERVICES BUSINESS SERVER PAGES	/default_host/sap/bc/bsp/sap/system
system_public	Public	/default_host/sap/bc/bsp/sap/system_public
BusinessSuite	Business Suite	

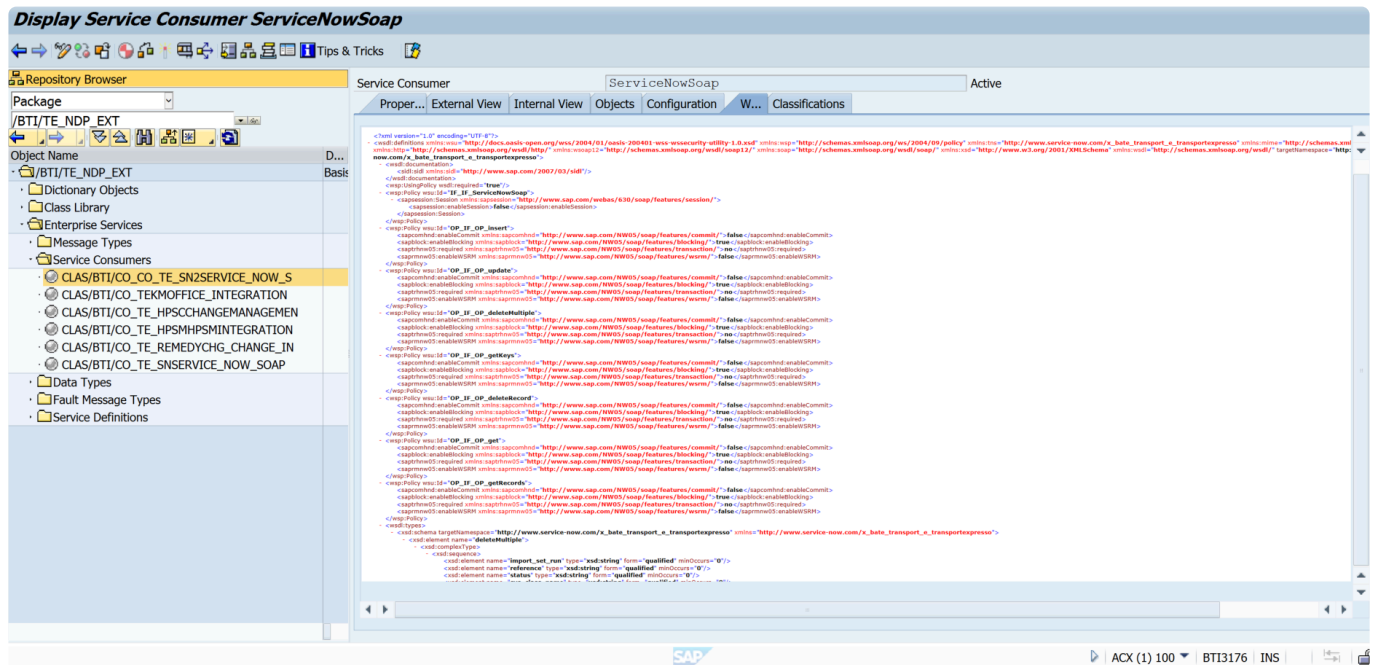
4.3. Object Navigation

Check ServiceNow Package for mapping /BTI/TE_NDP_EXT

Check Enterprise Services > Service Consumers > CLAS/BTI/CO_CO_TE_SN2SERVICE_NOW_S

Validate Active

Validate WSDL



Local file WSDL from Service Now: SOAP Message Function_-bti_-teTaskCreateW

Within Package /BTI/TE_NDP_EXT review folders Dictionary Objects and Enterprise Services.

The data populated derives from the SNOW WSDL files imported. Review and make sure relevant fields are complete.

Image required

Define ServiceNow Service Consumer

SE24

Results:

Class Builder: Display Class /BTI/TE_CL_INTEGRATION_SERVNOW

Local Definitions/Implementations Class documentation

Class Interface /BTI/TE_CL_INTEGRATION_SERVNOW Implemented / Active

Proper...	Interfaces	Friends	Attribu...	Methods	Events	Types	Aliases
-----------	-------------------	---------	------------	---------	--------	-------	---------

☐ Filter

Attribute	Level	Visi...	Rea...	Typing	Associated Type	Description	Initial v.
YT_INT_OBJECT	Instance	Protec.	<input type="checkbox"/>	Type Ref T.	/BTI/TE TT INTEG.	TE Integration Object	
YT_INT_DATA	Instance	Protec.	<input type="checkbox"/>	Type	/BTI/TE TT INT D.	TE Table Type Integration Sou.	
P_ENTRYDATE	Instance	Protec.	<input type="checkbox"/>	Type	/BTI/TE DE ENTRY.	Transport Express: EntryDate	
P_EXTSYS_NO	Instance	Protec.	<input type="checkbox"/>	Type	/BTI/TE EXTSYS_N.	TE Integration: External Syste	
P_ENTRYTIME	Instance	Protec.	<input type="checkbox"/>	Type	/BTI/TE DE ENTRY.	Transport Express: Entry Time	
EXIT_0092	Static Att	Private	<input type="checkbox"/>	Type	/BTI/TE EXITC	Transport Express:Customer-I.	
			<input type="checkbox"/>	Type			



4.5. Configuration Overview

The table below shows a list of database tables and objects with descriptions that need to be maintained followed by a more in depth description of how to configure the tables.

Name	Description
/BTI/TE_INT_SYST	Integration System List table
/BTI/TE_INT_CLAS	Integration Object Class List table
/BTI/TE_INT_PC	Process Codes table
/BTI/TE_INT_PROC	Process Identifier table
/BTI/TE_INT_CONV	Conversions table
/BTI/TE_INT_USR	Notification Users table
/BTI/TE_INT_MAPP	Mapping table
/BTI/TE_INT_FLDE	Complex Mapping (user exits) table
/BTI/TE_RF	Number Range object
/BTI/TE_INT_FILT	Filter Values table

4.5.1. External System(s)

The ActiveControl integration framework can be used to perform outbound integration on potentially any external system. Two tables need to be maintained here, table '/BTI/TE_INT_SYST' is the table that holds all the external system id's and descriptions along with any RFC Destinations that may possibly be needed for example for a Solution Manager system, also table '/BTI/TE_INT_CLAS' needs to be maintained and this holds the class that the framework references.

/BTI/TE_INT_SYST – AC Integration System List	
Field	Description
EXTSYS_NO	<p>Main external system identifier, this is the identifier of the system that you wish to integrate with we can have as many systems as we want.</p> <p>An example of this could be:</p> <ul style="list-style-type: none"> 1 – Remedy 2 – Solution Manager 3 – ServiceNow 4 – HP-ALM 5 - GitLab
EXTSYS_ID	Single word identifier for external system. E.g. REMEDY
EXTSYS_NAME	Full description of external system
RFC_DEST	Some external systems that you want systems with could possibly be SAP systems for example Solution Manager so the RFC destination is held here.

Example Configuration

Results

Messages

	EXTSYS_NO	EXTSYS_ID	EXTSYS_NAME	RFC_DEST	DDCINT	TASKFIELD_LINK	FORMFIELD_LINK	INT_USER	INT_PASSWORD	INT_PORT	SCENARIO_NO	VERSION
1	01	SNOW	SNOW									02

Example configuration for table /BTI/TE_INT_SYST in the Domain Controller for a ActiveContro <> ServiceNow integration.

* Note the need for VERSION = "02" in newer ActiveControl <> ServiceNow integration setups. In older versions of the integration, 00 could be configured there.

* Integration Port and user name and password can be defined here, otherwise SOAMANAGER integration default will pick up the port via proxy. A user name and

password can be defined on this line item too, over and above the integration user and p/w if the client is set up this way. The primary user and p/w in SOAMANAGER is all you need as default.

4.5.2. Integration Class

/BTI/ TE_INT_CLAS – Integration Object Class List	
Field	Description
EXTSYS_NO	<p>Main external system identifier, this is the identifier of the system that you wish to integrate with we can have as many systems as we want.</p> <p>An example of this could be:</p> <ul style="list-style-type: none"> 1 – Remedy 1 – Solution Manager 2 – ServiceNow 3 – HP-ALM 4 - GitLab
CLASSNAME	<p>Held here is the class name where the bulk of the integration processing is done. AC integration works on the principle of having a class for each external system that we need to integrate with. This is what is called in the integration send program. E.g. /BTI/TE_CL_INTEGRATION_SOLMAN.</p>

Display View "Integration Object Class List": Overview



Integration Object Class List

Ext.Sys.No	Class/Interface
2	/BTI/TE_CL_INTEGRATION_REMEDY
7	/BTI/TE_CL_INTEGRATION_RTC
8	/BTI/TE_CL_INTEGRATION_SERVNOW
9	/BTI/TE_CL_INTEGRATION_SERVNOW
10	/BTI/TE_CL_INTEGRATION_TFS
11	/BTI/TE_CL_INTEGRATION_JIRA

4.5.3. Update Processes

Currently the integration framework is capable of updating external records in two ways in either 'Create' mode or 'Update' mode, these 'modes' are known within the integration framework as process codes and to try and ensure forwards compatibility these have been made configurable but would obviously require code changes if any other process codes were to become available. These process codes are held in table '/BTI/TE_INT_PC'. These two process codes would need to be shipped for standard functionality.

/BTI/TE_INT_PC – Process Codes	
Field	Description
PROCESS_CODE	The process codes used by the integration framework to perform some kind of action. The framework gets shipped with two standard process codes CREATE and UPDATE.
CODE_DESCRIPTION	Description of above code.

Display View "TE Integration: Process Codes": Overview



TE Integration: Process Codes			
Proc. Cde.	Process Code Description	Action class	
CREATE	Create Integration Record	/BTI/TE_CL_INTEGR_CREATE	
TESTERS	Update testing complete	/BTI/TE_CL_INTEGR_TESTERS	
TRANSITION	State transition		
UPDATE	Update Integration Record	/BTI/TE_CL_INTEGR_UPDATE	

4.5.4. Integration Points

The standard out of the box integration framework integrates at task level with third party software using task status changes as integration points. A process code will need to be attached to a task deployment or planning status which subsequently needs to be attached to a control point within ActiveControl. Assuming deployment/planning statuses have already been attached to control points within the path, we need to:

To link the process code with a deployment/planning status table '/BTI/TE_INT_PROC' needs to be maintained here the status and process code is attached to the external system that is being integrated with.

/BTI/TE_INT_PROC – Process Identifiers (per system)	
Field	Description
EXTSYS_NO	<p>Main external system identifier, this is the identifier of the system that you wish to integrate with we can have as many systems as we want. An example of this could be:</p> <ul style="list-style-type: none"> 1 – Remedy 1 – Solution Manager 2 – ServiceNow 3 – HP-ALM 4 - GitLab
EXTSYS_NAME	Full description of external system
IDENTIFIER	This identifier is the crux of the integration framework and denotes a point of integration, more than likely this would be some kind of internal id, in our OOTB example it is a task status. This point of integration is attached to a process code denoted above and this is what would cause an integration to be performed when this identifier is reached.
PROCESS_CODE	The process codes used by the integration framework to perform some kind of action. The framework gets shipped with two standard process codes CREATE and UPDATE.
IGNORE_CHANGES	This flag is set when you wish to ignore previous changes in case the integrated object has skipped through more than one integration point since the integration trigger program was last run.

Process Identifiers (per system) = AC deployment status codes – codes found in SE16 table /BTI/TE_TASKSTAT

Display View "TE Integration: Process Identifier (per system)": Overvi



TE Integration: Process Identifier (per system)

Ext.Sys.No	External System Na	Internal ID	Proc. Cde.	+
7	RATIONAL	100120113000000002394	UPDATE	<input type="checkbox"/>
7	RATIONAL	100120119000000002488	UPDATE	<input type="checkbox"/>
8	SERVICENOW	100120113000000002394	UPDATE	<input type="checkbox"/>
8	SERVICENOW	100120113000000002396	UPDATE	<input type="checkbox"/>
8	SERVICENOW	100120119000000002487	UPDATE	<input type="checkbox"/>
8	SERVICENOW	100120119000000002488	UPDATE	<input type="checkbox"/>
8	SERVICENOW	100130521000000106578	UPDATE	<input type="checkbox"/>
8	SERVICENOW	100130724000000108515	UPDATE	<input type="checkbox"/>
8	SERVICENOW	100130724000000108516	UPDATE	<input type="checkbox"/>
8	SERVICENOW	100141203000000142759	UPDATE	<input type="checkbox"/>
8	SERVICENOW	100141203000000142760	UPDATE	<input type="checkbox"/>
8	SERVICENOW	100150102000000143250	UPDATE	<input type="checkbox"/>
8	SERVICENOW	100150618000000144776	UPDATE	<input type="checkbox"/>
8	SERVICENOW	100150813000000145274	UPDATE	<input type="checkbox"/>
8	SERVICENOW	100150813000000145275	UPDATE	<input type="checkbox"/>
8	SERVICENOW	100150813000000145276	UPDATE	<input type="checkbox"/>
8	SERVICENOW	100150813000000145277	UPDATE	<input type="checkbox"/>
8	SERVICENOW	100150813000000145278	UPDATE	<input type="checkbox"/>
8	SERVICENOW	100150813000000145279	UPDATE	<input type="checkbox"/>
8	SERVICENOW	100170620000000194303	UPDATE	<input type="checkbox"/>
8	SERVICENOW	100170620000000194304	UPDATE	<input type="checkbox"/>
8	SERVICENOW	100170816000000197269	UPDATE	<input type="checkbox"/>
8	SERVICENOW	100170816000000197270	UPDATE	<input type="checkbox"/>
8	SERVICENOW	100170816000000197271	UPDATE	<input type="checkbox"/>
8	SERVICENOW	100170816000000197272	UPDATE	<input type="checkbox"/>
8	SERVICENOW	100170816000000197273	UPDATE	<input type="checkbox"/>
9	SERVICENOW	100120113000000002394	UPDATE	<input type="checkbox"/>

4.5.5. Mapping

An essential part of the integration framework is mapping ActiveControl fields to the equivalent fields on any external system. This is achieved using the table '/BTI/TE_INT_MAPP'. Ideally, this process will need to be undertaken before the framework can be used. For general fields the AC field should be entered complete with table name into field TEFIELDREF and the external fieldname must be entered in the EXTERNAL_REF field. There is also the functionality to be able to reference any AC Custom fields the custom field ID's would need to be added to TECUSTFIELD_REF, also multiple line itemed fields are able to be handled here such as text fields. Finally, on the mapping table there is a KEY_FIELD field this is used to hold the external system record key in general use a specific non display custom field on the task would be created for this purpose.

/BTI/ TE_INT_MAPP – Integration Mapping	
Field	Description
EXTSYS_NO	Main external system identifier, this is the identifier of the system that you wish to integrate with we can have as many systems as we want. An example of this could be: 1 – Remedy 1 – Solution Manager 2 – ServiceNow 3 – HP-ALM 4 - GitLab
EXTSYS_NAME	Full description of external system
TEFIELDREF	This is the AC Field that needs to be mapped to a field on the external system. This table name is required in the field as well. I.e. /BTI/TE_TASK-PRIORITY /BTI/TE_TASK-GROUPID, /BTI/TE_TASK-STAT_DEPL, /BTI/TE_TASK-PROJECTID, /BTI/TE_TASK-TYPEID, /BTI/TE_TASK-TESTERID
EXTERNAL_REF	This is the fieldname that the frameworks calling web service needs to reference to map across the data.
KEY_FIELD	This field is the link between the AC record, in our task record we have set up a custom field which is hidden from view and in here we store the ID of the created record on the integrated system.
TECUSTFLD_REF	ID of AC Custom field to be mapped.
DEFAULT_VAL	Defaulted Value to be mapped over to the integrated system field.

Display View "TE Integration Mapping": Overview



TE Integration Mapping

Ext.Sys.No	External...	Direction	Sequence	TE Field Reference	External R
7	TION...	Bidi...	1	/BTI/TE_TASK-STAT_PLAN	/BTI/TE_1
7	RATION...	Bidi...	2	/BTI/TE_TASK-STAT_DEPL	/BTI/TE_1
7	RATION...	Bidi...	3	/BTI/TE_TASK-GROUPID	/BTI/TE_1
7	RATION...	Bidi...	4	/BTI/TE_TASK-PROJECTID	/BTI/TE_1
7	RATION...	Bidi...	5	/BTI/TE_TASK-TYPEID	/BTI/TE_1
7	RATION...	Bidi...	6	/BTI/TE_TASK-PRIORITY	/BTI/TE_1
8	SERVIC...	Bidi...	1	/BTI/TE_TASK-GROUPID	/BTI/TE_1
8	SERVIC...	Bidi...	2	/BTI/TE_TASK-PROJECTID	/BTI/TE_1
8	SERVIC...	Bidi...	3	/BTI/TE_TASK-TYPEID	/BTI/TE_1
8	SERVIC...	Bidi...	4	/BTI/TE_TASK-PRIORITY	/BTI/TE_1
9	SERVIC...	Bidi...	1	/BTI/TE_TASK-GROUPID	/BTI/TE_1
9	SERVIC...	Bidi...	2	/BTI/TE_TASK-PROJECTID	/BTI/TE_1
9	SERVIC...	Bidi...	3	/BTI/TE_TASK-TYPEID	/BTI/TE_1
9	SERVIC...	Bidi...	4	/BTI/TE_TASK-PRIORITY	/BTI/TE_1
9	SERVIC...	Bidi...	6	/BTI/TE_TASK_STAT_DEPL	/BTI/TE_1
9	SERVIC...	Bidi...	14	/BTI/TE_TASK-TESTERID	/BTI/TE_1
10	JIRA	Bidi...	1	/BTI/TE_TASK_PRIORITY	/BTI/TE_1
10	JIRA	Bidi...	2	/BTI/TE_TASK_TYPEID	/BTI/TE_1
10	JIRA	Bidi...	3	/BTI/TE_TASK_PROJECTID	/BTI/TE_1
10	JIRA	Bidi...	4	/BTI/TE_TASK_GROUPID	/BTI/TE_1
10	JIRA	Bidi...	5	/BTI/TE_TASK_TESTERID	/BTI/TE_1
10	JIRA	Bidi...	6	/BTI/TE_TASK_STAT_DEPL	/BTI/TE_1

4.5.6. Conversions

The integration framework can also take into account value conversions. For instance where a value in ActiveControl could equal one thing maybe its corresponding value in an external could be different although they both mean the same thing. For example:

A AC priority maybe '1' for 'Low' however, the same 'Low' priority in an ITSM system for example could be '4'.

The table '/BTI/TE_INT_CONV' can be used to map the two values together and address these issues.

/BTI/TE_INT_CONV – AC Integration Conversion Table	
Field	Description
EXTSYS_NO	<p>Main external system identifier, this is the identifier of the system that you wish to integrate with we can have as many systems as we want.</p> <p>An example of this could be:</p> <ul style="list-style-type: none"> – Remedy – Solution Manager – ServiceNow – HP-ALM - GitLab
EXTSYS_NAME	Full description of external system
EXTERNAL_REF	This is the field name of the external field that is on the system to be integrated with.
EXTFLD_ID	This is the AC field value that the conversion needs to take place on.
EXTFLD_VAL	<p>This is the converted value that needs to be fed into the integrated system.</p> <p>For example in our OOTB box example we are performing Solution Manager Integrations only on certain types of task and these types of tasks are set up in solution manager as Support Notification ticket types.</p>

= code found in SE16 /BTI/TE_GROUPS, /BTI/TE_TYPE, /BTI/TE_PROJ

/BTI/TE_INT_CONV

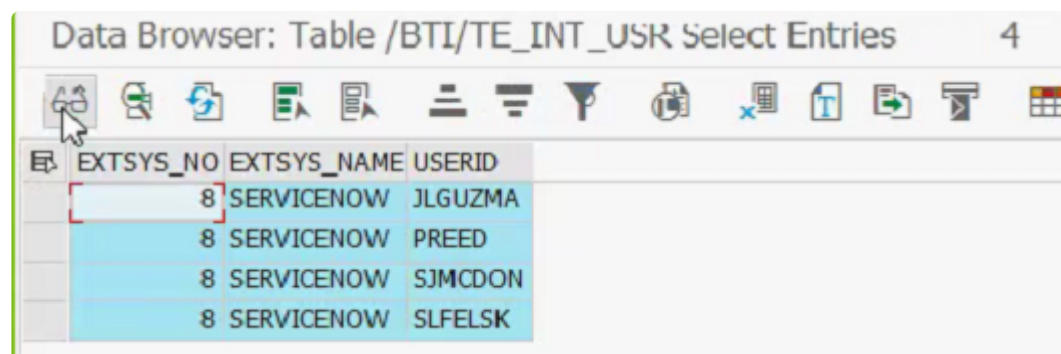
EXTSYS_NO	EXTSYS_NAME	DIRECTION	EXTERNAL_REF	EXTFLD_ID	EXTFLD_VAL
8	SERVICENOW		/BTI/TE_TASK-GROUPID	SAP BPC/BW	10010091500000000017
8	SERVICENOW		/BTI/TE_TASK-GROUPID	SAP ECC	10010091500000000021
8	SERVICENOW		/BTI/TE_TASK-GROUPID	SAP PI	10010091500000000022
8	SERVICENOW		/BTI/TE_TASK-GROUPID	SAP Solution Manager	10010091500000000024
8	SERVICENOW		/BTI/TE_TASK-PRIORITY	1 - Critical	4 - Emergency
8	SERVICENOW		/BTI/TE_TASK-PRIORITY	2 - High	3 - High
8	SERVICENOW		/BTI/TE_TASK-PRIORITY	3 - Moderate	2 - Normal
8	SERVICENOW		/BTI/TE_TASK-PRIORITY	4 - Low	1 - Low
8	SERVICENOW		/BTI/TE_TASK-PRIORITY	5 - Planning	1 - Low
8	SERVICENOW		/BTI/TE_TASK-PROJECTID	KTLO Release	10017110200000199286
8	SERVICENOW		/BTI/TE_TASK-TESTERID	assigned_to	*
8	SERVICENOW		/BTI/TE_TASK-TYPEID	Procure to Pay Enhancements	10018061800000000023
8	SERVICENOW		BTI/TE_TASK-TYPEID	Finance Break Fix	10018061800000000025
8	SERVICENOW		BTI/TE_TASK-TYPEID	Financial System Enhancements	10018061800000000031
8	SERVICENOW		BTI/TE_TASK-TYPEID	Procure to Pay Break Fix	10018061800000000024
8	SERVICENOW		BTI/TE_TASK-TYPEID	Revenue Break Fix	10018061800000000026
8	SERVICENOW		BTI/TE_TASK-TYPEID	Revenue Enhancements	10018061800000000030
8	SERVICENOW		BTI/TE_TASK-TYPEID	SAP Admin	10018072300000000014
8	SERVICENOW		BTI/TE_TASK-TYPEID	SAP Manage Break Fix	10018061800000000027
8	SERVICENOW		BTI/TE_TASK-TYPEID	SAP Manage Enhancements	10018061800000000028

4.5.7. Notification Users

It is also possible to set up 'Notification Users' per external system that can be notified when an integration message has gone into an error status. This is run through the Email Notification Engine and the table that needs to be maintained is '/BTI/TE_INT_USR'.

/BTI/TE_INT_USR – Notification Engine Users (per system)	
Field	Description
EXTSYS_NO	<p>Main external system identifier, this is the identifier of the system that you wish to integrate with we can have as many systems as we want.</p> <p>An example of this could be:</p> <ul style="list-style-type: none"> – Remedy – Solution Manager – ServiceNow – HP-ALM - GitLab
EXTSYS_NAME	Full description of external system
USERID	SAP Logon ID of person that needs to be notified of failed integrations.

Data Browser: Table /BTI/TE_INT_USR Select Entries 4




EXTSYS_NO	EXTSYS_NAME	USERID
8	SERVICENOW	JLGUZMA
8	SERVICENOW	PREED
8	SERVICENOW	SJMCDON
8	SERVICENOW	SLFELSK

4.5.8. Number Range

Number range for object /BTI/TE_RF needs to be setup in the AC Domain Controller via SNRO for the Integration Framework to operate.

Maintain Intervals: Reference Str					
⌵	No	From No.	To Number	NR Status	Ext
	01	0000000001	9999999999	2490	<input type="checkbox"/>



If you do a full DC migration of the ServiceNow configuration from a Dev Domain Controller to a Production Domain Controller, it will take all the historical transactional data stored in /BTI/TE_INT_HEAD and /BTI/TE_INT_ITEMS tables. This can result in issues when running the Send program in Production DC. When doing a DC migration – you should put the ‘NR Status’ in the receiving Production DC to be a higher number than the number in the source Development DC.

4.5.9. Complex Mapping

For complex mapping scenarios, a specific function module can be created on the ActiveControl Domain Controller to perform whatever mapping or transformation that may be required.

/BTI/TE_INT_FLDE – Mapping User Exits	
Field	Description
EXTSYS_NO	Main external system identifier, this is the identifier of the system that you wish to integrate with we can have as many systems as we want. An example of this could be: <ul style="list-style-type: none">– Remedy– Solution Manager– ServiceNow– HP-ALM- GitLab
EXITFIELDNAME	External field that this refers to
EXITFUNCNAME	The function module to be executed to perform this exit

4.5.10. Filter Values

Set the filter values in /BTI/TE_INT_FILT

/BTI/TE_INT_FILT – Filter for?	
Field	Description
SCENARIO_NO.	?
SEQUENCE_NO.	?
TEFIELDREF	?
FIELD_VALUE	?
FILTER_VALUE	?
CLASS	ActiveControl class identifying Transport Form = Request, and Business Task = Task.
CUSTOM_FIELD	?

Data Browser: Table /BTI/TE_INT_FILT Select Entries 7						
SCENARIO_NO	SEQUENCE_NO	TEFIELDREF	FIELD_VALUE	FILTER_VALUE	CLASS	CUSTOM_FIELD
00001	1	/BTI/TE_TASK-GROUPID	10011113000000005493	O	TASK	
00001	3	/BTI/TE_FORM-GROUPID	10010072800000000002	O	REQUEST	
00001	4	/BTI/TE_FORM-TYPEID	10010072800000000007	I	REQUEST	X
00001	5	/BTI/TE_TASK_TXT-TEXT554	*	O	TASK	X
00001	6	/BTI/TE_TASK_TXT-TEXT526	Y	O	TASK	X
NOTIF	1	/BTI/TE_TASK-STAT_DEPL_MAN	X	O		
RATIO	1	/BTI/TE_TASK-GROUPID	*	I	TASK	

4.5.11. Integration Trigger Engine

A trigger program should be scheduled to pick up the Task status changes that need to be interfaced to the external system(s). This trigger program selects the appropriate AC records, dependent on the configuration set up above, and passes it through the mapping engine. It then stores the mapped integration transactions into a set of standard tables.

/BTI/ TE_INTEG_TRIGGER se38	
Selection Option	Description
External System	The external system the trigger program is to be run against
Task ID	Task(s) the trigger program will be run against
Task Type	Task Type(s) the trigger program will be run against
Task Reference	Task Reference the trigger program will be run against
Task Priority	Task Priority the trigger program will be run against
Send previous changes	Select this checkbox if Task status changes is 'backwards' in the process and this change should be sent to the external system
Run as though Last Run on	The date and time of the 'last' run can be entered manually if this flag is checked
Run Date	The date of the last run (if manually entered)
Run Time	The time of the last run (if manually entered)

Integration Trigger Engine

Active Integration System(s)

External System: SERVICE NOW

Selection Options

Task ID

Task Type

Task Group

Task Reference

Priority

☒ Send previous task changes

Runtime Settings

☐ Run as though last run was on:

Run Date

Run Time

ABAP: Variant Directory of Program /BTI/TE_INTEG_TR

Variant Catalog for Program /BTI/TE_INTEG_TRIGGER

Variant name	Short Description
SNOWSODTRIG	SNOW SOD Trigger

Only populate the options fields if you want to Exclude specific TE Tasks from the Service Now integration.

Create a Batch job with the same name and variant.

Display Job /BTI/TE_INTEG_TRIGGER

Start condition Step Job Details Job log

General Data

Job Name: /BTI/TE_INTEG_TRIGGER

Job Class: C

Status: Released

Target: Spool List Recipient

Job Start

Planned Start

Date: 18.11.2017 Time: 00:26:38







Job Frequency




10 Minute(s)

Job Steps

1 Step(s) defined

Step List Overview

 Spool



No.	Program name/command	Prog. type	Spool list	Parameters	User	Lang.
1	/BTI/TE_INTEG_TRIGGER	ABAP		SNOWACXTRIGENG	TE_BATCH	EN

Job log	Time	Message text uncoded	Message ID	Msg.no.	Msg.typ
30.01.2018	07:27:23	Job started	00	516	S
30.01.2018	07:27:23	Step 001 started (program /BTI/TE_INTEG_TRIGGER, variant JIRAACXTRIG, user ID TE_BATCH)	00	550	S
30.01.2018	07:27:23	No Integration Records Found.	/BTI/TE_TASK	000	I
30.01.2018	07:27:23	Step 002 started (program /BTI/TE_INTEG_TRIGGER, variant SNOWACXTRIGENG, user ID TE_BATCH)	00	550	S
30.01.2018	07:27:23	No Integration Records Found.	/BTI/TE_TASK	000	I
30.01.2018	07:27:23	Job finished	00	517	S

4.5.12. Integration Send Engine

A send program is then scheduled to pick up the mapped transactions and send them out to the configured external systems. It retrieves the required records and then uses the configured send methods for each particular integration scenario to actually push the data out to the receiving systems. If a standard send method is not available for a particular external system (maybe the ticketing system is a 'home-grown' application), then custom send methods can be created and utilised in the Integration Framework. See Outbound Configuration section below.

/BTI/ TE_INTEG_SEND se38	
Selection Option	Description
External System	The external system the send program is to be run against
No. of Retries	The number of times the send program will try to send an integration transaction before issuing an error
Transaction Number	Specific integration transactions for the send program to process
Suppress Notifications	Makes sure that no notification emails are sent when the transactions are processed

Integration Send Engine

Integration Send Parameters

External System

SERVICE NOW

No. Retries before error

3

Individual Transactions Only

Transaction Number

Additional Parameters

☐ Surpress Notifications

☒ Save logs





ABAP: Variant Directory of Program /BTI/TE_INTEG_SEND

Variant Catalog for Program /BTI/TE_INTEG_SEND

Variant name	Short Description
SNOWACXSENDENG	ServiceNow ACX Send Engine
SNOWSODSEND	SNOW SOD Send

Create a Batch job with the same name and variant.

Display Job /BTI/TE_INTEG_SEND

 Start condition  Step  Job Details  Job log

General Data

Job Name /BTI/TE_INTEG_SEND
Job Class C
Status Released
Target

Spool List Recipient

Job Start

Planned Start

Date 18.11.2017 Time 00:31:45



Job Frequency

10 Minute(s)

Job Steps

1 Step(s) defined

Step List Overview

 Refresh  Spool  All Spool Lists

No.	Program name/command	Prog. type	Spool list	Parameters	User	Lang.
1	/BTI/TE_INTEG_SEND	ABAP		SNOWACXSENDENG	TE_BATCH	EN

4.5.13. Integration Audit Report

At any time, the Integration Reporting Console can be used to see the status of all integrations, the status and history of each transaction and can also be used to update the underlying transactional data, if required, to fix errors.

/BTI/TE_RINTEG_AUDIT se38	
Selection Option	Description
Date	Date range for the report
Time	Time range for the report
All transactions/ Transactions in error	Select if all transactions should be displayed or just transactions in error
External System	Show only transactions for a specific external system
Transactions	Show only specific transaction numbers
Field Name	The external system field name
Field Value	The value in the external field

Create a Batch job with the same name and variant.

5. SOAMANAGER Setup

Prerequisite: Review SSL certificates are the same between SAP and 3rd party tools. Locally/self-signed certificates are not accepted. Verisign is one certificate provider.

Note; SOAMANAGER web browser dashboard structure changes with every version of Solution Manager.

Inbound: 1. Create endpoint using SOAMANAGER

- a. Go to Application and Scenario Communication (Service Administration)
- b. Single service admin (Web Service Configuration)
- c. Enter /bti/* and search for Service
- d. Press Apply selection
- e. Go to Configurations tab
- f. Create
- g. Enter a service name and binding (TETASK)
- h. Save
- i. Go to Overview tab to get WSDL for selected binding

2. Give WSDL to calling system

3. Create a user ID and password

Outbound

1. Create endpoint using SOAMANAGER

- a. Go to Application and Scenario Communication (Service Administration)
- b. Single service admin (Web Service Configuration)
- c. Enter /bti/* and search for Consumer proxy (Both Names)
- d. Press Apply selection
- e. Go to Configurations tab
- f. Create Port
- g. Put in WSDL url, user id and password
- h. ALWAYS SELECT the DEFAULT checkbox
- i. Save

2. If a different version of Remedy, you may need to re-generate the proxy

3. If the outbound call is not working and you are debugging the send method, if the 'set authorisation' method fails on retrieving the 'protocol' it probably means that SAP cannot determine the logical port to use and therefore defaults to trying to output the call using XI. This will be because the 'default' checkbox was not selected when the port was created above. Re-create the port making sure it is selected. If this is not possible for some reason, then the port must be specified in the constructor method of the class.

5.1. Inbound – Service Definition

Two TE integration services are defined.

/BTI/TE_TASK_CREATE_WS is an older configuration requirement and no longer used in newer versions.

/BTI/TE_TASK_WS is to be configured.

Web Service Configuration (SMD;040)

Design Time Object Search

Configuration Search

Search Criteria

Object Type

is

Service Definition

Object Name

contains

/BTI*

Maximum Number of Results:

100

Search

Clear

Reset

Saved Search:

Search Result

Internal Name	Type	Name	Namespace	
/BTI/TE_TASK_CREATE_WS	Service Definition	/BTI/TE_TASK_CREATE_WS	urn:sap-com:docu...	T...
/BTI/TE_TASK_WS	Service Definition	/BTI/TE_TASK_WS	urn:sap-com:docu...	T...

Pending a web service binding WSDL from TETASK is still to be supplied to SNOW.

5.2. Outbound – Consumer Proxy

Use latest Service Now SOAP proxy

Web Service Configuration (ACX;100)

Design Time Object Search

Configuration Search

Search criteria

Object Type

is

Consumer Proxy

Object Name

contains

/BTI/*

Maximum Number of Results:

100

Search

Clear values

Reset search criteria

Saved Search:

Search Result

Internal Name	Type	Name	Namespace	Description
/BTI/CO_CO_TE_SN2SERVICE_NOW_S	Consumer Proxy	ServiceNowSoap	http://www.service-now.com/x_bate_transport_e_transportexpresso	
/BTI/CO_TEKMOFFICE_INTEGRATION	Consumer Proxy	KMOfficeIntegrationWSVi_Document	urn:KMOfficeIntegrationWSWsd/KMOfficeIntegrationWSVi/document	
/BTI/CO_TE_HPSCCHANGEMANAGEMEN	Consumer Proxy	changemanagement	http://schemas.hp.com/SM/7	
/BTI/CO_TE_HPSMCHANGE_MANAGEME	Consumer Proxy	ChangeManagementTE	http://schemas.hp.com/SM/7	
/BTI/CO_TE_HPSMHPSMINTegration	Consumer Proxy	HPSMIntegrationAPI	http://schemas.hp.com/SM/7	
/BTI/CO_TE_REMEDYCHG_CHANGE_IN	Consumer Proxy	CHG_ChangeInterface_WSPortTypePortType	urn:CHG_ChangeInterface_WS	
/BTI/CO_TE_SN3SERVICE_NOW_SOAP	Consumer Proxy	ServiceNowSoap	http://www.service-now.com/x_bate_transport_e_transportexpresso	
/BTI/CO_TE_SNSERVICE_NOW_SOAP	Consumer Proxy	ServiceNowSoap	http://www.service-now.com/TransportExpresso	

Web Service Configuration (ACX;100)

Details of Consumer Proxy: /BTI/CO_TE_SN3SERVICE_NOW_SOAP

Overview

Configurations

Details

Define Logical Ports

Create

Set Log Port Default

Activate

Deactivate

Delete

WSOL Based Configuration

Manual Configuration

Process Integration Runtime

Local Shortcut Configuration

Service Registry Based Configuration

Template Based Configuration

WSOL based Configuration with Template

Logical Port	State
DEFAULT	Active

Define SNOW user name and password

Web Service Configuration (SMD;040)

Configuration: Consumer Proxy '/BTI/CO_TE_SNSERVICE_NOW_SOAP', Logical Port 'SERVICENOW'

Consumer Security | Messaging | Transport Settings | Message Attachments

Configuration of Consumer Settings additional to WSDL Document Information LP=SERVICENOW

User ID/Password

User Name:

Password:

Properties from WSDL Document

Authentication

Authentication Method:

Transport Security

Signature Expected:

Encryption Expected:

Sign Message:

Add Encryption:

PSE of Key:

Ping Web Service – successful

Web Service Configuration (SMD;040)

Configuration: Consumer Proxy '/BTI/CO_TE_SNSERVICE_NOW_SOAP', Logical Port 'SERVICENOW'

Save Edit Ping Web Service

Consumer Security Messaging Transport Settings Message Attachments Operation specific Administrative Information

Configuration of Consumer Settings additional to WSDL Document Information LP=SERVICENOW

User ID/Password

User Name: soap.te

Password:

Properties from WSDL Document

Authentication

Authentication Method: sasp:HTTPBasic

Transport Security

Signature Expected: false

Encryption Expected: false

Sign Message: false

Add Encryption: false

PSE of Key: WSSCRT

Ping Result

Web service ping successful for LP 'SERVICENOW', proxy 'BTI/CO_TE_SNSERVICE_NOW_SOAP'

OK

Defining port 81 (:81/) in the HTTP url, will redirect the url to HTTPS.

Web Service Configuration (SMD;040)

Configuration: Consumer Proxy '/BTI/CO_TE_SNSERVICE_NOW_SOAP', Logical Port 'SERVICENOW'

Save Edit Ping Web Service

Consumer Security Messaging Transport Settings Message Attachments Operation

Transport Binding

URL Access Path: */TransportExpresso.do?WSDLTransportExpresso.do?SOAP

Computer Name of Access URL: tow-d-2ppdwb01

Port Number of Access URL: 81

URL Protocol Information: HTTP

Logon Language: Port Number of URL for Web Service Call

Name of Proxy Host:

Port Number of Proxy Host:

User Name for Proxy Access:

Password of Proxy User:

Make Local Call: No Call in Local System

Transport Binding Type: * SOAP 1.1

Maximum Wait for WS Consumer: 0

Optimized XML Transfer: None

Compress HTTP Message: Inactive

Compress Response: True

6. TROUBLESHOOTING

6.1. ServiceNow System Logs

System Log > Application Log

The screenshot displays the ServiceNow Application Log interface. On the left is a navigation pane with categories like 'My Repairs', 'All Repairs', 'System Logs', and 'Utilities'. The main area shows a list of log entries under the 'Created on Today' filter. Each entry includes a checkbox, an information icon, a timestamp (2018-08-08 12:52:43), a level (Information), a message, an app scope (Transport Expresso), and a source script (Script Include: TransportExpresso). The message for the selected entry is a SOAP response body in XML format.

	Created	Level	Message	App Scope	Source Script
<input type="checkbox"/>	2018-08-08 12:52:43	Information	response.haveError = false	Transport Expresso	Script Include: TransportExpresso
<input type="checkbox"/>	2018-08-08 12:52:43	Information	response.should be below	Transport Expresso	Script Include: TransportExpresso
<input type="checkbox"/>	2018-08-08 12:52:43	Information	response.getErrorMessage() = null	Transport Expresso	Script Include: TransportExpresso
<input type="checkbox"/>	2018-08-08 12:52:43	Information	returning success	Transport Expresso	Script Include: TransportExpresso
<input type="checkbox"/>	2018-08-08 12:52:43	Information	<pre> response body = <?xml version="1.0" encoding="UTF-8"?><soap-env:Envelope xmlns:soap-env="http://schemas.xmlsoap.org/soap/envelope/"><soap-env:Header/><soap-env:Body><n0:_btl_tTaskCreateWsResponse xmlns:n0="urn:sap-com:document:sap.soap.functions:mc-style"><YReturn><Msgtyp/><Msgid/><Msgnum>000</Msgnum><Message/><Msgv1/><Msgv2/><Msgv3/><Msgv4/><Exception/><YReturn><YTask><Id>10018080800000199571</Id><Caption>This is my first SN incident</Caption><Reference>INC0010018</Reference><Groupid>1001009150000000025</Groupid><Typeid>10013061300000106902</Typeid><Testerid>SERVICECENOWWS</Testerid><Priority>1</Priority><Projectid><Locked/><Path/><StatDepl/><StatPlan/><StatDeplMan/><StatPlanMan/><Owner/><Text/><Cf500/><Cf501/><Cf502/><Cf503/><Cf504/><Cf505/><Cf506/><Cf507/><Cf508/><Cf509/><Cf510/><Cf511/><Cf512/><Cf513/><Cf514/><Cf515/><Cf516/><Cf517/><Cf518/><Cf519/><Cf520/><Cf521/><Cf522/><Cf523/><Cf524/><Cf525/><Cf526/><Cf527/><Cf528/><Cf529/><Cf530/><Cf531/><Cf532/><Cf533/><Cf534/><Cf535/><Cf536/><Cf537/><Cf538/><Cf539/><Cf540/><Cf541/><Cf542/><Cf543/><Cf544/><Cf545/><Cf546/><Cf547/><Cf548/><Cf549/><Cf550/></YTask></n0:_btl_tTaskCreateWsResponse></soap-env:Body></soap-env:Envelope> </pre>	Transport Expresso	Script Include: TransportExpresso
<input type="checkbox"/>	2018-08-08	Information	tasks.TaskCreateWsResponse	Transport	Script Include:

6.2. SSL connectivity errors

SSL certificates not trusted/accepted

ServiceNow certificate not accepted by SAP organization

Extra reading:

<http://www.scribd.com/doc/26029682/EP-SSO-How-to-Implement-Security-Using>

<http://wiki.sdn.sap.com/wiki/display/SCM/SCM+Optimizers+in+the+Cloud+White+Paper+-+Security>

http://help.sap.com/saphelp_nw04/helpdata/en/d8/a922d7f45f11d5996e00508b5d5211/frameset.htm

http://help.sap.com/saphelp_nw04/helpdata/en/43/6b7ee9f3fa1b459825aebaf82f7340/frameset.htm

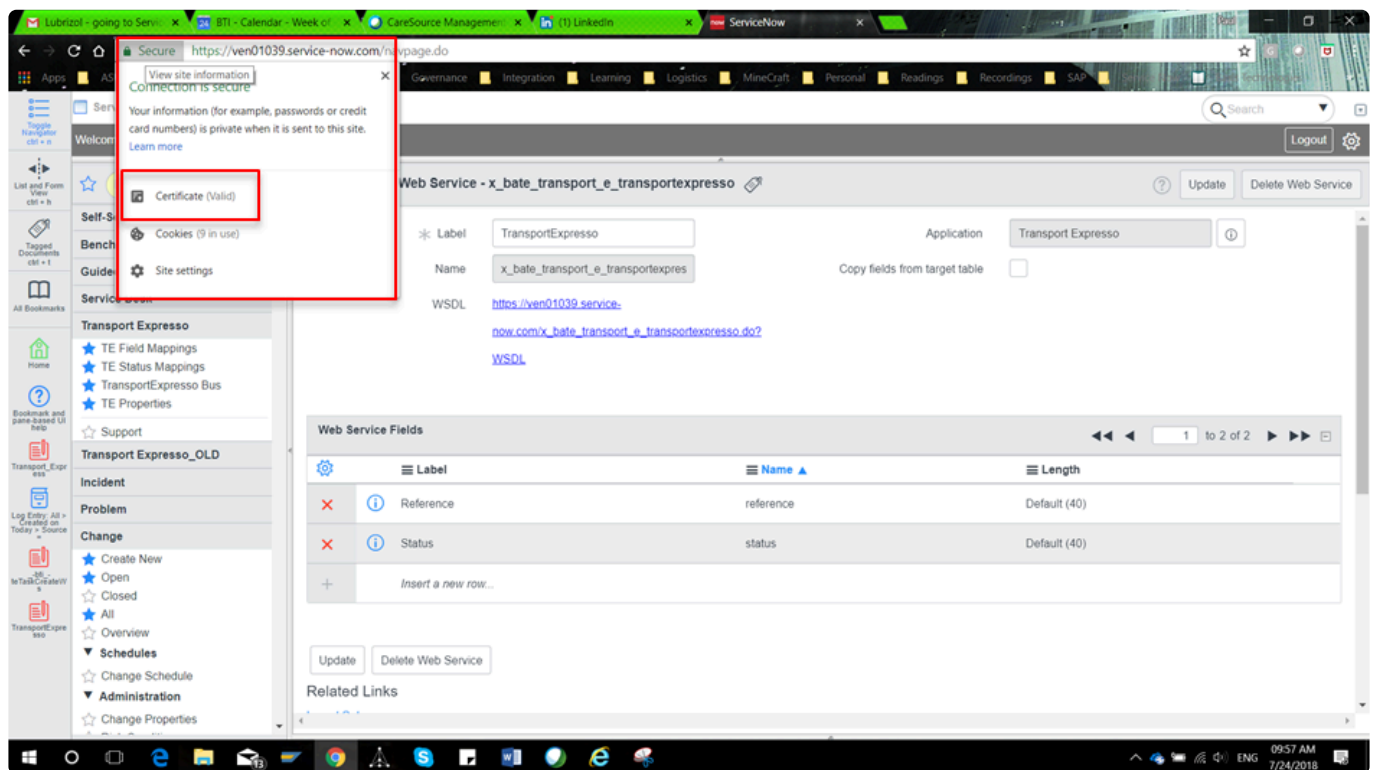
http://help.sap.com/saphelp_nw04/helpdata/en/9a/53a2a4a45e244aa189c2b7065a0b78/frameset.htm

http://help.sap.com/saphelp_nw04s/helpdata/en/52/31683ab81fd846e10000000a11402f/frameset.htm

http://help.sap.com/saphelp_erp2004/helpdata/en/39/09a63d7af20450e10000000a114084/content.htm

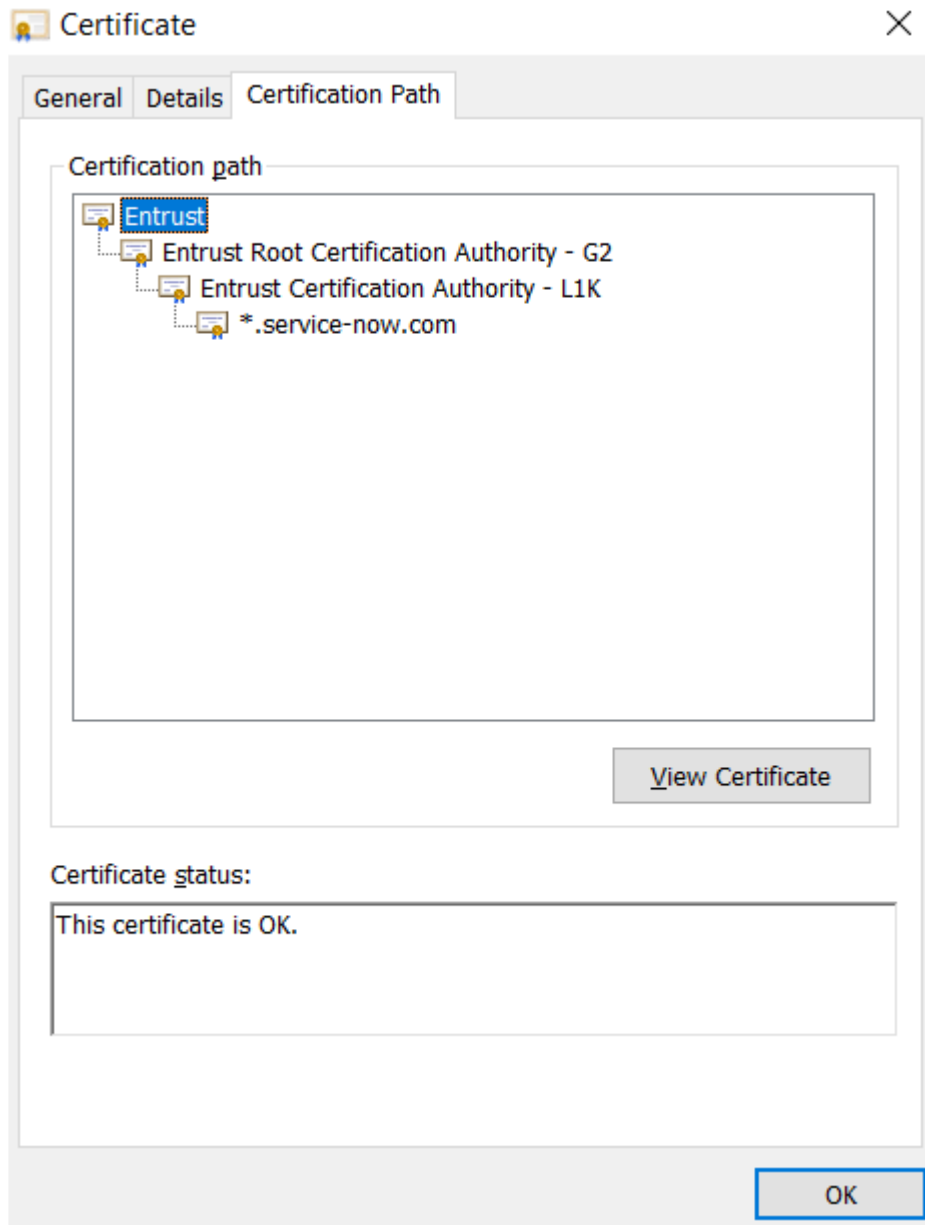
You can check some info at the ICM trace. -Goto SMICM tocde -Goto->Trace File—>Display All There you can find some information about it.

Check SNOW certificate: open SNOW instance > select Secure 'padlock' > select Certificate.



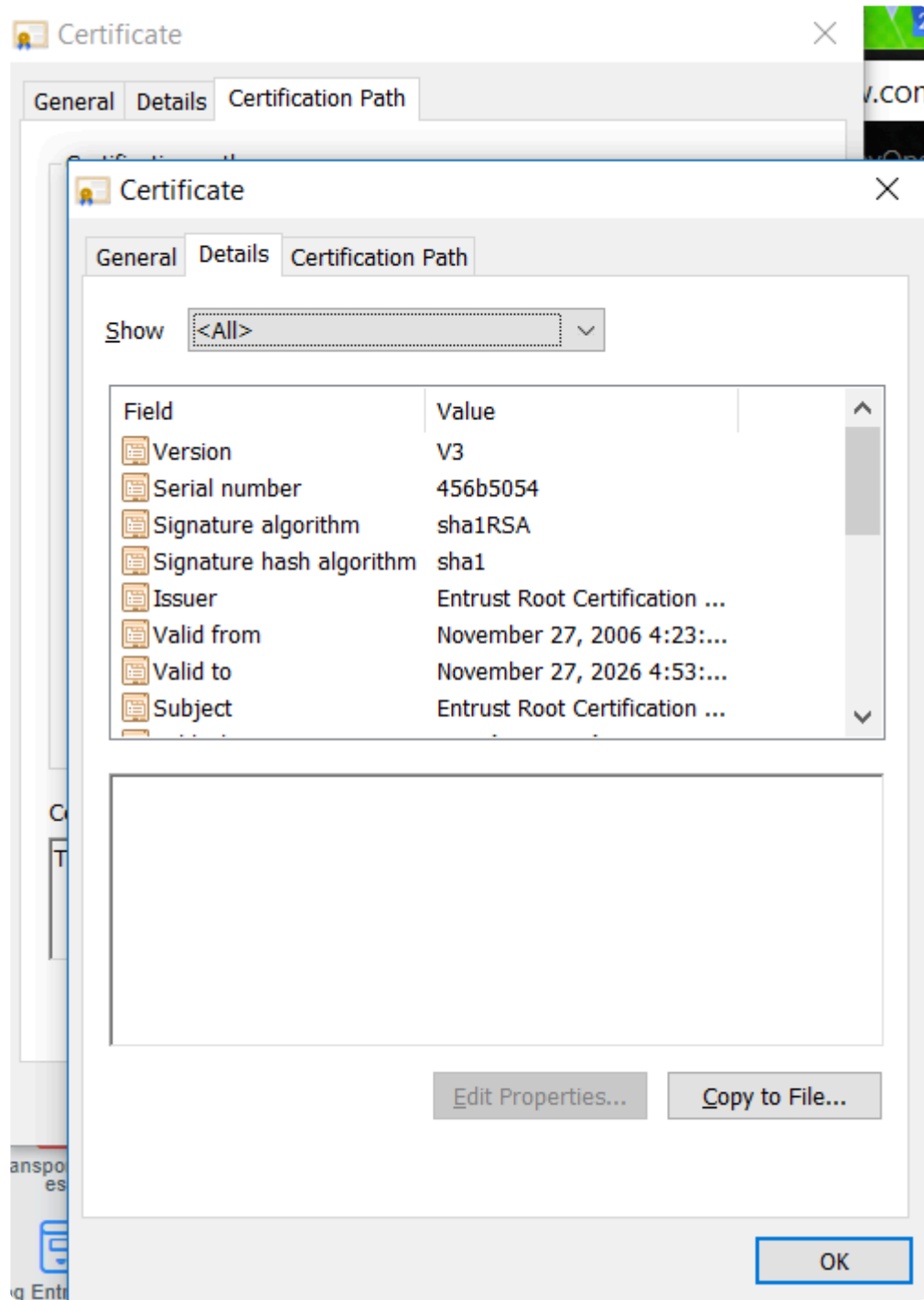
Select Certificate Path tab > select each certificate one at a time > View Certificate

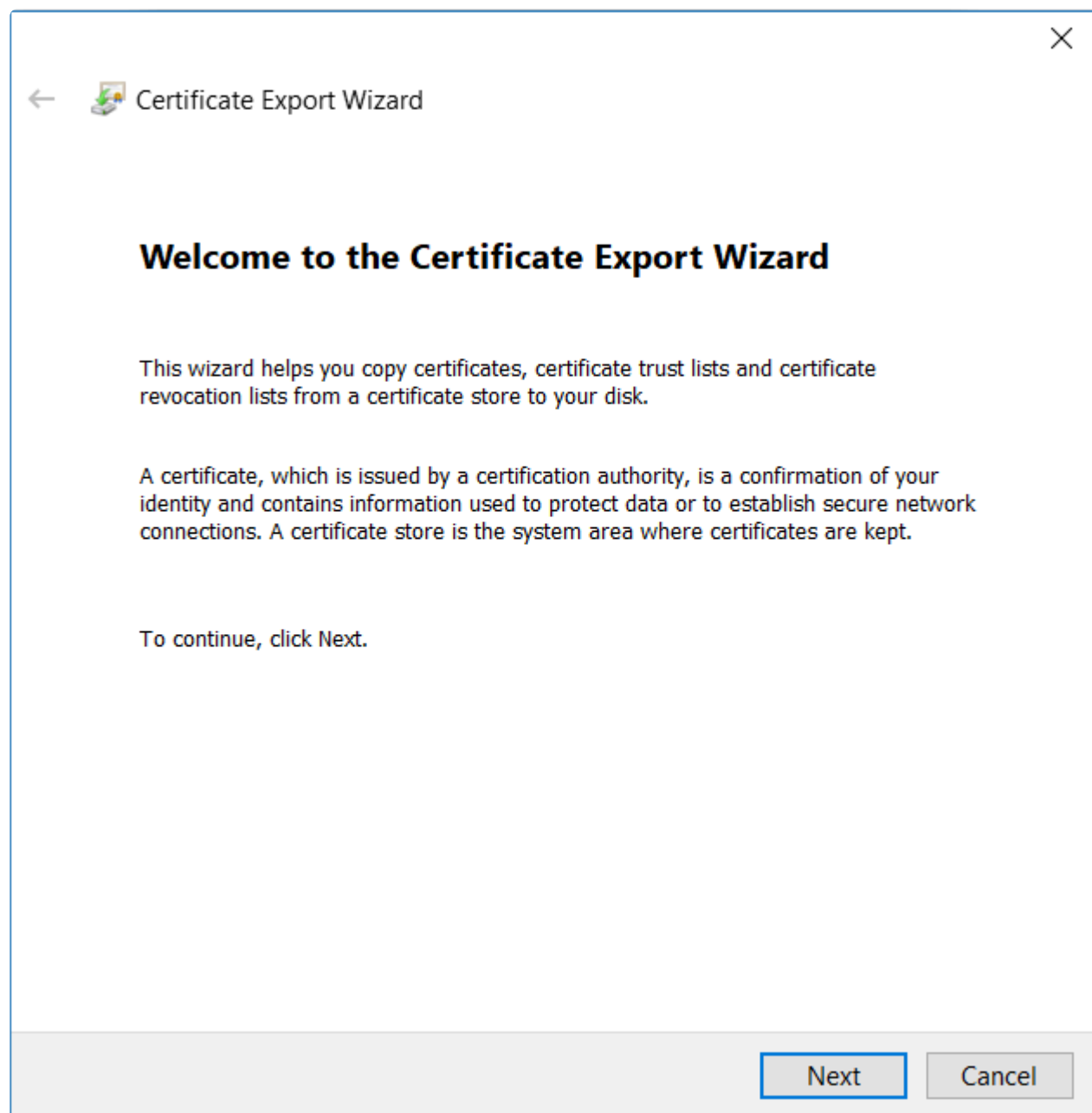
Note: Do not view/save the final/last/bottom certificate: '*.service-now.com'. This one contains an expiration date that you will need to maintain.




Opens another 'Certificate properties' > select Details tab > Copy to File : Opens Certificate Export Wizard.



Note: view the certification path tab to make sure your copying the correct cert. based on the previous screens cert. selection.





Select Base-64 encoded X.509 (.CER) > Next > give it a name and location to save > Next



 **Certificate Export Wizard**

Export File Format
Certificates can be exported in a variety of file formats.

Select the format you want to use:

☐ DER encoded binary X.509 (.CER)

☒ Base-64 encoded X.509 (.CER)

☐ Cryptographic Message Syntax Standard - PKCS #7 Certificates (.P7B)

☐ Include all certificates in the certification path if possible

☐ Personal Information Exchange - PKCS #12 (.PFX)

☐ Include all certificates in the certification path if possible

☐ Delete the private key if the export is successful

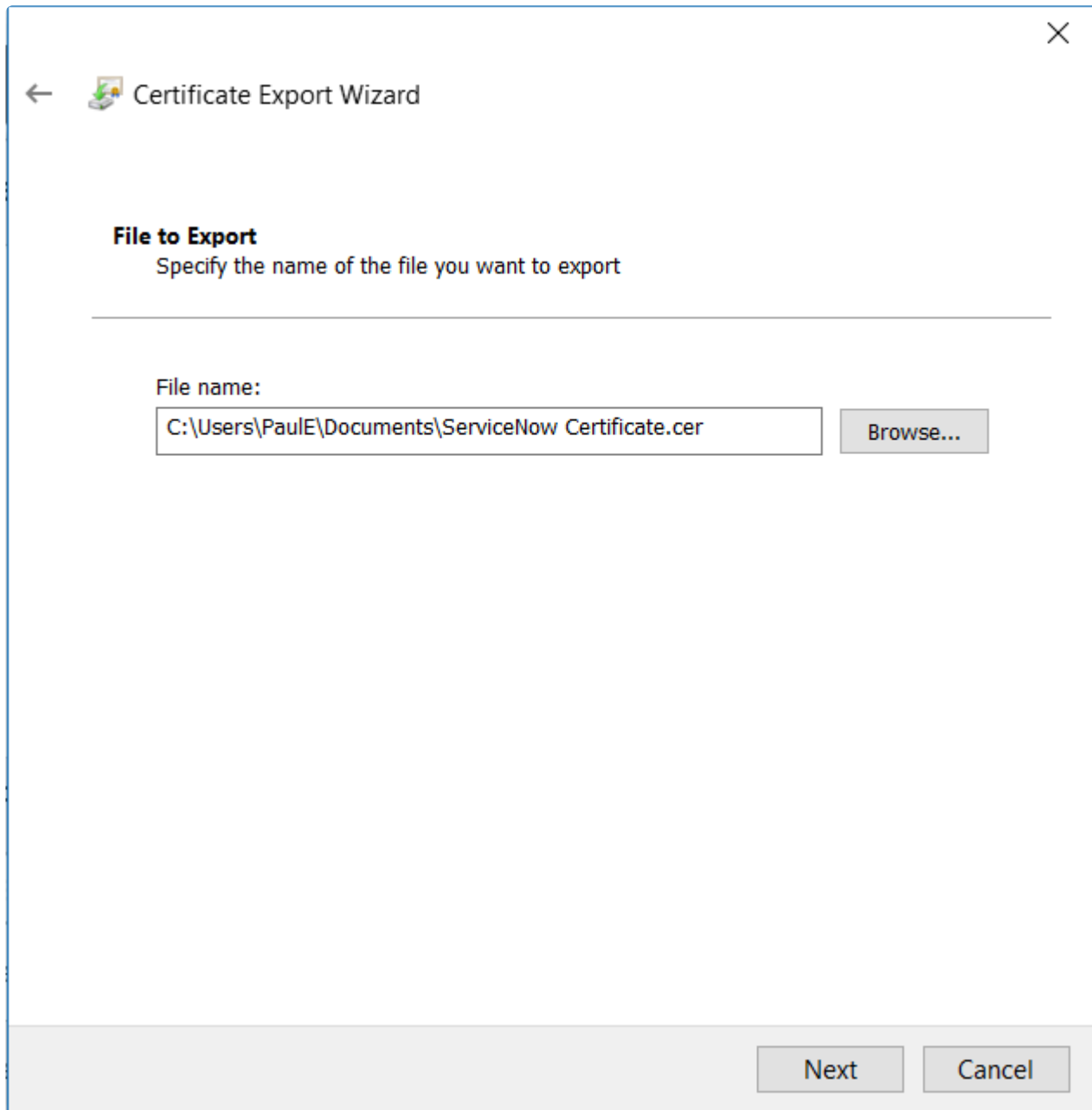
☐ Export all extended properties

☐ Enable certificate privacy


☐ Microsoft Serialized Certificate Store (.SST)

Next

Cancel



The image shows a 'Certificate Export Wizard' dialog box. At the top left is a back arrow icon, and at the top right is a close 'X' icon. Below the title bar, there is a section titled 'File to Export' with the instruction 'Specify the name of the file you want to export'. A horizontal line separates this section from the input area. The input area has a label 'File name:' followed by a text box containing the path 'C:\Users\PaulE\Documents\ServiceNow Certificate.cer'. To the right of the text box is a 'Browse...' button. At the bottom right of the dialog are 'Next' and 'Cancel' buttons.

←  Certificate Export Wizard

File to Export
Specify the name of the file you want to export

File name:

Confirm and complete/finish.



Certificate Export Wizard

Completing the Certificate Export Wizard

You have successfully completed the Certificate Export wizard.

You have specified the following settings:

File Name	C:\Users\PaulE\Documents\ServiceNo
Export Keys	No
Include all certificates in the certification path	No
File Format	Base64 Encoded X.509 (*.cer)

Finish

Cancel

In SAP > t-code: Strutsso2

Select SSL client SSL Client (Anonymo > Change mode > section Certificate > Import certificate
Import Certificate from saved file location



>


Trust Manager for Single Sign-On with Logon Ticket: Display



- System PSE
- ✗ SNC SAPCryptolib
- ✗ SSL server Standard
- ✗ **SSL client SSL Client (Anonymous)**
 - BT13176_ACX_00
- SSL client SSL Client (Standard)
- ✗ SSL client WSSE Web Service Security
- ✗ WS Security Standard
- ✗ WS Security Other System Encryption
- ✗ WS Security WS Security Keys
- ✗ SMIME Standard
- File
- ✗ SSF Collaboration Integration
- SSF Logon Ticket

[Certificate List](#)

Subject

 Verification PSE

 Password

Certificate



Subject				
Subject (Alt.)				
Issuer				
Serial Number (Hex.)				
Serial Number (Dec.)				
Valid From		to		
Algorithm			Key Strength	
Signature Algorithm				
Check Sum (MD5)				
Checksum (SHA1)				

 Add to ACL

Logon Ticket

Access Control List (ACL)

[illegible]

 Import Certificate 

File


Database


Addr. Book


Directory service

SAP System

File path

C:\Users\PaulE\Documents\ServiceNow Certificate.cer 







Select Add to Certificate List

Trust Manager for Single Sign-On with Logon Ticket: Change

- System PSE
 - SNC SAPCryptolib
 - SSL server Standard
 - SSL client SSL Client (Anonymo)**
 - BTI3176_ACX_00
 - SSL client SSL Client (Standar
 - SSL client WSSE Web Service Se
 - WS Security Standard
 - WS Security Other System Encry
 - WS Security WS Security Keys
 - SMIME Standard
 - File
 - SSF Collaboration Integration
 - SSF Logon Ticket



Certificate List

Subject

 Verification PSE  Password

Certificate

Subject	CN=Entrust Root Certification Authority, OU="(c) 2006 Entrust, Inc.", OU=www.entrust...		
Subject (Alt.)			
Issuer	CN=Entrust Root Certification Authority, OU="(c) 2006 Entrust, Inc.", OU=www.entrust...		
Serial Number (Hex.)	45:6B:50:54		
Serial Number (Dec.)	1164660820		
Valid From	27.11.2006 20:23:42	to	27.11.2026 20:53:42
Algorithm	RSA	Key Strength	2048
Signature Algorithm	RSA+SHA1		
Check Sum (MD5)	D6:A5:C3:ED:5D:DD:3E:00:C1:3D:87:92:1F:1D:3F:E4		
Checksum (SHA1)	B3:1E:B1:B7:40:E3:6C:84:02:DA:DC:37:D4:4D:F5:D4:67:49:52:F9		

 Add to Certificate List  Add to ACL

Logon Ticket

Access Control List (ACL)

System	Cl.	Certificate Subject

Results:

Trust Manager for Single Sign-On with Logon Ticket: Change

- System PSE
 - SNC SAPCryptolib
 - SSL server Standard
 - SSL client SSL Client (Anonymo)**
 - BTI3176_ACX_00
 - SSL client SSL Client (Standar
 - SSL client WSSE Web Service Se
 - WS Security Standard
 - WS Security Other System Encry
 - WS Security WS Security Keys
 - SMIME Standard
 - File
 - SSF Collaboration Integration
 - SSF Logon Ticket

System PSE

Own Certificate

Subject: CN=ACD
(Self-Signed)

Issuer Certificates

☐ Trust issuer certificates

Certificate List

Subject: CN=Entrust Root Certification Authority, OU="(c) 2006 Entrust, Inc.", OU=www.entrust...

Verification PSE: ☐ Password:

Certificate

Subject	CN=Entrust Root Certification Authority, OU="(c) 2006 Entrust, Inc.", OU=www.entrust...		
Subject (Alt.)			
Issuer	CN=Entrust Root Certification Authority, OU="(c) 2006 Entrust, Inc.", OU=www.entrust...		
Serial Number (Hex.)	45:6B:50:54		
Serial Number (Dec.)	1164660820		
Valid From	27.11.2006 20:23:42	to	27.11.2026 20:53:42
Algorithm	RSA	Key Strength	2048
Signature Algorithm	RSA+SHA1		
Check Sum (MD5)	D6:A5:C3:ED:5D:DD:3E:00:C1:3D:87:92:1F:1D:3F:E4		
Checksum (SHA1)	B3:1E:B1:B7:40:E3:6C:84:02:DA:DC:37:D4:4D:F5:D4:67:49:52:F9		

SAVE

N.B. Please restart ICM.

Back to SOAMANAGER Consumer Proxy to test web service connectivity.

Web Service Configuration (ACX;100)

Details of Consumer Proxy: /BTI/CO_TE_SN3SERVICE_NOW_SOAP

Overview **Configurations** Details

Define Logical Ports

Create

Action	Logical Port	State
<input type="button" value="Ping Web Service"/>	DEFAULT	Active

Or

Web Service Configuration (ACX;100)

Configuration: Consumer Proxy 'BTI/CO_TE_SN3SERVICE_NOW_SOAP', Logical Port 'DEFAULT'

Save Edit Ping Web Service

Consumer Security

Messaging

Transport Settings

Message Attachments

Identifiable Business Context

Operation Settings

Configuration of Consumer Settings additional to WSDL Document Information LP=DEFAULT

the certificate expired and was not set as trusted in the client system. steps:

1. the old ssl-certificate expired. To resolve this, create a new one refer to the article:
<https://www.sdn.sap.com/irj/sdn/go/portal/prtroot/docs/library/uuid/964f67ec-0701-0010-bd88-f995abf4e1fc>
2. get the certificate with accessing the https url; and with the prompt, install the certificate in your local machine.
3. set the certificate as trusted in transaction /nstrust. Refer to Thomas Jung blog: /people/thomas.jung3/blog/2005/05/13/calling-webservices-from-abap-via-https
4. restart ICM. to transaction /nsmicm, Menu: Administration >> ICM >> Exit Soft.

Error: Failed to create BT

The screenshot shows the SAP Web Service Configuration (ACX;100) interface. The left sidebar contains a navigation menu with options like Log, Transactions (Background), Client Transactions, Emails, Push Notifications, Events, Imports, Table Changes, Outbound HTTP Requests, Signature Images, System Log, All, Warnings, Errors, Script Log Statements, Application Logs, Transaction Cancellations, Utilities, Node Log File Browser, and Node Log File Download. The main area displays a table of transactions with columns for Time, Thread, and Details. The details column shows various warnings and errors, including 'Cannot read property 'closed' from null' and 'Field level read ACL failed when querying'.

The screenshot shows the 'Error' tab in the Basis Technologies interface. The error message is as follows:

```

FAILED TRYING TO EXECUTE ON CONNECTION 15: INSERT INTO task ('u_cf_user', 'made_sla', 'watch_list', 'upon_reject', 'sys_updated_on', 'a_int_6', 'number',
'sys_updated_by', 'opened_by', 'sys_created_on', 'sys_domain', 'state', 'sys_created_by', 'a_bln_1', 'knowledge', 'cmdb_ci', 'impact', 'active', 'work_notes_list',
'sys_created_on', 'sys_domain', 'state', 'sys_created_by', 'a_bln_1', 'knowledge', 'cmdb_ci', 'impact', 'active', 'work_notes_list', 'priority', 'sys_domain_path', 'opened_at', 'u_template', 'a_ref_4',
'approval_set', 'work_notes', 'short_description', 'assignment_group', 'u_quarter', 'a_int_1', 'sys_class_name', 'u_market_or_product_affected', 'sys_id', 'x_bate_transport_e_te_status',
'contact_type', 'a_int_2', 'urgency', 'company', 'reassignment_count', 'u_year', 'a_int_3', 'x_bate_transport_e_te_attempts', 'comments', 'a_str_38', 'approval', 'sys_mod_count', 'a_int_7',
'x_cros2_tfs_issue_submitted', 'escalation', 'u_created_date', 'upon_approval', 'u_prod_market', 'location', 'a_str_3') VALUES('550ea36e132992002236fc04e144b0ea', 1, NULL, 'cancel', '2018-07-26 14:11:14',
'INC02502403', 'preed', '550ea36e132992002236fc04e144b0ea', '2018-07-26 15:15:48', 'global', '5', 'preed', 1, 0, 'a6131cbe13e1200f3a5f482e144b038', 2, 1, NULL, 3, '7', '2018-07-26 14:11:14',
'1a6a56c131df600f8e7f82e144b0ea', NULL, 'Text AC with SNOW', '21e2b1713215200743c4b2e144b011', 'Q3', 'TEST AC with SNOW', 1, 'incident',
'550ea36e132992002236fc04e144b0ea', 3, 2, NULL, 'no_phi', 'not requested', 0, 0, 0, 0, '2018-07-26', 'preed', NULL, '720e3e69134276802946c04e144b0d', 'incident') /
caresource008,
gs.EB471913AB9081908FA2E144B08B, bc952986513ebdb0819dbfa2e144b0a8
Unique Key violation detected by database (Duplicate entry '8a5290a513ebdb0819dbfa2e144b038' for key 'PRIMARY')
: java.sql.SQLException: Duplicate entry '8a5290a513ebdb0819dbfa2e144b038' for key 'PRIMARY'
org.mariadb.jdbc.internal.SQLExceptionMapper.get(SQLExceptionMapper.java:132)
org.mariadb.jdbc.internal.SQLExceptionMapper.throwException(SQLExceptionMapper.java:106)
org.mariadb.jdbc.MySQLStatement.executeQuery(MySQLStatement.java:268)
org.mariadb.jdbc.MySQLStatement.execute(MySQLStatement.java:296)
org.mariadb.jdbc.MySQLStatement.execute(MySQLStatement.java:387)
sun.reflect.GeneratedMethodAccessor22.invoke(Unknown Source)
sun.reflect.DelegatingMethodAccessorImpl.invoke(DelegatingMethodAccessorImpl.java:43)
java.lang.reflect.Method.invoke(Method.java:498)
com.glide.db.StatementWrapper.invoke(StatementWrapper.java:40)
com.sun.proxy.$Proxy7.execute(Unknown Source)
com.glide.db.DB.executeStatement(DB.java:1044)
com.glide.db.DB.executeStatement(DB.java:1000)
com.glide.db.DB.executeStatement(DB.java:961)
com.glide.db.DBAction.executeResultSet(DBAction.java:282)
com.glide.db.DBCompositeAction.executeResultSet(DBCompositeAction.java:151)
com.glide.db.DBCompositeAction.executeResultSet(DBCompositeAction.java:93)
com.glide.db.DBAction.executeAndReturnTable(DBAction.java:245)
com.glide.db.DBAction.executeNormalDBAction(DBAction.java:234)
com.glide.db.DBAction.executeAndReturnTable(DBAction.java:195)
com.glide.script.GlideRecordTable.insert(GlideRecordTable.java:134)
com.glide.script.GlideRecord.insert(GlideRecord.java:4719)
com.glide.script.GlideRecord.insert(GlideRecord.java:4637)
com.glide.script.GlideRecord.insert(GlideRecord.java:5109)
sun.reflect.GeneratedMethodAccessor191.invoke(Unknown Source)
sun.reflect.DelegatingMethodAccessorImpl.invoke(DelegatingMethodAccessorImpl.java:43)
java.lang.reflect.Method.invoke(Method.java:498)
org.mozilla.javascript.MemberBox.invoke(MemberBox.java:138)
org.mozilla.javascript.FunctionObject.doInvoke(FunctionObject.java:570)
  
```

The error occurred on 07/26/2018 at 11:15:49 AM, created by 'preed', and is categorized as an 'Error'.

FAILED TRYING TO EXECUTE ON CONNECTION 15: INSERT INTO task (`u_cf_user`, `made_sla`, `watch_list`, `upon_reject`, `sys_updated_on`, `a_int_6`, `number`, `sys_updated_by`, `opened_by`, `sys_created_on`, `sys_domain`, `state`, `sys_created_by`, `a_bln_1`, `knowledge`, `cmdb_ci`, `impact`, `active`, `work_notes_list`, `priority`, `sys_domain_path`, `opened_at`, `u_template`, `a_ref_4`, `approval_set`, `work_notes`, `short_description`, `assignment_group`, `u_quarter`, `a_int_1`, `sys_class_name`, `u_market_or_product_affected`, `sys_id`, `x_bate_transport_e_te_status`, `contact_type`, `a_int_2`, `urgency`, `company`, `reassignment_count`, `u_year`, `a_int_3`, `x_bate_transport_e_te_attempts`, `comments`, `a_str_38`, `approval`, `sys_mod_count`, `a_int_7`, `x_cros2_tfs_issue_submitted`, `escalation`, `u_created_date`, `upon_approval`, `u_prod_market`, `location`, `a_str_3`) VALUES('550ea36e132992002236fc04e144b0ea', 1, NULL, 'cancel', '2018-07-26 16:16:06', 0, 'INC0250403', 'preed', '550e

The screenshot shows the 'Script Include' configuration page for 'TransportExpresso'. The configuration details are as follows:

- Name:** TransportExpresso
- API Name:** x_bate_transport_e.TransportExpresso
- Client callable:** ☐
- Description:** (Empty field)
- Script:**

```

336
337
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348
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358
359
360
361
362
var status = '';
var transport_expresso_soap_message_function =
this.getSoapMessageFunction('x_bate_transport_e.create_function');
try
{
var s = new sn_wsSoapMessageV2('x_bate_transport_e.Transport Expresso', transport_expresso_soap_message_function);
s.setStringParameter('XSystemNumber', gs.getProperty('x_bate_transport_e.XSystemNumber'));
var field_map = new GlideRecord('x_bate_transport_e_te_field_mapping');
field_map.addQuery('table', rec.getTable_name()).addOrCondition('key', true);
while (field_map.next())
{
if (field_map.sn_field == "TABLE")
{
s.setStringParameter(field_map.te_field, rec.getTable_name());
gs.info(field_map.te_field + " = " + rec.getTable_name());
continue;
}
if (field_map.sn_field == "PROPERTY")
{
s.setStringParameter(field_map.te_field, gs.getProperty('x_bate_transport_e.' + field_map.te_field));
continue;
}
s.setStringParameter(field_map.te_field, rec.getField(field_map.sn_field).getDisplayValue());
}
}
  
```
- Protection policy:** Read-only

The page also includes a sidebar with navigation options like 'Orchestration', 'Activity Dependencies', 'Script Includes', 'Crossfaze TFS Integration', 'Business Logic', 'Metrics', 'MID Server', 'System Definition', 'System UI', and 'Script Includes'.

6.3. SAP Integration Header

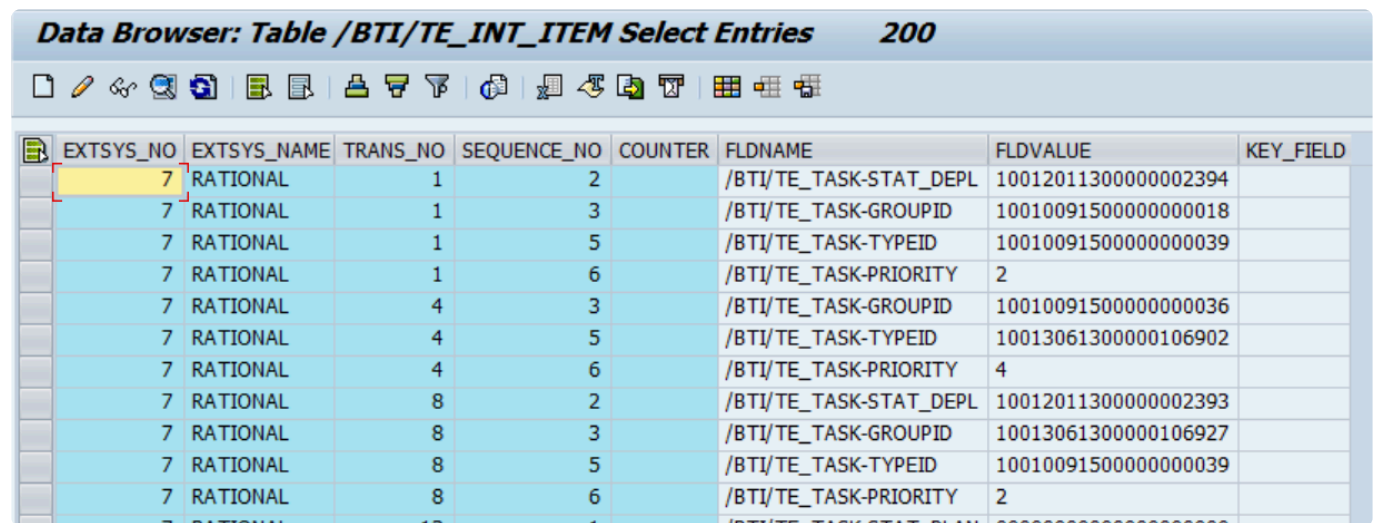
Check in tables /bti/te_int_head SE16

Data Browser: Table /BTI/TE_INT_HEAD Select Entries 200													
EXTSYS_NO	EXTSYS_NAME	TRANS_NO	DATECREATED	TIMECREATED	PROCESS_CODE	STATUS	RETRIES	DATEPROCESSED	TIMEPROCESSED	MSG_FLD	ORIGIN_TYPE	ORIGIN_KEY	ORIGIN_DATA
7	RATIONAL	1	26.02.2015	11:56:30	UPDATE	1	3	26.02.2015	12:52:32		/BTI/TE_TASK	10015022600000144190	10015022600000144190fr
7	RATIONAL	4	26.02.2015	12:55:14	UPDATE	9			00:00:00		/BTI/TE_TASK	10010100800000000139	10010100800000000139FI
7	RATIONAL	8	26.02.2015	12:55:23	UPDATE	9			00:00:00		/BTI/TE_TASK	10010100800000000155	10010100800000000155MI
7	RATIONAL	13	26.02.2015	12:55:23	UPDATE	9			00:00:00		/BTI/TE_TASK	10010102700000000183	10010102700000000183PI
7	RATIONAL	15	26.02.2015	12:55:23	UPDATE	9			00:00:00		/BTI/TE_TASK	10010110200000000184	10010110200000000184PI
7	RATIONAL	17	26.02.2015	12:55:23	UPDATE	9			00:00:00		/BTI/TE_TASK	10010112400000000206	10010112400000000206SC
7	RATIONAL	21	26.02.2015	12:55:23	UPDATE	9			00:00:00		/BTI/TE_TASK	10010120800000000217	10010120800000000217FI

6.4. SAP Integration Item's

Check table /bti/te_int_item se16.

Data Browser: Table /BTI/TE_INT_ITEM Select Entries 200



EXTSYS_NO	EXTSYS_NAME	TRANS_NO	SEQUENCE_NO	COUNTER	FLDNAME	FLDVALUE	KEY_FIELD
7	RATIONAL	1	2		/BTI/TE_TASK-STAT_DEPL	100120113000000002394	
7	RATIONAL	1	3		/BTI/TE_TASK-GROUPID	100100915000000000018	
7	RATIONAL	1	5		/BTI/TE_TASK-TYPEID	100100915000000000039	
7	RATIONAL	1	6		/BTI/TE_TASK-PRIORITY	2	
7	RATIONAL	4	3		/BTI/TE_TASK-GROUPID	100100915000000000036	
7	RATIONAL	4	5		/BTI/TE_TASK-TYPEID	100130613000000106902	
7	RATIONAL	4	6		/BTI/TE_TASK-PRIORITY	4	
7	RATIONAL	8	2		/BTI/TE_TASK-STAT_DEPL	100120113000000002393	
7	RATIONAL	8	3		/BTI/TE_TASK-GROUPID	100130613000000106927	
7	RATIONAL	8	5		/BTI/TE_TASK-TYPEID	100100915000000000039	
7	RATIONAL	8	6		/BTI/TE_TASK-PRIORITY	2	
7	RATIONAL	12	1		/BTI/TE_TASK-STAT_DEPL	000000000000000000000	

You can delete these entries and retest a connection.

6.5. WSDL Analyzer

SOAMANAGER has a WSDL Analyzer.

SOA Management (ACX;100)

Service Administration

Technical Administration

Logs and Traces

Management Connections

Services Registry

Monitoring

Tools

[WSDL Analyzer](#)
WSDL Analyzer

[Matching Interfaces](#)
Maintain matching interfaces

[Health Check](#)
Execute Health Check and Explore Results

[WSDL Upload](#)
Upload WSDL Files

[Documentation URLs for SOAManager](#)
Maintain URLs for Documentation of SOAManager

[Configuration Templates](#)
Defines Configuration Templates

[Web Services Administration](#)
Web Services Administration Cockpit (SRT_ADMIN)

1st Copy the WSDL from the Service Definition Binding

Web Service Configuration (ACX;100)

Details of Service Definition: /BTI/TE_TASK_WS

OverviewConfigurationsClassificationsDetails

Define Services and Bindings

Create Service

ActivateDeactivateDelete

Service/Binding

SNOW

snow

Actions

WSDL Generation for Binding: snow

WSDL Flavours

Flavour: All possible combinations are allowed

SAP Assertions: All

Security Assertions: ABAP 702/730/740 and higher

WSDL Section: AllInOne

WSDL Version: 1.1

WSP Version: 1.2

WSP Style: single-Binding

SOAP Version: SOAP 1.1 and SOAP 1.2

SOAP Style: Document

SOAP Action: With

Options for WSDL Access and URLs

☒ Standard

☐ Alternative URL

Alternate Host:

Alt. Port (http):

Meta Data Protocol:

Alt. Port (https):

Apply URL options

WSDL Generation

WSDL URL for Binding: http://TE.BASISTECHNOLOGIES.NET:8176/sap/bc/srt/wsdllflw_10002A111AD1/bndg_url/sap/bc/srt/rfc/bti/te_task_ws/100/snow/snow?sap-client=100

Paste url, user and password > Analyze!

WSDL Analyzer (ACX;100)

URL based WSDL

* Specify URL of WSDL File:

3176/sap/bc/srt/wsdl/flv_10002A111AD1/bndg_url/sap/bc/srt/rfc/bti/te_task_ws/100/snow/snow?sap-client=100

* WSDL Access User Name:

* WSDL Access User Password:

••••••••

Analyze

▶

Local WSDL File

Result

Successful with [green checkbox]

WSDL Analyzer (ACX;100)

▶

URL based WSDL

▶

Local WSDL File

Result

Detail

✓

WSDL URL

http://TE.BASISTECHNOLO...

Namespaces

ns0:urn:sap-com:document:sap:soap:functions:mc-style

Number of Interfaces: 1

Number of Services: 1

Interfaces

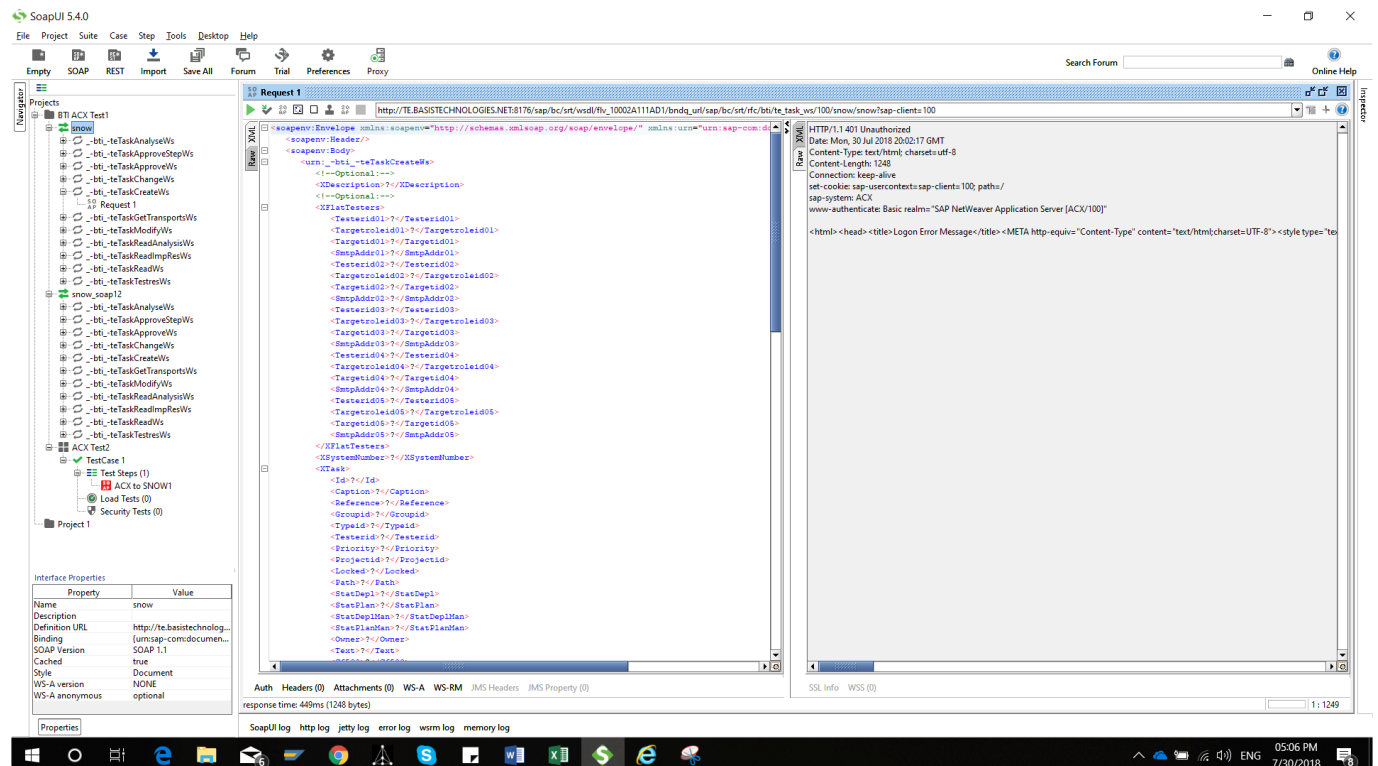
ExpandCollapseFind:Type: AllGo

Properties	Values	Description
ns0:_BTI_TE_TASK_WS		
Operations		
Policies		
Bindings		
Services		

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6.6. SOAPUI Test

3rd party tool



6.7. SAP Web Service Utilities

6.8. Updates to Business Tasks

It is not part of the current out-of-the-box ActiveControl / ServiceNow integration to update Business Tasks based on updates to the corresponding ServiceNow ticket.

It is possible to do this via an extension to the plug-in – this has been done by another customer so that a Business Task custom field could get updated as the corresponding ServiceNow ticket reached certain conditions.

Some information on this topic can be found in this online [Change Note](#).